Environmental Resources Management

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

http://www.erm.com

15 February 2017
Reference: 0377766

Mr. David Costello
National Development
2310 Washington Street
Newton Lower Falls, MA 02462

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

Dear Mr. Costello:

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

Innovative Engineering Solutions, Inc. (IESI) collected groundwater samples from twelve monitoring wells located on National Development property in January 2017. These samples were submitted to Alpha Analytical Laboratories, Inc. of Westborough, Massachusetts, and/or TestAmerica Laboratories, Inc. of Buffalo, NY for analysis. All analytical results are attached to this letter.

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.
Principal Consultant

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

cc: Jonathan Hone, Raytheon Company
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: National Development

2. Street Address: 2310 Washington Street

City/Town: Newton Lower Falls Zip Code: 02462

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: 480-111832-1
Client Project/Site: IDS Wayland

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

Attn: Vicki Pariyar

Denise L Giglia

Authorized for release by:
1/16/2017 11:52:14 AM
Denise Giglia, Project Management Assistant II
denise.giglia@testamericainc.com

Designee for

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 is outside acceptance limits.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

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: 480-111832-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-111832-1

Receipt
The samples were received on 1/5/2017 1:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.8° C.

Receipt Exceptions
The COC lacks sample times for all sample points listed. Client provided all sample time via email.

GC/MS VOA
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 Carbon disulfide, Acetone, Dichlorodifluoromethane 1,1-Dichloroethene, and Isopropyl ether associated with batch 480-338883 recovered outside the MCP control limit criteria. MCP protocol allows for 20% of the target compounds to be outside the 20% difference but not over 40% difference. Difficult analytes are allowed to be outside the 20% difference but not over 60% difference. The following samples were affected : REW-6-20170104 (480-111832-1), REW-7-20170104 (480-111832-2), REW-8-20170104 (480-111832-3), REW-11-20170104 (480-111832-4), REW-12-20170104 (480-111832-5), DUP-20170104 (480-111832-6) and TRIP BLANK (480-111832-7).

Method 8260C: The laboratory control sample (LCS) and / or the laboratory control sample duplicate (LCSD) for batch 480-338883 exceeded control limits for the following analyte: Tetrahydrofuran. Unlike the calibration standards, this is due to the coelution with Methacrylonitrile 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. The following samples were affected : REW-6-20170104 (480-111832-1), REW-7-20170104 (480-111832-2), REW-8-20170104 (480-111832-3), REW-11-20170104 (480-111832-4), REW-12-20170104 (480-111832-5), DUP-20170104 (480-111832-6) and TRIP BLANK (480-111832-7).

Method 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: REW-6-20170104 (480-111832-1). Elevated reporting limits (RLs) are provided.

Method 8260C: The following volatiles sample was diluted due to foaming at the time of purging during the original sample analysis: REW-12-20170104 (480-111832-5) and DUP-20170104 (480-111832-6). Elevated reporting limits (RLs) are provided.

Method 8260C: The following samples were collected in properly preserved vials for analysis of volatile organic compounds (VOCs). However, the pH was outside the required criteria when verified by the laboratory, and corrective action was not possible: REW-6-20170104 (480-111832-1), REW-12-20170104 (480-111832-5) and DUP-20170104 (480-111832-6). The samples were analyzed within 7 days per EPA recommendation.

Method 8260C: The the laboratory control sample duplicate (LCSD) for batch 338883 exceeded control limits for the following analytes: Carbon Disulfide. MCP protocol allows for 10% of the target compounds to be outside of the limits provided the recoveries are over 10%.

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

HPLC/IC
Method 300.0: The following sample was reported with elevated reporting limits for all analytes: REW-6-20170104 (480-111832-1) and REW-12-20170104 (480-111832-5). The sample was analyzed at a dilution based on screening results.

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

Metals
Method 6010: At the request of the client, an abbreviated/modified MCP compound list was reported for this job.

Job ID: 480-111832-1 (Continued)

Laboratory: TestAmerica Buffalo (Continued)

Method 3005A: Due to the matrix, the initial volumes used for the following samples deviated from the standard procedure: REW-6-20170104 (480-111832-1). The reporting limits (RLs) have been adjusted proportionately.

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

General Chemistry

Method 9040C, SM 4500 H+ B: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following samples has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: REW-7-20170104 (480-111832-2), REW-8-20170104 (480-111832-3) and REW-11-20170104 (480-111832-4).

Method 9040C: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following sample has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: REW-6-20170104 (480-111832-1) and REW-12-20170104 (480-111832-5).

Method Distill/Ammonia: Due to the matrix, the initial volume(s) used for the following sample deviated from the standard procedure: REW-11-20170104 (480-111832-4). The reporting limits (RLs) have been adjusted proportionately.

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 #: **480-111832**

Project Location: **IDS Wayland** RTN:

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

480-111832[1-7]

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 ☐	9014 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: Denise L Giglia Position: Project Manager Assistant II

Printed Name: Denise L. Giglia Date: 1/16/17 10:37

Detection Summary

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

TestAmerica Job ID: 480-111832-1

Client Sample ID: REW-6-20170104 — Lab Sample ID: 480-111832-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	1100		200		ug/L	20		8260C	Total/NA
Toluene	580		20		ug/L	20		8260C	Total/NA
Iron	11		0.10		mg/L	1		6010	Total/NA
Ammonia	14		2.0		mg/L	10		350.1	Total/NA
TOC Result 1	61000		1000		mg/L	1000		9060A	Total/NA
TOC Result 2	63000		1000		mg/L	1000		9060A	Total/NA
Total Organic Carbon - Duplicates	62000		1000		mg/L	1000		9060A	Total/NA
Alkalinity, Total	11000		5.0		mg/L	1		SM 2320B	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	13.3	HF	0.1		SU	1		9040C	Total/NA

Client Sample ID: REW-7-20170104 — Lab Sample ID: 480-111832-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	1.5		0.050		mg/L	1		6010	Total/NA
Chloride	1.3		0.50		mg/L	1		300.0	Total/NA
Ammonia	0.42		0.20		mg/L	1		350.1	Total/NA
TOC Result 1	10		1.0		mg/L	1		9060A	Total/NA
TOC Result 2	10		1.0		mg/L	1		9060A	Total/NA
Total Organic Carbon - Duplicates	10		1.0		mg/L	1		9060A	Total/NA
Alkalinity, Total	21		5.0		mg/L	1		SM 2320B	Total/NA
ortho-Phosphate	0.083		0.020		mg/L	1		SM 4500 P E	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	7.9	HF	0.1		SU	1		9040C	Total/NA

Client Sample ID: REW-8-20170104 — Lab Sample ID: 480-111832-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	3.6		0.050		mg/L	1		6010	Total/NA
Chloride	0.83		0.50		mg/L	1		300.0	Total/NA
Ammonia	0.28		0.20		mg/L	1		350.1	Total/NA
TOC Result 1	4.5		1.0		mg/L	1		9060A	Total/NA
TOC Result 2	4.6		1.0		mg/L	1		9060A	Total/NA
Total Organic Carbon - Duplicates	4.5		1.0		mg/L	1		9060A	Total/NA
Alkalinity, Total	5.9		5.0		mg/L	1		SM 2320B	Total/NA
ortho-Phosphate	0.14		0.020		mg/L	1		SM 4500 P E	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	6.5	HF	0.1		SU	1		9040C	Total/NA

Client Sample ID: REW-11-20170104 — Lab Sample ID: 480-111832-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	4.5		1.0		ug/L	1		8260C	Total/NA
Toluene	2.4		1.0		ug/L	1		8260C	Total/NA
Vinyl chloride	2.9		1.0		ug/L	1		8260C	Total/NA
Iron	13		0.050		mg/L	1		6010	Total/NA
Chloride	63		0.50		mg/L	1		300.0	Total/NA
Ammonia	3.1		0.40		mg/L	1		350.1	Total/NA
TOC Result 1	2.9		1.0		mg/L	1		9060A	Total/NA
TOC Result 2	2.4		1.0		mg/L	1		9060A	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

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

TestAmerica Job ID: 480-111832-1

Client Sample ID: REW-11-20170104 (Continued) — Lab Sample ID: 480-111832-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Organic Carbon - Duplicates	2.7		1.0		mg/L	1		9060A	Total/NA
Alkalinity, Total	160		5.0		mg/L	1		SM 2320B	Total/NA
ortho-Phosphate	0.028		0.020		mg/L	1		SM 4500 P E	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	7.2	HF	0.1		SU	1		9040C	Total/NA

Client Sample ID: REW-12-20170104 — Lab Sample ID: 480-111832-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	340		200		ug/L	20		8260C	Total/NA
Toluene	31		20		ug/L	20		8260C	Total/NA
Iron	2.0		0.050		mg/L	1		6010	Total/NA
Chloride	50		25		mg/L	50		300.0	Total/NA
Ammonia	0.46		0.20		mg/L	1		350.1	Total/NA
TOC Result 1	25000		1000		mg/L	1000		9060A	Total/NA
TOC Result 2	26000		1000		mg/L	1000		9060A	Total/NA
Total Organic Carbon - Duplicates	25000		1000		mg/L	1000		9060A	Total/NA
Alkalinity, Total	4300		5.0		mg/L	1		SM 2320B	Total/NA
ortho-Phosphate	0.55		0.020		mg/L	1		SM 4500 P E	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	12.8	HF	0.1		SU	1		9040C	Total/NA

Client Sample ID: DUP-20170104 — Lab Sample ID: 480-111832-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	360		200		ug/L	20		8260C	Total/NA
Toluene	30		20		ug/L	20		8260C	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-111832-7

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Client Sample ID: REW-6-20170104
Date Collected: 01/04/17 10:55
Date Received: 01/05/17 01:00

Lab Sample ID: 480-111832-1
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		20		ug/L			01/05/17 12:23	20
1,1,1-Trichloroethane	ND		20		ug/L			01/05/17 12:23	20
1,1,2,2-Tetrachloroethane	ND		10		ug/L			01/05/17 12:23	20
1,1,2-Trichloroethane	ND		20		ug/L			01/05/17 12:23	20
1,1-Dichloroethane	ND		20		ug/L			01/05/17 12:23	20
1,1-Dichloroethene	ND		20		ug/L			01/05/17 12:23	20
1,1-Dichloropropene	ND		20		ug/L			01/05/17 12:23	20
1,2,3-Trichlorobenzene	ND		20		ug/L			01/05/17 12:23	20
1,2,3-Trichloropropane	ND		20		ug/L			01/05/17 12:23	20
1,2,4-Trichlorobenzene	ND		20		ug/L			01/05/17 12:23	20
1,2,4-Trimethylbenzene	ND		20		ug/L			01/05/17 12:23	20
1,2-Dibromo-3-Chloropropane	ND		100		ug/L			01/05/17 12:23	20
1,2-Dichlorobenzene	ND		20		ug/L			01/05/17 12:23	20
1,2-Dichloroethane	ND		20		ug/L			01/05/17 12:23	20
1,2-Dichloropropane	ND		20		ug/L			01/05/17 12:23	20
1,3,5-Trimethylbenzene	ND		20		ug/L			01/05/17 12:23	20
1,3-Dichlorobenzene	ND		20		ug/L			01/05/17 12:23	20
1,3-Dichloropropane	ND		20		ug/L			01/05/17 12:23	20
1,4-Dichlorobenzene	ND		20		ug/L			01/05/17 12:23	20
1,4-Dioxane	ND		1000		ug/L			01/05/17 12:23	20
2,2-Dichloropropane	ND		20		ug/L			01/05/17 12:23	20
2-Butanone (MEK)	**1100**		200		ug/L			01/05/17 12:23	20
2-Chlorotoluene	ND		20		ug/L			01/05/17 12:23	20
2-Hexanone	ND		200		ug/L			01/05/17 12:23	20
4-Chlorotoluene	ND		20		ug/L			01/05/17 12:23	20
4-Isopropyltoluene	ND		20		ug/L			01/05/17 12:23	20
4-Methyl-2-pentanone (MIBK)	ND		200		ug/L			01/05/17 12:23	20
Acetone	ND		1000		ug/L			01/05/17 12:23	20
Benzene	ND		20		ug/L			01/05/17 12:23	20
Bromobenzene	ND		20		ug/L			01/05/17 12:23	20
Bromoform	ND		20		ug/L			01/05/17 12:23	20
Bromomethane	ND		40		ug/L			01/05/17 12:23	20
Carbon disulfide	ND	*	200		ug/L			01/05/17 12:23	20
Carbon tetrachloride	ND		20		ug/L			01/05/17 12:23	20
Chlorobenzene	ND		20		ug/L			01/05/17 12:23	20
Chlorobromomethane	ND		20		ug/L			01/05/17 12:23	20
Chlorodibromomethane	ND		10		ug/L			01/05/17 12:23	20
Chloroethane	ND		40		ug/L			01/05/17 12:23	20
Chloroform	ND		20		ug/L			01/05/17 12:23	20
Chloromethane	ND		40		ug/L			01/05/17 12:23	20
cis-1,2-Dichloroethene	ND		20		ug/L			01/05/17 12:23	20
cis-1,3-Dichloropropene	ND		8.0		ug/L			01/05/17 12:23	20
Dichlorobromomethane	ND		10		ug/L			01/05/17 12:23	20
Dichlorodifluoromethane	ND		20		ug/L			01/05/17 12:23	20
Ethyl ether	ND		20		ug/L			01/05/17 12:23	20
Ethylbenzene	ND		20		ug/L			01/05/17 12:23	20
Ethylene Dibromide	ND		20		ug/L			01/05/17 12:23	20
Hexachlorobutadiene	ND		8.0		ug/L			01/05/17 12:23	20
Isopropyl ether	ND		200		ug/L			01/05/17 12:23	20

Client Sample ID: REW-6-20170104
Date Collected: 01/04/17 10:55
Date Received: 01/05/17 01:00

Lab Sample ID: 480-111832-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		20		ug/L			01/05/17 12:23	20
Methyl tert-butyl ether	ND		20		ug/L			01/05/17 12:23	20
Methylene Chloride	ND		20		ug/L			01/05/17 12:23	20
m-Xylene & p-Xylene	ND		40		ug/L			01/05/17 12:23	20
Naphthalene	ND		100		ug/L			01/05/17 12:23	20
n-Butylbenzene	ND		20		ug/L			01/05/17 12:23	20
N-Propylbenzene	ND		20		ug/L			01/05/17 12:23	20
o-Xylene	ND		20		ug/L			01/05/17 12:23	20
sec-Butylbenzene	ND		20		ug/L			01/05/17 12:23	20
Styrene	ND		20		ug/L			01/05/17 12:23	20
Tert-amyl methyl ether	ND		100		ug/L			01/05/17 12:23	20
Tert-butyl ethyl ether	ND		100		ug/L			01/05/17 12:23	20
tert-Butylbenzene	ND		20		ug/L			01/05/17 12:23	20
Tetrachloroethene	ND		20		ug/L			01/05/17 12:23	20
Tetrahydrofuran	ND	*	200		ug/L			01/05/17 12:23	20
Toluene	**580**		20		ug/L			01/05/17 12:23	20
trans-1,2-Dichloroethene	ND		20		ug/L			01/05/17 12:23	20
trans-1,3-Dichloropropene	ND		8.0		ug/L			01/05/17 12:23	20
Trichloroethene	ND		20		ug/L			01/05/17 12:23	20
Trichlorofluoromethane	ND		20		ug/L			01/05/17 12:23	20
Vinyl chloride	ND		20		ug/L			01/05/17 12:23	20
Dibromomethane	ND		20		ug/L			01/05/17 12:23	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*70 - 130*		*01/05/17 12:23*	*20*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 130*		*01/05/17 12:23*	*20*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*01/05/17 12:23*	*20*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**11**		0.10		mg/L		01/06/17 09:25	01/06/17 22:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		50		mg/L			01/05/17 20:33	100
Sulfate	ND		200		mg/L			01/05/17 20:33	100
Ammonia	**14**		2.0		mg/L		01/09/17 10:02	01/10/17 10:06	10
Nitrate as N	ND		0.050		mg/L			01/05/17 17:11	1
TOC Result 1	**61000**		1000		mg/L			01/14/17 20:26	1000
TOC Result 2	**63000**		1000		mg/L			01/14/17 20:26	1000
Total Organic Carbon - Duplicates	**62000**		1000		mg/L			01/14/17 20:26	1000
Alkalinity, Total	**11000**		5.0		mg/L			01/11/17 08:15	1
ortho-Phosphate	ND		0.020		mg/L			01/05/17 08:45	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**13.3**	**HF**	0.1		SU			01/10/17 21:24	1

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

TestAmerica Job ID: 480-111832-1

Client Sample ID: REW-7-20170104
Date Collected: 01/04/17 09:05
Date Received: 01/05/17 01:00

Lab Sample ID: 480-111832-2
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			01/05/17 12:47	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/05/17 12:47	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			01/05/17 12:47	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/05/17 12:47	1
1,1-Dichloroethane	ND		1.0		ug/L			01/05/17 12:47	1
1,1-Dichloroethene	ND		1.0		ug/L			01/05/17 12:47	1
1,1-Dichloropropene	ND		1.0		ug/L			01/05/17 12:47	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/05/17 12:47	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/05/17 12:47	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/05/17 12:47	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/05/17 12:47	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/05/17 12:47	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/05/17 12:47	1
1,2-Dichloroethane	ND		1.0		ug/L			01/05/17 12:47	1
1,2-Dichloropropane	ND		1.0		ug/L			01/05/17 12:47	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/05/17 12:47	1
1,3-Dichlorobenzene	ND		1.0		ug/L			01/05/17 12:47	1
1,3-Dichloropropane	ND		1.0		ug/L			01/05/17 12:47	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/05/17 12:47	1
1,4-Dioxane	ND		50		ug/L			01/05/17 12:47	1
2,2-Dichloropropane	ND		1.0		ug/L			01/05/17 12:47	1
2-Butanone (MEK)	ND		10		ug/L			01/05/17 12:47	1
2-Chlorotoluene	ND		1.0		ug/L			01/05/17 12:47	1
2-Hexanone	ND		10		ug/L			01/05/17 12:47	1
4-Chlorotoluene	ND		1.0		ug/L			01/05/17 12:47	1
4-Isopropyltoluene	ND		1.0		ug/L			01/05/17 12:47	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			01/05/17 12:47	1
Acetone	ND		50		ug/L			01/05/17 12:47	1
Benzene	ND		1.0		ug/L			01/05/17 12:47	1
Bromobenzene	ND		1.0		ug/L			01/05/17 12:47	1
Bromoform	ND		1.0		ug/L			01/05/17 12:47	1
Bromomethane	ND		2.0		ug/L			01/05/17 12:47	1
Carbon disulfide	ND	*	10		ug/L			01/05/17 12:47	1
Carbon tetrachloride	ND		1.0		ug/L			01/05/17 12:47	1
Chlorobenzene	ND		1.0		ug/L			01/05/17 12:47	1
Chlorobromomethane	ND		1.0		ug/L			01/05/17 12:47	1
Chlorodibromomethane	ND		0.50		ug/L			01/05/17 12:47	1
Chloroethane	ND		2.0		ug/L			01/05/17 12:47	1
Chloroform	ND		1.0		ug/L			01/05/17 12:47	1
Chloromethane	ND		2.0		ug/L			01/05/17 12:47	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			01/05/17 12:47	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			01/05/17 12:47	1
Dichlorobromomethane	ND		0.50		ug/L			01/05/17 12:47	1
Dichlorodifluoromethane	ND		1.0		ug/L			01/05/17 12:47	1
Ethyl ether	ND		1.0		ug/L			01/05/17 12:47	1
Ethylbenzene	ND		1.0		ug/L			01/05/17 12:47	1
Ethylene Dibromide	ND		1.0		ug/L			01/05/17 12:47	1
Hexachlorobutadiene	ND		0.40		ug/L			01/05/17 12:47	1
Isopropyl ether	ND		10		ug/L			01/05/17 12:47	1

Client Sample ID: REW-7-20170104
Date Collected: 01/04/17 09:05
Date Received: 01/05/17 01:00

Lab Sample ID: 480-111832-2
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			01/05/17 12:47	1
Methyl tert-butyl ether	ND		1.0		ug/L			01/05/17 12:47	1
Methylene Chloride	ND		1.0		ug/L			01/05/17 12:47	1
m-Xylene & p-Xylene	ND		2.0		ug/L			01/05/17 12:47	1
Naphthalene	ND		5.0		ug/L			01/05/17 12:47	1
n-Butylbenzene	ND		1.0		ug/L			01/05/17 12:47	1
N-Propylbenzene	ND		1.0		ug/L			01/05/17 12:47	1
o-Xylene	ND		1.0		ug/L			01/05/17 12:47	1
sec-Butylbenzene	ND		1.0		ug/L			01/05/17 12:47	1
Styrene	ND		1.0		ug/L			01/05/17 12:47	1
Tert-amyl methyl ether	ND		5.0		ug/L			01/05/17 12:47	1
Tert-butyl ethyl ether	ND		5.0		ug/L			01/05/17 12:47	1
tert-Butylbenzene	ND		1.0		ug/L			01/05/17 12:47	1
Tetrachloroethene	ND		1.0		ug/L			01/05/17 12:47	1
Tetrahydrofuran	ND	*	10		ug/L			01/05/17 12:47	1
Toluene	ND		1.0		ug/L			01/05/17 12:47	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/05/17 12:47	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			01/05/17 12:47	1
Trichloroethene	ND		1.0		ug/L			01/05/17 12:47	1
Trichlorofluoromethane	ND		1.0		ug/L			01/05/17 12:47	1
Vinyl chloride	ND		1.0		ug/L			01/05/17 12:47	1
Dibromomethane	ND		1.0		ug/L			01/05/17 12:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*70 - 130*		*01/05/17 12:47*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 130*		*01/05/17 12:47*	*1*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*		*01/05/17 12:47*	*1*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**1.5**		0.050		mg/L		01/05/17 09:37	01/05/17 16:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1.3**		0.50		mg/L			01/05/17 20:48	1
Sulfate	ND		2.0		mg/L			01/05/17 20:48	1
Ammonia	**0.42**		0.20		mg/L		01/09/17 10:02	01/10/17 09:51	1
Nitrate as N	ND		0.050		mg/L			01/05/17 17:12	1
TOC Result 1	**10**		1.0		mg/L			01/14/17 20:53	1
TOC Result 2	**10**		1.0		mg/L			01/14/17 20:53	1
Total Organic Carbon - Duplicates	**10**		1.0		mg/L			01/14/17 20:53	1
Alkalinity, Total	**21**		5.0		mg/L			01/05/17 19:09	1
ortho-Phosphate	**0.083**		0.020		mg/L			01/05/17 08:45	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**7.9**	**HF**	0.1		SU			01/05/17 12:50	1

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

TestAmerica Job ID: 480-111832-1

Client Sample ID: REW-8-20170104
Date Collected: 01/04/17 10:00
Date Received: 01/05/17 01:00

Lab Sample ID: 480-111832-3
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			01/05/17 13:10	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/05/17 13:10	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			01/05/17 13:10	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/05/17 13:10	1
1,1-Dichloroethane	ND		1.0		ug/L			01/05/17 13:10	1
1,1-Dichloroethene	ND		1.0		ug/L			01/05/17 13:10	1
1,1-Dichloropropene	ND		1.0		ug/L			01/05/17 13:10	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/05/17 13:10	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/05/17 13:10	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/05/17 13:10	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/05/17 13:10	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/05/17 13:10	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/05/17 13:10	1
1,2-Dichloroethane	ND		1.0		ug/L			01/05/17 13:10	1
1,2-Dichloropropane	ND		1.0		ug/L			01/05/17 13:10	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/05/17 13:10	1
1,3-Dichlorobenzene	ND		1.0		ug/L			01/05/17 13:10	1
1,3-Dichloropropane	ND		1.0		ug/L			01/05/17 13:10	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/05/17 13:10	1
1,4-Dioxane	ND		50		ug/L			01/05/17 13:10	1
2,2-Dichloropropane	ND		1.0		ug/L			01/05/17 13:10	1
2-Butanone (MEK)	ND		10		ug/L			01/05/17 13:10	1
2-Chlorotoluene	ND		1.0		ug/L			01/05/17 13:10	1
2-Hexanone	ND		10		ug/L			01/05/17 13:10	1
4-Chlorotoluene	ND		1.0		ug/L			01/05/17 13:10	1
4-Isopropyltoluene	ND		1.0		ug/L			01/05/17 13:10	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			01/05/17 13:10	1
Acetone	ND		50		ug/L			01/05/17 13:10	1
Benzene	ND		1.0		ug/L			01/05/17 13:10	1
Bromobenzene	ND		1.0		ug/L			01/05/17 13:10	1
Bromoform	ND		1.0		ug/L			01/05/17 13:10	1
Bromomethane	ND		2.0		ug/L			01/05/17 13:10	1
Carbon disulfide	ND	*	10		ug/L			01/05/17 13:10	1
Carbon tetrachloride	ND		1.0		ug/L			01/05/17 13:10	1
Chlorobenzene	ND		1.0		ug/L			01/05/17 13:10	1
Chlorobromomethane	ND		1.0		ug/L			01/05/17 13:10	1
Chlorodibromomethane	ND		0.50		ug/L			01/05/17 13:10	1
Chloroethane	ND		2.0		ug/L			01/05/17 13:10	1
Chloroform	ND		1.0		ug/L			01/05/17 13:10	1
Chloromethane	ND		2.0		ug/L			01/05/17 13:10	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			01/05/17 13:10	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			01/05/17 13:10	1
Dichlorobromomethane	ND		0.50		ug/L			01/05/17 13:10	1
Dichlorodifluoromethane	ND		1.0		ug/L			01/05/17 13:10	1
Ethyl ether	ND		1.0		ug/L			01/05/17 13:10	1
Ethylbenzene	ND		1.0		ug/L			01/05/17 13:10	1
Ethylene Dibromide	ND		1.0		ug/L			01/05/17 13:10	1
Hexachlorobutadiene	ND		0.40		ug/L			01/05/17 13:10	1
Isopropyl ether	ND		10		ug/L			01/05/17 13:10	1

Client Sample ID: REW-8-20170104
Date Collected: 01/04/17 10:00
Date Received: 01/05/17 01:00

Lab Sample ID: 480-111832-3
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			01/05/17 13:10	1
Methyl tert-butyl ether	ND		1.0		ug/L			01/05/17 13:10	1
Methylene Chloride	ND		1.0		ug/L			01/05/17 13:10	1
m-Xylene & p-Xylene	ND		2.0		ug/L			01/05/17 13:10	1
Naphthalene	ND		5.0		ug/L			01/05/17 13:10	1
n-Butylbenzene	ND		1.0		ug/L			01/05/17 13:10	1
N-Propylbenzene	ND		1.0		ug/L			01/05/17 13:10	1
o-Xylene	ND		1.0		ug/L			01/05/17 13:10	1
sec-Butylbenzene	ND		1.0		ug/L			01/05/17 13:10	1
Styrene	ND		1.0		ug/L			01/05/17 13:10	1
Tert-amyl methyl ether	ND		5.0		ug/L			01/05/17 13:10	1
Tert-butyl ethyl ether	ND		5.0		ug/L			01/05/17 13:10	1
tert-Butylbenzene	ND		1.0		ug/L			01/05/17 13:10	1
Tetrachloroethene	ND		1.0		ug/L			01/05/17 13:10	1
Tetrahydrofuran	ND	*	10		ug/L			01/05/17 13:10	1
Toluene	ND		1.0		ug/L			01/05/17 13:10	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/05/17 13:10	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			01/05/17 13:10	1
Trichloroethene	ND		1.0		ug/L			01/05/17 13:10	1
Trichlorofluoromethane	ND		1.0		ug/L			01/05/17 13:10	1
Vinyl chloride	ND		1.0		ug/L			01/05/17 13:10	1
Dibromomethane	ND		1.0		ug/L			01/05/17 13:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*70 - 130*		*01/05/17 13:10*	*1*
1,2-Dichloroethane-d4 (Surr)	*111*		*70 - 130*		*01/05/17 13:10*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*01/05/17 13:10*	*1*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**3.6**		0.050		mg/L		01/05/17 09:37	01/05/17 16:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**0.83**		0.50		mg/L			01/05/17 21:02	1
Sulfate	ND		2.0		mg/L			01/05/17 21:02	1
Ammonia	**0.28**		0.20		mg/L		01/09/17 10:02	01/10/17 09:55	1
Nitrate as N	ND		0.050		mg/L			01/05/17 17:13	1
TOC Result 1	**4.5**		1.0		mg/L			01/14/17 21:47	1
TOC Result 2	**4.6**		1.0		mg/L			01/14/17 21:47	1
Total Organic Carbon - Duplicates	**4.5**		1.0		mg/L			01/14/17 21:47	1
Alkalinity, Total	**5.9**		5.0		mg/L			01/05/17 19:15	1
ortho-Phosphate	**0.14**		0.020		mg/L			01/05/17 08:45	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**6.5**	**HF**	0.1		SU			01/05/17 12:53	1

Client Sample ID: REW-11-20170104
Date Collected: 01/04/17 12:00
Date Received: 01/05/17 01:00

Lab Sample ID: 480-111832-4
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			01/05/17 13:34	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/05/17 13:34	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			01/05/17 13:34	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/05/17 13:34	1
1,1-Dichloroethane	ND		1.0		ug/L			01/05/17 13:34	1
1,1-Dichloroethene	ND		1.0		ug/L			01/05/17 13:34	1
1,1-Dichloropropene	ND		1.0		ug/L			01/05/17 13:34	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/05/17 13:34	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/05/17 13:34	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/05/17 13:34	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/05/17 13:34	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/05/17 13:34	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/05/17 13:34	1
1,2-Dichloroethane	ND		1.0		ug/L			01/05/17 13:34	1
1,2-Dichloropropane	ND		1.0		ug/L			01/05/17 13:34	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/05/17 13:34	1
1,3-Dichlorobenzene	ND		1.0		ug/L			01/05/17 13:34	1
1,3-Dichloropropane	ND		1.0		ug/L			01/05/17 13:34	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/05/17 13:34	1
1,4-Dioxane	ND		50		ug/L			01/05/17 13:34	1
2,2-Dichloropropane	ND		1.0		ug/L			01/05/17 13:34	1
2-Butanone (MEK)	ND		10		ug/L			01/05/17 13:34	1
2-Chlorotoluene	ND		1.0		ug/L			01/05/17 13:34	1
2-Hexanone	ND		10		ug/L			01/05/17 13:34	1
4-Chlorotoluene	ND		1.0		ug/L			01/05/17 13:34	1
4-Isopropyltoluene	ND		1.0		ug/L			01/05/17 13:34	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			01/05/17 13:34	1
Acetone	ND		50		ug/L			01/05/17 13:34	1
Benzene	ND		1.0		ug/L			01/05/17 13:34	1
Bromobenzene	ND		1.0		ug/L			01/05/17 13:34	1
Bromoform	ND		1.0		ug/L			01/05/17 13:34	1
Bromomethane	ND		2.0		ug/L			01/05/17 13:34	1
Carbon disulfide	ND	*	10		ug/L			01/05/17 13:34	1
Carbon tetrachloride	ND		1.0		ug/L			01/05/17 13:34	1
Chlorobenzene	ND		1.0		ug/L			01/05/17 13:34	1
Chlorobromomethane	ND		1.0		ug/L			01/05/17 13:34	1
Chlorodibromomethane	ND		0.50		ug/L			01/05/17 13:34	1
Chloroethane	ND		2.0		ug/L			01/05/17 13:34	1
Chloroform	ND		1.0		ug/L			01/05/17 13:34	1
Chloromethane	ND		2.0		ug/L			01/05/17 13:34	1
cis-1,2-Dichloroethene	**4.5**		1.0		ug/L			01/05/17 13:34	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			01/05/17 13:34	1
Dichlorobromomethane	ND		0.50		ug/L			01/05/17 13:34	1
Dichlorodifluoromethane	ND		1.0		ug/L			01/05/17 13:34	1
Ethyl ether	ND		1.0		ug/L			01/05/17 13:34	1
Ethylbenzene	ND		1.0		ug/L			01/05/17 13:34	1
Ethylene Dibromide	ND		1.0		ug/L			01/05/17 13:34	1
Hexachlorobutadiene	ND		0.40		ug/L			01/05/17 13:34	1
Isopropyl ether	ND		10		ug/L			01/05/17 13:34	1

Client Sample ID: REW-11-20170104
Date Collected: 01/04/17 12:00
Date Received: 01/05/17 01:00

Lab Sample ID: 480-111832-4
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			01/05/17 13:34	1
Methyl tert-butyl ether	ND		1.0		ug/L			01/05/17 13:34	1
Methylene Chloride	ND		1.0		ug/L			01/05/17 13:34	1
m-Xylene & p-Xylene	ND		2.0		ug/L			01/05/17 13:34	1
Naphthalene	ND		5.0		ug/L			01/05/17 13:34	1
n-Butylbenzene	ND		1.0		ug/L			01/05/17 13:34	1
N-Propylbenzene	ND		1.0		ug/L			01/05/17 13:34	1
o-Xylene	ND		1.0		ug/L			01/05/17 13:34	1
sec-Butylbenzene	ND		1.0		ug/L			01/05/17 13:34	1
Styrene	ND		1.0		ug/L			01/05/17 13:34	1
Tert-amyl methyl ether	ND		5.0		ug/L			01/05/17 13:34	1
Tert-butyl ethyl ether	ND		5.0		ug/L			01/05/17 13:34	1
tert-Butylbenzene	ND		1.0		ug/L			01/05/17 13:34	1
Tetrachloroethene	ND		1.0		ug/L			01/05/17 13:34	1
Tetrahydrofuran	ND	*	10		ug/L			01/05/17 13:34	1
Toluene	**2.4**		1.0		ug/L			01/05/17 13:34	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/05/17 13:34	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			01/05/17 13:34	1
Trichloroethene	ND		1.0		ug/L			01/05/17 13:34	1
Trichlorofluoromethane	ND		1.0		ug/L			01/05/17 13:34	1
Vinyl chloride	**2.9**		1.0		ug/L			01/05/17 13:34	1
Dibromomethane	ND		1.0		ug/L			01/05/17 13:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*70 - 130*		*01/05/17 13:34*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 130*		*01/05/17 13:34*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*01/05/17 13:34*	*1*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**13**		0.050		mg/L		01/05/17 09:37	01/05/17 16:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**63**		0.50		mg/L			01/05/17 21:17	1
Sulfate	ND		2.0		mg/L			01/05/17 21:17	1
Ammonia	**3.1**		0.40		mg/L		01/09/17 10:02	01/10/17 09:55	1
Nitrate as N	ND		0.050		mg/L			01/05/17 17:16	1
TOC Result 1	**2.9**		1.0		mg/L			01/12/17 05:38	1
TOC Result 2	**2.4**		1.0		mg/L			01/12/17 05:38	1
Total Organic Carbon - Duplicates	**2.7**		1.0		mg/L			01/12/17 05:38	1
Alkalinity, Total	**160**		5.0		mg/L			01/09/17 12:43	1
ortho-Phosphate	**0.028**		0.020		mg/L			01/05/17 08:45	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**7.2**	**HF**	0.1		SU			01/05/17 12:56	1

Client Sample ID: REW-12-20170104
Date Collected: 01/04/17 13:20
Date Received: 01/05/17 01:00

Lab Sample ID: 480-111832-5
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		20		ug/L			01/05/17 13:58	20
1,1,1-Trichloroethane	ND		20		ug/L			01/05/17 13:58	20
1,1,2,2-Tetrachloroethane	ND		10		ug/L			01/05/17 13:58	20
1,1,2-Trichloroethane	ND		20		ug/L			01/05/17 13:58	20
1,1-Dichloroethane	ND		20		ug/L			01/05/17 13:58	20
1,1-Dichloroethene	ND		20		ug/L			01/05/17 13:58	20
1,1-Dichloropropene	ND		20		ug/L			01/05/17 13:58	20
1,2,3-Trichlorobenzene	ND		20		ug/L			01/05/17 13:58	20
1,2,3-Trichloropropane	ND		20		ug/L			01/05/17 13:58	20
1,2,4-Trichlorobenzene	ND		20		ug/L			01/05/17 13:58	20
1,2,4-Trimethylbenzene	ND		20		ug/L			01/05/17 13:58	20
1,2-Dibromo-3-Chloropropane	ND		100		ug/L			01/05/17 13:58	20
1,2-Dichlorobenzene	ND		20		ug/L			01/05/17 13:58	20
1,2-Dichloroethane	ND		20		ug/L			01/05/17 13:58	20
1,2-Dichloropropane	ND		20		ug/L			01/05/17 13:58	20
1,3,5-Trimethylbenzene	ND		20		ug/L			01/05/17 13:58	20
1,3-Dichlorobenzene	ND		20		ug/L			01/05/17 13:58	20
1,3-Dichloropropane	ND		20		ug/L			01/05/17 13:58	20
1,4-Dichlorobenzene	ND		20		ug/L			01/05/17 13:58	20
1,4-Dioxane	ND		1000		ug/L			01/05/17 13:58	20
2,2-Dichloropropane	ND		20		ug/L			01/05/17 13:58	20
2-Butanone (MEK)	**340**		200		ug/L			01/05/17 13:58	20
2-Chlorotoluene	ND		20		ug/L			01/05/17 13:58	20
2-Hexanone	ND		200		ug/L			01/05/17 13:58	20
4-Chlorotoluene	ND		20		ug/L			01/05/17 13:58	20
4-Isopropyltoluene	ND		20		ug/L			01/05/17 13:58	20
4-Methyl-2-pentanone (MIBK)	ND		200		ug/L			01/05/17 13:58	20
Acetone	ND		1000		ug/L			01/05/17 13:58	20
Benzene	ND		20		ug/L			01/05/17 13:58	20
Bromobenzene	ND		20		ug/L			01/05/17 13:58	20
Bromoform	ND		20		ug/L			01/05/17 13:58	20
Bromomethane	ND		40		ug/L			01/05/17 13:58	20
Carbon disulfide	ND	*	200		ug/L			01/05/17 13:58	20
Carbon tetrachloride	ND		20		ug/L			01/05/17 13:58	20
Chlorobenzene	ND		20		ug/L			01/05/17 13:58	20
Chlorobromomethane	ND		20		ug/L			01/05/17 13:58	20
Chlorodibromomethane	ND		10		ug/L			01/05/17 13:58	20
Chloroethane	ND		40		ug/L			01/05/17 13:58	20
Chloroform	ND		20		ug/L			01/05/17 13:58	20
Chloromethane	ND		40		ug/L			01/05/17 13:58	20
cis-1,2-Dichloroethene	ND		20		ug/L			01/05/17 13:58	20
cis-1,3-Dichloropropene	ND		8.0		ug/L			01/05/17 13:58	20
Dichlorobromomethane	ND		10		ug/L			01/05/17 13:58	20
Dichlorodifluoromethane	ND		20		ug/L			01/05/17 13:58	20
Ethyl ether	ND		20		ug/L			01/05/17 13:58	20
Ethylbenzene	ND		20		ug/L			01/05/17 13:58	20
Ethylene Dibromide	ND		20		ug/L			01/05/17 13:58	20
Hexachlorobutadiene	ND		8.0		ug/L			01/05/17 13:58	20
Isopropyl ether	ND		200		ug/L			01/05/17 13:58	20

Client Sample ID: REW-12-20170104
Date Collected: 01/04/17 13:20
Date Received: 01/05/17 01:00

Lab Sample ID: 480-111832-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		20		ug/L			01/05/17 13:58	20
Methyl tert-butyl ether	ND		20		ug/L			01/05/17 13:58	20
Methylene Chloride	ND		20		ug/L			01/05/17 13:58	20
m-Xylene & p-Xylene	ND		40		ug/L			01/05/17 13:58	20
Naphthalene	ND		100		ug/L			01/05/17 13:58	20
n-Butylbenzene	ND		20		ug/L			01/05/17 13:58	20
N-Propylbenzene	ND		20		ug/L			01/05/17 13:58	20
o-Xylene	ND		20		ug/L			01/05/17 13:58	20
sec-Butylbenzene	ND		20		ug/L			01/05/17 13:58	20
Styrene	ND		20		ug/L			01/05/17 13:58	20
Tert-amyl methyl ether	ND		100		ug/L			01/05/17 13:58	20
Tert-butyl ethyl ether	ND		100		ug/L			01/05/17 13:58	20
tert-Butylbenzene	ND		20		ug/L			01/05/17 13:58	20
Tetrachloroethene	ND		20		ug/L			01/05/17 13:58	20
Tetrahydrofuran	ND	*	200		ug/L			01/05/17 13:58	20
Toluene	**31**		20		ug/L			01/05/17 13:58	20
trans-1,2-Dichloroethene	ND		20		ug/L			01/05/17 13:58	20
trans-1,3-Dichloropropene	ND		8.0		ug/L			01/05/17 13:58	20
Trichloroethene	ND		20		ug/L			01/05/17 13:58	20
Trichlorofluoromethane	ND		20		ug/L			01/05/17 13:58	20
Vinyl chloride	ND		20		ug/L			01/05/17 13:58	20
Dibromomethane	ND		20		ug/L			01/05/17 13:58	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*70 - 130*		*01/05/17 13:58*	*20*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 130*		*01/05/17 13:58*	*20*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*01/05/17 13:58*	*20*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**2.0**		0.050		mg/L		01/05/17 09:37	01/05/17 17:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**50**		25		mg/L			01/05/17 21:32	50
Sulfate	ND		100		mg/L			01/05/17 21:32	50
Ammonia	**0.46**		0.20		mg/L		01/09/17 10:02	01/10/17 09:56	1
Nitrate as N	ND		0.050		mg/L			01/05/17 17:17	1
TOC Result 1	**25000**		1000		mg/L			01/14/17 22:15	1000
TOC Result 2	**26000**		1000		mg/L			01/14/17 22:15	1000
Total Organic Carbon - Duplicates	**25000**		1000		mg/L			01/14/17 22:15	1000
Alkalinity, Total	**4300**		5.0		mg/L			01/11/17 08:15	1
ortho-Phosphate	**0.55**		0.020		mg/L			01/05/17 08:45	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**12.8**	**HF**	0.1		SU			01/10/17 21:24	1

Client Sample ID: DUP-20170104
Date Collected: 01/04/17 00:00
Date Received: 01/05/17 01:00

Lab Sample ID: 480-111832-6
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		20		ug/L			01/05/17 14:21	20
1,1,1-Trichloroethane	ND		20		ug/L			01/05/17 14:21	20
1,1,2,2-Tetrachloroethane	ND		10		ug/L			01/05/17 14:21	20
1,1,2-Trichloroethane	ND		20		ug/L			01/05/17 14:21	20
1,1-Dichloroethane	ND		20		ug/L			01/05/17 14:21	20
1,1-Dichloroethene	ND		20		ug/L			01/05/17 14:21	20
1,1-Dichloropropene	ND		20		ug/L			01/05/17 14:21	20
1,2,3-Trichlorobenzene	ND		20		ug/L			01/05/17 14:21	20
1,2,3-Trichloropropane	ND		20		ug/L			01/05/17 14:21	20
1,2,4-Trichlorobenzene	ND		20		ug/L			01/05/17 14:21	20
1,2,4-Trimethylbenzene	ND		20		ug/L			01/05/17 14:21	20
1,2-Dibromo-3-Chloropropane	ND		100		ug/L			01/05/17 14:21	20
1,2-Dichlorobenzene	ND		20		ug/L			01/05/17 14:21	20
1,2-Dichloroethane	ND		20		ug/L			01/05/17 14:21	20
1,2-Dichloropropane	ND		20		ug/L			01/05/17 14:21	20
1,3,5-Trimethylbenzene	ND		20		ug/L			01/05/17 14:21	20
1,3-Dichlorobenzene	ND		20		ug/L			01/05/17 14:21	20
1,3-Dichloropropane	ND		20		ug/L			01/05/17 14:21	20
1,4-Dichlorobenzene	ND		20		ug/L			01/05/17 14:21	20
1,4-Dioxane	ND		1000		ug/L			01/05/17 14:21	20
2,2-Dichloropropane	ND		20		ug/L			01/05/17 14:21	20
2-Butanone (MEK)	**360**		200		ug/L			01/05/17 14:21	20
2-Chlorotoluene	ND		20		ug/L			01/05/17 14:21	20
2-Hexanone	ND		200		ug/L			01/05/17 14:21	20
4-Chlorotoluene	ND		20		ug/L			01/05/17 14:21	20
4-Isopropyltoluene	ND		20		ug/L			01/05/17 14:21	20
4-Methyl-2-pentanone (MIBK)	ND		200		ug/L			01/05/17 14:21	20
Acetone	ND		1000		ug/L			01/05/17 14:21	20
Benzene	ND		20		ug/L			01/05/17 14:21	20
Bromobenzene	ND		20		ug/L			01/05/17 14:21	20
Bromoform	ND		20		ug/L			01/05/17 14:21	20
Bromomethane	ND		40		ug/L			01/05/17 14:21	20
Carbon disulfide	ND	*	200		ug/L			01/05/17 14:21	20
Carbon tetrachloride	ND		20		ug/L			01/05/17 14:21	20
Chlorobenzene	ND		20		ug/L			01/05/17 14:21	20
Chlorobromomethane	ND		20		ug/L			01/05/17 14:21	20
Chlorodibromomethane	ND		10		ug/L			01/05/17 14:21	20
Chloroethane	ND		40		ug/L			01/05/17 14:21	20
Chloroform	ND		20		ug/L			01/05/17 14:21	20
Chloromethane	ND		40		ug/L			01/05/17 14:21	20
cis-1,2-Dichloroethene	ND		20		ug/L			01/05/17 14:21	20
cis-1,3-Dichloropropene	ND		8.0		ug/L			01/05/17 14:21	20
Dichlorobromomethane	ND		10		ug/L			01/05/17 14:21	20
Dichlorodifluoromethane	ND		20		ug/L			01/05/17 14:21	20
Ethyl ether	ND		20		ug/L			01/05/17 14:21	20
Ethylbenzene	ND		20		ug/L			01/05/17 14:21	20
Ethylene Dibromide	ND		20		ug/L			01/05/17 14:21	20
Hexachlorobutadiene	ND		8.0		ug/L			01/05/17 14:21	20
Isopropyl ether	ND		200		ug/L			01/05/17 14:21	20

Client Sample ID: DUP-20170104

Lab Sample ID: 480-111832-6

Date Collected: 01/04/17 00:00

Matrix: Water

Date Received: 01/05/17 01:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		20		ug/L			01/05/17 14:21	20
Methyl tert-butyl ether	ND		20		ug/L			01/05/17 14:21	20
Methylene Chloride	ND		20		ug/L			01/05/17 14:21	20
m-Xylene & p-Xylene	ND		40		ug/L			01/05/17 14:21	20
Naphthalene	ND		100		ug/L			01/05/17 14:21	20
n-Butylbenzene	ND		20		ug/L			01/05/17 14:21	20
N-Propylbenzene	ND		20		ug/L			01/05/17 14:21	20
o-Xylene	ND		20		ug/L			01/05/17 14:21	20
sec-Butylbenzene	ND		20		ug/L			01/05/17 14:21	20
Styrene	ND		20		ug/L			01/05/17 14:21	20
Tert-amyl methyl ether	ND		100		ug/L			01/05/17 14:21	20
Tert-butyl ethyl ether	ND		100		ug/L			01/05/17 14:21	20
tert-Butylbenzene	ND		20		ug/L			01/05/17 14:21	20
Tetrachloroethene	ND		20		ug/L			01/05/17 14:21	20
Tetrahydrofuran	ND	*	200		ug/L			01/05/17 14:21	20
Toluene	**30**		20		ug/L			01/05/17 14:21	20
trans-1,2-Dichloroethene	ND		20		ug/L			01/05/17 14:21	20
trans-1,3-Dichloropropene	ND		8.0		ug/L			01/05/17 14:21	20
Trichloroethene	ND		20		ug/L			01/05/17 14:21	20
Trichlorofluoromethane	ND		20		ug/L			01/05/17 14:21	20
Vinyl chloride	ND		20		ug/L			01/05/17 14:21	20
Dibromomethane	ND		20		ug/L			01/05/17 14:21	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*70 - 130*		*01/05/17 14:21*	*20*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 130*		*01/05/17 14:21*	*20*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*01/05/17 14:21*	*20*

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-111832-7

Date Collected: 01/04/17 00:00

Matrix: Water

Date Received: 01/05/17 01:00

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			01/05/17 12:00	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/05/17 12:00	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			01/05/17 12:00	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/05/17 12:00	1
1,1-Dichloroethane	ND		1.0		ug/L			01/05/17 12:00	1
1,1-Dichloroethene	ND		1.0		ug/L			01/05/17 12:00	1
1,1-Dichloropropene	ND		1.0		ug/L			01/05/17 12:00	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/05/17 12:00	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/05/17 12:00	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/05/17 12:00	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/05/17 12:00	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/05/17 12:00	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/05/17 12:00	1
1,2-Dichloroethane	ND		1.0		ug/L			01/05/17 12:00	1
1,2-Dichloropropane	ND		1.0		ug/L			01/05/17 12:00	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/05/17 12:00	1

Client Sample ID: TRIP BLANK
Date Collected: 01/04/17 00:00
Date Received: 01/05/17 01:00

Lab Sample ID: 480-111832-7
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		1.0		ug/L			01/05/17 12:00	1
1,3-Dichloropropane	ND		1.0		ug/L			01/05/17 12:00	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/05/17 12:00	1
1,4-Dioxane	ND		50		ug/L			01/05/17 12:00	1
2,2-Dichloropropane	ND		1.0		ug/L			01/05/17 12:00	1
2-Butanone (MEK)	ND		10		ug/L			01/05/17 12:00	1
2-Chlorotoluene	ND		1.0		ug/L			01/05/17 12:00	1
2-Hexanone	ND		10		ug/L			01/05/17 12:00	1
4-Chlorotoluene	ND		1.0		ug/L			01/05/17 12:00	1
4-Isopropyltoluene	ND		1.0		ug/L			01/05/17 12:00	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			01/05/17 12:00	1
Acetone	ND		50		ug/L			01/05/17 12:00	1
Benzene	ND		1.0		ug/L			01/05/17 12:00	1
Bromobenzene	ND		1.0		ug/L			01/05/17 12:00	1
Bromoform	ND		1.0		ug/L			01/05/17 12:00	1
Bromomethane	ND		2.0		ug/L			01/05/17 12:00	1
Carbon disulfide	ND	*	10		ug/L			01/05/17 12:00	1
Carbon tetrachloride	ND		1.0		ug/L			01/05/17 12:00	1
Chlorobenzene	ND		1.0		ug/L			01/05/17 12:00	1
Chlorobromomethane	ND		1.0		ug/L			01/05/17 12:00	1
Chlorodibromomethane	ND		0.50		ug/L			01/05/17 12:00	1
Chloroethane	ND		2.0		ug/L			01/05/17 12:00	1
Chloroform	ND		1.0		ug/L			01/05/17 12:00	1
Chloromethane	ND		2.0		ug/L			01/05/17 12:00	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			01/05/17 12:00	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			01/05/17 12:00	1
Dichlorobromomethane	ND		0.50		ug/L			01/05/17 12:00	1
Dichlorodifluoromethane	ND		1.0		ug/L			01/05/17 12:00	1
Ethyl ether	ND		1.0		ug/L			01/05/17 12:00	1
Ethylbenzene	ND		1.0		ug/L			01/05/17 12:00	1
Ethylene Dibromide	ND		1.0		ug/L			01/05/17 12:00	1
Hexachlorobutadiene	ND		0.40		ug/L			01/05/17 12:00	1
Isopropyl ether	ND		10		ug/L			01/05/17 12:00	1
Isopropylbenzene	ND		1.0		ug/L			01/05/17 12:00	1
Methyl tert-butyl ether	ND		1.0		ug/L			01/05/17 12:00	1
Methylene Chloride	ND		1.0		ug/L			01/05/17 12:00	1
m-Xylene & p-Xylene	ND		2.0		ug/L			01/05/17 12:00	1
Naphthalene	ND		5.0		ug/L			01/05/17 12:00	1
n-Butylbenzene	ND		1.0		ug/L			01/05/17 12:00	1
N-Propylbenzene	ND		1.0		ug/L			01/05/17 12:00	1
o-Xylene	ND		1.0		ug/L			01/05/17 12:00	1
sec-Butylbenzene	ND		1.0		ug/L			01/05/17 12:00	1
Styrene	ND		1.0		ug/L			01/05/17 12:00	1
Tert-amyl methyl ether	ND		5.0		ug/L			01/05/17 12:00	1
Tert-butyl ethyl ether	ND		5.0		ug/L			01/05/17 12:00	1
tert-Butylbenzene	ND		1.0		ug/L			01/05/17 12:00	1
Tetrachloroethene	ND		1.0		ug/L			01/05/17 12:00	1
Tetrahydrofuran	ND	*	10		ug/L			01/05/17 12:00	1
Toluene	ND		1.0		ug/L			01/05/17 12:00	1

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

TestAmerica Job ID: 480-111832-1

Client Sample ID: TRIP BLANK
Date Collected: 01/04/17 00:00
Date Received: 01/05/17 01:00

Lab Sample ID: 480-111832-7
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/05/17 12:00	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			01/05/17 12:00	1
Trichloroethene	ND		1.0		ug/L			01/05/17 12:00	1
Trichlorofluoromethane	ND		1.0		ug/L			01/05/17 12:00	1
Vinyl chloride	ND		1.0		ug/L			01/05/17 12:00	1
Dibromomethane	ND		1.0		ug/L			01/05/17 12:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*70 - 130*		*01/05/17 12:00*	*1*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 130*		*01/05/17 12:00*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*01/05/17 12:00*	*1*

Surrogate Summary

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

TestAmerica Job ID: 480-111832-1

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)
480-111832-1	REW-6-20170104	98	109	101
480-111832-2	REW-7-20170104	100	107	104
480-111832-3	REW-8-20170104	97	111	100
480-111832-4	REW-11-20170104	98	107	100
480-111832-5	REW-12-20170104	98	106	101
480-111832-6	DUP-20170104	100	108	103
480-111832-7	TRIP BLANK	100	109	103
LCS 480-338883/5	Lab Control Sample	98	109	101
LCSD 480-338883/6	Lab Control Sample Dup	95	101	102
MB 480-338883/8	Method Blank	99	110	102

Surrogate Legend

TOL = Toluene-d8 (Surr)
12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)

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

Lab Sample ID: MB 480-338883/8
Matrix: Water
Analysis Batch: 338883

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			01/05/17 11:25	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/05/17 11:25	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			01/05/17 11:25	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/05/17 11:25	1
1,1-Dichloroethane	ND		1.0		ug/L			01/05/17 11:25	1
1,1-Dichloroethene	ND		1.0		ug/L			01/05/17 11:25	1
1,1-Dichloropropene	ND		1.0		ug/L			01/05/17 11:25	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/05/17 11:25	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/05/17 11:25	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/05/17 11:25	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/05/17 11:25	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/05/17 11:25	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/05/17 11:25	1
1,2-Dichloroethane	ND		1.0		ug/L			01/05/17 11:25	1
1,2-Dichloropropane	ND		1.0		ug/L			01/05/17 11:25	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/05/17 11:25	1
1,3-Dichlorobenzene	ND		1.0		ug/L			01/05/17 11:25	1
1,3-Dichloropropane	ND		1.0		ug/L			01/05/17 11:25	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/05/17 11:25	1
1,4-Dioxane	ND		50		ug/L			01/05/17 11:25	1
2,2-Dichloropropane	ND		1.0		ug/L			01/05/17 11:25	1
2-Butanone (MEK)	ND		10		ug/L			01/05/17 11:25	1
2-Chlorotoluene	ND		1.0		ug/L			01/05/17 11:25	1
2-Hexanone	ND		10		ug/L			01/05/17 11:25	1
4-Chlorotoluene	ND		1.0		ug/L			01/05/17 11:25	1
4-Isopropyltoluene	ND		1.0		ug/L			01/05/17 11:25	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			01/05/17 11:25	1
Acetone	ND		50		ug/L			01/05/17 11:25	1
Benzene	ND		1.0		ug/L			01/05/17 11:25	1
Bromobenzene	ND		1.0		ug/L			01/05/17 11:25	1
Bromoform	ND		1.0		ug/L			01/05/17 11:25	1
Bromomethane	ND		2.0		ug/L			01/05/17 11:25	1
Carbon disulfide	ND		10		ug/L			01/05/17 11:25	1
Carbon tetrachloride	ND		1.0		ug/L			01/05/17 11:25	1
Chlorobenzene	ND		1.0		ug/L			01/05/17 11:25	1
Chlorobromomethane	ND		1.0		ug/L			01/05/17 11:25	1
Chlorodibromomethane	ND		0.50		ug/L			01/05/17 11:25	1
Chloroethane	ND		2.0		ug/L			01/05/17 11:25	1
Chloroform	ND		1.0		ug/L			01/05/17 11:25	1
Chloromethane	ND		2.0		ug/L			01/05/17 11:25	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			01/05/17 11:25	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			01/05/17 11:25	1
Dichlorobromomethane	ND		0.50		ug/L			01/05/17 11:25	1
Dichlorodifluoromethane	ND		1.0		ug/L			01/05/17 11:25	1
Ethyl ether	ND		1.0		ug/L			01/05/17 11:25	1
Ethylbenzene	ND		1.0		ug/L			01/05/17 11:25	1
Ethylene Dibromide	ND		1.0		ug/L			01/05/17 11:25	1
Hexachlorobutadiene	ND		0.40		ug/L			01/05/17 11:25	1

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

Lab Sample ID: MB 480-338883/8
Matrix: Water
Analysis Batch: 338883

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			01/05/17 11:25	1
Isopropylbenzene	ND		1.0		ug/L			01/05/17 11:25	1
Methyl tert-butyl ether	ND		1.0		ug/L			01/05/17 11:25	1
Methylene Chloride	ND		1.0		ug/L			01/05/17 11:25	1
m-Xylene & p-Xylene	ND		2.0		ug/L			01/05/17 11:25	1
Naphthalene	ND		5.0		ug/L			01/05/17 11:25	1
n-Butylbenzene	ND		1.0		ug/L			01/05/17 11:25	1
N-Propylbenzene	ND		1.0		ug/L			01/05/17 11:25	1
o-Xylene	ND		1.0		ug/L			01/05/17 11:25	1
sec-Butylbenzene	ND		1.0		ug/L			01/05/17 11:25	1
Styrene	ND		1.0		ug/L			01/05/17 11:25	1
Tert-amyl methyl ether	ND		5.0		ug/L			01/05/17 11:25	1
Tert-butyl ethyl ether	ND		5.0		ug/L			01/05/17 11:25	1
tert-Butylbenzene	ND		1.0		ug/L			01/05/17 11:25	1
Tetrachloroethene	ND		1.0		ug/L			01/05/17 11:25	1
Tetrahydrofuran	ND		10		ug/L			01/05/17 11:25	1
Toluene	ND		1.0		ug/L			01/05/17 11:25	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/05/17 11:25	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			01/05/17 11:25	1
Trichloroethene	ND		1.0		ug/L			01/05/17 11:25	1
Trichlorofluoromethane	ND		1.0		ug/L			01/05/17 11:25	1
Vinyl chloride	ND		1.0		ug/L			01/05/17 11:25	1
Dibromomethane	ND		1.0		ug/L			01/05/17 11:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*70 - 130*		*01/05/17 11:25*	*1*
1,2-Dichloroethane-d4 (Surr)	*110*		*70 - 130*		*01/05/17 11:25*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*01/05/17 11:25*	*1*

Lab Sample ID: LCS 480-338883/5
Matrix: Water
Analysis Batch: 338883

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	23.5		ug/L		94	70 - 130
1,1,1-Trichloroethane	25.0	23.2		ug/L		93	70 - 130
1,1,2,2-Tetrachloroethane	25.0	20.8		ug/L		83	70 - 130
1,1,2-Trichloroethane	25.0	20.9		ug/L		83	70 - 130
1,1-Dichloroethane	25.0	23.2		ug/L		93	70 - 130
1,1-Dichloroethene	25.0	20.5		ug/L		82	70 - 130
1,1-Dichloropropene	25.0	22.9		ug/L		92	70 - 130
1,2,3-Trichlorobenzene	25.0	23.1		ug/L		92	70 - 130
1,2,3-Trichloropropane	25.0	20.4		ug/L		82	70 - 130
1,2,4-Trichlorobenzene	25.0	23.5		ug/L		94	70 - 130
1,2,4-Trimethylbenzene	25.0	22.0		ug/L		88	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	21.9		ug/L		88	70 - 130
1,2-Dichlorobenzene	25.0	22.5		ug/L		90	70 - 130
1,2-Dichloroethane	25.0	23.0		ug/L		92	70 - 130

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

Lab Sample ID: LCS 480-338883/5
Matrix: Water
Analysis Batch: 338883

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	24.0		ug/L		96	70 - 130
1,3,5-Trimethylbenzene	25.0	21.6		ug/L		87	70 - 130
1,3-Dichlorobenzene	25.0	22.0		ug/L		88	70 - 130
1,3-Dichloropropane	25.0	21.5		ug/L		86	70 - 130
1,4-Dichlorobenzene	25.0	22.0		ug/L		88	70 - 130
1,4-Dioxane	500	390		ug/L		78	70 - 130
2,2-Dichloropropane	25.0	23.8		ug/L		95	70 - 130
2-Butanone (MEK)	125	149		ug/L		119	70 - 130
2-Chlorotoluene	25.0	22.4		ug/L		90	70 - 130
2-Hexanone	125	125		ug/L		100	70 - 130
4-Chlorotoluene	25.0	22.4		ug/L		90	70 - 130
4-Isopropyltoluene	25.0	23.1		ug/L		93	70 - 130
4-Methyl-2-pentanone (MIBK)	125	123		ug/L		99	70 - 130
Acetone	125	139		ug/L		111	70 - 130
Benzene	25.0	21.6		ug/L		86	70 - 130
Bromobenzene	25.0	21.2		ug/L		85	70 - 130
Bromoform	25.0	23.5		ug/L		94	70 - 130
Bromomethane	25.0	24.6		ug/L		98	70 - 130
Carbon disulfide	25.0	18.3		ug/L		73	70 - 130
Carbon tetrachloride	25.0	24.3		ug/L		97	70 - 130
Chlorobenzene	25.0	22.1		ug/L		88	70 - 130
Chlorobromomethane	25.0	23.2		ug/L		93	70 - 130
Chlorodibromomethane	25.0	24.0		ug/L		96	70 - 130
Chloroethane	25.0	24.5		ug/L		98	70 - 130
Chloroform	25.0	21.7		ug/L		87	70 - 130
Chloromethane	25.0	23.8		ug/L		95	70 - 130
cis-1,2-Dichloroethene	25.0	22.2		ug/L		89	70 - 130
cis-1,3-Dichloropropene	25.0	23.0		ug/L		92	70 - 130
Dichlorobromomethane	25.0	23.4		ug/L		94	70 - 130
Dichlorodifluoromethane	25.0	20.0		ug/L		80	70 - 130
Ethyl ether	25.0	22.1		ug/L		88	70 - 130
Ethylbenzene	25.0	22.3		ug/L		89	70 - 130
Ethylene Dibromide	25.0	22.1		ug/L		89	70 - 130
Hexachlorobutadiene	25.0	23.3		ug/L		93	70 - 130
Isopropyl ether	25.0	32.6		ug/L		130	70 - 130
Isopropylbenzene	25.0	21.7		ug/L		87	70 - 130
Methyl tert-butyl ether	25.0	21.6		ug/L		86	70 - 130
Methylene Chloride	25.0	21.8		ug/L		87	70 - 130
m-Xylene & p-Xylene	25.0	22.3		ug/L		89	70 - 130
Naphthalene	25.0	23.1		ug/L		92	70 - 130
n-Butylbenzene	25.0	22.1		ug/L		88	70 - 130
N-Propylbenzene	25.0	21.8		ug/L		87	70 - 130
o-Xylene	25.0	22.5		ug/L		90	70 - 130
sec-Butylbenzene	25.0	22.1		ug/L		88	70 - 130
Styrene	25.0	22.1		ug/L		88	70 - 130
Tert-amyl methyl ether	25.0	24.1		ug/L		96	70 - 130
Tert-butyl ethyl ether	25.0	27.1		ug/L		109	70 - 130
tert-Butylbenzene	25.0	23.3		ug/L		93	70 - 130

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

Lab Sample ID: LCS 480-338883/5
Matrix: Water
Analysis Batch: 338883

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	23.1		ug/L		92	70 - 130
Tetrahydrofuran	50.0	67.6	*	ug/L		135	70 - 130
Toluene	25.0	21.1		ug/L		84	70 - 130
trans-1,2-Dichloroethene	25.0	21.6		ug/L		86	70 - 130
trans-1,3-Dichloropropene	25.0	21.3		ug/L		85	70 - 130
Trichloroethene	25.0	23.1		ug/L		92	70 - 130
Trichlorofluoromethane	25.0	24.5		ug/L		98	70 - 130
Vinyl chloride	25.0	24.6		ug/L		98	70 - 130
Dibromomethane	25.0	22.7		ug/L		91	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*98*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 130*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 480-338883/6
Matrix: Water
Analysis Batch: 338883

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	22.1		ug/L		88	70 - 130	6	20
1,1,1-Trichloroethane	25.0	21.1		ug/L		84	70 - 130	10	20
1,1,2,2-Tetrachloroethane	25.0	22.1		ug/L		88	70 - 130	6	20
1,1,2-Trichloroethane	25.0	20.2		ug/L		81	70 - 130	3	20
1,1-Dichloroethane	25.0	21.3		ug/L		85	70 - 130	9	20
1,1-Dichloroethene	25.0	18.5		ug/L		74	70 - 130	10	20
1,1-Dichloropropene	25.0	20.7		ug/L		83	70 - 130	10	20
1,2,3-Trichlorobenzene	25.0	23.8		ug/L		95	70 - 130	3	20
1,2,3-Trichloropropane	25.0	21.4		ug/L		85	70 - 130	5	20
1,2,4-Trichlorobenzene	25.0	23.5		ug/L		94	70 - 130	0	20
1,2,4-Trimethylbenzene	25.0	20.7		ug/L		83	70 - 130	6	20
1,2-Dibromo-3-Chloropropane	25.0	21.6		ug/L		86	70 - 130	1	20
1,2-Dichlorobenzene	25.0	21.9		ug/L		88	70 - 130	3	20
1,2-Dichloroethane	25.0	21.3		ug/L		85	70 - 130	7	20
1,2-Dichloropropane	25.0	21.9		ug/L		88	70 - 130	9	20
1,3,5-Trimethylbenzene	25.0	21.0		ug/L		84	70 - 130	3	20
1,3-Dichlorobenzene	25.0	21.8		ug/L		87	70 - 130	1	20
1,3-Dichloropropane	25.0	20.2		ug/L		81	70 - 130	6	20
1,4-Dichlorobenzene	25.0	21.3		ug/L		85	70 - 130	3	20
1,4-Dioxane	500	413		ug/L		83	70 - 130	6	20
2,2-Dichloropropane	25.0	21.8		ug/L		87	70 - 130	9	20
2-Butanone (MEK)	125	141		ug/L		113	70 - 130	5	20
2-Chlorotoluene	25.0	21.8		ug/L		87	70 - 130	3	20
2-Hexanone	125	123		ug/L		98	70 - 130	2	20
4-Chlorotoluene	25.0	21.3		ug/L		85	70 - 130	5	20
4-Isopropyltoluene	25.0	22.1		ug/L		88	70 - 130	5	20
4-Methyl-2-pentanone (MIBK)	125	119		ug/L		95	70 - 130	4	20
Acetone	125	132		ug/L		105	70 - 130	5	20

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

Lab Sample ID: LCSD 480-338883/6
Matrix: Water
Analysis Batch: 338883

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	20.2		ug/L		81	70 - 130	6	20
Bromobenzene	25.0	21.0		ug/L		84	70 - 130	1	20
Bromoform	25.0	22.2		ug/L		89	70 - 130	6	20
Bromomethane	25.0	22.5		ug/L		90	70 - 130	9	20
Carbon disulfide	25.0	16.8	*	ug/L		67	70 - 130	9	20
Carbon tetrachloride	25.0	22.3		ug/L		89	70 - 130	9	20
Chlorobenzene	25.0	20.9		ug/L		83	70 - 130	6	20
Chlorobromomethane	25.0	21.4		ug/L		86	70 - 130	8	20
Chlorodibromomethane	25.0	22.9		ug/L		92	70 - 130	5	20
Chloroethane	25.0	22.1		ug/L		89	70 - 130	10	20
Chloroform	25.0	20.1		ug/L		80	70 - 130	8	20
Chloromethane	25.0	22.0		ug/L		88	70 - 130	8	20
cis-1,2-Dichloroethene	25.0	20.3		ug/L		81	70 - 130	9	20
cis-1,3-Dichloropropene	25.0	21.4		ug/L		86	70 - 130	7	20
Dichlorobromomethane	25.0	22.3		ug/L		89	70 - 130	5	20
Dichlorodifluoromethane	25.0	18.4		ug/L		74	70 - 130	8	20
Ethyl ether	25.0	22.4		ug/L		90	70 - 130	1	20
Ethylbenzene	25.0	20.7		ug/L		83	70 - 130	7	20
Ethylene Dibromide	25.0	20.6		ug/L		83	70 - 130	7	20
Hexachlorobutadiene	25.0	22.0		ug/L		88	70 - 130	6	20
Isopropyl ether	25.0	31.1		ug/L		124	70 - 130	5	20
Isopropylbenzene	25.0	20.6		ug/L		82	70 - 130	5	20
Methyl tert-butyl ether	25.0	20.3		ug/L		81	70 - 130	6	20
Methylene Chloride	25.0	20.3		ug/L		81	70 - 130	7	20
m-Xylene & p-Xylene	25.0	21.3		ug/L		85	70 - 130	5	20
Naphthalene	25.0	22.9		ug/L		92	70 - 130	1	20
n-Butylbenzene	25.0	21.6		ug/L		86	70 - 130	2	20
N-Propylbenzene	25.0	20.4		ug/L		82	70 - 130	6	20
o-Xylene	25.0	21.2		ug/L		85	70 - 130	6	20
sec-Butylbenzene	25.0	21.2		ug/L		85	70 - 130	4	20
Styrene	25.0	21.4		ug/L		86	70 - 130	3	20
Tert-amyl methyl ether	25.0	23.0		ug/L		92	70 - 130	5	20
Tert-butyl ethyl ether	25.0	26.0		ug/L		104	70 - 130	4	20
tert-Butylbenzene	25.0	22.8		ug/L		91	70 - 130	2	20
Tetrachloroethene	25.0	21.5		ug/L		86	70 - 130	7	20
Tetrahydrofuran	50.0	64.0		ug/L		128	70 - 130	5	20
Toluene	25.0	20.1		ug/L		80	70 - 130	5	20
trans-1,2-Dichloroethene	25.0	19.7		ug/L		79	70 - 130	9	20
trans-1,3-Dichloropropene	25.0	21.3		ug/L		85	70 - 130	0	20
Trichloroethene	25.0	20.8		ug/L		83	70 - 130	10	20
Trichlorofluoromethane	25.0	22.1		ug/L		88	70 - 130	11	20
Vinyl chloride	25.0	22.2		ug/L		89	70 - 130	10	20
Dibromomethane	25.0	22.0		ug/L		88	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*95*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*

Method: 6010 - Metals (ICP)

Lab Sample ID: MB 480-338876/1-A
Matrix: Water
Analysis Batch: 339063

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 338876

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050		mg/L		01/05/17 09:37	01/05/17 16:12	1

Lab Sample ID: LCS 480-338876/2-A
Matrix: Water
Analysis Batch: 339063

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 338876

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	10.6		mg/L		106	80 - 120

Lab Sample ID: LCSD 480-338876/3-A
Matrix: Water
Analysis Batch: 339063

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 338876

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	10.0	10.5		mg/L		105	80 - 120	1	20

Lab Sample ID: 480-111832-4 MS
Matrix: Water
Analysis Batch: 339063

Client Sample ID: REW-11-20170104
Prep Type: Total/NA
Prep Batch: 338876

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	13		10.0	24.3		mg/L		111	75 - 125

Lab Sample ID: 480-111832-4 MSD
Matrix: Water
Analysis Batch: 339063

Client Sample ID: REW-11-20170104
Prep Type: Total/NA
Prep Batch: 338876

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	13		10.0	24.4		mg/L		112	75 - 125	0	20

Lab Sample ID: MB 480-339025/1-A
Matrix: Water
Analysis Batch: 339256

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 339025

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050		mg/L		01/06/17 09:25	01/06/17 21:16	1

Lab Sample ID: LCS 480-339025/2-A
Matrix: Water
Analysis Batch: 339256

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 339025

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	10.9		mg/L		109	80 - 120

Lab Sample ID: LCSD 480-339025/3-A
Matrix: Water
Analysis Batch: 339256

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 339025

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	10.0	10.8		mg/L		108	80 - 120	1	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-338943/4
Matrix: Water
Analysis Batch: 338943

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50		mg/L			01/05/17 16:39	1
Sulfate	ND		2.0		mg/L			01/05/17 16:39	1

Lab Sample ID: LCS 480-338943/3
Matrix: Water
Analysis Batch: 338943

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	49.6		mg/L		99	90 - 110
Sulfate	50.0	47.2		mg/L		94	90 - 110

Lab Sample ID: 480-111832-5 MS
Matrix: Water
Analysis Batch: 338943

Client Sample ID: REW-12-20170104
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50		2500	2550		mg/L		100	81 - 120
Sulfate	ND		2500	2330		mg/L		93	80 - 120

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-339274/2-A
Matrix: Water
Analysis Batch: 339425

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 339274

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.20		mg/L		01/09/17 10:02	01/10/17 09:45	1

Lab Sample ID: LCS 480-339274/1-A
Matrix: Water
Analysis Batch: 339425

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 339274

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.08		mg/L		108	90 - 110

Lab Sample ID: 480-111832-2 MS
Matrix: Water
Analysis Batch: 339425

Client Sample ID: REW-7-20170104
Prep Type: Total/NA
Prep Batch: 339274

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	0.42		0.500	0.911		mg/L		98	90 - 110

Lab Sample ID: 480-111832-1 DU
Matrix: Water
Analysis Batch: 339425

Client Sample ID: REW-6-20170104
Prep Type: Total/NA
Prep Batch: 339274

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Ammonia	14		14.4		mg/L		6	20

Method: 9040C - pH

Lab Sample ID: 480-111832-1 DU
Matrix: Water
Analysis Batch: 339511

Client Sample ID: REW-6-20170104
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
pH	13.3	HF		13.3		SU				0.08	5

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-339827/46
Matrix: Water
Analysis Batch: 339827

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TOC Result 1	ND		1.0		mg/L			01/12/17 03:49	1
TOC Result 2	ND		1.0		mg/L			01/12/17 03:49	1
Total Organic Carbon - Duplicates	ND		1.0		mg/L			01/12/17 03:49	1

Lab Sample ID: LCS 480-339827/47
Matrix: Water
Analysis Batch: 339827

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
TOC Result 1			60.0	58.4		mg/L		97	90 - 110		
TOC Result 2			60.0	61.1		mg/L		102	90 - 110		
Total Organic Carbon - Duplicates			60.0	59.7		mg/L		100	90 - 110		

Lab Sample ID: MB 480-340101/5
Matrix: Water
Analysis Batch: 340101

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TOC Result 1	ND		1.0		mg/L			01/14/17 18:13	1
TOC Result 2	ND		1.0		mg/L			01/14/17 18:13	1
Total Organic Carbon - Duplicates	ND		1.0		mg/L			01/14/17 18:13	1

Lab Sample ID: LCS 480-340101/6
Matrix: Water
Analysis Batch: 340101

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
TOC Result 1			60.0	57.8		mg/L		96	90 - 110		
TOC Result 2			60.0	61.4		mg/L		102	90 - 110		
Total Organic Carbon - Duplicates			60.0	59.6		mg/L		99	90 - 110		

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-339213/30
Matrix: Water
Analysis Batch: 339213

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	ND		5.0		mg/L			01/05/17 17:56	1

Lab Sample ID: MB 480-339213/7
Matrix: Water
Analysis Batch: 339213

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	ND		5.0		mg/L			01/05/17 15:21	1

Lab Sample ID: LCS 480-339213/31
Matrix: Water
Analysis Batch: 339213

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total	100	100		mg/L		100	90 - 110

Lab Sample ID: LCS 480-339213/8
Matrix: Water
Analysis Batch: 339213

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total	100	104		mg/L		104	90 - 110

Lab Sample ID: MB 480-339387/7
Matrix: Water
Analysis Batch: 339387

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	ND		5.0		mg/L			01/09/17 12:30	1

Lab Sample ID: LCS 480-339387/8
Matrix: Water
Analysis Batch: 339387

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total	100	99.8		mg/L		100	90 - 110

Lab Sample ID: MB 480-339587/3
Matrix: Water
Analysis Batch: 339587

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	ND		5.0		mg/L			01/11/17 08:15	1

Lab Sample ID: LCS 480-339587/4
Matrix: Water
Analysis Batch: 339587

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total	100	99.6		mg/L		100	90 - 110

Lab Sample ID: 480-111832-5 MS
Matrix: Water
Analysis Batch: 339587

Client Sample ID: REW-12-20170104
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Alkalinity, Total	4300		2500	6850		mg/L		101	60 - 140		

Lab Sample ID: 480-111832-1 DU
Matrix: Water
Analysis Batch: 339587

Client Sample ID: REW-6-20170104
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Alkalinity, Total	11000			10800		mg/L				0.9	20

Method: SM 4500 P E - Orthophosphate

Lab Sample ID: MB 480-338928/3
Matrix: Water
Analysis Batch: 338928

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
ortho-Phosphate	ND		0.020		mg/L			01/05/17 08:45	1

Lab Sample ID: LCS 480-338928/4
Matrix: Water
Analysis Batch: 338928

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
ortho-Phosphate			0.200	0.193		mg/L		96	90 - 110		

GC/MS VOA

Analysis Batch: 338883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111832-1	REW-6-20170104	Total/NA	Water	8260C	
480-111832-2	REW-7-20170104	Total/NA	Water	8260C	
480-111832-3	REW-8-20170104	Total/NA	Water	8260C	
480-111832-4	REW-11-20170104	Total/NA	Water	8260C	
480-111832-5	REW-12-20170104	Total/NA	Water	8260C	
480-111832-6	DUP-20170104	Total/NA	Water	8260C	
480-111832-7	TRIP BLANK	Total/NA	Water	8260C	
MB 480-338883/8	Method Blank	Total/NA	Water	8260C	
LCS 480-338883/5	Lab Control Sample	Total/NA	Water	8260C	
LCSD 480-338883/6	Lab Control Sample Dup	Total/NA	Water	8260C	

Metals

Prep Batch: 338876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111832-2	REW-7-20170104	Total/NA	Water	3005A	
480-111832-3	REW-8-20170104	Total/NA	Water	3005A	
480-111832-4	REW-11-20170104	Total/NA	Water	3005A	
480-111832-5	REW-12-20170104	Total/NA	Water	3005A	
MB 480-338876/1-A	Method Blank	Total/NA	Water	3005A	
LCS 480-338876/2-A	Lab Control Sample	Total/NA	Water	3005A	
LCSD 480-338876/3-A	Lab Control Sample Dup	Total/NA	Water	3005A	
480-111832-4 MS	REW-11-20170104	Total/NA	Water	3005A	
480-111832-4 MSD	REW-11-20170104	Total/NA	Water	3005A	

Prep Batch: 339025

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111832-1	REW-6-20170104	Total/NA	Water	3005A	
MB 480-339025/1-A	Method Blank	Total/NA	Water	3005A	
LCS 480-339025/2-A	Lab Control Sample	Total/NA	Water	3005A	
LCSD 480-339025/3-A	Lab Control Sample Dup	Total/NA	Water	3005A	

Analysis Batch: 339063

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111832-2	REW-7-20170104	Total/NA	Water	6010	338876
480-111832-3	REW-8-20170104	Total/NA	Water	6010	338876
480-111832-4	REW-11-20170104	Total/NA	Water	6010	338876
480-111832-5	REW-12-20170104	Total/NA	Water	6010	338876
MB 480-338876/1-A	Method Blank	Total/NA	Water	6010	338876
LCS 480-338876/2-A	Lab Control Sample	Total/NA	Water	6010	338876
LCSD 480-338876/3-A	Lab Control Sample Dup	Total/NA	Water	6010	338876
480-111832-4 MS	REW-11-20170104	Total/NA	Water	6010	338876
480-111832-4 MSD	REW-11-20170104	Total/NA	Water	6010	338876

Analysis Batch: 339256

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111832-1	REW-6-20170104	Total/NA	Water	6010	339025
MB 480-339025/1-A	Method Blank	Total/NA	Water	6010	339025
LCS 480-339025/2-A	Lab Control Sample	Total/NA	Water	6010	339025
LCSD 480-339025/3-A	Lab Control Sample Dup	Total/NA	Water	6010	339025

General Chemistry

Analysis Batch: 338928

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111832-1	REW-6-20170104	Total/NA	Water	SM 4500 P E	
480-111832-2	REW-7-20170104	Total/NA	Water	SM 4500 P E	
480-111832-3	REW-8-20170104	Total/NA	Water	SM 4500 P E	
480-111832-4	REW-11-20170104	Total/NA	Water	SM 4500 P E	
480-111832-5	REW-12-20170104	Total/NA	Water	SM 4500 P E	
MB 480-338928/3	Method Blank	Total/NA	Water	SM 4500 P E	
LCS 480-338928/4	Lab Control Sample	Total/NA	Water	SM 4500 P E	

Analysis Batch: 338943

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111832-1	REW-6-20170104	Total/NA	Water	300.0	
480-111832-2	REW-7-20170104	Total/NA	Water	300.0	
480-111832-3	REW-8-20170104	Total/NA	Water	300.0	
480-111832-4	REW-11-20170104	Total/NA	Water	300.0	
480-111832-5	REW-12-20170104	Total/NA	Water	300.0	
MB 480-338943/4	Method Blank	Total/NA	Water	300.0	
LCS 480-338943/3	Lab Control Sample	Total/NA	Water	300.0	
480-111832-5 MS	REW-12-20170104	Total/NA	Water	300.0	

Analysis Batch: 338956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111832-2	REW-7-20170104	Total/NA	Water	9040C	
480-111832-3	REW-8-20170104	Total/NA	Water	9040C	
480-111832-4	REW-11-20170104	Total/NA	Water	9040C	
LCS 480-338956/1	Lab Control Sample	Total/NA	Water	9040C	

Analysis Batch: 339007

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111832-1	REW-6-20170104	Total/NA	Water	353.2	
480-111832-2	REW-7-20170104	Total/NA	Water	353.2	
480-111832-3	REW-8-20170104	Total/NA	Water	353.2	
480-111832-4	REW-11-20170104	Total/NA	Water	353.2	
480-111832-5	REW-12-20170104	Total/NA	Water	353.2	

Analysis Batch: 339213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111832-2	REW-7-20170104	Total/NA	Water	SM 2320B	
480-111832-3	REW-8-20170104	Total/NA	Water	SM 2320B	
MB 480-339213/30	Method Blank	Total/NA	Water	SM 2320B	
MB 480-339213/7	Method Blank	Total/NA	Water	SM 2320B	
LCS 480-339213/31	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 480-339213/8	Lab Control Sample	Total/NA	Water	SM 2320B	

Prep Batch: 339274

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111832-1	REW-6-20170104	Total/NA	Water	Distill/Ammonia	
480-111832-2	REW-7-20170104	Total/NA	Water	Distill/Ammonia	
480-111832-3	REW-8-20170104	Total/NA	Water	Distill/Ammonia	
480-111832-4	REW-11-20170104	Total/NA	Water	Distill/Ammonia	
480-111832-5	REW-12-20170104	Total/NA	Water	Distill/Ammonia	
MB 480-339274/2-A	Method Blank	Total/NA	Water	Distill/Ammonia	

General Chemistry (Continued)

Prep Batch: 339274 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-339274/1-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	
480-111832-2 MS	REW-7-20170104	Total/NA	Water	Distill/Ammonia	
480-111832-1 DU	REW-6-20170104	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 339387

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111832-4	REW-11-20170104	Total/NA	Water	SM 2320B	
MB 480-339387/7	Method Blank	Total/NA	Water	SM 2320B	
LCS 480-339387/8	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 339425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111832-1	REW-6-20170104	Total/NA	Water	350.1	339274
480-111832-2	REW-7-20170104	Total/NA	Water	350.1	339274
480-111832-3	REW-8-20170104	Total/NA	Water	350.1	339274
480-111832-4	REW-11-20170104	Total/NA	Water	350.1	339274
480-111832-5	REW-12-20170104	Total/NA	Water	350.1	339274
MB 480-339274/2-A	Method Blank	Total/NA	Water	350.1	339274
LCS 480-339274/1-A	Lab Control Sample	Total/NA	Water	350.1	339274
480-111832-2 MS	REW-7-20170104	Total/NA	Water	350.1	339274
480-111832-1 DU	REW-6-20170104	Total/NA	Water	350.1	339274

Analysis Batch: 339511

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111832-1	REW-6-20170104	Total/NA	Water	9040C	
480-111832-5	REW-12-20170104	Total/NA	Water	9040C	
LCS 480-339511/1	Lab Control Sample	Total/NA	Water	9040C	
480-111832-1 DU	REW-6-20170104	Total/NA	Water	9040C	

Analysis Batch: 339587

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111832-1	REW-6-20170104	Total/NA	Water	SM 2320B	
480-111832-5	REW-12-20170104	Total/NA	Water	SM 2320B	
MB 480-339587/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 480-339587/4	Lab Control Sample	Total/NA	Water	SM 2320B	
480-111832-5 MS	REW-12-20170104	Total/NA	Water	SM 2320B	
480-111832-1 DU	REW-6-20170104	Total/NA	Water	SM 2320B	

Analysis Batch: 339827

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111832-4	REW-11-20170104	Total/NA	Water	9060A	
MB 480-339827/46	Method Blank	Total/NA	Water	9060A	
LCS 480-339827/47	Lab Control Sample	Total/NA	Water	9060A	

Analysis Batch: 340101

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111832-1	REW-6-20170104	Total/NA	Water	9060A	
480-111832-2	REW-7-20170104	Total/NA	Water	9060A	
480-111832-3	REW-8-20170104	Total/NA	Water	9060A	
480-111832-5	REW-12-20170104	Total/NA	Water	9060A	
MB 480-340101/5	Method Blank	Total/NA	Water	9060A	

General Chemistry (Continued)

Analysis Batch: 340101 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-340101/6	Lab Control Sample	Total/NA	Water	9060A	

Client Sample ID: REW-6-20170104

Lab Sample ID: 480-111832-1

Date Collected: 01/04/17 10:55

Matrix: Water

Date Received: 01/05/17 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		20	338883	01/05/17 12:23	RRS	TAL BUF
Total/NA	Prep	3005A			339025	01/06/17 09:25	MVZ	TAL BUF
Total/NA	Analysis	6010		1	339256	01/06/17 22:36	AMH	TAL BUF
Total/NA	Analysis	300.0		100	338943	01/05/17 20:33	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			339274	01/09/17 10:02	CEA	TAL BUF
Total/NA	Analysis	350.1		10	339425	01/10/17 10:06	CEA	TAL BUF
Total/NA	Analysis	353.2		1	339007	01/05/17 17:11	ELR	TAL BUF
Total/NA	Analysis	9040C		1	339511	01/10/17 21:24	DSC	TAL BUF
Total/NA	Analysis	9060A		1000	340101	01/14/17 20:26	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	339587	01/11/17 08:15	LAW	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	338928	01/05/17 08:45	CLT	TAL BUF

Client Sample ID: REW-7-20170104

Lab Sample ID: 480-111832-2

Date Collected: 01/04/17 09:05

Matrix: Water

Date Received: 01/05/17 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	338883	01/05/17 12:47	RRS	TAL BUF
Total/NA	Prep	3005A			338876	01/05/17 09:37	MVZ	TAL BUF
Total/NA	Analysis	6010		1	339063	01/05/17 16:39	AMH	TAL BUF
Total/NA	Analysis	300.0		1	338943	01/05/17 20:48	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			339274	01/09/17 10:02	CEA	TAL BUF
Total/NA	Analysis	350.1		1	339425	01/10/17 09:51	CEA	TAL BUF
Total/NA	Analysis	353.2		1	339007	01/05/17 17:12	ELR	TAL BUF
Total/NA	Analysis	9040C		1	338956	01/05/17 12:50	CEA	TAL BUF
Total/NA	Analysis	9060A		1	340101	01/14/17 20:53	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	339213	01/05/17 19:09	CEA	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	338928	01/05/17 08:45	CLT	TAL BUF

Client Sample ID: REW-8-20170104

Lab Sample ID: 480-111832-3

Date Collected: 01/04/17 10:00

Matrix: Water

Date Received: 01/05/17 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	338883	01/05/17 13:10	RRS	TAL BUF
Total/NA	Prep	3005A			338876	01/05/17 09:37	MVZ	TAL BUF
Total/NA	Analysis	6010		1	339063	01/05/17 16:42	AMH	TAL BUF
Total/NA	Analysis	300.0		1	338943	01/05/17 21:02	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			339274	01/09/17 10:02	CEA	TAL BUF
Total/NA	Analysis	350.1		1	339425	01/10/17 09:55	CEA	TAL BUF
Total/NA	Analysis	353.2		1	339007	01/05/17 17:13	ELR	TAL BUF

Client Sample ID: REW-8-20170104

Lab Sample ID: 480-111832-3

Date Collected: 01/04/17 10:00

Matrix: Water

Date Received: 01/05/17 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9040C		1	338956	01/05/17 12:53	CEA	TAL BUF
Total/NA	Analysis	9060A		1	340101	01/14/17 21:47	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	339213	01/05/17 19:15	CEA	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	338928	01/05/17 08:45	CLT	TAL BUF

Client Sample ID: REW-11-20170104

Lab Sample ID: 480-111832-4

Date Collected: 01/04/17 12:00

Matrix: Water

Date Received: 01/05/17 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	338883	01/05/17 13:34	RRS	TAL BUF
Total/NA	Prep	3005A			338876	01/05/17 09:37	MVZ	TAL BUF
Total/NA	Analysis	6010		1	339063	01/05/17 16:46	AMH	TAL BUF
Total/NA	Analysis	300.0		1	338943	01/05/17 21:17	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			339274	01/09/17 10:02	CEA	TAL BUF
Total/NA	Analysis	350.1		1	339425	01/10/17 09:55	CEA	TAL BUF
Total/NA	Analysis	353.2		1	339007	01/05/17 17:16	ELR	TAL BUF
Total/NA	Analysis	9040C		1	338956	01/05/17 12:56	CEA	TAL BUF
Total/NA	Analysis	9060A		1	339827	01/12/17 05:38	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	339387	01/09/17 12:43	CEA	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	338928	01/05/17 08:45	CLT	TAL BUF

Client Sample ID: REW-12-20170104

Lab Sample ID: 480-111832-5

Date Collected: 01/04/17 13:20

Matrix: Water

Date Received: 01/05/17 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		20	338883	01/05/17 13:58	RRS	TAL BUF
Total/NA	Prep	3005A			338876	01/05/17 09:37	MVZ	TAL BUF
Total/NA	Analysis	6010		1	339063	01/05/17 17:13	AMH	TAL BUF
Total/NA	Analysis	300.0		50	338943	01/05/17 21:32	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			339274	01/09/17 10:02	CEA	TAL BUF
Total/NA	Analysis	350.1		1	339425	01/10/17 09:56	CEA	TAL BUF
Total/NA	Analysis	353.2		1	339007	01/05/17 17:17	ELR	TAL BUF
Total/NA	Analysis	9040C		1	339511	01/10/17 21:24	DSC	TAL BUF
Total/NA	Analysis	9060A		1000	340101	01/14/17 22:15	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	339587	01/11/17 08:15	LAW	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	338928	01/05/17 08:45	CLT	TAL BUF

Lab Chronicle

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

TestAmerica Job ID: 480-111832-1

Client Sample ID: DUP-20170104

Lab Sample ID: 480-111832-6

Date Collected: 01/04/17 00:00

Matrix: Water

Date Received: 01/05/17 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		20	338883	01/05/17 14:21	RRS	TAL BUF

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-111832-7

Date Collected: 01/04/17 00:00

Matrix: Water

Date Received: 01/05/17 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	338883	01/05/17 12:00	RRS	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: 480-111832-1

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	07-06-17
California	State Program	9	1169CA	09-30-17
Connecticut	State Program	1	PH-0568	09-30-18
Florida	NELAP	4	E87672	06-30-17
Georgia	State Program	4	N/A	03-31-17 *
Georgia	State Program	4	956	03-31-17 *
Illinois	NELAP	5	200003	09-30-17
Iowa	State Program	7	374	03-01-17 *
Kansas	NELAP	7	E-10187	11-30-16 *
Kentucky (DW)	State Program	4	90029	12-31-17
Kentucky (UST)	State Program	4	30	03-31-17 *
Kentucky (WW)	State Program	4	90029	12-31-16 *
Louisiana	NELAP	6	02031	06-30-17
Maine	State Program	1	NY00044	12-04-18
Maryland	State Program	3	294	03-31-17 *
Massachusetts	State Program	1	M-NY044	06-30-17
Michigan	State Program	5	9937	03-31-17 *
Minnesota	NELAP	5	036-999-337	12-31-17
New Hampshire	NELAP Primary AB	1	2973	09-11-17
New Hampshire	NELAP Secondary AB	1	2337	11-17-17
New Jersey	NELAP	2	NY455	06-30-17
New York	NELAP	2	10026	03-31-17 *
North Dakota	State Program	8	R-176	03-31-17 *
Oklahoma	State Program	6	9421	08-31-17
Oregon	NELAP	10	NY200003	06-09-17
Pennsylvania	NELAP	3	68-00281	07-31-17
Rhode Island	State Program	1	LAO00328	12-30-17
Tennessee	State Program	4	TN02970	03-31-17 *
Texas	NELAP	6	T104704412-15-6	07-31-17
USDA	Federal		P330-11-00386	11-26-17
Virginia	NELAP	3	460185	09-14-17
Washington	State Program	10	C784	02-10-17 *
West Virginia DEP	State Program	3	252	09-30-16 *
Wisconsin	State Program	5	998310390	08-31-17

* Certification renewal pending - certification considered valid.

Method Summary

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

TestAmerica Job ID: 480-111832-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds (GC/MS)	MA DEP	TAL BUF
6010	Metals (ICP)	SW846	TAL BUF
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
350.1	Nitrogen, Ammonia	MCAWW	TAL BUF
353.2	Nitrate	EPA	TAL BUF
9040C	pH	SW846	TAL BUF
9060A	Organic Carbon, Total (TOC)	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 P E	Orthophosphate	SM	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

MA DEP = Massachusetts Department Of Environmental Protection

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

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

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: 480-111832-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-111832-1	REW-6-20170104	Water	01/04/17 10:55	01/05/17 01:00
480-111832-2	REW-7-20170104	Water	01/04/17 09:05	01/05/17 01:00
480-111832-3	REW-8-20170104	Water	01/04/17 10:00	01/05/17 01:00
480-111832-4	REW-11-20170104	Water	01/04/17 12:00	01/05/17 01:00
480-111832-5	REW-12-20170104	Water	01/04/17 13:20	01/05/17 01:00
480-111832-6	DUP-20170104	Water	01/04/17 00:00	01/05/17 01:00
480-111832-7	TRIP BLANK	Water	01/04/17 00:00	01/05/17 01:00

Login Sample Receipt Checklist

Client: Innovative Engineering Solutions, Inc

Job Number: 480-111832-1

Login Number: 111832
List Number: 1
Creator: Williams, Christopher S

List Source: TestAmerica Buffalo

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.	False	Sample times are not listed on COC, client provided via email.
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 (Excluding tests with immediate HTs)..	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	

TestAmerica Westfield
501 Southampton Road
Westfield MA 01085
Phone: (413) 572-4000 Fax: (303) 467-7247

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

~~360325-Boston~~

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information:

Client Contact: Vicki Poriyer
Company: Innovative Engineering Solutions Inc
Address: 25 Spring St
City: Walpole
State and Zip: MA 02081
Client's Phone: 508-668-0033
Client's Contact Email: v.poriyer@IESIonline.com
Client's Project Name/Number: Raytheon - Wayland, RA-008
Sample Collection Site Name & Locations: Wayland MA

Sample Collector's Name (Please Print Neatly): Danny Soares
Sample Collector's Phone: 508-404-3196
Due Date Requested: 1/12/17
Turnaround Time (TAT) Requested (business days): 5 days
Quote # or Project #:
PO #: RA-008
WO #:
PWS ID #:

Lab PM:
E-Mail:

Lab COC Barcode Label: 480-111832 COC

COC No: 36682
Page: 1 of 1
Job #:

Analysis Requested: 8260C VOC; 9060A TOC; 350.1 NH3; 6010 MCP Total Iron; 2320 Alkalinity; 300.0-28D SO4+Cl; 4500-P_E Ortho PO4 NO3 353.2 NO3; pH

Total Number of Containers (enter total for each line)

Sample Identification	Sample Collection Date (MM/DD/YY)	Sample Collection Time (24 Hour Clock)	Sample Type: C=Comp G=Grab	Matrix Type **	8260C VOC	9060A TOC	350.1 NH3	6010 MCP Total Iron	2320 Alkalinity	300.0-28D SO4+Cl	4500-P_E Ortho PO4 NO3 / 353.2 NO3									Total Number of Containers	Special Instructions & Notes
Preservation Codes →					A	A	S	D	N	N	N									↓	
REW-6-20170104	1/4/17		G	W	X	X	X	X	X	X	X									10	GW-3
REW-7-20170104	1/4/17		G	W	X	X	X	X	X	X	X									10	
REW-8-20170104	1/4/17		G	W	X	X	X	X	X	X	X									10	
REW-11-20170104	1/4/17		G	W	X	X	X	X	X	X	X									10	
REW-12-20170104	1/4/17		G	W	X	X	X	X	X	X	X									10	
Dup1 - 20170104	1/4/17	—	G	W	X															3	
Trip Blanks	—	—	—	W	X															2	

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 TestAmerica to use certified, subcontract labs, without any additional notification made by us, as necessary to fulfill your work order.

Special Instructions & Notes:

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 IN A COOLER, ON ICE !!** ◀

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	1/4/17 1430	IESI	[signature]	1-4-17 1430	TA
[signature]	1-4-17 1800	TA	[signature]	1-5-17 0100	TAB

Custody Seals Intact: △ Yes △ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 0.8 #1

WI-QA-010 rev 8
Revised 10/29/2014
TAL-8245-360R

1/16/2017

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: 480-111878-1
Client Project/Site: IDS Wayland

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

Attn: Vicki Pariyar

Denise L Giglia

Authorized for release by:
1/16/2017 11:59:16 AM
Denise Giglia, Project Management Assistant II
denise.giglia@testamericainc.com

Designee for

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 is outside acceptance limits.

Metals

Qualifier	Qualifier Description
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.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

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: 480-111878-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-111878-1

Receipt
The samples were received on 1/6/2017 12:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.6º C.

GC/MS VOA
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 following sample was diluted to bring the concentration of target analytes within the calibration range: MW-267S-20170105 (480-111878-1) and MW-268M-20170105 (480-111878-4). Elevated reporting limits (RLs) are provided.

Method 8260C: The continuing calibration verification (CCV) for Isopropyl ether associated with batch 480-339355 recovered outside the MCP control limit criteria. MCP protocol allows for 20% of the target compounds to be outside the 20% difference but not over 40% difference. The following samples were affected : MW-267S-20170105 (480-111878-1), MW-267M-20170105 (480-111878-2), MW-268M-20170105 (480-111878-4), MW-563-20170105 (480-111878-5) and TRIP BLANK (480-111878-7).

Method 8260C: The laboratory control sample (LCS) and the laboratory control sample duplicate (LCSD) for batch 480-339355 exceeded control limits for the following analyte:Tetrahydrofuran. Unlike the calibration standards, this is due to the coelution with Methacrylonitrile 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. The following samples were affected : MW-267S-20170105 (480-111878-1), MW-267M-20170105 (480-111878-2), MW-268M-20170105 (480-111878-4), MW-563-20170105 (480-111878-5) and TRIP BLANK (480-111878-7).

Method 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-268S-20170105 (480-111878-3) and DUP2-20170105 (480-111878-6). Elevated reporting limits (RLs) are provided.

Method 8260C: The continuing calibration verification (CCV) for Acetone, 1,4-Dioxane, 2-Butanone (MEK) and Isopropyl ether associated with batch 480-339490 recovered outside the MCP control limit criteria. MCP protocol allows for 20% of the target compounds to be outside the 20% difference but not over 40% difference. The following sample was affected : MW-268S-20170105 (480-111878-3) and DUP2-20170105 (480-111878-6).

Method 8260C: The laboratory control sample (LCS) and the laboratory control sample duplicate (LCSD) for batch 480-339490 exceeded control limits for the following analyte: Tetrahydrofuran. Unlike the calibration standards, this is due to the coelution with Methacrylonitrile 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. The following sample was affected : MW-268S-20170105 (480-111878-3) and DUP2-20170105 (480-111878-6).

Method 8260C: The laboratory control sample (LCS) and the laboratory control sample duplicate (LCSD) for batch 480-339490 exceeded control limits for the following analyte: Isopropyl ether. MCP protocol allows for 10% of the target compounds to be outside of the limits provided the recoveries are over 10%. The following sample was affected : MW-268S-20170105 (480-111878-3) and DUP2-20170105 (480-111878-6).

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

HPLC/IC
Method 300.0: The matrix spike / matrix spike duplicate (MS/MSD) precision for analytical batch 480-339199 was outside control limits.

Method 300.0: The following samples were diluted due to the nature of the sample matrix: MW-267S-20170105 (480-111878-1), MW-267M-20170105 (480-111878-2), MW-268S-20170105 (480-111878-3) and MW-268M-20170105 (480-111878-4). Elevated reporting

Job ID: 480-111878-1 (Continued)

Laboratory: TestAmerica Buffalo (Continued)

limits (RLs) are provided.

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

Metals
Method 6010: At the request of the client, an abbreviated/modified MCP compound list was reported for this job.

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

General Chemistry
Method 9040C, SM 4500 H+ B: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following samples has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: MW-267S-20170105 (480-111878-1), MW-267M-20170105 (480-111878-2), MW-268M-20170105 (480-111878-4) and MW-563-20170105 (480-111878-5).

Method 9040C: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following sample has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: MW-268S-20170105 (480-111878-3).

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 #: **480-111878**

Project Location: **IDS Wayland** RTN:

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

480-111878[1-7]

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 ☐	9014 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: Denise L Giglia Position: Project Manager Assistant II

Printed Name: Denise L. Giglia Date: 1/16/17 11:55

Detection Summary

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

TestAmerica Job ID: 480-111878-1

Client Sample ID: MW-267S-20170105 — Lab Sample ID: 480-111878-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	320		40		ug/L	4		8260C	Total/NA
cis-1,2-Dichloroethene	260		4.0		ug/L	4		8260C	Total/NA
Toluene	100		4.0		ug/L	4		8260C	Total/NA
Vinyl chloride	20		4.0		ug/L	4		8260C	Total/NA
Iron	290		0.050		mg/L	1		6010	Total/NA
Chloride	55	F1 F2	5.0		mg/L	10		300.0	Total/NA
Sulfate	21	F1 F2	20		mg/L	10		300.0	Total/NA
Ammonia	0.22		0.20		mg/L	1		350.1	Total/NA
TOC Result 1	2000		40		mg/L	40		9060A	Total/NA
TOC Result 2	2000		40		mg/L	40		9060A	Total/NA
Total Organic Carbon - Duplicates	2000		40		mg/L	40		9060A	Total/NA
Alkalinity, Total	470		5.0		mg/L	1		SM 2320B	Total/NA
ortho-Phosphate	0.098		0.020		mg/L	1		SM 4500 P E	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	5.2	HF	0.1		SU	1		9040C	Total/NA

Client Sample ID: MW-267M-20170105 — Lab Sample ID: 480-111878-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	60		0.050		mg/L	1		6010	Total/NA
Chloride	23		1.0		mg/L	2		300.0	Total/NA
Ammonia	1.1		0.20		mg/L	1		350.1	Total/NA
TOC Result 1	410		5.0		mg/L	5		9060A	Total/NA
TOC Result 2	420		5.0		mg/L	5		9060A	Total/NA
Total Organic Carbon - Duplicates	420		5.0		mg/L	5		9060A	Total/NA
Alkalinity, Total	130		5.0		mg/L	1		SM 2320B	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	6.8	HF	0.1		SU	1		9040C	Total/NA

Client Sample ID: MW-268S-20170105 — Lab Sample ID: 480-111878-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	84		4.0		ug/L	4		8260C	Total/NA
Trichloroethene	180		4.0		ug/L	4		8260C	Total/NA
Vinyl chloride	5.6		4.0		ug/L	4		8260C	Total/NA
Iron	0.48		0.050		mg/L	1		6010	Total/NA
Chloride	16		2.5		mg/L	5		300.0	Total/NA
Sulfate	32		10		mg/L	5		300.0	Total/NA
Ammonia	0.28		0.20		mg/L	1		350.1	Total/NA
TOC Result 1	420		5.0		mg/L	5		9060A	Total/NA
TOC Result 2	450		5.0		mg/L	5		9060A	Total/NA
Total Organic Carbon - Duplicates	430		5.0		mg/L	5		9060A	Total/NA
Alkalinity, Total	270		5.0		mg/L	1		SM 2320B	Total/NA
ortho-Phosphate	0.29		0.020		mg/L	1		SM 4500 P E	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	11.3	HF	0.1		SU	1		9040C	Total/NA

Client Sample ID: MW-268M-20170105 — Lab Sample ID: 480-111878-4

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Client Sample ID: MW-268M-20170105 (Continued) — Lab Sample ID: 480-111878-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	630		20		ug/L	20		8260C	Total/NA
Vinyl chloride	96		20		ug/L	20		8260C	Total/NA
Iron	39		0.050		mg/L	1		6010	Total/NA
Chloride	47		2.5		mg/L	5		300.0	Total/NA
Ammonia	0.21		0.20		mg/L	1		350.1	Total/NA
TOC Result 1	530		8.0		mg/L	8		9060A	Total/NA
TOC Result 2	570		8.0		mg/L	8		9060A	Total/NA
Total Organic Carbon - Duplicates	550		8.0		mg/L	8		9060A	Total/NA
Alkalinity, Total	320		5.0		mg/L	1		SM 2320B	Total/NA
ortho-Phosphate	0.041		0.020		mg/L	1		SM 4500 P E	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	6.9	HF	0.1		SU	1		9040C	Total/NA

Client Sample ID: MW-563-20170105 — Lab Sample ID: 480-111878-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	29		0.050		mg/L	1		6010	Total/NA
Chloride	18		0.50		mg/L	1		300.0	Total/NA
Ammonia	0.90		0.20		mg/L	1		350.1	Total/NA
TOC Result 1	1.4		1.0		mg/L	1		9060A	Total/NA
TOC Result 2	1.1		1.0		mg/L	1		9060A	Total/NA
Total Organic Carbon - Duplicates	1.2		1.0		mg/L	1		9060A	Total/NA
Alkalinity, Total	120		5.0		mg/L	1		SM 2320B	Total/NA
ortho-Phosphate	0.043		0.020		mg/L	1		SM 4500 P E	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	7.0	HF	0.1		SU	1		9040C	Total/NA

Client Sample ID: DUP2-20170105 — Lab Sample ID: 480-111878-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	650		20		ug/L	20		8260C	Total/NA
Vinyl chloride	95		20		ug/L	20		8260C	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-111878-7

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-267S-20170105
Date Collected: 01/05/17 11:10
Date Received: 01/06/17 00:45

Lab Sample ID: 480-111878-1
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		4.0		ug/L			01/09/17 21:56	4
1,1,1-Trichloroethane	ND		4.0		ug/L			01/09/17 21:56	4
1,1,2,2-Tetrachloroethane	ND		2.0		ug/L			01/09/17 21:56	4
1,1,2-Trichloroethane	ND		4.0		ug/L			01/09/17 21:56	4
1,1-Dichloroethane	ND		4.0		ug/L			01/09/17 21:56	4
1,1-Dichloroethene	ND		4.0		ug/L			01/09/17 21:56	4
1,1-Dichloropropene	ND		4.0		ug/L			01/09/17 21:56	4
1,2,3-Trichlorobenzene	ND		4.0		ug/L			01/09/17 21:56	4
1,2,3-Trichloropropane	ND		4.0		ug/L			01/09/17 21:56	4
1,2,4-Trichlorobenzene	ND		4.0		ug/L			01/09/17 21:56	4
1,2,4-Trimethylbenzene	ND		4.0		ug/L			01/09/17 21:56	4
1,2-Dibromo-3-Chloropropane	ND		20		ug/L			01/09/17 21:56	4
1,2-Dichlorobenzene	ND		4.0		ug/L			01/09/17 21:56	4
1,2-Dichloroethane	ND		4.0		ug/L			01/09/17 21:56	4
1,2-Dichloropropane	ND		4.0		ug/L			01/09/17 21:56	4
1,3,5-Trimethylbenzene	ND		4.0		ug/L			01/09/17 21:56	4
1,3-Dichlorobenzene	ND		4.0		ug/L			01/09/17 21:56	4
1,3-Dichloropropane	ND		4.0		ug/L			01/09/17 21:56	4
1,4-Dichlorobenzene	ND		4.0		ug/L			01/09/17 21:56	4
1,4-Dioxane	ND		200		ug/L			01/09/17 21:56	4
2,2-Dichloropropane	ND		4.0		ug/L			01/09/17 21:56	4
2-Butanone (MEK)	**320**		40		ug/L			01/09/17 21:56	4
2-Chlorotoluene	ND		4.0		ug/L			01/09/17 21:56	4
2-Hexanone	ND		40		ug/L			01/09/17 21:56	4
4-Chlorotoluene	ND		4.0		ug/L			01/09/17 21:56	4
4-Isopropyltoluene	ND		4.0		ug/L			01/09/17 21:56	4
4-Methyl-2-pentanone (MIBK)	ND		40		ug/L			01/09/17 21:56	4
Acetone	ND		200		ug/L			01/09/17 21:56	4
Benzene	ND		4.0		ug/L			01/09/17 21:56	4
Bromobenzene	ND		4.0		ug/L			01/09/17 21:56	4
Bromoform	ND		4.0		ug/L			01/09/17 21:56	4
Bromomethane	ND		8.0		ug/L			01/09/17 21:56	4
Carbon disulfide	ND		40		ug/L			01/09/17 21:56	4
Carbon tetrachloride	ND		4.0		ug/L			01/09/17 21:56	4
Chlorobenzene	ND		4.0		ug/L			01/09/17 21:56	4
Chlorobromomethane	ND		4.0		ug/L			01/09/17 21:56	4
Chlorodibromomethane	ND		2.0		ug/L			01/09/17 21:56	4
Chloroethane	ND		8.0		ug/L			01/09/17 21:56	4
Chloroform	ND		4.0		ug/L			01/09/17 21:56	4
Chloromethane	ND		8.0		ug/L			01/09/17 21:56	4
cis-1,2-Dichloroethene	**260**		4.0		ug/L			01/09/17 21:56	4
cis-1,3-Dichloropropene	ND		1.6		ug/L			01/09/17 21:56	4
Dichlorobromomethane	ND		2.0		ug/L			01/09/17 21:56	4
Dichlorodifluoromethane	ND		4.0		ug/L			01/09/17 21:56	4
Ethyl ether	ND		4.0		ug/L			01/09/17 21:56	4
Ethylbenzene	ND		4.0		ug/L			01/09/17 21:56	4
Ethylene Dibromide	ND		4.0		ug/L			01/09/17 21:56	4
Hexachlorobutadiene	ND		1.6		ug/L			01/09/17 21:56	4
Isopropyl ether	ND		40		ug/L			01/09/17 21:56	4

Client Sample ID: MW-267S-20170105

Date Collected: 01/05/17 11:10
Date Received: 01/06/17 00:45

Lab Sample ID: 480-111878-1

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		4.0		ug/L			01/09/17 21:56	4
Methyl tert-butyl ether	ND		4.0		ug/L			01/09/17 21:56	4
Methylene Chloride	ND		4.0		ug/L			01/09/17 21:56	4
m-Xylene & p-Xylene	ND		8.0		ug/L			01/09/17 21:56	4
Naphthalene	ND		20		ug/L			01/09/17 21:56	4
n-Butylbenzene	ND		4.0		ug/L			01/09/17 21:56	4
N-Propylbenzene	ND		4.0		ug/L			01/09/17 21:56	4
o-Xylene	ND		4.0		ug/L			01/09/17 21:56	4
sec-Butylbenzene	ND		4.0		ug/L			01/09/17 21:56	4
Styrene	ND		4.0		ug/L			01/09/17 21:56	4
Tert-amyl methyl ether	ND		20		ug/L			01/09/17 21:56	4
Tert-butyl ethyl ether	ND		20		ug/L			01/09/17 21:56	4
tert-Butylbenzene	ND		4.0		ug/L			01/09/17 21:56	4
Tetrachloroethene	ND		4.0		ug/L			01/09/17 21:56	4
Tetrahydrofuran	ND	*	40		ug/L			01/09/17 21:56	4
Toluene	**100**		4.0		ug/L			01/09/17 21:56	4
trans-1,2-Dichloroethene	ND		4.0		ug/L			01/09/17 21:56	4
trans-1,3-Dichloropropene	ND		1.6		ug/L			01/09/17 21:56	4
Trichloroethene	ND		4.0		ug/L			01/09/17 21:56	4
Trichlorofluoromethane	ND		4.0		ug/L			01/09/17 21:56	4
Vinyl chloride	**20**		4.0		ug/L			01/09/17 21:56	4
Dibromomethane	ND		4.0		ug/L			01/09/17 21:56	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*95*		*70 - 130*		*01/09/17 21:56*	*4*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*01/09/17 21:56*	*4*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*01/09/17 21:56*	*4*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**290**		0.050		mg/L		01/06/17 09:25	01/06/17 21:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**55**	**F1 F2**	5.0		mg/L			01/09/17 12:57	10
Sulfate	**21**	**F1 F2**	20		mg/L			01/09/17 12:57	10
Ammonia	**0.22**		0.20		mg/L		01/09/17 10:02	01/10/17 09:57	1
Nitrate as N	ND		0.050		mg/L			01/06/17 15:45	1
TOC Result 1	**2000**		40		mg/L			01/14/17 21:20	40
TOC Result 2	**2000**		40		mg/L			01/14/17 21:20	40
Total Organic Carbon - Duplicates	**2000**		40		mg/L			01/14/17 21:20	40
Alkalinity, Total	**470**		5.0		mg/L			01/09/17 15:24	1
ortho-Phosphate	**0.098**		0.020		mg/L			01/06/17 08:55	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**5.2**	**HF**	0.1		SU			01/09/17 14:56	1

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

TestAmerica Job ID: 480-111878-1

Client Sample ID: MW-267M-20170105
Date Collected: 01/05/17 11:50
Date Received: 01/06/17 00:45

Lab Sample ID: 480-111878-2
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			01/09/17 22:20	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/09/17 22:20	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			01/09/17 22:20	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/09/17 22:20	1
1,1-Dichloroethane	ND		1.0		ug/L			01/09/17 22:20	1
1,1-Dichloroethene	ND		1.0		ug/L			01/09/17 22:20	1
1,1-Dichloropropene	ND		1.0		ug/L			01/09/17 22:20	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/09/17 22:20	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/09/17 22:20	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/09/17 22:20	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/09/17 22:20	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/09/17 22:20	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/09/17 22:20	1
1,2-Dichloroethane	ND		1.0		ug/L			01/09/17 22:20	1
1,2-Dichloropropane	ND		1.0		ug/L			01/09/17 22:20	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/09/17 22:20	1
1,3-Dichlorobenzene	ND		1.0		ug/L			01/09/17 22:20	1
1,3-Dichloropropane	ND		1.0		ug/L			01/09/17 22:20	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/09/17 22:20	1
1,4-Dioxane	ND		50		ug/L			01/09/17 22:20	1
2,2-Dichloropropane	ND		1.0		ug/L			01/09/17 22:20	1
2-Butanone (MEK)	ND		10		ug/L			01/09/17 22:20	1
2-Chlorotoluene	ND		1.0		ug/L			01/09/17 22:20	1
2-Hexanone	ND		10		ug/L			01/09/17 22:20	1
4-Chlorotoluene	ND		1.0		ug/L			01/09/17 22:20	1
4-Isopropyltoluene	ND		1.0		ug/L			01/09/17 22:20	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			01/09/17 22:20	1
Acetone	ND		50		ug/L			01/09/17 22:20	1
Benzene	ND		1.0		ug/L			01/09/17 22:20	1
Bromobenzene	ND		1.0		ug/L			01/09/17 22:20	1
Bromoform	ND		1.0		ug/L			01/09/17 22:20	1
Bromomethane	ND		2.0		ug/L			01/09/17 22:20	1
Carbon disulfide	ND		10		ug/L			01/09/17 22:20	1
Carbon tetrachloride	ND		1.0		ug/L			01/09/17 22:20	1
Chlorobenzene	ND		1.0		ug/L			01/09/17 22:20	1
Chlorobromomethane	ND		1.0		ug/L			01/09/17 22:20	1
Chlorodibromomethane	ND		0.50		ug/L			01/09/17 22:20	1
Chloroethane	ND		2.0		ug/L			01/09/17 22:20	1
Chloroform	ND		1.0		ug/L			01/09/17 22:20	1
Chloromethane	ND		2.0		ug/L			01/09/17 22:20	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			01/09/17 22:20	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			01/09/17 22:20	1
Dichlorobromomethane	ND		0.50		ug/L			01/09/17 22:20	1
Dichlorodifluoromethane	ND		1.0		ug/L			01/09/17 22:20	1
Ethyl ether	ND		1.0		ug/L			01/09/17 22:20	1
Ethylbenzene	ND		1.0		ug/L			01/09/17 22:20	1
Ethylene Dibromide	ND		1.0		ug/L			01/09/17 22:20	1
Hexachlorobutadiene	ND		0.40		ug/L			01/09/17 22:20	1
Isopropyl ether	ND		10		ug/L			01/09/17 22:20	1

Client Sample ID: MW-267M-20170105
Date Collected: 01/05/17 11:50
Date Received: 01/06/17 00:45

Lab Sample ID: 480-111878-2
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			01/09/17 22:20	1
Methyl tert-butyl ether	ND		1.0		ug/L			01/09/17 22:20	1
Methylene Chloride	ND		1.0		ug/L			01/09/17 22:20	1
m-Xylene & p-Xylene	ND		2.0		ug/L			01/09/17 22:20	1
Naphthalene	ND		5.0		ug/L			01/09/17 22:20	1
n-Butylbenzene	ND		1.0		ug/L			01/09/17 22:20	1
N-Propylbenzene	ND		1.0		ug/L			01/09/17 22:20	1
o-Xylene	ND		1.0		ug/L			01/09/17 22:20	1
sec-Butylbenzene	ND		1.0		ug/L			01/09/17 22:20	1
Styrene	ND		1.0		ug/L			01/09/17 22:20	1
Tert-amyl methyl ether	ND		5.0		ug/L			01/09/17 22:20	1
Tert-butyl ethyl ether	ND		5.0		ug/L			01/09/17 22:20	1
tert-Butylbenzene	ND		1.0		ug/L			01/09/17 22:20	1
Tetrachloroethene	ND		1.0		ug/L			01/09/17 22:20	1
Tetrahydrofuran	ND	*	10		ug/L			01/09/17 22:20	1
Toluene	ND		1.0		ug/L			01/09/17 22:20	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/09/17 22:20	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			01/09/17 22:20	1
Trichloroethene	ND		1.0		ug/L			01/09/17 22:20	1
Trichlorofluoromethane	ND		1.0		ug/L			01/09/17 22:20	1
Vinyl chloride	ND		1.0		ug/L			01/09/17 22:20	1
Dibromomethane	ND		1.0		ug/L			01/09/17 22:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*94*		*70 - 130*		*01/09/17 22:20*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*01/09/17 22:20*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*01/09/17 22:20*	*1*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**60**		0.050		mg/L		01/06/17 09:25	01/06/17 21:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**23**		1.0		mg/L			01/09/17 13:46	2
Sulfate	ND		4.0		mg/L			01/09/17 13:46	2
Ammonia	**1.1**		0.20		mg/L		01/09/17 10:02	01/10/17 09:58	1
Nitrate as N	ND		0.050		mg/L			01/06/17 15:47	1
TOC Result 1	**410**		5.0		mg/L			01/14/17 23:34	5
TOC Result 2	**420**		5.0		mg/L			01/14/17 23:34	5
Total Organic Carbon - Duplicates	**420**		5.0		mg/L			01/14/17 23:34	5
Alkalinity, Total	**130**		5.0		mg/L			01/09/17 15:30	1
ortho-Phosphate	ND		0.020		mg/L			01/06/17 08:55	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**6.8**	**HF**	0.1		SU			01/09/17 14:59	1

Client Sample ID: MW-268S-20170105
Date Collected: 01/05/17 08:35
Date Received: 01/06/17 00:45

Lab Sample ID: 480-111878-3
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		4.0		ug/L			01/10/17 23:06	4
1,1,1-Trichloroethane	ND		4.0		ug/L			01/10/17 23:06	4
1,1,2,2-Tetrachloroethane	ND		2.0		ug/L			01/10/17 23:06	4
1,1,2-Trichloroethane	ND		4.0		ug/L			01/10/17 23:06	4
1,1-Dichloroethane	ND		4.0		ug/L			01/10/17 23:06	4
1,1-Dichloroethene	ND		4.0		ug/L			01/10/17 23:06	4
1,1-Dichloropropene	ND		4.0		ug/L			01/10/17 23:06	4
1,2,3-Trichlorobenzene	ND		4.0		ug/L			01/10/17 23:06	4
1,2,3-Trichloropropane	ND		4.0		ug/L			01/10/17 23:06	4
1,2,4-Trichlorobenzene	ND		4.0		ug/L			01/10/17 23:06	4
1,2,4-Trimethylbenzene	ND		4.0		ug/L			01/10/17 23:06	4
1,2-Dibromo-3-Chloropropane	ND		20		ug/L			01/10/17 23:06	4
1,2-Dichlorobenzene	ND		4.0		ug/L			01/10/17 23:06	4
1,2-Dichloroethane	ND		4.0		ug/L			01/10/17 23:06	4
1,2-Dichloropropane	ND		4.0		ug/L			01/10/17 23:06	4
1,3,5-Trimethylbenzene	ND		4.0		ug/L			01/10/17 23:06	4
1,3-Dichlorobenzene	ND		4.0		ug/L			01/10/17 23:06	4
1,3-Dichloropropane	ND		4.0		ug/L			01/10/17 23:06	4
1,4-Dichlorobenzene	ND		4.0		ug/L			01/10/17 23:06	4
1,4-Dioxane	ND		200		ug/L			01/10/17 23:06	4
2,2-Dichloropropane	ND		4.0		ug/L			01/10/17 23:06	4
2-Butanone (MEK)	ND		40		ug/L			01/10/17 23:06	4
2-Chlorotoluene	ND		4.0		ug/L			01/10/17 23:06	4
2-Hexanone	ND		40		ug/L			01/10/17 23:06	4
4-Chlorotoluene	ND		4.0		ug/L			01/10/17 23:06	4
4-Isopropyltoluene	ND		4.0		ug/L			01/10/17 23:06	4
4-Methyl-2-pentanone (MIBK)	ND		40		ug/L			01/10/17 23:06	4
Acetone	ND		200		ug/L			01/10/17 23:06	4
Benzene	ND		4.0		ug/L			01/10/17 23:06	4
Bromobenzene	ND		4.0		ug/L			01/10/17 23:06	4
Bromoform	ND		4.0		ug/L			01/10/17 23:06	4
Bromomethane	ND		8.0		ug/L			01/10/17 23:06	4
Carbon disulfide	ND		40		ug/L			01/10/17 23:06	4
Carbon tetrachloride	ND		4.0		ug/L			01/10/17 23:06	4
Chlorobenzene	ND		4.0		ug/L			01/10/17 23:06	4
Chlorobromomethane	ND		4.0		ug/L			01/10/17 23:06	4
Chlorodibromomethane	ND		2.0		ug/L			01/10/17 23:06	4
Chloroethane	ND		8.0		ug/L			01/10/17 23:06	4
Chloroform	ND		4.0		ug/L			01/10/17 23:06	4
Chloromethane	ND		8.0		ug/L			01/10/17 23:06	4
cis-1,2-Dichloroethene	**84**		4.0		ug/L			01/10/17 23:06	4
cis-1,3-Dichloropropene	ND		1.6		ug/L			01/10/17 23:06	4
Dichlorobromomethane	ND		2.0		ug/L			01/10/17 23:06	4
Dichlorodifluoromethane	ND		4.0		ug/L			01/10/17 23:06	4
Ethyl ether	ND		4.0		ug/L			01/10/17 23:06	4
Ethylbenzene	ND		4.0		ug/L			01/10/17 23:06	4
Ethylene Dibromide	ND		4.0		ug/L			01/10/17 23:06	4
Hexachlorobutadiene	ND		1.6		ug/L			01/10/17 23:06	4
Isopropyl ether	ND	*	40		ug/L			01/10/17 23:06	4

Client Sample ID: MW-268S-20170105
Date Collected: 01/05/17 08:35
Date Received: 01/06/17 00:45

Lab Sample ID: 480-111878-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		4.0		ug/L			01/10/17 23:06	4
Methyl tert-butyl ether	ND		4.0		ug/L			01/10/17 23:06	4
Methylene Chloride	ND		4.0		ug/L			01/10/17 23:06	4
m-Xylene & p-Xylene	ND		8.0		ug/L			01/10/17 23:06	4
Naphthalene	ND		20		ug/L			01/10/17 23:06	4
n-Butylbenzene	ND		4.0		ug/L			01/10/17 23:06	4
N-Propylbenzene	ND		4.0		ug/L			01/10/17 23:06	4
o-Xylene	ND		4.0		ug/L			01/10/17 23:06	4
sec-Butylbenzene	ND		4.0		ug/L			01/10/17 23:06	4
Styrene	ND		4.0		ug/L			01/10/17 23:06	4
Tert-amyl methyl ether	ND		20		ug/L			01/10/17 23:06	4
Tert-butyl ethyl ether	ND		20		ug/L			01/10/17 23:06	4
tert-Butylbenzene	ND		4.0		ug/L			01/10/17 23:06	4
Tetrachloroethene	ND		4.0		ug/L			01/10/17 23:06	4
Tetrahydrofuran	ND	*	40		ug/L			01/10/17 23:06	4
Toluene	ND		4.0		ug/L			01/10/17 23:06	4
trans-1,2-Dichloroethene	ND		4.0		ug/L			01/10/17 23:06	4
trans-1,3-Dichloropropene	ND		1.6		ug/L			01/10/17 23:06	4
Trichloroethene	**180**		4.0		ug/L			01/10/17 23:06	4
Trichlorofluoromethane	ND		4.0		ug/L			01/10/17 23:06	4
Vinyl chloride	**5.6**		4.0		ug/L			01/10/17 23:06	4
Dibromomethane	ND		4.0		ug/L			01/10/17 23:06	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*70 - 130*		*01/10/17 23:06*	*4*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 130*		*01/10/17 23:06*	*4*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*01/10/17 23:06*	*4*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.48**		0.050		mg/L		01/06/17 09:25	01/06/17 21:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**16**		2.5		mg/L			01/09/17 13:54	5
Sulfate	**32**		10		mg/L			01/09/17 13:54	5
Ammonia	**0.28**		0.20		mg/L		01/09/17 10:02	01/10/17 09:59	1
Nitrate as N	ND		0.050		mg/L			01/06/17 15:48	1
TOC Result 1	**420**		5.0		mg/L			01/12/17 11:50	5
TOC Result 2	**450**		5.0		mg/L			01/12/17 11:50	5
Total Organic Carbon - Duplicates	**430**		5.0		mg/L			01/12/17 11:50	5
Alkalinity, Total	**270**		5.0		mg/L			01/09/17 15:38	1
ortho-Phosphate	**0.29**		0.020		mg/L			01/06/17 08:55	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**11.3**	**HF**	0.1		SU			01/10/17 21:24	1

Client Sample ID: MW-268M-20170105
Date Collected: 01/05/17 10:15
Date Received: 01/06/17 00:45

Lab Sample ID: 480-111878-4
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		20		ug/L			01/09/17 23:08	20
1,1,1-Trichloroethane	ND		20		ug/L			01/09/17 23:08	20
1,1,2,2-Tetrachloroethane	ND		10		ug/L			01/09/17 23:08	20
1,1,2-Trichloroethane	ND		20		ug/L			01/09/17 23:08	20
1,1-Dichloroethane	ND		20		ug/L			01/09/17 23:08	20
1,1-Dichloroethene	ND		20		ug/L			01/09/17 23:08	20
1,1-Dichloropropene	ND		20		ug/L			01/09/17 23:08	20
1,2,3-Trichlorobenzene	ND		20		ug/L			01/09/17 23:08	20
1,2,3-Trichloropropane	ND		20		ug/L			01/09/17 23:08	20
1,2,4-Trichlorobenzene	ND		20		ug/L			01/09/17 23:08	20
1,2,4-Trimethylbenzene	ND		20		ug/L			01/09/17 23:08	20
1,2-Dibromo-3-Chloropropane	ND		100		ug/L			01/09/17 23:08	20
1,2-Dichlorobenzene	ND		20		ug/L			01/09/17 23:08	20
1,2-Dichloroethane	ND		20		ug/L			01/09/17 23:08	20
1,2-Dichloropropane	ND		20		ug/L			01/09/17 23:08	20
1,3,5-Trimethylbenzene	ND		20		ug/L			01/09/17 23:08	20
1,3-Dichlorobenzene	ND		20		ug/L			01/09/17 23:08	20
1,3-Dichloropropane	ND		20		ug/L			01/09/17 23:08	20
1,4-Dichlorobenzene	ND		20		ug/L			01/09/17 23:08	20
1,4-Dioxane	ND		1000		ug/L			01/09/17 23:08	20
2,2-Dichloropropane	ND		20		ug/L			01/09/17 23:08	20
2-Butanone (MEK)	ND		200		ug/L			01/09/17 23:08	20
2-Chlorotoluene	ND		20		ug/L			01/09/17 23:08	20
2-Hexanone	ND		200		ug/L			01/09/17 23:08	20
4-Chlorotoluene	ND		20		ug/L			01/09/17 23:08	20
4-Isopropyltoluene	ND		20		ug/L			01/09/17 23:08	20
4-Methyl-2-pentanone (MIBK)	ND		200		ug/L			01/09/17 23:08	20
Acetone	ND		1000		ug/L			01/09/17 23:08	20
Benzene	ND		20		ug/L			01/09/17 23:08	20
Bromobenzene	ND		20		ug/L			01/09/17 23:08	20
Bromoform	ND		20		ug/L			01/09/17 23:08	20
Bromomethane	ND		40		ug/L			01/09/17 23:08	20
Carbon disulfide	ND		200		ug/L			01/09/17 23:08	20
Carbon tetrachloride	ND		20		ug/L			01/09/17 23:08	20
Chlorobenzene	ND		20		ug/L			01/09/17 23:08	20
Chlorobromomethane	ND		20		ug/L			01/09/17 23:08	20
Chlorodibromomethane	ND		10		ug/L			01/09/17 23:08	20
Chloroethane	ND		40		ug/L			01/09/17 23:08	20
Chloroform	ND		20		ug/L			01/09/17 23:08	20
Chloromethane	ND		40		ug/L			01/09/17 23:08	20
cis-1,2-Dichloroethene	**630**		20		ug/L			01/09/17 23:08	20
cis-1,3-Dichloropropene	ND		8.0		ug/L			01/09/17 23:08	20
Dichlorobromomethane	ND		10		ug/L			01/09/17 23:08	20
Dichlorodifluoromethane	ND		20		ug/L			01/09/17 23:08	20
Ethyl ether	ND		20		ug/L			01/09/17 23:08	20
Ethylbenzene	ND		20		ug/L			01/09/17 23:08	20
Ethylene Dibromide	ND		20		ug/L			01/09/17 23:08	20
Hexachlorobutadiene	ND		8.0		ug/L			01/09/17 23:08	20
Isopropyl ether	ND		200		ug/L			01/09/17 23:08	20

Client Sample ID: MW-268M-20170105
Date Collected: 01/05/17 10:15
Date Received: 01/06/17 00:45

Lab Sample ID: 480-111878-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		20		ug/L			01/09/17 23:08	20
Methyl tert-butyl ether	ND		20		ug/L			01/09/17 23:08	20
Methylene Chloride	ND		20		ug/L			01/09/17 23:08	20
m-Xylene & p-Xylene	ND		40		ug/L			01/09/17 23:08	20
Naphthalene	ND		100		ug/L			01/09/17 23:08	20
n-Butylbenzene	ND		20		ug/L			01/09/17 23:08	20
N-Propylbenzene	ND		20		ug/L			01/09/17 23:08	20
o-Xylene	ND		20		ug/L			01/09/17 23:08	20
sec-Butylbenzene	ND		20		ug/L			01/09/17 23:08	20
Styrene	ND		20		ug/L			01/09/17 23:08	20
Tert-amyl methyl ether	ND		100		ug/L			01/09/17 23:08	20
Tert-butyl ethyl ether	ND		100		ug/L			01/09/17 23:08	20
tert-Butylbenzene	ND		20		ug/L			01/09/17 23:08	20
Tetrachloroethene	ND		20		ug/L			01/09/17 23:08	20
Tetrahydrofuran	ND	*	200		ug/L			01/09/17 23:08	20
Toluene	ND		20		ug/L			01/09/17 23:08	20
trans-1,2-Dichloroethene	ND		20		ug/L			01/09/17 23:08	20
trans-1,3-Dichloropropene	ND		8.0		ug/L			01/09/17 23:08	20
Trichloroethene	ND		20		ug/L			01/09/17 23:08	20
Trichlorofluoromethane	ND		20		ug/L			01/09/17 23:08	20
Vinyl chloride	**96**		20		ug/L			01/09/17 23:08	20
Dibromomethane	ND		20		ug/L			01/09/17 23:08	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*70 - 130*		*01/09/17 23:08*	*20*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*		*01/09/17 23:08*	*20*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*01/09/17 23:08*	*20*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**39**		0.050		mg/L		01/06/17 09:25	01/06/17 21:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**47**		2.5		mg/L			01/09/17 14:03	5
Sulfate	ND		10		mg/L			01/09/17 14:03	5
Ammonia	**0.21**		0.20		mg/L		01/09/17 10:02	01/10/17 10:00	1
Nitrate as N	ND		0.050		mg/L			01/06/17 15:49	1
TOC Result 1	**530**		8.0		mg/L			01/12/17 12:16	8
TOC Result 2	**570**		8.0		mg/L			01/12/17 12:16	8
Total Organic Carbon - Duplicates	**550**		8.0		mg/L			01/12/17 12:16	8
Alkalinity, Total	**320**		5.0		mg/L			01/09/17 15:46	1
ortho-Phosphate	**0.041**		0.020		mg/L			01/06/17 08:55	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**6.9**	**HF**	0.1		SU			01/09/17 15:04	1

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

TestAmerica Job ID: 480-111878-1

Client Sample ID: MW-563-20170105
Date Collected: 01/05/17 12:40
Date Received: 01/06/17 00:45

Lab Sample ID: 480-111878-5
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			01/09/17 23:32	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/09/17 23:32	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			01/09/17 23:32	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/09/17 23:32	1
1,1-Dichloroethane	ND		1.0		ug/L			01/09/17 23:32	1
1,1-Dichloroethene	ND		1.0		ug/L			01/09/17 23:32	1
1,1-Dichloropropene	ND		1.0		ug/L			01/09/17 23:32	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/09/17 23:32	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/09/17 23:32	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/09/17 23:32	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/09/17 23:32	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/09/17 23:32	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/09/17 23:32	1
1,2-Dichloroethane	ND		1.0		ug/L			01/09/17 23:32	1
1,2-Dichloropropane	ND		1.0		ug/L			01/09/17 23:32	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/09/17 23:32	1
1,3-Dichlorobenzene	ND		1.0		ug/L			01/09/17 23:32	1
1,3-Dichloropropane	ND		1.0		ug/L			01/09/17 23:32	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/09/17 23:32	1
1,4-Dioxane	ND		50		ug/L			01/09/17 23:32	1
2,2-Dichloropropane	ND		1.0		ug/L			01/09/17 23:32	1
2-Butanone (MEK)	ND		10		ug/L			01/09/17 23:32	1
2-Chlorotoluene	ND		1.0		ug/L			01/09/17 23:32	1
2-Hexanone	ND		10		ug/L			01/09/17 23:32	1
4-Chlorotoluene	ND		1.0		ug/L			01/09/17 23:32	1
4-Isopropyltoluene	ND		1.0		ug/L			01/09/17 23:32	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			01/09/17 23:32	1
Acetone	ND		50		ug/L			01/09/17 23:32	1
Benzene	ND		1.0		ug/L			01/09/17 23:32	1
Bromobenzene	ND		1.0		ug/L			01/09/17 23:32	1
Bromoform	ND		1.0		ug/L			01/09/17 23:32	1
Bromomethane	ND		2.0		ug/L			01/09/17 23:32	1
Carbon disulfide	ND		10		ug/L			01/09/17 23:32	1
Carbon tetrachloride	ND		1.0		ug/L			01/09/17 23:32	1
Chlorobenzene	ND		1.0		ug/L			01/09/17 23:32	1
Chlorobromomethane	ND		1.0		ug/L			01/09/17 23:32	1
Chlorodibromomethane	ND		0.50		ug/L			01/09/17 23:32	1
Chloroethane	ND		2.0		ug/L			01/09/17 23:32	1
Chloroform	ND		1.0		ug/L			01/09/17 23:32	1
Chloromethane	ND		2.0		ug/L			01/09/17 23:32	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			01/09/17 23:32	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			01/09/17 23:32	1
Dichlorobromomethane	ND		0.50		ug/L			01/09/17 23:32	1
Dichlorodifluoromethane	ND		1.0		ug/L			01/09/17 23:32	1
Ethyl ether	ND		1.0		ug/L			01/09/17 23:32	1
Ethylbenzene	ND		1.0		ug/L			01/09/17 23:32	1
Ethylene Dibromide	ND		1.0		ug/L			01/09/17 23:32	1
Hexachlorobutadiene	ND		0.40		ug/L			01/09/17 23:32	1
Isopropyl ether	ND		10		ug/L			01/09/17 23:32	1

Client Sample ID: MW-563-20170105

Date Collected: 01/05/17 12:40
Date Received: 01/06/17 00:45

Lab Sample ID: 480-111878-5

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			01/09/17 23:32	1
Methyl tert-butyl ether	ND		1.0		ug/L			01/09/17 23:32	1
Methylene Chloride	ND		1.0		ug/L			01/09/17 23:32	1
m-Xylene & p-Xylene	ND		2.0		ug/L			01/09/17 23:32	1
Naphthalene	ND		5.0		ug/L			01/09/17 23:32	1
n-Butylbenzene	ND		1.0		ug/L			01/09/17 23:32	1
N-Propylbenzene	ND		1.0		ug/L			01/09/17 23:32	1
o-Xylene	ND		1.0		ug/L			01/09/17 23:32	1
sec-Butylbenzene	ND		1.0		ug/L			01/09/17 23:32	1
Styrene	ND		1.0		ug/L			01/09/17 23:32	1
Tert-amyl methyl ether	ND		5.0		ug/L			01/09/17 23:32	1
Tert-butyl ethyl ether	ND		5.0		ug/L			01/09/17 23:32	1
tert-Butylbenzene	ND		1.0		ug/L			01/09/17 23:32	1
Tetrachloroethene	ND		1.0		ug/L			01/09/17 23:32	1
Tetrahydrofuran	ND	*	10		ug/L			01/09/17 23:32	1
Toluene	ND		1.0		ug/L			01/09/17 23:32	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/09/17 23:32	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			01/09/17 23:32	1
Trichloroethene	ND		1.0		ug/L			01/09/17 23:32	1
Trichlorofluoromethane	ND		1.0		ug/L			01/09/17 23:32	1
Vinyl chloride	ND		1.0		ug/L			01/09/17 23:32	1
Dibromomethane	ND		1.0		ug/L			01/09/17 23:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*90*		*70 - 130*		*01/09/17 23:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*		*01/09/17 23:32*	*1*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*		*01/09/17 23:32*	*1*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**29**		0.050		mg/L		01/06/17 09:25	01/06/17 22:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**18**		0.50		mg/L			01/09/17 14:11	1
Sulfate	ND		2.0		mg/L			01/09/17 14:11	1
Ammonia	**0.90**		0.20		mg/L		01/09/17 10:02	01/10/17 10:01	1
Nitrate as N	ND		0.050		mg/L			01/06/17 15:50	1
TOC Result 1	**1.4**		1.0		mg/L			01/12/17 12:42	1
TOC Result 2	**1.1**		1.0		mg/L			01/12/17 12:42	1
Total Organic Carbon - Duplicates	**1.2**		1.0		mg/L			01/12/17 12:42	1
Alkalinity, Total	**120**		5.0		mg/L			01/09/17 15:52	1
ortho-Phosphate	**0.043**		0.020		mg/L			01/06/17 08:55	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**7.0**	**HF**	0.1		SU			01/09/17 15:11	1

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

TestAmerica Job ID: 480-111878-1

Client Sample ID: DUP2-20170105
Date Collected: 01/05/17 00:00
Date Received: 01/06/17 00:45

Lab Sample ID: 480-111878-6
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		20		ug/L			01/10/17 23:30	20
1,1,1-Trichloroethane	ND		20		ug/L			01/10/17 23:30	20
1,1,2,2-Tetrachloroethane	ND		10		ug/L			01/10/17 23:30	20
1,1,2-Trichloroethane	ND		20		ug/L			01/10/17 23:30	20
1,1-Dichloroethane	ND		20		ug/L			01/10/17 23:30	20
1,1-Dichloroethene	ND		20		ug/L			01/10/17 23:30	20
1,1-Dichloropropene	ND		20		ug/L			01/10/17 23:30	20
1,2,3-Trichlorobenzene	ND		20		ug/L			01/10/17 23:30	20
1,2,3-Trichloropropane	ND		20		ug/L			01/10/17 23:30	20
1,2,4-Trichlorobenzene	ND		20		ug/L			01/10/17 23:30	20
1,2,4-Trimethylbenzene	ND		20		ug/L			01/10/17 23:30	20
1,2-Dibromo-3-Chloropropane	ND		100		ug/L			01/10/17 23:30	20
1,2-Dichlorobenzene	ND		20		ug/L			01/10/17 23:30	20
1,2-Dichloroethane	ND		20		ug/L			01/10/17 23:30	20
1,2-Dichloropropane	ND		20		ug/L			01/10/17 23:30	20
1,3,5-Trimethylbenzene	ND		20		ug/L			01/10/17 23:30	20
1,3-Dichlorobenzene	ND		20		ug/L			01/10/17 23:30	20
1,3-Dichloropropane	ND		20		ug/L			01/10/17 23:30	20
1,4-Dichlorobenzene	ND		20		ug/L			01/10/17 23:30	20
1,4-Dioxane	ND		1000		ug/L			01/10/17 23:30	20
2,2-Dichloropropane	ND		20		ug/L			01/10/17 23:30	20
2-Butanone (MEK)	ND		200		ug/L			01/10/17 23:30	20
2-Chlorotoluene	ND		20		ug/L			01/10/17 23:30	20
2-Hexanone	ND		200		ug/L			01/10/17 23:30	20
4-Chlorotoluene	ND		20		ug/L			01/10/17 23:30	20
4-Isopropyltoluene	ND		20		ug/L			01/10/17 23:30	20
4-Methyl-2-pentanone (MIBK)	ND		200		ug/L			01/10/17 23:30	20
Acetone	ND		1000		ug/L			01/10/17 23:30	20
Benzene	ND		20		ug/L			01/10/17 23:30	20
Bromobenzene	ND		20		ug/L			01/10/17 23:30	20
Bromoform	ND		20		ug/L			01/10/17 23:30	20
Bromomethane	ND		40		ug/L			01/10/17 23:30	20
Carbon disulfide	ND		200		ug/L			01/10/17 23:30	20
Carbon tetrachloride	ND		20		ug/L			01/10/17 23:30	20
Chlorobenzene	ND		20		ug/L			01/10/17 23:30	20
Chlorobromomethane	ND		20		ug/L			01/10/17 23:30	20
Chlorodibromomethane	ND		10		ug/L			01/10/17 23:30	20
Chloroethane	ND		40		ug/L			01/10/17 23:30	20
Chloroform	ND		20		ug/L			01/10/17 23:30	20
Chloromethane	ND		40		ug/L			01/10/17 23:30	20
cis-1,2-Dichloroethene	**650**		20		ug/L			01/10/17 23:30	20
cis-1,3-Dichloropropene	ND		8.0		ug/L			01/10/17 23:30	20
Dichlorobromomethane	ND		10		ug/L			01/10/17 23:30	20
Dichlorodifluoromethane	ND		20		ug/L			01/10/17 23:30	20
Ethyl ether	ND		20		ug/L			01/10/17 23:30	20
Ethylbenzene	ND		20		ug/L			01/10/17 23:30	20
Ethylene Dibromide	ND		20		ug/L			01/10/17 23:30	20
Hexachlorobutadiene	ND		8.0		ug/L			01/10/17 23:30	20
Isopropyl ether	ND	*	200		ug/L			01/10/17 23:30	20

Client Sample ID: DUP2-20170105

Lab Sample ID: 480-111878-6

Date Collected: 01/05/17 00:00

Matrix: Water

Date Received: 01/06/17 00:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		20		ug/L			01/10/17 23:30	20
Methyl tert-butyl ether	ND		20		ug/L			01/10/17 23:30	20
Methylene Chloride	ND		20		ug/L			01/10/17 23:30	20
m-Xylene & p-Xylene	ND		40		ug/L			01/10/17 23:30	20
Naphthalene	ND		100		ug/L			01/10/17 23:30	20
n-Butylbenzene	ND		20		ug/L			01/10/17 23:30	20
N-Propylbenzene	ND		20		ug/L			01/10/17 23:30	20
o-Xylene	ND		20		ug/L			01/10/17 23:30	20
sec-Butylbenzene	ND		20		ug/L			01/10/17 23:30	20
Styrene	ND		20		ug/L			01/10/17 23:30	20
Tert-amyl methyl ether	ND		100		ug/L			01/10/17 23:30	20
Tert-butyl ethyl ether	ND		100		ug/L			01/10/17 23:30	20
tert-Butylbenzene	ND		20		ug/L			01/10/17 23:30	20
Tetrachloroethene	ND		20		ug/L			01/10/17 23:30	20
Tetrahydrofuran	ND	*	200		ug/L			01/10/17 23:30	20
Toluene	ND		20		ug/L			01/10/17 23:30	20
trans-1,2-Dichloroethene	ND		20		ug/L			01/10/17 23:30	20
trans-1,3-Dichloropropene	ND		8.0		ug/L			01/10/17 23:30	20
Trichloroethene	ND		20		ug/L			01/10/17 23:30	20
Trichlorofluoromethane	ND		20		ug/L			01/10/17 23:30	20
Vinyl chloride	**95**		20		ug/L			01/10/17 23:30	20
Dibromomethane	ND		20		ug/L			01/10/17 23:30	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*92*		*70 - 130*		*01/10/17 23:30*	*20*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*		*01/10/17 23:30*	*20*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*01/10/17 23:30*	*20*

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-111878-7

Date Collected: 01/05/17 00:00

Matrix: Water

Date Received: 01/06/17 00:45

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			01/10/17 00:19	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/10/17 00:19	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			01/10/17 00:19	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/10/17 00:19	1
1,1-Dichloroethane	ND		1.0		ug/L			01/10/17 00:19	1
1,1-Dichloroethene	ND		1.0		ug/L			01/10/17 00:19	1
1,1-Dichloropropene	ND		1.0		ug/L			01/10/17 00:19	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/10/17 00:19	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/10/17 00:19	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/10/17 00:19	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/10/17 00:19	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/10/17 00:19	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/10/17 00:19	1
1,2-Dichloroethane	ND		1.0		ug/L			01/10/17 00:19	1
1,2-Dichloropropane	ND		1.0		ug/L			01/10/17 00:19	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/10/17 00:19	1

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

TestAmerica Job ID: 480-111878-1

Client Sample ID: TRIP BLANK
Date Collected: 01/05/17 00:00
Date Received: 01/06/17 00:45

Lab Sample ID: 480-111878-7
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		1.0		ug/L			01/10/17 00:19	1
1,3-Dichloropropane	ND		1.0		ug/L			01/10/17 00:19	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/10/17 00:19	1
1,4-Dioxane	ND		50		ug/L			01/10/17 00:19	1
2,2-Dichloropropane	ND		1.0		ug/L			01/10/17 00:19	1
2-Butanone (MEK)	ND		10		ug/L			01/10/17 00:19	1
2-Chlorotoluene	ND		1.0		ug/L			01/10/17 00:19	1
2-Hexanone	ND		10		ug/L			01/10/17 00:19	1
4-Chlorotoluene	ND		1.0		ug/L			01/10/17 00:19	1
4-Isopropyltoluene	ND		1.0		ug/L			01/10/17 00:19	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			01/10/17 00:19	1
Acetone	ND		50		ug/L			01/10/17 00:19	1
Benzene	ND		1.0		ug/L			01/10/17 00:19	1
Bromobenzene	ND		1.0		ug/L			01/10/17 00:19	1
Bromoform	ND		1.0		ug/L			01/10/17 00:19	1
Bromomethane	ND		2.0		ug/L			01/10/17 00:19	1
Carbon disulfide	ND		10		ug/L			01/10/17 00:19	1
Carbon tetrachloride	ND		1.0		ug/L			01/10/17 00:19	1
Chlorobenzene	ND		1.0		ug/L			01/10/17 00:19	1
Chlorobromomethane	ND		1.0		ug/L			01/10/17 00:19	1
Chlorodibromomethane	ND		0.50		ug/L			01/10/17 00:19	1
Chloroethane	ND		2.0		ug/L			01/10/17 00:19	1
Chloroform	ND		1.0		ug/L			01/10/17 00:19	1
Chloromethane	ND		2.0		ug/L			01/10/17 00:19	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			01/10/17 00:19	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			01/10/17 00:19	1
Dichlorobromomethane	ND		0.50		ug/L			01/10/17 00:19	1
Dichlorodifluoromethane	ND		1.0		ug/L			01/10/17 00:19	1
Ethyl ether	ND		1.0		ug/L			01/10/17 00:19	1
Ethylbenzene	ND		1.0		ug/L			01/10/17 00:19	1
Ethylene Dibromide	ND		1.0		ug/L			01/10/17 00:19	1
Hexachlorobutadiene	ND		0.40		ug/L			01/10/17 00:19	1
Isopropyl ether	ND		10		ug/L			01/10/17 00:19	1
Isopropylbenzene	ND		1.0		ug/L			01/10/17 00:19	1
Methyl tert-butyl ether	ND		1.0		ug/L			01/10/17 00:19	1
Methylene Chloride	ND		1.0		ug/L			01/10/17 00:19	1
m-Xylene & p-Xylene	ND		2.0		ug/L			01/10/17 00:19	1
Naphthalene	ND		5.0		ug/L			01/10/17 00:19	1
n-Butylbenzene	ND		1.0		ug/L			01/10/17 00:19	1
N-Propylbenzene	ND		1.0		ug/L			01/10/17 00:19	1
o-Xylene	ND		1.0		ug/L			01/10/17 00:19	1
sec-Butylbenzene	ND		1.0		ug/L			01/10/17 00:19	1
Styrene	ND		1.0		ug/L			01/10/17 00:19	1
Tert-amyl methyl ether	ND		5.0		ug/L			01/10/17 00:19	1
Tert-butyl ethyl ether	ND		5.0		ug/L			01/10/17 00:19	1
tert-Butylbenzene	ND		1.0		ug/L			01/10/17 00:19	1
Tetrachloroethene	ND		1.0		ug/L			01/10/17 00:19	1
Tetrahydrofuran	ND	*	10		ug/L			01/10/17 00:19	1
Toluene	ND		1.0		ug/L			01/10/17 00:19	1

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

TestAmerica Job ID: 480-111878-1

Client Sample ID: TRIP BLANK
Date Collected: 01/05/17 00:00
Date Received: 01/06/17 00:45

Lab Sample ID: 480-111878-7
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/10/17 00:19	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			01/10/17 00:19	1
Trichloroethene	ND		1.0		ug/L			01/10/17 00:19	1
Trichlorofluoromethane	ND		1.0		ug/L			01/10/17 00:19	1
Vinyl chloride	ND		1.0		ug/L			01/10/17 00:19	1
Dibromomethane	ND		1.0		ug/L			01/10/17 00:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*95*		*70 - 130*		*01/10/17 00:19*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*		*01/10/17 00:19*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*01/10/17 00:19*	*1*

Surrogate Summary

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

TestAmerica Job ID: 480-111878-1

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)
480-111878-1	MW-267S-20170105	95	100	100
480-111878-2	MW-267M-20170105	94	101	100
480-111878-3	MW-268S-20170105	96	105	102
480-111878-4	MW-268M-20170105	96	103	101
480-111878-5	MW-563-20170105	90	104	99
480-111878-6	DUP2-20170105	92	104	97
480-111878-7	TRIP BLANK	95	102	100
LCS 480-339355/6	Lab Control Sample	95	106	103
LCS 480-339490/4	Lab Control Sample	96	102	99
LCSD 480-339355/7	Lab Control Sample Dup	92	102	101
LCSD 480-339490/5	Lab Control Sample Dup	94	102	100
MB 480-339355/9	Method Blank	96	104	103
MB 480-339490/7	Method Blank	90	106	98

Surrogate Legend

TOL = Toluene-d8 (Surr)
12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)

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

Lab Sample ID: MB 480-339355/9
Matrix: Water
Analysis Batch: 339355

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			01/09/17 21:21	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/09/17 21:21	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			01/09/17 21:21	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/09/17 21:21	1
1,1-Dichloroethane	ND		1.0		ug/L			01/09/17 21:21	1
1,1-Dichloroethene	ND		1.0		ug/L			01/09/17 21:21	1
1,1-Dichloropropene	ND		1.0		ug/L			01/09/17 21:21	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/09/17 21:21	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/09/17 21:21	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/09/17 21:21	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/09/17 21:21	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/09/17 21:21	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/09/17 21:21	1
1,2-Dichloroethane	ND		1.0		ug/L			01/09/17 21:21	1
1,2-Dichloropropane	ND		1.0		ug/L			01/09/17 21:21	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/09/17 21:21	1
1,3-Dichlorobenzene	ND		1.0		ug/L			01/09/17 21:21	1
1,3-Dichloropropane	ND		1.0		ug/L			01/09/17 21:21	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/09/17 21:21	1
1,4-Dioxane	ND		50		ug/L			01/09/17 21:21	1
2,2-Dichloropropane	ND		1.0		ug/L			01/09/17 21:21	1
2-Butanone (MEK)	ND		10		ug/L			01/09/17 21:21	1
2-Chlorotoluene	ND		1.0		ug/L			01/09/17 21:21	1
2-Hexanone	ND		10		ug/L			01/09/17 21:21	1
4-Chlorotoluene	ND		1.0		ug/L			01/09/17 21:21	1
4-Isopropyltoluene	ND		1.0		ug/L			01/09/17 21:21	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			01/09/17 21:21	1
Acetone	ND		50		ug/L			01/09/17 21:21	1
Benzene	ND		1.0		ug/L			01/09/17 21:21	1
Bromobenzene	ND		1.0		ug/L			01/09/17 21:21	1
Bromoform	ND		1.0		ug/L			01/09/17 21:21	1
Bromomethane	ND		2.0		ug/L			01/09/17 21:21	1
Carbon disulfide	ND		10		ug/L			01/09/17 21:21	1
Carbon tetrachloride	ND		1.0		ug/L			01/09/17 21:21	1
Chlorobenzene	ND		1.0		ug/L			01/09/17 21:21	1
Chlorobromomethane	ND		1.0		ug/L			01/09/17 21:21	1
Chlorodibromomethane	ND		0.50		ug/L			01/09/17 21:21	1
Chloroethane	ND		2.0		ug/L			01/09/17 21:21	1
Chloroform	ND		1.0		ug/L			01/09/17 21:21	1
Chloromethane	ND		2.0		ug/L			01/09/17 21:21	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			01/09/17 21:21	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			01/09/17 21:21	1
Dichlorobromomethane	ND		0.50		ug/L			01/09/17 21:21	1
Dichlorodifluoromethane	ND		1.0		ug/L			01/09/17 21:21	1
Ethyl ether	ND		1.0		ug/L			01/09/17 21:21	1
Ethylbenzene	ND		1.0		ug/L			01/09/17 21:21	1
Ethylene Dibromide	ND		1.0		ug/L			01/09/17 21:21	1
Hexachlorobutadiene	ND		0.40		ug/L			01/09/17 21:21	1

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

Lab Sample ID: MB 480-339355/9
Matrix: Water
Analysis Batch: 339355

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			01/09/17 21:21	1
Isopropylbenzene	ND		1.0		ug/L			01/09/17 21:21	1
Methyl tert-butyl ether	ND		1.0		ug/L			01/09/17 21:21	1
Methylene Chloride	ND		1.0		ug/L			01/09/17 21:21	1
m-Xylene & p-Xylene	ND		2.0		ug/L			01/09/17 21:21	1
Naphthalene	ND		5.0		ug/L			01/09/17 21:21	1
n-Butylbenzene	ND		1.0		ug/L			01/09/17 21:21	1
N-Propylbenzene	ND		1.0		ug/L			01/09/17 21:21	1
o-Xylene	ND		1.0		ug/L			01/09/17 21:21	1
sec-Butylbenzene	ND		1.0		ug/L			01/09/17 21:21	1
Styrene	ND		1.0		ug/L			01/09/17 21:21	1
Tert-amyl methyl ether	ND		5.0		ug/L			01/09/17 21:21	1
Tert-butyl ethyl ether	ND		5.0		ug/L			01/09/17 21:21	1
tert-Butylbenzene	ND		1.0		ug/L			01/09/17 21:21	1
Tetrachloroethene	ND		1.0		ug/L			01/09/17 21:21	1
Tetrahydrofuran	ND		10		ug/L			01/09/17 21:21	1
Toluene	ND		1.0		ug/L			01/09/17 21:21	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/09/17 21:21	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			01/09/17 21:21	1
Trichloroethene	ND		1.0		ug/L			01/09/17 21:21	1
Trichlorofluoromethane	ND		1.0		ug/L			01/09/17 21:21	1
Vinyl chloride	ND		1.0		ug/L			01/09/17 21:21	1
Dibromomethane	ND		1.0		ug/L			01/09/17 21:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*70 - 130*		*01/09/17 21:21*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*		*01/09/17 21:21*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*01/09/17 21:21*	*1*

Lab Sample ID: LCS 480-339355/6
Matrix: Water
Analysis Batch: 339355

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	24.8		ug/L		99	70 - 130
1,1,1-Trichloroethane	25.0	24.1		ug/L		96	70 - 130
1,1,2,2-Tetrachloroethane	25.0	21.8		ug/L		87	70 - 130
1,1,2-Trichloroethane	25.0	21.3		ug/L		85	70 - 130
1,1-Dichloroethane	25.0	24.6		ug/L		98	70 - 130
1,1-Dichloroethene	25.0	22.2		ug/L		89	70 - 130
1,1-Dichloropropene	25.0	23.3		ug/L		93	70 - 130
1,2,3-Trichlorobenzene	25.0	24.6		ug/L		98	70 - 130
1,2,3-Trichloropropane	25.0	21.7		ug/L		87	70 - 130
1,2,4-Trichlorobenzene	25.0	23.9		ug/L		95	70 - 130
1,2,4-Trimethylbenzene	25.0	21.9		ug/L		88	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	23.6		ug/L		95	70 - 130
1,2-Dichlorobenzene	25.0	22.3		ug/L		89	70 - 130
1,2-Dichloroethane	25.0	23.9		ug/L		96	70 - 130

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

Lab Sample ID: LCS 480-339355/6
Matrix: Water
Analysis Batch: 339355

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	24.4		ug/L		98	70 - 130
1,3,5-Trimethylbenzene	25.0	21.7		ug/L		87	70 - 130
1,3-Dichlorobenzene	25.0	22.1		ug/L		88	70 - 130
1,3-Dichloropropane	25.0	21.1		ug/L		84	70 - 130
1,4-Dichlorobenzene	25.0	21.9		ug/L		87	70 - 130
1,4-Dioxane	500	522		ug/L		104	70 - 130
2,2-Dichloropropane	25.0	24.1		ug/L		96	70 - 130
2-Butanone (MEK)	125	140		ug/L		112	70 - 130
2-Chlorotoluene	25.0	21.7		ug/L		87	70 - 130
2-Hexanone	125	124		ug/L		99	70 - 130
4-Chlorotoluene	25.0	21.7		ug/L		87	70 - 130
4-Isopropyltoluene	25.0	22.8		ug/L		91	70 - 130
4-Methyl-2-pentanone (MIBK)	125	127		ug/L		102	70 - 130
Acetone	125	111		ug/L		89	70 - 130
Benzene	25.0	22.8		ug/L		91	70 - 130
Bromobenzene	25.0	21.3		ug/L		85	70 - 130
Bromoform	25.0	25.9		ug/L		104	70 - 130
Bromomethane	25.0	24.2		ug/L		97	70 - 130
Carbon disulfide	25.0	21.9		ug/L		88	70 - 130
Carbon tetrachloride	25.0	25.5		ug/L		102	70 - 130
Chlorobenzene	25.0	22.3		ug/L		89	70 - 130
Chlorobromomethane	25.0	24.8		ug/L		99	70 - 130
Chlorodibromomethane	25.0	25.4		ug/L		102	70 - 130
Chloroethane	25.0	23.7		ug/L		95	70 - 130
Chloroform	25.0	22.7		ug/L		91	70 - 130
Chloromethane	25.0	27.2		ug/L		109	70 - 130
cis-1,2-Dichloroethene	25.0	23.1		ug/L		92	70 - 130
cis-1,3-Dichloropropene	25.0	23.4		ug/L		94	70 - 130
Dichlorobromomethane	25.0	24.4		ug/L		97	70 - 130
Dichlorodifluoromethane	25.0	27.9		ug/L		112	70 - 130
Ethyl ether	25.0	24.2		ug/L		97	70 - 130
Ethylbenzene	25.0	21.9		ug/L		88	70 - 130
Ethylene Dibromide	25.0	22.0		ug/L		88	70 - 130
Hexachlorobutadiene	25.0	23.9		ug/L		96	70 - 130
Isopropyl ether	25.0	31.4		ug/L		126	70 - 130
Isopropylbenzene	25.0	21.5		ug/L		86	70 - 130
Methyl tert-butyl ether	25.0	22.9		ug/L		92	70 - 130
Methylene Chloride	25.0	23.1		ug/L		92	70 - 130
m-Xylene & p-Xylene	25.0	22.8		ug/L		91	70 - 130
Naphthalene	25.0	23.4		ug/L		94	70 - 130
n-Butylbenzene	25.0	21.8		ug/L		87	70 - 130
N-Propylbenzene	25.0	21.2		ug/L		85	70 - 130
o-Xylene	25.0	22.2		ug/L		89	70 - 130
sec-Butylbenzene	25.0	21.6		ug/L		86	70 - 130
Styrene	25.0	22.9		ug/L		92	70 - 130
Tert-amyl methyl ether	25.0	22.3		ug/L		89	70 - 130
Tert-butyl ethyl ether	25.0	25.2		ug/L		101	70 - 130
tert-Butylbenzene	25.0	22.8		ug/L		91	70 - 130

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

Lab Sample ID: LCS 480-339355/6
Matrix: Water
Analysis Batch: 339355

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	23.2		ug/L		93	70 - 130
Tetrahydrofuran	50.0	69.2	*	ug/L		138	70 - 130
Toluene	25.0	21.3		ug/L		85	70 - 130
trans-1,2-Dichloroethene	25.0	23.2		ug/L		93	70 - 130
trans-1,3-Dichloropropene	25.0	22.1		ug/L		88	70 - 130
Trichloroethene	25.0	23.4		ug/L		94	70 - 130
Trichlorofluoromethane	25.0	23.7		ug/L		95	70 - 130
Vinyl chloride	25.0	26.0		ug/L		104	70 - 130
Dibromomethane	25.0	24.1		ug/L		97	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*95*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 130*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 480-339355/7
Matrix: Water
Analysis Batch: 339355

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	24.7		ug/L		99	70 - 130	0	20
1,1,1-Trichloroethane	25.0	24.5		ug/L		98	70 - 130	2	20
1,1,2,2-Tetrachloroethane	25.0	21.5		ug/L		86	70 - 130	1	20
1,1,2-Trichloroethane	25.0	20.9		ug/L		84	70 - 130	2	20
1,1-Dichloroethane	25.0	25.2		ug/L		101	70 - 130	2	20
1,1-Dichloroethene	25.0	23.0		ug/L		92	70 - 130	4	20
1,1-Dichloropropene	25.0	24.0		ug/L		96	70 - 130	3	20
1,2,3-Trichlorobenzene	25.0	23.7		ug/L		95	70 - 130	4	20
1,2,3-Trichloropropane	25.0	20.8		ug/L		83	70 - 130	4	20
1,2,4-Trichlorobenzene	25.0	23.6		ug/L		94	70 - 130	1	20
1,2,4-Trimethylbenzene	25.0	22.2		ug/L		89	70 - 130	1	20
1,2-Dibromo-3-Chloropropane	25.0	23.5		ug/L		94	70 - 130	1	20
1,2-Dichlorobenzene	25.0	22.1		ug/L		89	70 - 130	1	20
1,2-Dichloroethane	25.0	23.9		ug/L		96	70 - 130	0	20
1,2-Dichloropropane	25.0	25.4		ug/L		102	70 - 130	4	20
1,3,5-Trimethylbenzene	25.0	22.1		ug/L		88	70 - 130	2	20
1,3-Dichlorobenzene	25.0	22.5		ug/L		90	70 - 130	2	20
1,3-Dichloropropane	25.0	21.1		ug/L		85	70 - 130	0	20
1,4-Dichlorobenzene	25.0	21.9		ug/L		87	70 - 130	0	20
1,4-Dioxane	500	518		ug/L		104	70 - 130	1	20
2,2-Dichloropropane	25.0	24.1		ug/L		96	70 - 130	0	20
2-Butanone (MEK)	125	116		ug/L		93	70 - 130	19	20
2-Chlorotoluene	25.0	22.4		ug/L		90	70 - 130	3	20
2-Hexanone	125	121		ug/L		97	70 - 130	2	20
4-Chlorotoluene	25.0	22.0		ug/L		88	70 - 130	2	20
4-Isopropyltoluene	25.0	22.8		ug/L		91	70 - 130	0	20
4-Methyl-2-pentanone (MIBK)	125	125		ug/L		100	70 - 130	2	20
Acetone	125	110		ug/L		88	70 - 130	1	20

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

Lab Sample ID: LCSD 480-339355/7
Matrix: Water
Analysis Batch: 339355

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	23.1		ug/L		92	70 - 130	1	20
Bromobenzene			25.0	21.5		ug/L		86	70 - 130	1	20
Bromoform			25.0	25.6		ug/L		103	70 - 130	1	20
Bromomethane			25.0	25.0		ug/L		100	70 - 130	3	20
Carbon disulfide			25.0	22.7		ug/L		91	70 - 130	4	20
Carbon tetrachloride			25.0	26.2		ug/L		105	70 - 130	2	20
Chlorobenzene			25.0	22.4		ug/L		90	70 - 130	0	20
Chlorobromomethane			25.0	24.0		ug/L		96	70 - 130	3	20
Chlorodibromomethane			25.0	25.1		ug/L		100	70 - 130	1	20
Chloroethane			25.0	24.8		ug/L		99	70 - 130	4	20
Chloroform			25.0	22.6		ug/L		90	70 - 130	0	20
Chloromethane			25.0	27.6		ug/L		111	70 - 130	2	20
cis-1,2-Dichloroethene			25.0	22.9		ug/L		91	70 - 130	1	20
cis-1,3-Dichloropropene			25.0	22.7		ug/L		91	70 - 130	3	20
Dichlorobromomethane			25.0	24.5		ug/L		98	70 - 130	1	20
Dichlorodifluoromethane			25.0	27.8		ug/L		111	70 - 130	0	20
Ethyl ether			25.0	24.5		ug/L		98	70 - 130	1	20
Ethylbenzene			25.0	22.1		ug/L		88	70 - 130	1	20
Ethylene Dibromide			25.0	21.7		ug/L		87	70 - 130	2	20
Hexachlorobutadiene			25.0	23.7		ug/L		95	70 - 130	1	20
Isopropyl ether			25.0	30.9		ug/L		123	70 - 130	2	20
Isopropylbenzene			25.0	22.3		ug/L		89	70 - 130	3	20
Methyl tert-butyl ether			25.0	22.5		ug/L		90	70 - 130	2	20
Methylene Chloride			25.0	23.0		ug/L		92	70 - 130	0	20
m-Xylene & p-Xylene			25.0	22.6		ug/L		90	70 - 130	1	20
Naphthalene			25.0	23.8		ug/L		95	70 - 130	2	20
n-Butylbenzene			25.0	22.4		ug/L		90	70 - 130	3	20
N-Propylbenzene			25.0	21.7		ug/L		87	70 - 130	2	20
o-Xylene			25.0	22.9		ug/L		92	70 - 130	3	20
sec-Butylbenzene			25.0	22.5		ug/L		90	70 - 130	4	20
Styrene			25.0	22.7		ug/L		91	70 - 130	1	20
Tert-amyl methyl ether			25.0	21.7		ug/L		87	70 - 130	2	20
Tert-butyl ethyl ether			25.0	25.1		ug/L		100	70 - 130	1	20
tert-Butylbenzene			25.0	23.3		ug/L		93	70 - 130	2	20
Tetrachloroethene			25.0	24.3		ug/L		97	70 - 130	5	20
Tetrahydrofuran			50.0	68.4	*	ug/L		137	70 - 130	1	20
Toluene			25.0	21.8		ug/L		87	70 - 130	2	20
trans-1,2-Dichloroethene			25.0	23.7		ug/L		95	70 - 130	2	20
trans-1,3-Dichloropropene			25.0	21.9		ug/L		88	70 - 130	1	20
Trichloroethene			25.0	23.6		ug/L		94	70 - 130	1	20
Trichlorofluoromethane			25.0	24.9		ug/L		99	70 - 130	5	20
Vinyl chloride			25.0	27.3		ug/L		109	70 - 130	5	20
Dibromomethane			25.0	24.2		ug/L		97	70 - 130	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*92*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: MB 480-339490/7
Matrix: Water
Analysis Batch: 339490

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			01/10/17 22:31	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/10/17 22:31	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			01/10/17 22:31	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/10/17 22:31	1
1,1-Dichloroethane	ND		1.0		ug/L			01/10/17 22:31	1
1,1-Dichloroethene	ND		1.0		ug/L			01/10/17 22:31	1
1,1-Dichloropropene	ND		1.0		ug/L			01/10/17 22:31	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/10/17 22:31	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/10/17 22:31	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/10/17 22:31	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/10/17 22:31	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/10/17 22:31	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/10/17 22:31	1
1,2-Dichloroethane	ND		1.0		ug/L			01/10/17 22:31	1
1,2-Dichloropropane	ND		1.0		ug/L			01/10/17 22:31	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/10/17 22:31	1
1,3-Dichlorobenzene	ND		1.0		ug/L			01/10/17 22:31	1
1,3-Dichloropropane	ND		1.0		ug/L			01/10/17 22:31	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/10/17 22:31	1
1,4-Dioxane	ND		50		ug/L			01/10/17 22:31	1
2,2-Dichloropropane	ND		1.0		ug/L			01/10/17 22:31	1
2-Butanone (MEK)	ND		10		ug/L			01/10/17 22:31	1
2-Chlorotoluene	ND		1.0		ug/L			01/10/17 22:31	1
2-Hexanone	ND		10		ug/L			01/10/17 22:31	1
4-Chlorotoluene	ND		1.0		ug/L			01/10/17 22:31	1
4-Isopropyltoluene	ND		1.0		ug/L			01/10/17 22:31	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			01/10/17 22:31	1
Acetone	ND		50		ug/L			01/10/17 22:31	1
Benzene	ND		1.0		ug/L			01/10/17 22:31	1
Bromobenzene	ND		1.0		ug/L			01/10/17 22:31	1
Bromoform	ND		1.0		ug/L			01/10/17 22:31	1
Bromomethane	ND		2.0		ug/L			01/10/17 22:31	1
Carbon disulfide	ND		10		ug/L			01/10/17 22:31	1
Carbon tetrachloride	ND		1.0		ug/L			01/10/17 22:31	1
Chlorobenzene	ND		1.0		ug/L			01/10/17 22:31	1
Chlorobromomethane	ND		1.0		ug/L			01/10/17 22:31	1
Chlorodibromomethane	ND		0.50		ug/L			01/10/17 22:31	1
Chloroethane	ND		2.0		ug/L			01/10/17 22:31	1
Chloroform	ND		1.0		ug/L			01/10/17 22:31	1
Chloromethane	ND		2.0		ug/L			01/10/17 22:31	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			01/10/17 22:31	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			01/10/17 22:31	1
Dichlorobromomethane	ND		0.50		ug/L			01/10/17 22:31	1
Dichlorodifluoromethane	ND		1.0		ug/L			01/10/17 22:31	1
Ethyl ether	ND		1.0		ug/L			01/10/17 22:31	1
Ethylbenzene	ND		1.0		ug/L			01/10/17 22:31	1
Ethylene Dibromide	ND		1.0		ug/L			01/10/17 22:31	1
Hexachlorobutadiene	ND		0.40		ug/L			01/10/17 22:31	1
Isopropyl ether	ND		10		ug/L			01/10/17 22:31	1
Isopropylbenzene	ND		1.0		ug/L			01/10/17 22:31	1

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

Lab Sample ID: MB 480-339490/7
Matrix: Water
Analysis Batch: 339490

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		1.0		ug/L			01/10/17 22:31	1
Methylene Chloride	ND		1.0		ug/L			01/10/17 22:31	1
m-Xylene & p-Xylene	ND		2.0		ug/L			01/10/17 22:31	1
Naphthalene	ND		5.0		ug/L			01/10/17 22:31	1
n-Butylbenzene	ND		1.0		ug/L			01/10/17 22:31	1
N-Propylbenzene	ND		1.0		ug/L			01/10/17 22:31	1
o-Xylene	ND		1.0		ug/L			01/10/17 22:31	1
sec-Butylbenzene	ND		1.0		ug/L			01/10/17 22:31	1
Styrene	ND		1.0		ug/L			01/10/17 22:31	1
Tert-amyl methyl ether	ND		5.0		ug/L			01/10/17 22:31	1
Tert-butyl ethyl ether	ND		5.0		ug/L			01/10/17 22:31	1
tert-Butylbenzene	ND		1.0		ug/L			01/10/17 22:31	1
Tetrachloroethene	ND		1.0		ug/L			01/10/17 22:31	1
Tetrahydrofuran	ND		10		ug/L			01/10/17 22:31	1
Toluene	ND		1.0		ug/L			01/10/17 22:31	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/10/17 22:31	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			01/10/17 22:31	1
Trichloroethene	ND		1.0		ug/L			01/10/17 22:31	1
Trichlorofluoromethane	ND		1.0		ug/L			01/10/17 22:31	1
Vinyl chloride	ND		1.0		ug/L			01/10/17 22:31	1
Dibromomethane	ND		1.0		ug/L			01/10/17 22:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*90*		*70 - 130*		*01/10/17 22:31*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 130*		*01/10/17 22:31*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*01/10/17 22:31*	*1*

Lab Sample ID: LCS 480-339490/4
Matrix: Water
Analysis Batch: 339490

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	23.4		ug/L		93	70 - 130
1,1,1-Trichloroethane	25.0	22.9		ug/L		92	70 - 130
1,1,2,2-Tetrachloroethane	25.0	21.9		ug/L		87	70 - 130
1,1,2-Trichloroethane	25.0	21.0		ug/L		84	70 - 130
1,1-Dichloroethane	25.0	24.2		ug/L		97	70 - 130
1,1-Dichloroethene	25.0	21.0		ug/L		84	70 - 130
1,1-Dichloropropene	25.0	22.6		ug/L		90	70 - 130
1,2,3-Trichlorobenzene	25.0	24.1		ug/L		97	70 - 130
1,2,3-Trichloropropane	25.0	21.0		ug/L		84	70 - 130
1,2,4-Trichlorobenzene	25.0	24.1		ug/L		97	70 - 130
1,2,4-Trimethylbenzene	25.0	21.9		ug/L		88	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	23.8		ug/L		95	70 - 130
1,2-Dichlorobenzene	25.0	22.4		ug/L		90	70 - 130
1,2-Dichloroethane	25.0	23.8		ug/L		95	70 - 130
1,2-Dichloropropane	25.0	23.6		ug/L		95	70 - 130
1,3,5-Trimethylbenzene	25.0	21.9		ug/L		88	70 - 130

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

Lab Sample ID: LCS 480-339490/4
Matrix: Water
Analysis Batch: 339490

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichlorobenzene	25.0	23.1		ug/L		92	70 - 130
1,3-Dichloropropane	25.0	20.9		ug/L		84	70 - 130
1,4-Dichlorobenzene	25.0	22.1		ug/L		88	70 - 130
1,4-Dioxane	500	538		ug/L		108	70 - 130
2,2-Dichloropropane	25.0	24.0		ug/L		96	70 - 130
2-Butanone (MEK)	125	151		ug/L		120	70 - 130
2-Chlorotoluene	25.0	22.4		ug/L		90	70 - 130
2-Hexanone	125	133		ug/L		106	70 - 130
4-Chlorotoluene	25.0	22.0		ug/L		88	70 - 130
4-Isopropyltoluene	25.0	22.7		ug/L		91	70 - 130
4-Methyl-2-pentanone (MIBK)	125	132		ug/L		106	70 - 130
Acetone	125	137		ug/L		110	70 - 130
Benzene	25.0	21.9		ug/L		88	70 - 130
Bromobenzene	25.0	21.5		ug/L		86	70 - 130
Bromoform	25.0	23.5		ug/L		94	70 - 130
Bromomethane	25.0	23.0		ug/L		92	70 - 130
Carbon disulfide	25.0	21.1		ug/L		84	70 - 130
Carbon tetrachloride	25.0	24.3		ug/L		97	70 - 130
Chlorobenzene	25.0	22.1		ug/L		89	70 - 130
Chlorobromomethane	25.0	22.9		ug/L		91	70 - 130
Chlorodibromomethane	25.0	24.4		ug/L		98	70 - 130
Chloroethane	25.0	23.2		ug/L		93	70 - 130
Chloroform	25.0	22.2		ug/L		89	70 - 130
Chloromethane	25.0	25.9		ug/L		104	70 - 130
cis-1,2-Dichloroethene	25.0	22.0		ug/L		88	70 - 130
cis-1,3-Dichloropropene	25.0	23.1		ug/L		93	70 - 130
Dichlorobromomethane	25.0	23.6		ug/L		95	70 - 130
Dichlorodifluoromethane	25.0	25.9		ug/L		104	70 - 130
Ethyl ether	25.0	23.7		ug/L		95	70 - 130
Ethylbenzene	25.0	21.6		ug/L		86	70 - 130
Ethylene Dibromide	25.0	22.1		ug/L		88	70 - 130
Hexachlorobutadiene	25.0	23.1		ug/L		92	70 - 130
Isopropyl ether	25.0	33.9	*	ug/L		136	70 - 130
Isopropylbenzene	25.0	21.4		ug/L		86	70 - 130
Methyl tert-butyl ether	25.0	21.7		ug/L		87	70 - 130
Methylene Chloride	25.0	22.4		ug/L		89	70 - 130
m-Xylene & p-Xylene	25.0	21.9		ug/L		88	70 - 130
Naphthalene	25.0	24.0		ug/L		96	70 - 130
n-Butylbenzene	25.0	22.5		ug/L		90	70 - 130
N-Propylbenzene	25.0	21.9		ug/L		87	70 - 130
o-Xylene	25.0	21.3		ug/L		85	70 - 130
sec-Butylbenzene	25.0	22.3		ug/L		89	70 - 130
Styrene	25.0	22.4		ug/L		90	70 - 130
Tert-amyl methyl ether	25.0	23.5		ug/L		94	70 - 130
Tert-butyl ethyl ether	25.0	27.4		ug/L		109	70 - 130
tert-Butylbenzene	25.0	22.9		ug/L		91	70 - 130
Tetrachloroethene	25.0	23.1		ug/L		92	70 - 130
Tetrahydrofuran	50.0	71.7	*	ug/L		143	70 - 130

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

Lab Sample ID: LCS 480-339490/4
Matrix: Water
Analysis Batch: 339490

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	25.0	21.2		ug/L		85	70 - 130
trans-1,2-Dichloroethene	25.0	22.0		ug/L		88	70 - 130
trans-1,3-Dichloropropene	25.0	21.2		ug/L		85	70 - 130
Trichloroethene	25.0	22.2		ug/L		89	70 - 130
Trichlorofluoromethane	25.0	23.2		ug/L		93	70 - 130
Vinyl chloride	25.0	24.3		ug/L		97	70 - 130
Dibromomethane	25.0	24.1		ug/L		96	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*96*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: LCSD 480-339490/5
Matrix: Water
Analysis Batch: 339490

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	24.1		ug/L		97	70 - 130	3	20
1,1,1-Trichloroethane	25.0	23.8		ug/L		95	70 - 130	4	20
1,1,2,2-Tetrachloroethane	25.0	22.4		ug/L		90	70 - 130	3	20
1,1,2-Trichloroethane	25.0	21.2		ug/L		85	70 - 130	1	20
1,1-Dichloroethane	25.0	24.6		ug/L		98	70 - 130	1	20
1,1-Dichloroethene	25.0	22.6		ug/L		90	70 - 130	7	20
1,1-Dichloropropene	25.0	24.1		ug/L		96	70 - 130	7	20
1,2,3-Trichlorobenzene	25.0	23.9		ug/L		95	70 - 130	1	20
1,2,3-Trichloropropane	25.0	21.8		ug/L		87	70 - 130	4	20
1,2,4-Trichlorobenzene	25.0	24.7		ug/L		99	70 - 130	2	20
1,2,4-Trimethylbenzene	25.0	23.0		ug/L		92	70 - 130	5	20
1,2-Dibromo-3-Chloropropane	25.0	23.0		ug/L		92	70 - 130	4	20
1,2-Dichlorobenzene	25.0	23.4		ug/L		94	70 - 130	5	20
1,2-Dichloroethane	25.0	24.1		ug/L		96	70 - 130	1	20
1,2-Dichloropropane	25.0	25.1		ug/L		100	70 - 130	6	20
1,3,5-Trimethylbenzene	25.0	22.8		ug/L		91	70 - 130	4	20
1,3-Dichlorobenzene	25.0	23.5		ug/L		94	70 - 130	2	20
1,3-Dichloropropane	25.0	21.3		ug/L		85	70 - 130	2	20
1,4-Dichlorobenzene	25.0	22.9		ug/L		92	70 - 130	4	20
1,4-Dioxane	500	519		ug/L		104	70 - 130	4	20
2,2-Dichloropropane	25.0	24.4		ug/L		97	70 - 130	1	20
2-Butanone (MEK)	125	151		ug/L		121	70 - 130	0	20
2-Chlorotoluene	25.0	23.4		ug/L		93	70 - 130	4	20
2-Hexanone	125	133		ug/L		107	70 - 130	0	20
4-Chlorotoluene	25.0	23.1		ug/L		92	70 - 130	5	20
4-Isopropyltoluene	25.0	23.9		ug/L		96	70 - 130	5	20
4-Methyl-2-pentanone (MIBK)	125	129		ug/L		103	70 - 130	2	20
Acetone	125	137		ug/L		110	70 - 130	0	20
Benzene	25.0	22.6		ug/L		91	70 - 130	3	20
Bromobenzene	25.0	22.1		ug/L		88	70 - 130	3	20

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

Lab Sample ID: LCSD 480-339490/5
Matrix: Water
Analysis Batch: 339490

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
Bromoform			25.0	24.1		ug/L		96	70 - 130	3	20
Bromomethane			25.0	24.4		ug/L		97	70 - 130	6	20
Carbon disulfide			25.0	21.6		ug/L		86	70 - 130	2	20
Carbon tetrachloride			25.0	25.6		ug/L		102	70 - 130	5	20
Chlorobenzene			25.0	22.3		ug/L		89	70 - 130	1	20
Chlorobromomethane			25.0	23.6		ug/L		94	70 - 130	3	20
Chlorodibromomethane			25.0	24.4		ug/L		98	70 - 130	0	20
Chloroethane			25.0	23.9		ug/L		96	70 - 130	3	20
Chloroform			25.0	22.6		ug/L		90	70 - 130	2	20
Chloromethane			25.0	27.3		ug/L		109	70 - 130	6	20
cis-1,2-Dichloroethene			25.0	23.0		ug/L		92	70 - 130	4	20
cis-1,3-Dichloropropene			25.0	23.2		ug/L		93	70 - 130	0	20
Dichlorobromomethane			25.0	24.3		ug/L		97	70 - 130	3	20
Dichlorodifluoromethane			25.0	26.5		ug/L		106	70 - 130	2	20
Ethyl ether			25.0	25.2		ug/L		101	70 - 130	6	20
Ethylbenzene			25.0	22.4		ug/L		90	70 - 130	4	20
Ethylene Dibromide			25.0	22.2		ug/L		89	70 - 130	0	20
Hexachlorobutadiene			25.0	23.9		ug/L		95	70 - 130	3	20
Isopropyl ether			25.0	34.8	*	ug/L		139	70 - 130	3	20
Isopropylbenzene			25.0	22.8		ug/L		91	70 - 130	6	20
Methyl tert-butyl ether			25.0	21.9		ug/L		87	70 - 130	1	20
Methylene Chloride			25.0	22.6		ug/L		90	70 - 130	1	20
m-Xylene & p-Xylene			25.0	22.9		ug/L		92	70 - 130	5	20
Naphthalene			25.0	24.0		ug/L		96	70 - 130	0	20
n-Butylbenzene			25.0	24.0		ug/L		96	70 - 130	6	20
N-Propylbenzene			25.0	22.9		ug/L		92	70 - 130	5	20
o-Xylene			25.0	22.6		ug/L		91	70 - 130	6	20
sec-Butylbenzene			25.0	23.4		ug/L		94	70 - 130	5	20
Styrene			25.0	23.1		ug/L		93	70 - 130	3	20
Tert-amyl methyl ether			25.0	23.4		ug/L		94	70 - 130	0	20
Tert-butyl ethyl ether			25.0	27.4		ug/L		110	70 - 130	0	20
tert-Butylbenzene			25.0	24.5		ug/L		98	70 - 130	7	20
Tetrachloroethene			25.0	23.5		ug/L		94	70 - 130	2	20
Tetrahydrofuran			50.0	72.7	*	ug/L		145	70 - 130	1	20
Toluene			25.0	21.7		ug/L		87	70 - 130	2	20
trans-1,2-Dichloroethene			25.0	22.9		ug/L		92	70 - 130	4	20
trans-1,3-Dichloropropene			25.0	21.9		ug/L		88	70 - 130	4	20
Trichloroethene			25.0	23.9		ug/L		96	70 - 130	7	20
Trichlorofluoromethane			25.0	24.3		ug/L		97	70 - 130	5	20
Vinyl chloride			25.0	25.6		ug/L		102	70 - 130	5	20
Dibromomethane			25.0	23.8		ug/L		95	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*94*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*

Method: 6010 - Metals (ICP)

Lab Sample ID: MB 480-339025/1-A
Matrix: Water
Analysis Batch: 339256

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 339025

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050		mg/L		01/06/17 09:25	01/06/17 21:16	1

Lab Sample ID: LCS 480-339025/2-A
Matrix: Water
Analysis Batch: 339256

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 339025

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	10.9		mg/L		109	80 - 120

Lab Sample ID: LCSD 480-339025/3-A
Matrix: Water
Analysis Batch: 339256

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 339025

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	10.0	10.8		mg/L		108	80 - 120	1	20

Lab Sample ID: 480-111878-1 MS
Matrix: Water
Analysis Batch: 339256

Client Sample ID: MW-267S-20170105
Prep Type: Total/NA
Prep Batch: 339025

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	290		10.0	305	4	mg/L		164	75 - 125

Lab Sample ID: 480-111878-1 MSD
Matrix: Water
Analysis Batch: 339256

Client Sample ID: MW-267S-20170105
Prep Type: Total/NA
Prep Batch: 339025

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	290		10.0	300	4	mg/L		116	75 - 125	2	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-339199/4
Matrix: Water
Analysis Batch: 339199

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50		mg/L			01/09/17 12:09	1
Sulfate	ND		2.0		mg/L			01/09/17 12:09	1

Lab Sample ID: LCS 480-339199/3
Matrix: Water
Analysis Batch: 339199

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	48.9		mg/L		98	90 - 110
Sulfate	50.0	47.9		mg/L		96	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 480-111878-1 MS
Matrix: Water
Analysis Batch: 339199

Client Sample ID: MW-267S-20170105
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	55	F1 F2	500	831	F1	mg/L		155	81 - 120
Sulfate	21	F1 F2	500	858	F1	mg/L		167	80 - 120

Lab Sample ID: 480-111878-1 MSD
Matrix: Water
Analysis Batch: 339199

Client Sample ID: MW-267S-20170105
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	55	F1 F2	500	529	F2	mg/L		95	81 - 120	44	20
Sulfate	21	F1 F2	500	533	F2	mg/L		102	80 - 120	47	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-339274/2-A
Matrix: Water
Analysis Batch: 339425

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 339274

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.20		mg/L		01/09/17 10:02	01/10/17 09:45	1

Lab Sample ID: LCS 480-339274/1-A
Matrix: Water
Analysis Batch: 339425

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 339274

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.08		mg/L		108	90 - 110

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-339827/46
Matrix: Water
Analysis Batch: 339827

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TOC Result 1	ND		1.0		mg/L			01/12/17 03:49	1
TOC Result 2	ND		1.0		mg/L			01/12/17 03:49	1
Total Organic Carbon - Duplicates	ND		1.0		mg/L			01/12/17 03:49	1

Lab Sample ID: LCS 480-339827/47
Matrix: Water
Analysis Batch: 339827

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
TOC Result 1	60.0	58.4		mg/L		97	90 - 110
TOC Result 2	60.0	61.1		mg/L		102	90 - 110
Total Organic Carbon - Duplicates	60.0	59.7		mg/L		100	90 - 110

Method: 9060A - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: MB 480-340101/5
Matrix: Water
Analysis Batch: 340101

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TOC Result 1	ND		1.0		mg/L			01/14/17 18:13	1
TOC Result 2	ND		1.0		mg/L			01/14/17 18:13	1
Total Organic Carbon - Duplicates	ND		1.0		mg/L			01/14/17 18:13	1

Lab Sample ID: LCS 480-340101/6
Matrix: Water
Analysis Batch: 340101

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
TOC Result 1	60.0	57.8		mg/L		96	90 - 110
TOC Result 2	60.0	61.4		mg/L		102	90 - 110
Total Organic Carbon - Duplicates	60.0	59.6		mg/L		99	90 - 110

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-339387/30
Matrix: Water
Analysis Batch: 339387

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	ND		5.0		mg/L			01/09/17 14:57	1

Lab Sample ID: MB 480-339387/7
Matrix: Water
Analysis Batch: 339387

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	ND		5.0		mg/L			01/09/17 12:30	1

Lab Sample ID: LCS 480-339387/31
Matrix: Water
Analysis Batch: 339387

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total	100	94.3		mg/L		94	90 - 110

Lab Sample ID: LCS 480-339387/8
Matrix: Water
Analysis Batch: 339387

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total	100	99.8		mg/L		100	90 - 110

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

TestAmerica Job ID: 480-111878-1

Method: SM 4500 P E - Orthophosphate

Lab Sample ID: MB 480-339080/3
Matrix: Water
Analysis Batch: 339080

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
ortho-Phosphate	ND		0.020		mg/L			01/06/17 08:55	1

Lab Sample ID: LCS 480-339080/4
Matrix: Water
Analysis Batch: 339080

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
ortho-Phosphate			0.200	0.208		mg/L		104	90 - 110		

GC/MS VOA

Analysis Batch: 339355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111878-1	MW-267S-20170105	Total/NA	Water	8260C	
480-111878-2	MW-267M-20170105	Total/NA	Water	8260C	
480-111878-4	MW-268M-20170105	Total/NA	Water	8260C	
480-111878-5	MW-563-20170105	Total/NA	Water	8260C	
480-111878-7	TRIP BLANK	Total/NA	Water	8260C	
MB 480-339355/9	Method Blank	Total/NA	Water	8260C	
LCS 480-339355/6	Lab Control Sample	Total/NA	Water	8260C	
LCSD 480-339355/7	Lab Control Sample Dup	Total/NA	Water	8260C	

Analysis Batch: 339490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111878-3	MW-268S-20170105	Total/NA	Water	8260C	
480-111878-6	DUP2-20170105	Total/NA	Water	8260C	
MB 480-339490/7	Method Blank	Total/NA	Water	8260C	
LCS 480-339490/4	Lab Control Sample	Total/NA	Water	8260C	
LCSD 480-339490/5	Lab Control Sample Dup	Total/NA	Water	8260C	

Metals

Prep Batch: 339025

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111878-1	MW-267S-20170105	Total/NA	Water	3005A	
480-111878-2	MW-267M-20170105	Total/NA	Water	3005A	
480-111878-3	MW-268S-20170105	Total/NA	Water	3005A	
480-111878-4	MW-268M-20170105	Total/NA	Water	3005A	
480-111878-5	MW-563-20170105	Total/NA	Water	3005A	
MB 480-339025/1-A	Method Blank	Total/NA	Water	3005A	
LCS 480-339025/2-A	Lab Control Sample	Total/NA	Water	3005A	
LCSD 480-339025/3-A	Lab Control Sample Dup	Total/NA	Water	3005A	
480-111878-1 MS	MW-267S-20170105	Total/NA	Water	3005A	
480-111878-1 MSD	MW-267S-20170105	Total/NA	Water	3005A	

Analysis Batch: 339256

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111878-1	MW-267S-20170105	Total/NA	Water	6010	339025
480-111878-2	MW-267M-20170105	Total/NA	Water	6010	339025
480-111878-3	MW-268S-20170105	Total/NA	Water	6010	339025
480-111878-4	MW-268M-20170105	Total/NA	Water	6010	339025
480-111878-5	MW-563-20170105	Total/NA	Water	6010	339025
MB 480-339025/1-A	Method Blank	Total/NA	Water	6010	339025
LCS 480-339025/2-A	Lab Control Sample	Total/NA	Water	6010	339025
LCSD 480-339025/3-A	Lab Control Sample Dup	Total/NA	Water	6010	339025
480-111878-1 MS	MW-267S-20170105	Total/NA	Water	6010	339025
480-111878-1 MSD	MW-267S-20170105	Total/NA	Water	6010	339025

General Chemistry

Analysis Batch: 339080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111878-1	MW-267S-20170105	Total/NA	Water	SM 4500 P E	

General Chemistry (Continued)

Analysis Batch: 339080 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111878-2	MW-267M-20170105	Total/NA	Water	SM 4500 P E	
480-111878-3	MW-268S-20170105	Total/NA	Water	SM 4500 P E	
480-111878-4	MW-268M-20170105	Total/NA	Water	SM 4500 P E	
480-111878-5	MW-563-20170105	Total/NA	Water	SM 4500 P E	
MB 480-339080/3	Method Blank	Total/NA	Water	SM 4500 P E	
LCS 480-339080/4	Lab Control Sample	Total/NA	Water	SM 4500 P E	

Analysis Batch: 339149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111878-1	MW-267S-20170105	Total/NA	Water	353.2	
480-111878-2	MW-267M-20170105	Total/NA	Water	353.2	
480-111878-3	MW-268S-20170105	Total/NA	Water	353.2	
480-111878-4	MW-268M-20170105	Total/NA	Water	353.2	
480-111878-5	MW-563-20170105	Total/NA	Water	353.2	

Analysis Batch: 339199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111878-1	MW-267S-20170105	Total/NA	Water	300.0	
480-111878-2	MW-267M-20170105	Total/NA	Water	300.0	
480-111878-3	MW-268S-20170105	Total/NA	Water	300.0	
480-111878-4	MW-268M-20170105	Total/NA	Water	300.0	
480-111878-5	MW-563-20170105	Total/NA	Water	300.0	
MB 480-339199/4	Method Blank	Total/NA	Water	300.0	
LCS 480-339199/3	Lab Control Sample	Total/NA	Water	300.0	
480-111878-1 MS	MW-267S-20170105	Total/NA	Water	300.0	
480-111878-1 MSD	MW-267S-20170105	Total/NA	Water	300.0	

Prep Batch: 339274

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111878-1	MW-267S-20170105	Total/NA	Water	Distill/Ammonia	
480-111878-2	MW-267M-20170105	Total/NA	Water	Distill/Ammonia	
480-111878-3	MW-268S-20170105	Total/NA	Water	Distill/Ammonia	
480-111878-4	MW-268M-20170105	Total/NA	Water	Distill/Ammonia	
480-111878-5	MW-563-20170105	Total/NA	Water	Distill/Ammonia	
MB 480-339274/2-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 480-339274/1-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 339386

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111878-1	MW-267S-20170105	Total/NA	Water	9040C	
480-111878-2	MW-267M-20170105	Total/NA	Water	9040C	
480-111878-4	MW-268M-20170105	Total/NA	Water	9040C	
480-111878-5	MW-563-20170105	Total/NA	Water	9040C	
LCS 480-339386/1	Lab Control Sample	Total/NA	Water	9040C	
LCS 480-339386/23	Lab Control Sample	Total/NA	Water	9040C	

Analysis Batch: 339387

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111878-1	MW-267S-20170105	Total/NA	Water	SM 2320B	
480-111878-2	MW-267M-20170105	Total/NA	Water	SM 2320B	
480-111878-3	MW-268S-20170105	Total/NA	Water	SM 2320B	

General Chemistry (Continued)

Analysis Batch: 339387 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111878-4	MW-268M-20170105	Total/NA	Water	SM 2320B	
480-111878-5	MW-563-20170105	Total/NA	Water	SM 2320B	
MB 480-339387/30	Method Blank	Total/NA	Water	SM 2320B	
MB 480-339387/7	Method Blank	Total/NA	Water	SM 2320B	
LCS 480-339387/31	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 480-339387/8	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 339425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111878-1	MW-267S-20170105	Total/NA	Water	350.1	339274
480-111878-2	MW-267M-20170105	Total/NA	Water	350.1	339274
480-111878-3	MW-268S-20170105	Total/NA	Water	350.1	339274
480-111878-4	MW-268M-20170105	Total/NA	Water	350.1	339274
480-111878-5	MW-563-20170105	Total/NA	Water	350.1	339274
MB 480-339274/2-A	Method Blank	Total/NA	Water	350.1	339274
LCS 480-339274/1-A	Lab Control Sample	Total/NA	Water	350.1	339274

Analysis Batch: 339511

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111878-3	MW-268S-20170105	Total/NA	Water	9040C	
LCS 480-339511/1	Lab Control Sample	Total/NA	Water	9040C	

Analysis Batch: 339827

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111878-3	MW-268S-20170105	Total/NA	Water	9060A	
480-111878-4	MW-268M-20170105	Total/NA	Water	9060A	
480-111878-5	MW-563-20170105	Total/NA	Water	9060A	
MB 480-339827/46	Method Blank	Total/NA	Water	9060A	
LCS 480-339827/47	Lab Control Sample	Total/NA	Water	9060A	

Analysis Batch: 340101

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111878-1	MW-267S-20170105	Total/NA	Water	9060A	
480-111878-2	MW-267M-20170105	Total/NA	Water	9060A	
MB 480-340101/5	Method Blank	Total/NA	Water	9060A	
LCS 480-340101/6	Lab Control Sample	Total/NA	Water	9060A	

Lab Chronicle

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

TestAmerica Job ID: 480-111878-1

Client Sample ID: MW-267S-20170105

Lab Sample ID: 480-111878-1

Date Collected: 01/05/17 11:10

Matrix: Water

Date Received: 01/06/17 00:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		4	339355	01/09/17 21:56	GTG	TAL BUF
Total/NA	Prep	3005A			339025	01/06/17 09:25	MVZ	TAL BUF
Total/NA	Analysis	6010		1	339256	01/06/17 21:25	AMH	TAL BUF
Total/NA	Analysis	300.0		10	339199	01/09/17 12:57	CAV	TAL BUF
Total/NA	Prep	Distill/Ammonia			339274	01/09/17 10:02	CEA	TAL BUF
Total/NA	Analysis	350.1		1	339425	01/10/17 09:57	CEA	TAL BUF
Total/NA	Analysis	353.2		1	339149	01/06/17 15:45	DSC	TAL BUF
Total/NA	Analysis	9040C		1	339386	01/09/17 14:56	CEA	TAL BUF
Total/NA	Analysis	9060A		40	340101	01/14/17 21:20	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	339387	01/09/17 15:24	CEA	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	339080	01/06/17 08:55	CLT	TAL BUF

Client Sample ID: MW-267M-20170105

Lab Sample ID: 480-111878-2

Date Collected: 01/05/17 11:50

Matrix: Water

Date Received: 01/06/17 00:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	339355	01/09/17 22:20	GTG	TAL BUF
Total/NA	Prep	3005A			339025	01/06/17 09:25	MVZ	TAL BUF
Total/NA	Analysis	6010		1	339256	01/06/17 21:52	AMH	TAL BUF
Total/NA	Analysis	300.0		2	339199	01/09/17 13:46	CAV	TAL BUF
Total/NA	Prep	Distill/Ammonia			339274	01/09/17 10:02	CEA	TAL BUF
Total/NA	Analysis	350.1		1	339425	01/10/17 09:58	CEA	TAL BUF
Total/NA	Analysis	353.2		1	339149	01/06/17 15:47	DSC	TAL BUF
Total/NA	Analysis	9040C		1	339386	01/09/17 14:59	CEA	TAL BUF
Total/NA	Analysis	9060A		5	340101	01/14/17 23:34	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	339387	01/09/17 15:30	CEA	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	339080	01/06/17 08:55	CLT	TAL BUF

Client Sample ID: MW-268S-20170105

Lab Sample ID: 480-111878-3

Date Collected: 01/05/17 08:35

Matrix: Water

Date Received: 01/06/17 00:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		4	339490	01/10/17 23:06	GTG	TAL BUF
Total/NA	Prep	3005A			339025	01/06/17 09:25	MVZ	TAL BUF
Total/NA	Analysis	6010		1	339256	01/06/17 21:55	AMH	TAL BUF
Total/NA	Analysis	300.0		5	339199	01/09/17 13:54	CAV	TAL BUF
Total/NA	Prep	Distill/Ammonia			339274	01/09/17 10:02	CEA	TAL BUF
Total/NA	Analysis	350.1		1	339425	01/10/17 09:59	CEA	TAL BUF
Total/NA	Analysis	353.2		1	339149	01/06/17 15:48	DSC	TAL BUF

Client Sample ID: MW-268S-20170105

Lab Sample ID: 480-111878-3
Date Collected: 01/05/17 08:35
Matrix: Water
Date Received: 01/06/17 00:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9040C		1	339511	01/10/17 21:24	DSC	TAL BUF
Total/NA	Analysis	9060A		5	339827	01/12/17 11:50	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	339387	01/09/17 15:38	CEA	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	339080	01/06/17 08:55	CLT	TAL BUF

Client Sample ID: MW-268M-20170105

Lab Sample ID: 480-111878-4
Date Collected: 01/05/17 10:15
Matrix: Water
Date Received: 01/06/17 00:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		20	339355	01/09/17 23:08	GTG	TAL BUF
Total/NA	Prep	3005A			339025	01/06/17 09:25	MVZ	TAL BUF
Total/NA	Analysis	6010		1	339256	01/06/17 21:59	AMH	TAL BUF
Total/NA	Analysis	300.0		5	339199	01/09/17 14:03	CAV	TAL BUF
Total/NA	Prep	Distill/Ammonia			339274	01/09/17 10:02	CEA	TAL BUF
Total/NA	Analysis	350.1		1	339425	01/10/17 10:00	CEA	TAL BUF
Total/NA	Analysis	353.2		1	339149	01/06/17 15:49	DSC	TAL BUF
Total/NA	Analysis	9040C		1	339386	01/09/17 15:04	CEA	TAL BUF
Total/NA	Analysis	9060A		8	339827	01/12/17 12:16	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	339387	01/09/17 15:46	CEA	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	339080	01/06/17 08:55	CLT	TAL BUF

Client Sample ID: MW-563-20170105

Lab Sample ID: 480-111878-5
Date Collected: 01/05/17 12:40
Matrix: Water
Date Received: 01/06/17 00:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	339355	01/09/17 23:32	GTG	TAL BUF
Total/NA	Prep	3005A			339025	01/06/17 09:25	MVZ	TAL BUF
Total/NA	Analysis	6010		1	339256	01/06/17 22:02	AMH	TAL BUF
Total/NA	Analysis	300.0		1	339199	01/09/17 14:11	CAV	TAL BUF
Total/NA	Prep	Distill/Ammonia			339274	01/09/17 10:02	CEA	TAL BUF
Total/NA	Analysis	350.1		1	339425	01/10/17 10:01	CEA	TAL BUF
Total/NA	Analysis	353.2		1	339149	01/06/17 15:50	DSC	TAL BUF
Total/NA	Analysis	9040C		1	339386	01/09/17 15:11	CEA	TAL BUF
Total/NA	Analysis	9060A		1	339827	01/12/17 12:42	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	339387	01/09/17 15:52	CEA	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	339080	01/06/17 08:55	CLT	TAL BUF

Lab Chronicle

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

TestAmerica Job ID: 480-111878-1

Client Sample ID: DUP2-20170105

Lab Sample ID: 480-111878-6

Date Collected: 01/05/17 00:00
Matrix: Water
Date Received: 01/06/17 00:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		20	339490	01/10/17 23:30	GTG	TAL BUF

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-111878-7

Date Collected: 01/05/17 00:00
Matrix: Water
Date Received: 01/06/17 00:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	339355	01/10/17 00:19	GTG	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: 480-111878-1

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	07-06-17
California	State Program	9	1169CA	09-30-17
Connecticut	State Program	1	PH-0568	09-30-18
Florida	NELAP	4	E87672	06-30-17
Georgia	State Program	4	N/A	03-31-17 *
Georgia	State Program	4	956	03-31-17 *
Illinois	NELAP	5	200003	09-30-17
Iowa	State Program	7	374	03-01-17 *
Kansas	NELAP	7	E-10187	11-30-16 *
Kentucky (DW)	State Program	4	90029	12-31-17
Kentucky (UST)	State Program	4	30	03-31-17 *
Kentucky (WW)	State Program	4	90029	12-31-16 *
Louisiana	NELAP	6	02031	06-30-17
Maine	State Program	1	NY00044	12-04-18
Maryland	State Program	3	294	03-31-17 *
Massachusetts	State Program	1	M-NY044	06-30-17
Michigan	State Program	5	9937	03-31-17 *
Minnesota	NELAP	5	036-999-337	12-31-17
New Hampshire	NELAP Primary AB	1	2973	09-11-17
New Hampshire	NELAP Secondary AB	1	2337	11-17-17
New Jersey	NELAP	2	NY455	06-30-17
New York	NELAP	2	10026	03-31-17 *
North Dakota	State Program	8	R-176	03-31-17 *
Oklahoma	State Program	6	9421	08-31-17
Oregon	NELAP	10	NY200003	06-09-17
Pennsylvania	NELAP	3	68-00281	07-31-17
Rhode Island	State Program	1	LAO00328	12-30-17
Tennessee	State Program	4	TN02970	03-31-17 *
Texas	NELAP	6	T104704412-15-6	07-31-17
USDA	Federal		P330-11-00386	11-26-17
Virginia	NELAP	3	460185	09-14-17
Washington	State Program	10	C784	02-10-17 *
West Virginia DEP	State Program	3	252	09-30-16 *
Wisconsin	State Program	5	998310390	08-31-17

* Certification renewal pending - certification considered valid.

Method Summary

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

TestAmerica Job ID: 480-111878-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds (GC/MS)	MA DEP	TAL BUF
6010	Metals (ICP)	SW846	TAL BUF
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
350.1	Nitrogen, Ammonia	MCAWW	TAL BUF
353.2	Nitrate	EPA	TAL BUF
9040C	pH	SW846	TAL BUF
9060A	Organic Carbon, Total (TOC)	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 P E	Orthophosphate	SM	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

MA DEP = Massachusetts Department Of Environmental Protection

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

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

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: 480-111878-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-111878-1	MW-267S-20170105	Water	01/05/17 11:10	01/06/17 00:45
480-111878-2	MW-267M-20170105	Water	01/05/17 11:50	01/06/17 00:45
480-111878-3	MW-268S-20170105	Water	01/05/17 08:35	01/06/17 00:45
480-111878-4	MW-268M-20170105	Water	01/05/17 10:15	01/06/17 00:45
480-111878-5	MW-563-20170105	Water	01/05/17 12:40	01/06/17 00:45
480-111878-6	DUP2-20170105	Water	01/05/17 00:00	01/06/17 00:45
480-111878-7	TRIP BLANK	Water	01/05/17 00:00	01/06/17 00:45

Login Sample Receipt Checklist

Client: Innovative Engineering Solutions, Inc

Job Number: 480-111878-1

Login Number: 111878
List Number: 1
Creator: Williams, Christopher S

List Source: TestAmerica Buffalo

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 (Excluding tests with immediate HTs)..	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	

TestAmerica Westfield
501 Southampton Road
Westfield MA 01085
Phone: (413) 572-4000 Fax: (303) 467-7247

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

360325-Boston

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

480-111878 COC

COC No: 36683
Page: 1 of 1
Job #:

Client Information:	Sample Collector's Name (Please Print Neatly): Dewy Sowles	Lab PM:	Lab
Client Contact: Vicki Pearson	Sample Collector's Phone: 508-404-3186	E-Mail:	
Company: Innovative Engineering Solutions Inc	Due Date Requested: 1/13/17		
Address: 25 Spring St	Turnaround Time (TAT) Requested (business days): 3 day		
City: Walpole			
State and Zip: MA 02081	Quote # or Project #:		
Client's Phone: 508-668-0033	PO #: RA-008		
Client's Contact Email: V.pearson@IESolutions.com	WO #:		
Client's Project Name/Number: Raytheon (Wayland) RA-008	PWS ID #:		
Sample Collection Site Name & Location: Wayland MA			

Analysis Requ

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 Hour Clock)	Sample Type: C=Comp G=Grab	Matrix Type **	Preservation Codes →	Total Number of Containers (enter total for each line)	Special Instructions & Notes:
mw-267s-20170103	1/5/17	1110	G	W	A A J D N N N	10	CW-3
mw-267m-20170105	1/5/17	1150	G	W	A A J D N N N	10	
mw-268s-20170103	1/5/17	0835	G	W	A A J D N N N	10	
mw-268m-20170103	1/5/17	1015	G	W	A A J D N N N	10	
mw-363-20170105	1/5/17	1240	G	W	A A J D N N N	10	
Dup2-20170105	1/5/17	—	G	W	A	3	
Trip Blank	—	—	—	W	A	2	

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 IN A COOLER, ON ICE !! ◄

	Date/Time:	Company		Date/Time:	Company
Relinquished by:	1/5/17 1325	IESI	Received by:	1-5-17 1335	TA
Relinquished by:	1-5-17 1800	TA	Received by:	1-6-17 0045	TAD
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: 1.6 #1

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: 480-111939-1
Client Project/Site: IDS Wayland

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

Attn: Vicki Pariyar

Denise L Giglia

Authorized for release by:
1/18/2017 10:48:37 AM
Denise Giglia, Project Management Assistant II
denise.giglia@testamericainc.com

Designee for

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 is outside acceptance limits.

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance 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.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
F1	MS and/or MSD Recovery is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
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: 480-111939-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-111939-1

Receipt
The samples were received on 1/7/2017 12:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.9º C.

GC/MS VOA
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 following samples were collected in properly preserved vials for analysis of volatile organic compounds (VOCs). However, the pH was outside the required criteria when verified by the laboratory, and corrective action was not possible: MW-265M-20170106 (480-111939-1) and MW-562-20170106 (480-111939-2). The sample was analyzed within 7 days per EPA recommendation.

Method 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-265M-20170106 (480-111939-1). Elevated reporting limits (RLs) are provided.

Method 8260C: The continuing calibration verification (CCV) for Isopropyl ether associated with batch 480-339355 recovered outside the MCP control limit criteria. MCP protocol allows for 20% of the target compounds to be outside the 20% difference but not over 40% difference. The following samples were affected : MW-265M-20170106 (480-111939-1), MW-562-20170106 (480-111939-2) and TRIP BLANK (480-111939-3).

Method 8260C: The laboratory control sample (LCS) and the laboratory control sample duplicate (LCSD) for batch 480-339355 exceeded control limits for the following analyte:Tetrahydrofuran. Unlike the calibration standards, this is due to the coelution with Methacrylonitrile 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. The following samples were affected : MW-265M-20170106 (480-111939-1), MW-562-20170106 (480-111939-2) and TRIP BLANK (480-111939-3).

Method 8260C: The following sample was diluted due to the abundance of non-target analytes: MW-562-20170106 (480-111939-2). 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.

HPLC/IC
Method 300.0: The following sample was diluted due to the nature of the sample matrix: MW-265M-20170106 (480-111939-1) and MW-562-20170106 (480-111939-2). 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.

Metals
Method 6010: At the request of the client, an abbreviated/modified MCP compound list was reported for this job.

Method 6010: The continuing calibration blank (CCB 480-340403/34) for analytical batch 480-340403 contained Total Iron above the reporting limit (RL). All reported samples associated with this CCB were either ND for this analyte or contained this analyte at a concentration greater than 10X the value found in the CCB; therefore, re-analysis of samples MW-265M-20170106 (480-111939-1), MW-562-20170106 (480-111939-2), (LCS 480-340248/2-A), (LCSD 480-340248/3-A), (MB 480-340248/1-A), (480-111939-B-1-C MS), (480-111939-B-1-D MSD), (480-111939-B-1-B PDS) and (480-111939-B-1-B SD) was not performed.

Method 6010: The Low Level Continuing Calibration Verification, (CCVL 480-340403/35) associated with batch 480-340403, contained Total Iron above the upper quality control limit. The associated samples were either ND for the affected analyte or contained this analyte at a concentration greater than 10X the value found in the CCVL; therefore, re-analysis of samples MW-265M-20170106 (480-111939-1),

Job ID: 480-111939-1 (Continued)

Laboratory: TestAmerica Buffalo (Continued)

MW-562-20170106 (480-111939-2), (LCS 480-340248/2-A), (LCSD 480-340248/3-A), (MB 480-340248/1-A), (480-111939-B-1-C MS), (480-111939-B-1-D MSD), (480-111939-B-1-B PDS) and (480-111939-B-1-B SD) was not performed.

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

General Chemistry
Method 353.2: The matrix spike / matrix spike duplicate (MS/MSD) precision was outside control limits. Sample matrix interference is suspected. MW-562-20170106 (480-111939-2), (480-111939-D-2 MS ^2) and (480-111939-D-2 MSD ^)

Method 9040C, SM 4500 H+ B: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following sample has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: MW-265M-20170106 (480-111939-1) and MW-562-20170106 (480-111939-2).

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 #: **480-111939**

Project Location: **IDS Wayland** RTN:

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

480-111939[1-3]

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 ☐	9014 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: Denise L Giglia Position: Project Manager Assistant II

Printed Name: Denise L. Giglia Date: 1/18/17 10:44

Detection Summary

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

TestAmerica Job ID: 480-111939-1

Client Sample ID: MW-265M-20170106 — Lab Sample ID: 480-111939-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	170		50		ug/L	5		8260C	Total/NA
Acetone	980		250		ug/L	5		8260C	Total/NA
m-Xylene & p-Xylene	16		10		ug/L	5		8260C	Total/NA
o-Xylene	5.4		5.0		ug/L	5		8260C	Total/NA
Toluene	9.2		5.0		ug/L	5		8260C	Total/NA
Iron	470	^	0.050		mg/L	1		6010	Total/NA
Chloride	62		5.0		mg/L	10		300.0	Total/NA
Sulfate	29		20		mg/L	10		300.0	Total/NA
Ammonia	0.22		0.20		mg/L	1		350.1	Total/NA
TOC Result 1	1300		40		mg/L	40		9060A	Total/NA
TOC Result 2	1300		40		mg/L	40		9060A	Total/NA
Total Organic Carbon - Duplicates	1300		40		mg/L	40		9060A	Total/NA
Alkalinity, Total	670		5.0		mg/L	1		SM 2320B	Total/NA
ortho-Phosphate	0.15		0.020		mg/L	1		SM 4500 P E	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	5.1	HF	0.1		SU	1		9040C	Total/NA

Client Sample ID: MW-562-20170106 — Lab Sample ID: 480-111939-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	480		40		ug/L	4		8260C	Total/NA
Toluene	15		4.0		ug/L	4		8260C	Total/NA
Iron	390	^	0.050		mg/L	1		6010	Total/NA
Chloride	46		5.0		mg/L	10		300.0	Total/NA
Ammonia	0.42	F1	0.20		mg/L	1		350.1	Total/NA
TOC Result 1	1900		40		mg/L	40		9060A	Total/NA
TOC Result 2	1900		40		mg/L	40		9060A	Total/NA
Total Organic Carbon - Duplicates	1900		40		mg/L	40		9060A	Total/NA
Alkalinity, Total	810		5.0		mg/L	1		SM 2320B	Total/NA
ortho-Phosphate	0.61		0.10		mg/L	5		SM 4500 P E	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	5.7	HF	0.1		SU	1		9040C	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-111939-3

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Client Sample ID: MW-265M-20170106
Date Collected: 01/06/17 11:15
Date Received: 01/07/17 00:30

Lab Sample ID: 480-111939-1
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		5.0		ug/L			01/10/17 04:41	5
1,1,1-Trichloroethane	ND		5.0		ug/L			01/10/17 04:41	5
1,1,2,2-Tetrachloroethane	ND		2.5		ug/L			01/10/17 04:41	5
1,1,2-Trichloroethane	ND		5.0		ug/L			01/10/17 04:41	5
1,1-Dichloroethane	ND		5.0		ug/L			01/10/17 04:41	5
1,1-Dichloroethene	ND		5.0		ug/L			01/10/17 04:41	5
1,1-Dichloropropene	ND		5.0		ug/L			01/10/17 04:41	5
1,2,3-Trichlorobenzene	ND		5.0		ug/L			01/10/17 04:41	5
1,2,3-Trichloropropane	ND		5.0		ug/L			01/10/17 04:41	5
1,2,4-Trichlorobenzene	ND		5.0		ug/L			01/10/17 04:41	5
1,2,4-Trimethylbenzene	ND		5.0		ug/L			01/10/17 04:41	5
1,2-Dibromo-3-Chloropropane	ND		25		ug/L			01/10/17 04:41	5
1,2-Dichlorobenzene	ND		5.0		ug/L			01/10/17 04:41	5
1,2-Dichloroethane	ND		5.0		ug/L			01/10/17 04:41	5
1,2-Dichloropropane	ND		5.0		ug/L			01/10/17 04:41	5
1,3,5-Trimethylbenzene	ND		5.0		ug/L			01/10/17 04:41	5
1,3-Dichlorobenzene	ND		5.0		ug/L			01/10/17 04:41	5
1,3-Dichloropropane	ND		5.0		ug/L			01/10/17 04:41	5
1,4-Dichlorobenzene	ND		5.0		ug/L			01/10/17 04:41	5
1,4-Dioxane	ND		250		ug/L			01/10/17 04:41	5
2,2-Dichloropropane	ND		5.0		ug/L			01/10/17 04:41	5
2-Butanone (MEK)	**170**		50		ug/L			01/10/17 04:41	5
2-Chlorotoluene	ND		5.0		ug/L			01/10/17 04:41	5
2-Hexanone	ND		50		ug/L			01/10/17 04:41	5
4-Chlorotoluene	ND		5.0		ug/L			01/10/17 04:41	5
4-Isopropyltoluene	ND		5.0		ug/L			01/10/17 04:41	5
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			01/10/17 04:41	5
Acetone	**980**		250		ug/L			01/10/17 04:41	5
Benzene	ND		5.0		ug/L			01/10/17 04:41	5
Bromobenzene	ND		5.0		ug/L			01/10/17 04:41	5
Bromoform	ND		5.0		ug/L			01/10/17 04:41	5
Bromomethane	ND		10		ug/L			01/10/17 04:41	5
Carbon disulfide	ND		50		ug/L			01/10/17 04:41	5
Carbon tetrachloride	ND		5.0		ug/L			01/10/17 04:41	5
Chlorobenzene	ND		5.0		ug/L			01/10/17 04:41	5
Chlorobromomethane	ND		5.0		ug/L			01/10/17 04:41	5
Chlorodibromomethane	ND		2.5		ug/L			01/10/17 04:41	5
Chloroethane	ND		10		ug/L			01/10/17 04:41	5
Chloroform	ND		5.0		ug/L			01/10/17 04:41	5
Chloromethane	ND		10		ug/L			01/10/17 04:41	5
cis-1,2-Dichloroethene	ND		5.0		ug/L			01/10/17 04:41	5
cis-1,3-Dichloropropene	ND		2.0		ug/L			01/10/17 04:41	5
Dichlorobromomethane	ND		2.5		ug/L			01/10/17 04:41	5
Dichlorodifluoromethane	ND		5.0		ug/L			01/10/17 04:41	5
Ethyl ether	ND		5.0		ug/L			01/10/17 04:41	5
Ethylbenzene	ND		5.0		ug/L			01/10/17 04:41	5
Ethylene Dibromide	ND		5.0		ug/L			01/10/17 04:41	5
Hexachlorobutadiene	ND		2.0		ug/L			01/10/17 04:41	5
Isopropyl ether	ND		50		ug/L			01/10/17 04:41	5

Client Sample ID: MW-265M-20170106
Date Collected: 01/06/17 11:15
Date Received: 01/07/17 00:30

Lab Sample ID: 480-111939-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		5.0		ug/L			01/10/17 04:41	5
Methyl tert-butyl ether	ND		5.0		ug/L			01/10/17 04:41	5
Methylene Chloride	ND		5.0		ug/L			01/10/17 04:41	5
m-Xylene & p-Xylene	**16**		10		ug/L			01/10/17 04:41	5
Naphthalene	ND		25		ug/L			01/10/17 04:41	5
n-Butylbenzene	ND		5.0		ug/L			01/10/17 04:41	5
N-Propylbenzene	ND		5.0		ug/L			01/10/17 04:41	5
o-Xylene	**5.4**		5.0		ug/L			01/10/17 04:41	5
sec-Butylbenzene	ND		5.0		ug/L			01/10/17 04:41	5
Styrene	ND		5.0		ug/L			01/10/17 04:41	5
Tert-amyl methyl ether	ND		25		ug/L			01/10/17 04:41	5
Tert-butyl ethyl ether	ND		25		ug/L			01/10/17 04:41	5
tert-Butylbenzene	ND		5.0		ug/L			01/10/17 04:41	5
Tetrachloroethene	ND		5.0		ug/L			01/10/17 04:41	5
Tetrahydrofuran	ND	*	50		ug/L			01/10/17 04:41	5
Toluene	**9.2**		5.0		ug/L			01/10/17 04:41	5
trans-1,2-Dichloroethene	ND		5.0		ug/L			01/10/17 04:41	5
trans-1,3-Dichloropropene	ND		2.0		ug/L			01/10/17 04:41	5
Trichloroethene	ND		5.0		ug/L			01/10/17 04:41	5
Trichlorofluoromethane	ND		5.0		ug/L			01/10/17 04:41	5
Vinyl chloride	ND		5.0		ug/L			01/10/17 04:41	5
Dibromomethane	ND		5.0		ug/L			01/10/17 04:41	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*70 - 130*		*01/10/17 04:41*	*5*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 130*		*01/10/17 04:41*	*5*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*		*01/10/17 04:41*	*5*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**470**	**^**	0.050		mg/L		01/17/17 07:45	01/17/17 16:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**62**		5.0		mg/L			01/10/17 05:24	10
Sulfate	**29**		20		mg/L			01/10/17 05:24	10
Ammonia	**0.22**		0.20		mg/L		01/11/17 09:32	01/11/17 13:13	1
Nitrate as N	ND		0.050		mg/L			01/07/17 11:26	1
TOC Result 1	**1300**		40		mg/L			01/15/17 00:00	40
TOC Result 2	**1300**		40		mg/L			01/15/17 00:00	40
Total Organic Carbon - Duplicates	**1300**		40		mg/L			01/15/17 00:00	40
Alkalinity, Total	**670**		5.0		mg/L			01/09/17 18:49	1
ortho-Phosphate	**0.15**		0.020		mg/L			01/07/17 14:15	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**5.1**	**HF**	0.1		SU			01/09/17 15:53	1

Client Sample ID: MW-562-20170106
Date Collected: 01/06/17 10:20
Date Received: 01/07/17 00:30

Lab Sample ID: 480-111939-2
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		4.0		ug/L			01/10/17 05:04	4
1,1,1-Trichloroethane	ND		4.0		ug/L			01/10/17 05:04	4
1,1,2,2-Tetrachloroethane	ND		2.0		ug/L			01/10/17 05:04	4
1,1,2-Trichloroethane	ND		4.0		ug/L			01/10/17 05:04	4
1,1-Dichloroethane	ND		4.0		ug/L			01/10/17 05:04	4
1,1-Dichloroethene	ND		4.0		ug/L			01/10/17 05:04	4
1,1-Dichloropropene	ND		4.0		ug/L			01/10/17 05:04	4
1,2,3-Trichlorobenzene	ND		4.0		ug/L			01/10/17 05:04	4
1,2,3-Trichloropropane	ND		4.0		ug/L			01/10/17 05:04	4
1,2,4-Trichlorobenzene	ND		4.0		ug/L			01/10/17 05:04	4
1,2,4-Trimethylbenzene	ND		4.0		ug/L			01/10/17 05:04	4
1,2-Dibromo-3-Chloropropane	ND		20		ug/L			01/10/17 05:04	4
1,2-Dichlorobenzene	ND		4.0		ug/L			01/10/17 05:04	4
1,2-Dichloroethane	ND		4.0		ug/L			01/10/17 05:04	4
1,2-Dichloropropane	ND		4.0		ug/L			01/10/17 05:04	4
1,3,5-Trimethylbenzene	ND		4.0		ug/L			01/10/17 05:04	4
1,3-Dichlorobenzene	ND		4.0		ug/L			01/10/17 05:04	4
1,3-Dichloropropane	ND		4.0		ug/L			01/10/17 05:04	4
1,4-Dichlorobenzene	ND		4.0		ug/L			01/10/17 05:04	4
1,4-Dioxane	ND		200		ug/L			01/10/17 05:04	4
2,2-Dichloropropane	ND		4.0		ug/L			01/10/17 05:04	4
2-Butanone (MEK)	**480**		40		ug/L			01/10/17 05:04	4
2-Chlorotoluene	ND		4.0		ug/L			01/10/17 05:04	4
2-Hexanone	ND		40		ug/L			01/10/17 05:04	4
4-Chlorotoluene	ND		4.0		ug/L			01/10/17 05:04	4
4-Isopropyltoluene	ND		4.0		ug/L			01/10/17 05:04	4
4-Methyl-2-pentanone (MIBK)	ND		40		ug/L			01/10/17 05:04	4
Acetone	ND		200		ug/L			01/10/17 05:04	4
Benzene	ND		4.0		ug/L			01/10/17 05:04	4
Bromobenzene	ND		4.0		ug/L			01/10/17 05:04	4
Bromoform	ND		4.0		ug/L			01/10/17 05:04	4
Bromomethane	ND		8.0		ug/L			01/10/17 05:04	4
Carbon disulfide	ND		40		ug/L			01/10/17 05:04	4
Carbon tetrachloride	ND		4.0		ug/L			01/10/17 05:04	4
Chlorobenzene	ND		4.0		ug/L			01/10/17 05:04	4
Chlorobromomethane	ND		4.0		ug/L			01/10/17 05:04	4
Chlorodibromomethane	ND		2.0		ug/L			01/10/17 05:04	4
Chloroethane	ND		8.0		ug/L			01/10/17 05:04	4
Chloroform	ND		4.0		ug/L			01/10/17 05:04	4
Chloromethane	ND		8.0		ug/L			01/10/17 05:04	4
cis-1,2-Dichloroethene	ND		4.0		ug/L			01/10/17 05:04	4
cis-1,3-Dichloropropene	ND		1.6		ug/L			01/10/17 05:04	4
Dichlorobromomethane	ND		2.0		ug/L			01/10/17 05:04	4
Dichlorodifluoromethane	ND		4.0		ug/L			01/10/17 05:04	4
Ethyl ether	ND		4.0		ug/L			01/10/17 05:04	4
Ethylbenzene	ND		4.0		ug/L			01/10/17 05:04	4
Ethylene Dibromide	ND		4.0		ug/L			01/10/17 05:04	4
Hexachlorobutadiene	ND		1.6		ug/L			01/10/17 05:04	4
Isopropyl ether	ND		40		ug/L			01/10/17 05:04	4

Client Sample ID: MW-562-20170106
Date Collected: 01/06/17 10:20
Date Received: 01/07/17 00:30

Lab Sample ID: 480-111939-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		4.0		ug/L			01/10/17 05:04	4
Methyl tert-butyl ether	ND		4.0		ug/L			01/10/17 05:04	4
Methylene Chloride	ND		4.0		ug/L			01/10/17 05:04	4
m-Xylene & p-Xylene	ND		8.0		ug/L			01/10/17 05:04	4
Naphthalene	ND		20		ug/L			01/10/17 05:04	4
n-Butylbenzene	ND		4.0		ug/L			01/10/17 05:04	4
N-Propylbenzene	ND		4.0		ug/L			01/10/17 05:04	4
o-Xylene	ND		4.0		ug/L			01/10/17 05:04	4
sec-Butylbenzene	ND		4.0		ug/L			01/10/17 05:04	4
Styrene	ND		4.0		ug/L			01/10/17 05:04	4
Tert-amyl methyl ether	ND		20		ug/L			01/10/17 05:04	4
Tert-butyl ethyl ether	ND		20		ug/L			01/10/17 05:04	4
tert-Butylbenzene	ND		4.0		ug/L			01/10/17 05:04	4
Tetrachloroethene	ND		4.0		ug/L			01/10/17 05:04	4
Tetrahydrofuran	ND	*	40		ug/L			01/10/17 05:04	4
Toluene	**15**		4.0		ug/L			01/10/17 05:04	4
trans-1,2-Dichloroethene	ND		4.0		ug/L			01/10/17 05:04	4
trans-1,3-Dichloropropene	ND		1.6		ug/L			01/10/17 05:04	4
Trichloroethene	ND		4.0		ug/L			01/10/17 05:04	4
Trichlorofluoromethane	ND		4.0		ug/L			01/10/17 05:04	4
Vinyl chloride	ND		4.0		ug/L			01/10/17 05:04	4
Dibromomethane	ND		4.0		ug/L			01/10/17 05:04	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*95*		*70 - 130*		*01/10/17 05:04*	*4*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*		*01/10/17 05:04*	*4*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*01/10/17 05:04*	*4*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**390**	**^**	0.050		mg/L		01/17/17 07:45	01/17/17 16:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**46**		5.0		mg/L			01/10/17 05:39	10
Sulfate	ND		20		mg/L			01/10/17 05:39	10
Ammonia	**0.42**	**F1**	0.20		mg/L		01/09/17 10:02	01/10/17 10:02	1
Nitrate as N	ND		0.050		mg/L			01/07/17 11:27	1
TOC Result 1	**1900**		40		mg/L			01/15/17 00:27	40
TOC Result 2	**1900**		40		mg/L			01/15/17 00:27	40
Total Organic Carbon - Duplicates	**1900**		40		mg/L			01/15/17 00:27	40
Alkalinity, Total	**810**		5.0		mg/L			01/09/17 19:00	1
ortho-Phosphate	**0.61**		0.10		mg/L			01/07/17 14:15	5

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**5.7**	**HF**	0.1		SU			01/09/17 15:56	1

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

TestAmerica Job ID: 480-111939-1

Client Sample ID: TRIP BLANK
Date Collected: 01/06/17 00:00
Date Received: 01/07/17 00:30

Lab Sample ID: 480-111939-3
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			01/10/17 05:28	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/10/17 05:28	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			01/10/17 05:28	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/10/17 05:28	1
1,1-Dichloroethane	ND		1.0		ug/L			01/10/17 05:28	1
1,1-Dichloroethene	ND		1.0		ug/L			01/10/17 05:28	1
1,1-Dichloropropene	ND		1.0		ug/L			01/10/17 05:28	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/10/17 05:28	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/10/17 05:28	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/10/17 05:28	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/10/17 05:28	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/10/17 05:28	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/10/17 05:28	1
1,2-Dichloroethane	ND		1.0		ug/L			01/10/17 05:28	1
1,2-Dichloropropane	ND		1.0		ug/L			01/10/17 05:28	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/10/17 05:28	1
1,3-Dichlorobenzene	ND		1.0		ug/L			01/10/17 05:28	1
1,3-Dichloropropane	ND		1.0		ug/L			01/10/17 05:28	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/10/17 05:28	1
1,4-Dioxane	ND		50		ug/L			01/10/17 05:28	1
2,2-Dichloropropane	ND		1.0		ug/L			01/10/17 05:28	1
2-Butanone (MEK)	ND		10		ug/L			01/10/17 05:28	1
2-Chlorotoluene	ND		1.0		ug/L			01/10/17 05:28	1
2-Hexanone	ND		10		ug/L			01/10/17 05:28	1
4-Chlorotoluene	ND		1.0		ug/L			01/10/17 05:28	1
4-Isopropyltoluene	ND		1.0		ug/L			01/10/17 05:28	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			01/10/17 05:28	1
Acetone	ND		50		ug/L			01/10/17 05:28	1
Benzene	ND		1.0		ug/L			01/10/17 05:28	1
Bromobenzene	ND		1.0		ug/L			01/10/17 05:28	1
Bromoform	ND		1.0		ug/L			01/10/17 05:28	1
Bromomethane	ND		2.0		ug/L			01/10/17 05:28	1
Carbon disulfide	ND		10		ug/L			01/10/17 05:28	1
Carbon tetrachloride	ND		1.0		ug/L			01/10/17 05:28	1
Chlorobenzene	ND		1.0		ug/L			01/10/17 05:28	1
Chlorobromomethane	ND		1.0		ug/L			01/10/17 05:28	1
Chlorodibromomethane	ND		0.50		ug/L			01/10/17 05:28	1
Chloroethane	ND		2.0		ug/L			01/10/17 05:28	1
Chloroform	ND		1.0		ug/L			01/10/17 05:28	1
Chloromethane	ND		2.0		ug/L			01/10/17 05:28	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			01/10/17 05:28	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			01/10/17 05:28	1
Dichlorobromomethane	ND		0.50		ug/L			01/10/17 05:28	1
Dichlorodifluoromethane	ND		1.0		ug/L			01/10/17 05:28	1
Ethyl ether	ND		1.0		ug/L			01/10/17 05:28	1
Ethylbenzene	ND		1.0		ug/L			01/10/17 05:28	1
Ethylene Dibromide	ND		1.0		ug/L			01/10/17 05:28	1
Hexachlorobutadiene	ND		0.40		ug/L			01/10/17 05:28	1
Isopropyl ether	ND		10		ug/L			01/10/17 05:28	1

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

TestAmerica Job ID: 480-111939-1

Client Sample ID: TRIP BLANK
Date Collected: 01/06/17 00:00
Date Received: 01/07/17 00:30

Lab Sample ID: 480-111939-3
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			01/10/17 05:28	1
Methyl tert-butyl ether	ND		1.0		ug/L			01/10/17 05:28	1
Methylene Chloride	ND		1.0		ug/L			01/10/17 05:28	1
m-Xylene & p-Xylene	ND		2.0		ug/L			01/10/17 05:28	1
Naphthalene	ND		5.0		ug/L			01/10/17 05:28	1
n-Butylbenzene	ND		1.0		ug/L			01/10/17 05:28	1
N-Propylbenzene	ND		1.0		ug/L			01/10/17 05:28	1
o-Xylene	ND		1.0		ug/L			01/10/17 05:28	1
sec-Butylbenzene	ND		1.0		ug/L			01/10/17 05:28	1
Styrene	ND		1.0		ug/L			01/10/17 05:28	1
Tert-amyl methyl ether	ND		5.0		ug/L			01/10/17 05:28	1
Tert-butyl ethyl ether	ND		5.0		ug/L			01/10/17 05:28	1
tert-Butylbenzene	ND		1.0		ug/L			01/10/17 05:28	1
Tetrachloroethene	ND		1.0		ug/L			01/10/17 05:28	1
Tetrahydrofuran	ND	*	10		ug/L			01/10/17 05:28	1
Toluene	ND		1.0		ug/L			01/10/17 05:28	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/10/17 05:28	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			01/10/17 05:28	1
Trichloroethene	ND		1.0		ug/L			01/10/17 05:28	1
Trichlorofluoromethane	ND		1.0		ug/L			01/10/17 05:28	1
Vinyl chloride	ND		1.0		ug/L			01/10/17 05:28	1
Dibromomethane	ND		1.0		ug/L			01/10/17 05:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*70 - 130*		*01/10/17 05:28*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 130*		*01/10/17 05:28*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*01/10/17 05:28*	*1*

Surrogate Summary

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

TestAmerica Job ID: 480-111939-1

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)
480-111939-1	MW-265M-20170106	96	105	104
480-111939-2	MW-562-20170106	95	102	98
480-111939-3	TRIP BLANK	97	107	101
LCS 480-339355/6	Lab Control Sample	95	106	103
LCSD 480-339355/7	Lab Control Sample Dup	92	102	101
MB 480-339355/9	Method Blank	96	104	103

Surrogate Legend

TOL = Toluene-d8 (Surr)
12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)

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

Lab Sample ID: MB 480-339355/9
Matrix: Water
Analysis Batch: 339355

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			01/09/17 21:21	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/09/17 21:21	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			01/09/17 21:21	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/09/17 21:21	1
1,1-Dichloroethane	ND		1.0		ug/L			01/09/17 21:21	1
1,1-Dichloroethene	ND		1.0		ug/L			01/09/17 21:21	1
1,1-Dichloropropene	ND		1.0		ug/L			01/09/17 21:21	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/09/17 21:21	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/09/17 21:21	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/09/17 21:21	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/09/17 21:21	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/09/17 21:21	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/09/17 21:21	1
1,2-Dichloroethane	ND		1.0		ug/L			01/09/17 21:21	1
1,2-Dichloropropane	ND		1.0		ug/L			01/09/17 21:21	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/09/17 21:21	1
1,3-Dichlorobenzene	ND		1.0		ug/L			01/09/17 21:21	1
1,3-Dichloropropane	ND		1.0		ug/L			01/09/17 21:21	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/09/17 21:21	1
1,4-Dioxane	ND		50		ug/L			01/09/17 21:21	1
2,2-Dichloropropane	ND		1.0		ug/L			01/09/17 21:21	1
2-Butanone (MEK)	ND		10		ug/L			01/09/17 21:21	1
2-Chlorotoluene	ND		1.0		ug/L			01/09/17 21:21	1
2-Hexanone	ND		10		ug/L			01/09/17 21:21	1
4-Chlorotoluene	ND		1.0		ug/L			01/09/17 21:21	1
4-Isopropyltoluene	ND		1.0		ug/L			01/09/17 21:21	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			01/09/17 21:21	1
Acetone	ND		50		ug/L			01/09/17 21:21	1
Benzene	ND		1.0		ug/L			01/09/17 21:21	1
Bromobenzene	ND		1.0		ug/L			01/09/17 21:21	1
Bromoform	ND		1.0		ug/L			01/09/17 21:21	1
Bromomethane	ND		2.0		ug/L			01/09/17 21:21	1
Carbon disulfide	ND		10		ug/L			01/09/17 21:21	1
Carbon tetrachloride	ND		1.0		ug/L			01/09/17 21:21	1
Chlorobenzene	ND		1.0		ug/L			01/09/17 21:21	1
Chlorobromomethane	ND		1.0		ug/L			01/09/17 21:21	1
Chlorodibromomethane	ND		0.50		ug/L			01/09/17 21:21	1
Chloroethane	ND		2.0		ug/L			01/09/17 21:21	1
Chloroform	ND		1.0		ug/L			01/09/17 21:21	1
Chloromethane	ND		2.0		ug/L			01/09/17 21:21	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			01/09/17 21:21	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			01/09/17 21:21	1
Dichlorobromomethane	ND		0.50		ug/L			01/09/17 21:21	1
Dichlorodifluoromethane	ND		1.0		ug/L			01/09/17 21:21	1
Ethyl ether	ND		1.0		ug/L			01/09/17 21:21	1
Ethylbenzene	ND		1.0		ug/L			01/09/17 21:21	1
Ethylene Dibromide	ND		1.0		ug/L			01/09/17 21:21	1
Hexachlorobutadiene	ND		0.40		ug/L			01/09/17 21:21	1

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

Lab Sample ID: MB 480-339355/9
Matrix: Water
Analysis Batch: 339355

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			01/09/17 21:21	1
Isopropylbenzene	ND		1.0		ug/L			01/09/17 21:21	1
Methyl tert-butyl ether	ND		1.0		ug/L			01/09/17 21:21	1
Methylene Chloride	ND		1.0		ug/L			01/09/17 21:21	1
m-Xylene & p-Xylene	ND		2.0		ug/L			01/09/17 21:21	1
Naphthalene	ND		5.0		ug/L			01/09/17 21:21	1
n-Butylbenzene	ND		1.0		ug/L			01/09/17 21:21	1
N-Propylbenzene	ND		1.0		ug/L			01/09/17 21:21	1
o-Xylene	ND		1.0		ug/L			01/09/17 21:21	1
sec-Butylbenzene	ND		1.0		ug/L			01/09/17 21:21	1
Styrene	ND		1.0		ug/L			01/09/17 21:21	1
Tert-amyl methyl ether	ND		5.0		ug/L			01/09/17 21:21	1
Tert-butyl ethyl ether	ND		5.0		ug/L			01/09/17 21:21	1
tert-Butylbenzene	ND		1.0		ug/L			01/09/17 21:21	1
Tetrachloroethene	ND		1.0		ug/L			01/09/17 21:21	1
Tetrahydrofuran	ND		10		ug/L			01/09/17 21:21	1
Toluene	ND		1.0		ug/L			01/09/17 21:21	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/09/17 21:21	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			01/09/17 21:21	1
Trichloroethene	ND		1.0		ug/L			01/09/17 21:21	1
Trichlorofluoromethane	ND		1.0		ug/L			01/09/17 21:21	1
Vinyl chloride	ND		1.0		ug/L			01/09/17 21:21	1
Dibromomethane	ND		1.0		ug/L			01/09/17 21:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*70 - 130*		*01/09/17 21:21*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*		*01/09/17 21:21*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*01/09/17 21:21*	*1*

Lab Sample ID: LCS 480-339355/6
Matrix: Water
Analysis Batch: 339355

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	24.8		ug/L		99	70 - 130
1,1,1-Trichloroethane	25.0	24.1		ug/L		96	70 - 130
1,1,2,2-Tetrachloroethane	25.0	21.8		ug/L		87	70 - 130
1,1,2-Trichloroethane	25.0	21.3		ug/L		85	70 - 130
1,1-Dichloroethane	25.0	24.6		ug/L		98	70 - 130
1,1-Dichloroethene	25.0	22.2		ug/L		89	70 - 130
1,1-Dichloropropene	25.0	23.3		ug/L		93	70 - 130
1,2,3-Trichlorobenzene	25.0	24.6		ug/L		98	70 - 130
1,2,3-Trichloropropane	25.0	21.7		ug/L		87	70 - 130
1,2,4-Trichlorobenzene	25.0	23.9		ug/L		95	70 - 130
1,2,4-Trimethylbenzene	25.0	21.9		ug/L		88	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	23.6		ug/L		95	70 - 130
1,2-Dichlorobenzene	25.0	22.3		ug/L		89	70 - 130
1,2-Dichloroethane	25.0	23.9		ug/L		96	70 - 130

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

Lab Sample ID: LCS 480-339355/6
Matrix: Water
Analysis Batch: 339355

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	24.4		ug/L		98	70 - 130
1,3,5-Trimethylbenzene	25.0	21.7		ug/L		87	70 - 130
1,3-Dichlorobenzene	25.0	22.1		ug/L		88	70 - 130
1,3-Dichloropropane	25.0	21.1		ug/L		84	70 - 130
1,4-Dichlorobenzene	25.0	21.9		ug/L		87	70 - 130
1,4-Dioxane	500	522		ug/L		104	70 - 130
2,2-Dichloropropane	25.0	24.1		ug/L		96	70 - 130
2-Butanone (MEK)	125	140		ug/L		112	70 - 130
2-Chlorotoluene	25.0	21.7		ug/L		87	70 - 130
2-Hexanone	125	124		ug/L		99	70 - 130
4-Chlorotoluene	25.0	21.7		ug/L		87	70 - 130
4-Isopropyltoluene	25.0	22.8		ug/L		91	70 - 130
4-Methyl-2-pentanone (MIBK)	125	127		ug/L		102	70 - 130
Acetone	125	111		ug/L		89	70 - 130
Benzene	25.0	22.8		ug/L		91	70 - 130
Bromobenzene	25.0	21.3		ug/L		85	70 - 130
Bromoform	25.0	25.9		ug/L		104	70 - 130
Bromomethane	25.0	24.2		ug/L		97	70 - 130
Carbon disulfide	25.0	21.9		ug/L		88	70 - 130
Carbon tetrachloride	25.0	25.5		ug/L		102	70 - 130
Chlorobenzene	25.0	22.3		ug/L		89	70 - 130
Chlorobromomethane	25.0	24.8		ug/L		99	70 - 130
Chlorodibromomethane	25.0	25.4		ug/L		102	70 - 130
Chloroethane	25.0	23.7		ug/L		95	70 - 130
Chloroform	25.0	22.7		ug/L		91	70 - 130
Chloromethane	25.0	27.2		ug/L		109	70 - 130
cis-1,2-Dichloroethene	25.0	23.1		ug/L		92	70 - 130
cis-1,3-Dichloropropene	25.0	23.4		ug/L		94	70 - 130
Dichlorobromomethane	25.0	24.4		ug/L		97	70 - 130
Dichlorodifluoromethane	25.0	27.9		ug/L		112	70 - 130
Ethyl ether	25.0	24.2		ug/L		97	70 - 130
Ethylbenzene	25.0	21.9		ug/L		88	70 - 130
Ethylene Dibromide	25.0	22.0		ug/L		88	70 - 130
Hexachlorobutadiene	25.0	23.9		ug/L		96	70 - 130
Isopropyl ether	25.0	31.4		ug/L		126	70 - 130
Isopropylbenzene	25.0	21.5		ug/L		86	70 - 130
Methyl tert-butyl ether	25.0	22.9		ug/L		92	70 - 130
Methylene Chloride	25.0	23.1		ug/L		92	70 - 130
m-Xylene & p-Xylene	25.0	22.8		ug/L		91	70 - 130
Naphthalene	25.0	23.4		ug/L		94	70 - 130
n-Butylbenzene	25.0	21.8		ug/L		87	70 - 130
N-Propylbenzene	25.0	21.2		ug/L		85	70 - 130
o-Xylene	25.0	22.2		ug/L		89	70 - 130
sec-Butylbenzene	25.0	21.6		ug/L		86	70 - 130
Styrene	25.0	22.9		ug/L		92	70 - 130
Tert-amyl methyl ether	25.0	22.3		ug/L		89	70 - 130
Tert-butyl ethyl ether	25.0	25.2		ug/L		101	70 - 130
tert-Butylbenzene	25.0	22.8		ug/L		91	70 - 130

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

Lab Sample ID: LCS 480-339355/6
Matrix: Water
Analysis Batch: 339355

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	23.2		ug/L		93	70 - 130		
Tetrahydrofuran			50.0	69.2	*	ug/L		138	70 - 130		
Toluene			25.0	21.3		ug/L		85	70 - 130		
trans-1,2-Dichloroethene			25.0	23.2		ug/L		93	70 - 130		
trans-1,3-Dichloropropene			25.0	22.1		ug/L		88	70 - 130		
Trichloroethene			25.0	23.4		ug/L		94	70 - 130		
Trichlorofluoromethane			25.0	23.7		ug/L		95	70 - 130		
Vinyl chloride			25.0	26.0		ug/L		104	70 - 130		
Dibromomethane			25.0	24.1		ug/L		97	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*95*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 130*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 480-339355/7
Matrix: Water
Analysis Batch: 339355

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	24.7		ug/L		99	70 - 130	0	20
1,1,1-Trichloroethane			25.0	24.5		ug/L		98	70 - 130	2	20
1,1,2,2-Tetrachloroethane			25.0	21.5		ug/L		86	70 - 130	1	20
1,1,2-Trichloroethane			25.0	20.9		ug/L		84	70 - 130	2	20
1,1-Dichloroethane			25.0	25.2		ug/L		101	70 - 130	2	20
1,1-Dichloroethene			25.0	23.0		ug/L		92	70 - 130	4	20
1,1-Dichloropropene			25.0	24.0		ug/L		96	70 - 130	3	20
1,2,3-Trichlorobenzene			25.0	23.7		ug/L		95	70 - 130	4	20
1,2,3-Trichloropropane			25.0	20.8		ug/L		83	70 - 130	4	20
1,2,4-Trichlorobenzene			25.0	23.6		ug/L		94	70 - 130	1	20
1,2,4-Trimethylbenzene			25.0	22.2		ug/L		89	70 - 130	1	20
1,2-Dibromo-3-Chloropropane			25.0	23.5		ug/L		94	70 - 130	1	20
1,2-Dichlorobenzene			25.0	22.1		ug/L		89	70 - 130	1	20
1,2-Dichloroethane			25.0	23.9		ug/L		96	70 - 130	0	20
1,2-Dichloropropane			25.0	25.4		ug/L		102	70 - 130	4	20
1,3,5-Trimethylbenzene			25.0	22.1		ug/L		88	70 - 130	2	20
1,3-Dichlorobenzene			25.0	22.5		ug/L		90	70 - 130	2	20
1,3-Dichloropropane			25.0	21.1		ug/L		85	70 - 130	0	20
1,4-Dichlorobenzene			25.0	21.9		ug/L		87	70 - 130	0	20
1,4-Dioxane			500	518		ug/L		104	70 - 130	1	20
2,2-Dichloropropane			25.0	24.1		ug/L		96	70 - 130	0	20
2-Butanone (MEK)			125	116		ug/L		93	70 - 130	19	20
2-Chlorotoluene			25.0	22.4		ug/L		90	70 - 130	3	20
2-Hexanone			125	121		ug/L		97	70 - 130	2	20
4-Chlorotoluene			25.0	22.0		ug/L		88	70 - 130	2	20
4-Isopropyltoluene			25.0	22.8		ug/L		91	70 - 130	0	20
4-Methyl-2-pentanone (MIBK)			125	125		ug/L		100	70 - 130	2	20
Acetone			125	110		ug/L		88	70 - 130	1	20

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

Lab Sample ID: LCSD 480-339355/7
Matrix: Water
Analysis Batch: 339355

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	23.1		ug/L		92	70 - 130	1	20
Bromobenzene			25.0	21.5		ug/L		86	70 - 130	1	20
Bromoform			25.0	25.6		ug/L		103	70 - 130	1	20
Bromomethane			25.0	25.0		ug/L		100	70 - 130	3	20
Carbon disulfide			25.0	22.7		ug/L		91	70 - 130	4	20
Carbon tetrachloride			25.0	26.2		ug/L		105	70 - 130	2	20
Chlorobenzene			25.0	22.4		ug/L		90	70 - 130	0	20
Chlorobromomethane			25.0	24.0		ug/L		96	70 - 130	3	20
Chlorodibromomethane			25.0	25.1		ug/L		100	70 - 130	1	20
Chloroethane			25.0	24.8		ug/L		99	70 - 130	4	20
Chloroform			25.0	22.6		ug/L		90	70 - 130	0	20
Chloromethane			25.0	27.6		ug/L		111	70 - 130	2	20
cis-1,2-Dichloroethene			25.0	22.9		ug/L		91	70 - 130	1	20
cis-1,3-Dichloropropene			25.0	22.7		ug/L		91	70 - 130	3	20
Dichlorobromomethane			25.0	24.5		ug/L		98	70 - 130	1	20
Dichlorodifluoromethane			25.0	27.8		ug/L		111	70 - 130	0	20
Ethyl ether			25.0	24.5		ug/L		98	70 - 130	1	20
Ethylbenzene			25.0	22.1		ug/L		88	70 - 130	1	20
Ethylene Dibromide			25.0	21.7		ug/L		87	70 - 130	2	20
Hexachlorobutadiene			25.0	23.7		ug/L		95	70 - 130	1	20
Isopropyl ether			25.0	30.9		ug/L		123	70 - 130	2	20
Isopropylbenzene			25.0	22.3		ug/L		89	70 - 130	3	20
Methyl tert-butyl ether			25.0	22.5		ug/L		90	70 - 130	2	20
Methylene Chloride			25.0	23.0		ug/L		92	70 - 130	0	20
m-Xylene & p-Xylene			25.0	22.6		ug/L		90	70 - 130	1	20
Naphthalene			25.0	23.8		ug/L		95	70 - 130	2	20
n-Butylbenzene			25.0	22.4		ug/L		90	70 - 130	3	20
N-Propylbenzene			25.0	21.7		ug/L		87	70 - 130	2	20
o-Xylene			25.0	22.9		ug/L		92	70 - 130	3	20
sec-Butylbenzene			25.0	22.5		ug/L		90	70 - 130	4	20
Styrene			25.0	22.7		ug/L		91	70 - 130	1	20
Tert-amyl methyl ether			25.0	21.7		ug/L		87	70 - 130	2	20
Tert-butyl ethyl ether			25.0	25.1		ug/L		100	70 - 130	1	20
tert-Butylbenzene			25.0	23.3		ug/L		93	70 - 130	2	20
Tetrachloroethene			25.0	24.3		ug/L		97	70 - 130	5	20
Tetrahydrofuran			50.0	68.4	*	ug/L		137	70 - 130	1	20
Toluene			25.0	21.8		ug/L		87	70 - 130	2	20
trans-1,2-Dichloroethene			25.0	23.7		ug/L		95	70 - 130	2	20
trans-1,3-Dichloropropene			25.0	21.9		ug/L		88	70 - 130	1	20
Trichloroethene			25.0	23.6		ug/L		94	70 - 130	1	20
Trichlorofluoromethane			25.0	24.9		ug/L		99	70 - 130	5	20
Vinyl chloride			25.0	27.3		ug/L		109	70 - 130	5	20
Dibromomethane			25.0	24.2		ug/L		97	70 - 130	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*92*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*

Method: 6010 - Metals (ICP)

Lab Sample ID: MB 480-340248/1-A
Matrix: Water
Analysis Batch: 340403

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 340248

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050		mg/L		01/17/17 07:45	01/17/17 16:10	1

Lab Sample ID: LCS 480-340248/2-A
Matrix: Water
Analysis Batch: 340403

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 340248

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	10.4		mg/L		104	80 - 120

Lab Sample ID: LCSD 480-340248/3-A
Matrix: Water
Analysis Batch: 340403

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 340248

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	10.0	10.6		mg/L		106	80 - 120	2	20

Lab Sample ID: 480-111939-1 MS
Matrix: Water
Analysis Batch: 340403

Client Sample ID: MW-265M-20170106
Prep Type: Total/NA
Prep Batch: 340248

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	470	^	10.0	497	4	mg/L		266	75 - 125

Lab Sample ID: 480-111939-1 MSD
Matrix: Water
Analysis Batch: 340403

Client Sample ID: MW-265M-20170106
Prep Type: Total/NA
Prep Batch: 340248

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	470	^	10.0	480	4	mg/L		99	75 - 125	3	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-339347/30
Matrix: Water
Analysis Batch: 339347

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50		mg/L			01/10/17 01:59	1
Sulfate	ND		2.0		mg/L			01/10/17 01:59	1

Lab Sample ID: LCS 480-339347/29
Matrix: Water
Analysis Batch: 339347

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	50.1		mg/L		100	90 - 110
Sulfate	50.0	47.8		mg/L		96	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-339274/2-A
Matrix: Water
Analysis Batch: 339425

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 339274

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.20		mg/L		01/09/17 10:02	01/10/17 09:45	1

Lab Sample ID: LCS 480-339274/1-A
Matrix: Water
Analysis Batch: 339425

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 339274

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.08		mg/L		108	90 - 110

Lab Sample ID: 480-111939-2 MS
Matrix: Water
Analysis Batch: 339425

Client Sample ID: MW-562-20170106
Prep Type: Total/NA
Prep Batch: 339274

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	0.42	F1	0.500	0.990	F1	mg/L		114	90 - 110

Lab Sample ID: MB 480-339566/2-A
Matrix: Water
Analysis Batch: 339631

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 339566

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.20		mg/L		01/11/17 09:32	01/11/17 12:57	1

Lab Sample ID: LCS 480-339566/1-A
Matrix: Water
Analysis Batch: 339631

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 339566

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	0.974		mg/L		97	90 - 110

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-340101/5
Matrix: Water
Analysis Batch: 340101

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TOC Result 1	ND		1.0		mg/L			01/14/17 18:13	1
TOC Result 2	ND		1.0		mg/L			01/14/17 18:13	1
Total Organic Carbon - Duplicates	ND		1.0		mg/L			01/14/17 18:13	1

Lab Sample ID: LCS 480-340101/6
Matrix: Water
Analysis Batch: 340101

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
TOC Result 1	60.0	57.8		mg/L		96	90 - 110
TOC Result 2	60.0	61.4		mg/L		102	90 - 110

Method: 9060A - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: LCS 480-340101/6
Matrix: Water
Analysis Batch: 340101

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Duplicates	60.0	59.6		mg/L		99	90 - 110

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-339387/54
Matrix: Water
Analysis Batch: 339387

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	ND		5.0		mg/L			01/09/17 17:30	1

Lab Sample ID: LCS 480-339387/55
Matrix: Water
Analysis Batch: 339387

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total	100	98.3		mg/L		98	90 - 110

Method: SM 4500 P E - Orthophosphate

Lab Sample ID: MB 480-339180/3
Matrix: Water
Analysis Batch: 339180

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
ortho-Phosphate	ND		0.020		mg/L			01/07/17 14:15	1

Lab Sample ID: LCS 480-339180/4
Matrix: Water
Analysis Batch: 339180

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
ortho-Phosphate	0.200	0.192		mg/L		96	90 - 110

Lab Sample ID: 480-111939-1 MS
Matrix: Water
Analysis Batch: 339180

Client Sample ID: MW-265M-20170106
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
ortho-Phosphate	0.15		1.00	1.10		mg/L		95	49 - 138

Lab Sample ID: 480-111939-1 MSD
Matrix: Water
Analysis Batch: 339180

Client Sample ID: MW-265M-20170106
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
ortho-Phosphate	0.15		1.00	1.08		mg/L		93	49 - 138	2	20

GC/MS VOA

Analysis Batch: 339355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111939-1	MW-265M-20170106	Total/NA	Water	8260C	
480-111939-2	MW-562-20170106	Total/NA	Water	8260C	
480-111939-3	TRIP BLANK	Total/NA	Water	8260C	
MB 480-339355/9	Method Blank	Total/NA	Water	8260C	
LCS 480-339355/6	Lab Control Sample	Total/NA	Water	8260C	
LCSD 480-339355/7	Lab Control Sample Dup	Total/NA	Water	8260C	

Metals

Prep Batch: 340248

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111939-1	MW-265M-20170106	Total/NA	Water	3005A	
480-111939-2	MW-562-20170106	Total/NA	Water	3005A	
MB 480-340248/1-A	Method Blank	Total/NA	Water	3005A	
LCS 480-340248/2-A	Lab Control Sample	Total/NA	Water	3005A	
LCSD 480-340248/3-A	Lab Control Sample Dup	Total/NA	Water	3005A	
480-111939-1 MS	MW-265M-20170106	Total/NA	Water	3005A	
480-111939-1 MSD	MW-265M-20170106	Total/NA	Water	3005A	

Analysis Batch: 340403

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111939-1	MW-265M-20170106	Total/NA	Water	6010	340248
480-111939-2	MW-562-20170106	Total/NA	Water	6010	340248
MB 480-340248/1-A	Method Blank	Total/NA	Water	6010	340248
LCS 480-340248/2-A	Lab Control Sample	Total/NA	Water	6010	340248
LCSD 480-340248/3-A	Lab Control Sample Dup	Total/NA	Water	6010	340248
480-111939-1 MS	MW-265M-20170106	Total/NA	Water	6010	340248
480-111939-1 MSD	MW-265M-20170106	Total/NA	Water	6010	340248

General Chemistry

Analysis Batch: 339168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111939-1	MW-265M-20170106	Total/NA	Water	353.2	
480-111939-2	MW-562-20170106	Total/NA	Water	353.2	

Analysis Batch: 339180

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111939-1	MW-265M-20170106	Total/NA	Water	SM 4500 P E	
480-111939-2	MW-562-20170106	Total/NA	Water	SM 4500 P E	
MB 480-339180/3	Method Blank	Total/NA	Water	SM 4500 P E	
LCS 480-339180/4	Lab Control Sample	Total/NA	Water	SM 4500 P E	
480-111939-1 MS	MW-265M-20170106	Total/NA	Water	SM 4500 P E	
480-111939-1 MSD	MW-265M-20170106	Total/NA	Water	SM 4500 P E	

Prep Batch: 339274

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111939-2	MW-562-20170106	Total/NA	Water	Distill/Ammonia	
MB 480-339274/2-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 480-339274/1-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

General Chemistry (Continued)

Prep Batch: 339274 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111939-2 MS	MW-562-20170106	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 339347

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111939-1	MW-265M-20170106	Total/NA	Water	300.0	
480-111939-2	MW-562-20170106	Total/NA	Water	300.0	
MB 480-339347/30	Method Blank	Total/NA	Water	300.0	
LCS 480-339347/29	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 339386

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111939-1	MW-265M-20170106	Total/NA	Water	9040C	
480-111939-2	MW-562-20170106	Total/NA	Water	9040C	
LCS 480-339386/23	Lab Control Sample	Total/NA	Water	9040C	

Analysis Batch: 339387

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111939-1	MW-265M-20170106	Total/NA	Water	SM 2320B	
480-111939-2	MW-562-20170106	Total/NA	Water	SM 2320B	
MB 480-339387/54	Method Blank	Total/NA	Water	SM 2320B	
LCS 480-339387/55	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 339425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111939-2	MW-562-20170106	Total/NA	Water	350.1	339274
MB 480-339274/2-A	Method Blank	Total/NA	Water	350.1	339274
LCS 480-339274/1-A	Lab Control Sample	Total/NA	Water	350.1	339274
480-111939-2 MS	MW-562-20170106	Total/NA	Water	350.1	339274

Prep Batch: 339566

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111939-1	MW-265M-20170106	Total/NA	Water	Distill/Ammonia	
MB 480-339566/2-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 480-339566/1-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 339631

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111939-1	MW-265M-20170106	Total/NA	Water	350.1	339566
MB 480-339566/2-A	Method Blank	Total/NA	Water	350.1	339566
LCS 480-339566/1-A	Lab Control Sample	Total/NA	Water	350.1	339566

Analysis Batch: 340101

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-111939-1	MW-265M-20170106	Total/NA	Water	9060A	
480-111939-2	MW-562-20170106	Total/NA	Water	9060A	
MB 480-340101/5	Method Blank	Total/NA	Water	9060A	
LCS 480-340101/6	Lab Control Sample	Total/NA	Water	9060A	

Lab Chronicle

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

TestAmerica Job ID: 480-111939-1

Client Sample ID: MW-265M-20170106

Date Collected: 01/06/17 11:15
Date Received: 01/07/17 00:30

Lab Sample ID: 480-111939-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		5	339355	01/10/17 04:41	GTG	TAL BUF
Total/NA	Prep	3005A			340248	01/17/17 07:45	MVZ	TAL BUF
Total/NA	Analysis	6010		1	340403	01/17/17 16:20	AMH	TAL BUF
Total/NA	Analysis	300.0		10	339347	01/10/17 05:24	CAV	TAL BUF
Total/NA	Prep	Distill/Ammonia			339566	01/11/17 09:32	CEA	TAL BUF
Total/NA	Analysis	350.1		1	339631	01/11/17 13:13	CEA	TAL BUF
Total/NA	Analysis	353.2		1	339168	01/07/17 11:26	LED	TAL BUF
Total/NA	Analysis	9040C		1	339386	01/09/17 15:53	CEA	TAL BUF
Total/NA	Analysis	9060A		40	340101	01/15/17 00:00	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	339387	01/09/17 18:49	CEA	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	339180	01/07/17 14:15	JCL	TAL BUF

Client Sample ID: MW-562-20170106

Date Collected: 01/06/17 10:20
Date Received: 01/07/17 00:30

Lab Sample ID: 480-111939-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		4	339355	01/10/17 05:04	GTG	TAL BUF
Total/NA	Prep	3005A			340248	01/17/17 07:45	MVZ	TAL BUF
Total/NA	Analysis	6010		1	340403	01/17/17 16:38	AMH	TAL BUF
Total/NA	Analysis	300.0		10	339347	01/10/17 05:39	CAV	TAL BUF
Total/NA	Prep	Distill/Ammonia			339274	01/09/17 10:02	CEA	TAL BUF
Total/NA	Analysis	350.1		1	339425	01/10/17 10:02	CEA	TAL BUF
Total/NA	Analysis	353.2		1	339168	01/07/17 11:27	LED	TAL BUF
Total/NA	Analysis	9040C		1	339386	01/09/17 15:56	CEA	TAL BUF
Total/NA	Analysis	9060A		40	340101	01/15/17 00:27	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	339387	01/09/17 19:00	CEA	TAL BUF
Total/NA	Analysis	SM 4500 P E		5	339180	01/07/17 14:15	JCL	TAL BUF

Client Sample ID: TRIP BLANK

Date Collected: 01/06/17 00:00
Date Received: 01/07/17 00:30

Lab Sample ID: 480-111939-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	339355	01/10/17 05:28	GTG	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: 480-111939-1

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	07-06-17
California	State Program	9	1169CA	09-30-17
Connecticut	State Program	1	PH-0568	09-30-18
Florida	NELAP	4	E87672	06-30-17
Georgia	State Program	4	N/A	03-31-17 *
Georgia	State Program	4	956	03-31-17 *
Illinois	NELAP	5	200003	09-30-17
Iowa	State Program	7	374	03-01-17 *
Kansas	NELAP	7	E-10187	11-30-16 *
Kentucky (DW)	State Program	4	90029	12-31-17
Kentucky (UST)	State Program	4	30	03-31-17 *
Kentucky (WW)	State Program	4	90029	12-31-16 *
Louisiana	NELAP	6	02031	06-30-17
Maine	State Program	1	NY00044	12-04-18
Maryland	State Program	3	294	03-31-17 *
Massachusetts	State Program	1	M-NY044	06-30-17
Michigan	State Program	5	9937	03-31-17 *
Minnesota	NELAP	5	036-999-337	12-31-17
New Hampshire	NELAP Primary AB	1	2973	09-11-17
New Hampshire	NELAP Secondary AB	1	2337	11-17-17
New Jersey	NELAP	2	NY455	06-30-17
New York	NELAP	2	10026	03-31-17 *
North Dakota	State Program	8	R-176	03-31-17 *
Oklahoma	State Program	6	9421	08-31-17
Oregon	NELAP	10	NY200003	06-09-17
Pennsylvania	NELAP	3	68-00281	07-31-17
Rhode Island	State Program	1	LAO00328	12-30-17
Tennessee	State Program	4	TN02970	03-31-17 *
Texas	NELAP	6	T104704412-15-6	07-31-17
USDA	Federal		P330-11-00386	11-26-17
Virginia	NELAP	3	460185	09-14-17
Washington	State Program	10	C784	02-10-17 *
West Virginia DEP	State Program	3	252	09-30-16 *
Wisconsin	State Program	5	998310390	08-31-17

* Certification renewal pending - certification considered valid.

Method Summary

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

TestAmerica Job ID: 480-111939-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds (GC/MS)	MA DEP	TAL BUF
6010	Metals (ICP)	SW846	TAL BUF
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
350.1	Nitrogen, Ammonia	MCAWW	TAL BUF
353.2	Nitrate	EPA	TAL BUF
9040C	pH	SW846	TAL BUF
9060A	Organic Carbon, Total (TOC)	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 P E	Orthophosphate	SM	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

MA DEP = Massachusetts Department Of Environmental Protection

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

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

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: 480-111939-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-111939-1	MW-265M-20170106	Water	01/06/17 11:15	01/07/17 00:30
480-111939-2	MW-562-20170106	Water	01/06/17 10:20	01/07/17 00:30
480-111939-3	TRIP BLANK	Water	01/06/17 00:00	01/07/17 00:30

Login Sample Receipt Checklist

Client: Innovative Engineering Solutions, Inc

Job Number: 480-111939-1

Login Number: 111939
List Number: 1
Creator: Williams, Christopher S

List Source: TestAmerica Buffalo

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 (Excluding tests with immediate HTs)..	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	

TestAmerica Westfield
501 Southampton Road
Westfield MA 01085
Phone: (413) 572-4000 Fax: (303) 467-7247

TestAmerica Boston
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 Information:

Client Contact: Vicki Perrigan
Company: Innovative Engineering Solutions Inc
Address: 25 Spring St
City: Walpole
State and Zip: MA 02081
Client's Phone: 508-668-0033
Client's Contact Email: vperrigan@iesolutions.com
Client's Project Name/Number: Raytheon-Wayland RA-008
Sample Collection Site Name & Location: Wayland MA

Sample Collector's Name (Please Print Neatly): Deary Jones
Sample Collector's Phone: 508-404-3196
Lab PM:
E-Mail:
Lab COC
Due Date Requested: 1/14/17
Turnaround Time (TAT) Requested (business days): 5 days
Quote # or Project #:
PO #: RA-008
WO #:
PWS ID #:

480-111939 COC

COC No: 36729
Page: 1 of 1
Job #:

Analysis Requested: 8260C; 9040A TOC; 350.1 NH3; 6010 MSP Total Iron; 2320B Alkalinity; 300.0-ORGFM SO4+Cl; 9040C pH, NO2, NO3, Ortho PO4, 4500-P-E, 353.2

Sample Identification	Sample Collection Date (MM/DD/YY)	Sample Collection Time (24 Hour Clock)	Sample Type: C=Comp G=Grab	Matrix Type **	8260C	9040A TOC	350.1 NH3	6010 MSP Total Iron	2320B Alkalinity	300.0 SO4+Cl	pH / NO2 / NO3 / Ortho PO4	Total Number of Containers	Special Instructions & Notes
Preservation Codes ⇒					A	A	S	D	N	N	N	↓	
MW-265M-20170106	1/6/17	1115	G	W	X	X	X	X	X	X	X	10	GW3
MW-5L2-20170106	1/6/17	1020	G	W	X	X	X	X	X	X	X	10	
Trip Blank	–	–	–	W	X							2	

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 TestAmerica to use certified, subcontract labs, without any additional notification made by us, as necessary to fulfill your work order.

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 IN A COOLER, ON ICE !!** ◀

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[signature]	1/6/17 1300	IESI	[signature]	1-6-17 – 1400	TA
[signature]	1-6-17 1800		[signature]	1-7-17 0030	TAB
[signature]					

Custody Seals Intact: △ Yes △ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 1.5 #1

WI-QA-010 rev 8
Revised 10/29/2014
TAL-8245-360R

ANALYTICAL REPORT

Lab Number:	L1700578
Client:	Innovative Engineering Solutions, Inc. 25 Spring Street Walpole, MA 02081
ATTN:	Vicki Pariyar
Phone:	(508) 668-0033
Project Name:	RAYTHEON WAYLAND
Project Number:	RA-008
Report Date:	01/13/17

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

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

Project Name: RAYTHEON WAYLAND
Project Number: RA-008

Lab Number: L1700578
Report Date: 01/13/17

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1700578-01	REW-6-20170104	WATER	WAYLAND, MA	01/04/17 10:55	01/06/17
L1700578-02	REW-7-20170104	WATER	WAYLAND, MA	01/04/17 09:05	01/06/17
L1700578-03	REW-8-20170104	WATER	WAYLAND, MA	01/04/17 10:00	01/06/17
L1700578-04	REW-11-20170104	WATER	WAYLAND, MA	01/04/17 12:00	01/06/17
L1700578-05	REW-12-20170104	WATER	WAYLAND, MA	01/04/17 13:20	01/06/17
L1700578-06	MW-265M-20170106	WATER	WAYLAND, MA	01/06/17 11:15	01/06/17
L1700578-07	MW-267S-20170105	WATER	WAYLAND, MA	01/05/17 11:10	01/06/17
L1700578-08	MW-267M-20170105	WATER	WAYLAND, MA	01/05/17 11:50	01/06/17
L1700578-09	MW-268S-20170105	WATER	WAYLAND, MA	01/05/17 08:55	01/06/17
L1700578-10	MW-268M-20170105	WATER	WAYLAND, MA	01/05/17 10:15	01/06/17
L1700578-11	MW-562-20170106	WATER	WAYLAND, MA	01/06/17 10:20	01/06/17
L1700578-12	MW-563-20170105	WATER	WAYLAND, MA	01/05/17 12:40	01/06/17

Project Name: RAYTHEON WAYLAND
Project Number: RA-008
Lab Number: L1700578
Report Date: 01/13/17

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: RAYTHEON WAYLAND **Lab Number:** L1700578
Project Number: RA-008 **Report Date:** 01/13/17

Case Narrative (continued)

Dissolved Gases

L1700578-01, -05, -06, -07, -10 and -11 were collected in pre-preserved vials; however, the pH of the samples was determined to be greater than two.

Samples L1700578-01 through -08 and -10 through -12 were re-analyzed on dilution in order to quantify the results within the calibration range. The results should be considered estimated, and are qualified with an E flag, for any compounds that exceeded the calibration range in the initial analysis. The re-analysis was performed only for the compound that exceeded the calibration range.

The WG968699-5 MS recovery, performed on L1700578-09, is outside the acceptance criteria for methane (0%). The unacceptable percent recovery is attributed to the elevated concentration of this target compound present in the native sample.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Christopher J. Anderson

Title: Technical Director/Representative Date: 01/13/17

ORGANICS

VOLATILES

Project Name: RAYTHEON WAYLAND
Lab Number: L1700578
Project Number: RA-008
Report Date: 01/13/17

SAMPLE RESULTS

Lab ID: L1700578-01
Client ID: REW-6-20170104
Sample Location: WAYLAND, MA
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/17 10:12
Analyst: MR

Date Collected: 01/04/17 10:55
Date Received: 01/06/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	21200	E	ug/l	0.500	--	1	A
Ethene	0.566		ug/l	0.500	--	1	A
Ethane	4.41		ug/l	0.500	--	1	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1700578
Project Number: RA-008
Report Date: 01/13/17

SAMPLE RESULTS

Lab ID: L1700578-01 D
Client ID: REW-6-20170104
Sample Location: WAYLAND, MA
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/17 14:29
Analyst: MR

Date Collected: 01/04/17 10:55
Date Received: 01/06/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	19900		ug/l	2.50	--	5	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1700578
Project Number: RA-008
Report Date: 01/13/17

SAMPLE RESULTS

Lab ID: L1700578-02
Client ID: REW-7-20170104
Sample Location: WAYLAND, MA
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/17 10:26
Analyst: MR

Date Collected: 01/04/17 09:05
Date Received: 01/06/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	28300	E	ug/l	0.500	--	1	A
Ethene	0.598		ug/l	0.500	--	1	A
Ethane	7.99		ug/l	0.500	--	1	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1700578
Project Number: RA-008
Report Date: 01/13/17

SAMPLE RESULTS

Lab ID: L1700578-02 D
Client ID: REW-7-20170104
Sample Location: WAYLAND, MA
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/17 14:43
Analyst: MR

Date Collected: 01/04/17 09:05
Date Received: 01/06/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	22100		ug/l	2.50	--	5	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1700578
Project Number: RA-008
Report Date: 01/13/17

SAMPLE RESULTS

Lab ID: L1700578-03
Client ID: REW-8-20170104
Sample Location: WAYLAND, MA
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/17 10:41
Analyst: MR

Date Collected: 01/04/17 10:00
Date Received: 01/06/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	31700	E	ug/l	0.500	--	1	A
Ethene	0.515		ug/l	0.500	--	1	A
Ethane	1.82		ug/l	0.500	--	1	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1700578
Project Number: RA-008
Report Date: 01/13/17

SAMPLE RESULTS

Lab ID: L1700578-03 D
Client ID: REW-8-20170104
Sample Location: WAYLAND, MA
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/17 16:29
Analyst: MR

Date Collected: 01/04/17 10:00
Date Received: 01/06/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	24900		ug/l	5.00	--	10	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1700578
Project Number: RA-008
Report Date: 01/13/17

SAMPLE RESULTS

Lab ID: L1700578-04
Client ID: REW-11-20170104
Sample Location: WAYLAND, MA
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/17 10:55
Analyst: MR

Date Collected: 01/04/17 12:00
Date Received: 01/06/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	33600	E	ug/l	0.500	--	1	A
Ethene	2.56		ug/l	0.500	--	1	A
Ethane	6.80		ug/l	0.500	--	1	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1700578
Project Number: RA-008
Report Date: 01/13/17

SAMPLE RESULTS

Lab ID: L1700578-04 D
Client ID: REW-11-20170104
Sample Location: WAYLAND, MA
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/17 16:43
Analyst: MR

Date Collected: 01/04/17 12:00
Date Received: 01/06/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	27800		ug/l	5.00	--	10	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1700578
Project Number: RA-008
Report Date: 01/13/17

SAMPLE RESULTS

Lab ID: L1700578-05
Client ID: REW-12-20170104
Sample Location: WAYLAND, MA
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/17 11:09
Analyst: MR

Date Collected: 01/04/17 13:20
Date Received: 01/06/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	17700	E	ug/l	0.500	--	1	A
Ethene	3.32		ug/l	0.500	--	1	A
Ethane	7.39		ug/l	0.500	--	1	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1700578
Project Number: RA-008
Report Date: 01/13/17

SAMPLE RESULTS

Lab ID: L1700578-05 D
Client ID: REW-12-20170104
Sample Location: WAYLAND, MA
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/17 14:57
Analyst: MR

Date Collected: 01/04/17 13:20
Date Received: 01/06/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	16200		ug/l	2.50	--	5	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1700578
Project Number: RA-008
Report Date: 01/13/17

SAMPLE RESULTS

Lab ID: L1700578-06
Client ID: MW-265M-20170106
Sample Location: WAYLAND, MA
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/17 11:23
Analyst: MR

Date Collected: 01/06/17 11:15
Date Received: 01/06/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	21600	E	ug/l	0.500	--	1	A
Ethene	0.944		ug/l	0.500	--	1	A
Ethane	0.639		ug/l	0.500	--	1	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1700578
Project Number: RA-008
Report Date: 01/13/17

SAMPLE RESULTS

Lab ID: L1700578-06 D
Client ID: MW-265M-20170106
Sample Location: WAYLAND, MA
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/17 15:12
Analyst: MR

Date Collected: 01/06/17 11:15
Date Received: 01/06/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	19400		ug/l	2.50	--	5	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1700578
Project Number: RA-008
Report Date: 01/13/17

SAMPLE RESULTS

Lab ID: L1700578-07
Client ID: MW-267S-20170105
Sample Location: WAYLAND, MA
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/17 11:38
Analyst: MR

Date Collected: 01/05/17 11:10
Date Received: 01/06/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	25100	E	ug/l	0.500	--	1	A
Ethene	2.87		ug/l	0.500	--	1	A
Ethane	1.09		ug/l	0.500	--	1	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1700578
Project Number: RA-008
Report Date: 01/13/17

SAMPLE RESULTS

Lab ID: L1700578-07 D
Client ID: MW-267S-20170105
Sample Location: WAYLAND, MA
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/17 15:26
Analyst: MR

Date Collected: 01/05/17 11:10
Date Received: 01/06/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	21500		ug/l	2.50	--	5	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1700578
Project Number: RA-008
Report Date: 01/13/17

SAMPLE RESULTS

Lab ID: L1700578-08
Client ID: MW-267M-20170105
Sample Location: WAYLAND, MA
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/17 11:52
Analyst: MR

Date Collected: 01/05/17 11:50
Date Received: 01/06/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	46000	E	ug/l	0.500	--	1	A
Ethene	ND		ug/l	0.500	--	1	A
Ethane	28.8		ug/l	0.500	--	1	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1700578
Project Number: RA-008
Report Date: 01/13/17

SAMPLE RESULTS

Lab ID: L1700578-08 D
Client ID: MW-267M-20170105
Sample Location: WAYLAND, MA
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/17 16:58
Analyst: MR

Date Collected: 01/05/17 11:50
Date Received: 01/06/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	36700		ug/l	5.00	--	10	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1700578
Project Number: RA-008
Report Date: 01/13/17

SAMPLE RESULTS

Lab ID: L1700578-09
Client ID: MW-268S-20170105
Sample Location: WAYLAND, MA
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/17 12:06
Analyst: MR

Date Collected: 01/05/17 08:55
Date Received: 01/06/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	2160		ug/l	0.500	--	1	A
Ethene	1.00		ug/l	0.500	--	1	A
Ethane	ND		ug/l	0.500	--	1	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1700578
Project Number: RA-008
Report Date: 01/13/17

SAMPLE RESULTS

Lab ID: L1700578-10
Client ID: MW-268M-20170105
Sample Location: WAYLAND, MA
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/17 12:20
Analyst: MR

Date Collected: 01/05/17 10:15
Date Received: 01/06/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	41200	E	ug/l	0.500	--	1	A
Ethene	18.0		ug/l	0.500	--	1	A
Ethane	6.66		ug/l	0.500	--	1	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1700578
Project Number: RA-008
Report Date: 01/13/17

SAMPLE RESULTS

Lab ID: L1700578-10 D
Client ID: MW-268M-20170105
Sample Location: WAYLAND, MA
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/17 17:12
Analyst: MR

Date Collected: 01/05/17 10:15
Date Received: 01/06/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	32000		ug/l	5.00	--	10	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1700578
Project Number: RA-008
Report Date: 01/13/17

SAMPLE RESULTS

Lab ID: L1700578-11
Client ID: MW-562-20170106
Sample Location: WAYLAND, MA
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/17 13:18
Analyst: MR

Date Collected: 01/06/17 10:20
Date Received: 01/06/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	22200	E	ug/l	0.500	--	1	A
Ethene	ND		ug/l	0.500	--	1	A
Ethane	1.17		ug/l	0.500	--	1	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1700578
Project Number: RA-008
Report Date: 01/13/17

SAMPLE RESULTS

Lab ID: L1700578-11 D
Client ID: MW-562-20170106
Sample Location: WAYLAND, MA
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/17 15:40
Analyst: MR

Date Collected: 01/06/17 10:20
Date Received: 01/06/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	18800		ug/l	2.50	--	5	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1700578
Project Number: RA-008
Report Date: 01/13/17

SAMPLE RESULTS

Lab ID: L1700578-12
Client ID: MW-563-20170105
Sample Location: WAYLAND, MA
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/17 13:33
Analyst: MR

Date Collected: 01/05/17 12:40
Date Received: 01/06/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	39000	E	ug/l	0.500	--	1	A
Ethene	ND		ug/l	0.500	--	1	A
Ethane	8.54		ug/l	0.500	--	1	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1700578
Project Number: RA-008
Report Date: 01/13/17

SAMPLE RESULTS

Lab ID: L1700578-12 D
Client ID: MW-563-20170105
Sample Location: WAYLAND, MA
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/17 17:26
Analyst: MR

Date Collected: 01/05/17 12:40
Date Received: 01/06/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	27900		ug/l	5.00	--	10	A

Project Name: RAYTHEON WAYLAND
Project Number: RA-008
Lab Number: L1700578
Report Date: 01/13/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 117,-
Analytical Date: 01/11/17 09:43
Analyst: MR

Parameter	Result	Qualifier	Units	RL	MDL	
Dissolved Gases by GC - Mansfield Lab for sample(s): 01-12 Batch: WG968699-3						
Methane	ND		ug/l	0.500	--	A
Ethene	ND		ug/l	0.500	--	A
Ethane	ND		ug/l	0.500	--	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Project Number: RA-008

Lab Number: L1700578

Report Date: 01/13/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Dissolved Gases by GC - Mansfield Lab Associated sample(s): 01-12 Batch: WG968699-2									
Methane	102		-		80-120	-		25	A
Ethene	102		-		80-120	-		25	A
Ethane	104		-		80-120	-		25	A

Matrix Spike Analysis
Batch Quality Control

Project Name: RAYTHEON WAYLAND
Project Number: RA-008

Lab Number: L1700578
Report Date: 01/13/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits	Column
Dissolved Gases by GC - Mansfield Lab Associated sample(s): 01-12 QC Batch ID: WG968699-5 QC Sample: L1700578-09 Client ID: MW-268S-20170105													
Methane	2160	54.6	1960	**0**	Q	-	-		80-120	-		25	A
Ethene	1.00	95.5	101	105		-	-		80-120	-		25	A
Ethane	ND	102	109	106		-	-		80-120	-		25	A

Lab Duplicate Analysis
Batch Quality Control

Project Name: RAYTHEON WAYLAND
Project Number: RA-008

Lab Number: L1700578
Report Date: 01/13/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits	
Dissolved Gases by GC - Mansfield Lab Associated sample(s): 01-12 QC Batch ID: WG968699-4 QC Sample: L1700578-09 Client ID: MW-268S-20170105							
Methane	2160	2010	ug/l	7		25	A
Ethene	1.00	0.924	ug/l	8		25	A
Ethane	ND	ND	ug/l	NC		25	A

Project Name: RAYTHEON WAYLAND
Project Number: RA-008

Lab Number: L1700578
Report Date: 01/13/17

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information **Custody Seal**

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1700578-01A	20ml Vial HCl preserved	A	N/A	2.3	Y	Absent	DISSGAS(14)
L1700578-01B	20ml Vial HCl preserved	A	N/A	2.3	Y	Absent	DISSGAS(14)
L1700578-02A	20ml Vial HCl preserved	A	N/A	2.3	Y	Absent	DISSGAS(14)
L1700578-02B	20ml Vial HCl preserved	A	N/A	2.3	Y	Absent	DISSGAS(14)
L1700578-03A	20ml Vial HCl preserved	A	N/A	2.3	Y	Absent	DISSGAS(14)
L1700578-03B	20ml Vial HCl preserved	A	N/A	2.3	Y	Absent	DISSGAS(14)
L1700578-04A	20ml Vial HCl preserved	A	N/A	2.3	Y	Absent	DISSGAS(14)
L1700578-04B	20ml Vial HCl preserved	A	N/A	2.3	Y	Absent	DISSGAS(14)
L1700578-05A	20ml Vial HCl preserved	A	N/A	2.3	Y	Absent	DISSGAS(14)
L1700578-05B	20ml Vial HCl preserved	A	N/A	2.3	Y	Absent	DISSGAS(14)
L1700578-06A	20ml Vial HCl preserved	A	N/A	2.3	Y	Absent	DISSGAS(14)
L1700578-06B	20ml Vial HCl preserved	A	N/A	2.3	Y	Absent	DISSGAS(14)
L1700578-07A	20ml Vial HCl preserved	A	N/A	2.3	Y	Absent	DISSGAS(14)
L1700578-07B	20ml Vial HCl preserved	A	N/A	2.3	Y	Absent	DISSGAS(14)
L1700578-08A	20ml Vial HCl preserved	A	N/A	2.3	Y	Absent	DISSGAS(14)
L1700578-08B	20ml Vial HCl preserved	A	N/A	2.3	Y	Absent	DISSGAS(14)
L1700578-09A	20ml Vial HCl preserved	A	N/A	2.3	Y	Absent	DISSGAS(14)
L1700578-09B	20ml Vial HCl preserved	A	N/A	2.3	Y	Absent	DISSGAS(14)
L1700578-10A	20ml Vial HCl preserved	A	N/A	2.3	Y	Absent	DISSGAS(14)
L1700578-10B	20ml Vial HCl preserved	A	N/A	2.3	Y	Absent	DISSGAS(14)
L1700578-11A	20ml Vial HCl preserved	A	N/A	2.3	Y	Absent	DISSGAS(14)
L1700578-11B	20ml Vial HCl preserved	A	N/A	2.3	Y	Absent	DISSGAS(14)
L1700578-12A	20ml Vial HCl preserved	A	N/A	2.3	Y	Absent	DISSGAS(14)
L1700578-12B	20ml Vial HCl preserved	A	N/A	2.3	Y	Absent	DISSGAS(14)

*Values in parentheses indicate holding time in days

Project Name:	RAYTHEON WAYLAND	**Lab Number:**	L1700578
Project Number:	RA-008	**Report Date:**	01/13/17

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the

Report Format: Data Usability Report

Project Name:	RAYTHEON WAYLAND	**Lab Number:**	L1700578
Project Number:	RA-008	**Report Date:**	01/13/17

Data Qualifiers

reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

REFERENCES

117 Technical Guidance for the Natural Attenuation Indicators: Methane, Ethane, and Ethene, EPA-NE, Revision 1, February 21, 2002 and Sample Preparation & Calculations for Dissolved Gas Analysis in Water Samples using a GC Headspace Equilibration Technique, EPA RSKSOP-175, Revision 2, May 2004.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 300: DW: Bromide
EPA 6860: NPW and SCM: Perchlorate
EPA 9010: NPW and SCM: Amenable Cyanide Distillation
EPA 9012B: NPW: Total Cyanide
EPA 9050A: NPW: Specific Conductance
SM3500: NPW: Ferrous Iron
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.
SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility
SM 2540D: TSS
EPA 3005A NPW
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, EPA 351.1, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT**.

Mansfield Facility:

Drinking Water
EPA 200.7: Ba, Be, Cd, Cr, Cu, Ni, Na, Ca. **EPA 200.8:** Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, TL. **EPA 245.1** Hg.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY

PAGE 1 OF 2

Date Rec'd in Lab: 1/6/17

ALPHA Job #: L1700578

ALPHA ANALYTICAL
8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Client Information

Client: Innovative Engineering Solutions Inc
Address: 25 Spring St
Walpole MA 02081
Phone: 508-668-0033
Email: v.pariyar@IESIonline.com

Additional Project Information:

Project Information

Project Name: Raytheon Wayland
Project Location: Wayland MA
Project #: RA-008
Project Manager: Vicki Pariyar
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due: 1/14/17

Report Information - Data Deliverables

☐ ADEx ☒ EMAIL

Billing Information

☒ Same as Client info PO #: RA-008

Regulatory Requirements & Project Information Requirements

☐ Yes ☒ No MA MCP Analytical Methods. ☐ Yes ☒ No CT RCP Analytical Methods
☐ Yes ☒ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☒ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☒ No NPDES RGP
☒ Other State /Fed Program ______ Criteria GW-3

ANALYSIS: VOC: ☐ 8260 ☐ 624 ☐ 524.2; SVOC: ☐ ABN ☐ PAH; METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15; METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13; EPH: ☐ Ranges & Targets ☐ Ranges Only; VPH: ☐ Ranges & Targets ☐ Ranges Only; ☐ PCB ☐ PEST; TPH: ☐ Quant Only ☐ Fingerprint; Dissolved Gases (methane, ethane, ethene)

SAMPLE INFO — Filtration: ☐ Field ☐ Lab to do; Preservation: ☐ Lab to do

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	Dissolved Gases (methane, ethane, ethene)	Sample Comments	TOTAL # BOTTLES
700578-01	REW-6-20170104	1/4/17	1035	GW	[illegible]	X		2
-02	REW-7-20170104	1/4/17	0903	GW	[illegible]	X		2
-03	REW-8-20170104	1/4/17	1000	GW	[illegible]	X		2
-04	REW-11-20170104	1/4/17	1200	GW	[illegible]	X		2
-05	REW-12-20170104	1/4/17	1320	GW	[illegible]	X		2
-06	MW-265M-20170106	1/6/17	1115	GW	[illegible]	X		2
-07	MW-267S-20170105	1/5/17	1110	GW	[illegible]	X		2
-08	MW-267M-20170105	1/5/17	1130	GW	[illegible]	X		2
-09	MW-268S-20170105	1/5/17	0855	GW	[illegible]	X		2
-10	MW-268M-20170105	1/5/17	1013	GW	[illegible]	X		2
	Container Type					V		
	Preservative					B		

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
B= HCl
C= HNO_3
D= H_2SO_4
E= NaOH
F= MeOH
G= $NaHSO_4$
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = NH_4Cl
K= Zn Acetate
O= Other

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FORM NO: 01-01 (rev. 12-Mar-2012)

CHAIN OF CUSTODY

PAGE 2 OF 2

Date Rec'd in Lab: 1/6/17

ALPHA Job #: L1700578

ALPHA ANALYTICAL

8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220

320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Project Information

Project Name: Raytheon Wayland

Project Location: Wayland MA

Project #: RA-008

Project Manager: Vicki Puniyar

ALPHA Quote #:

Report Information - Data Deliverables

☐ ADEx ☒ EMAIL

Billing Information

☒ Same as Client info PO #: RA-008

Client Information

Client: Innovative Engineering Solutions Inc

Address: 25 Spring St, Walpole, MA 02081

Phone: 508-668-0033

Email: vpuniyar@IESolutions.com

Regulatory Requirements & Project Information Requirements

☐ Yes ☒ No MA MCP Analytical Methods

☐ Yes ☒ No CT RCP Analytical Methods

☐ Yes ☒ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)

☐ Yes ☒ No GW1 Standards (Info Required for Metals & EPH with Targets)

☐ Yes ☒ No NPDES RGP

☒ Other State /Fed Program ______ Criteria GW-3

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due: 1/14/17

Additional Project Information:

ANALYSIS: VOC: ☐ 8260 ☐ 624 ☐ 524.2; SVOC: ☐ ABN ☐ PAH; METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15; METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13; EPH: ☐ Ranges & Targets ☐ Ranges Only; VPH: ☐ Ranges & Targets ☐ Ranges Only; ☐ PCB ☐ PEST; TPH: ☐ Quant Only ☐ Fingerprint; Dissolved Gases (methane, ethane, ethene)

SAMPLE INFO — Filtration: ☐ Field ☐ Lab to do; Preservation: ☐ Lab to do

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	Dissolved Gases	Sample Comments	TOTAL # BOTTLES
-11	MW-562-20170106	1/6/17	1020	GW	[initials]	X		2
-12	MW-563-20170105	1/5/17	1240	GW	[initials]	X		2

	Dissolved Gases
Container Type	V
Preservative	B

Container Type: P= Plastic, A= Amber glass, V= Vial, G= Glass, B= Bacteria cup, C= Cube, O= Other, E= Encore, D= BOD Bottle

Preservative: A= None, B= HCl, C= HNO_3, D= H_2SO_4, E= NaOH, F= MeOH, G= $NaHSO_4$, H = $Na_2S_2O_3$, I= Ascorbic Acid, J = NH_4Cl, K= Zn Acetate, O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
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FORM NO: 01-01 (rev. 12-Mar-2012)