Environmental
Resources
Management

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

http://www.erm.com

ERM

15 May 2018
Reference: 0437996

Wayland Meadows Development, Inc.
Attn: Mr. Richard Gass
20 Pickering Street, Second Floor
Needham, MA 02492

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

Dear Mr. Gass:

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 one monitoring well located on Wayland Meadows Development, Inc. property in April 2018. These samples were submitted to TestAmerica Laboratories, Inc. of Amherst, 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,

Lyndsey Colburn

Lyndsey Colburn, P.G.
Partner-in-Charge

Larry Mastera
Project Manager

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

NOTICE OF ENVIRONMENTAL SAMPLING

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

BWSC123

This Notice is Related to:
Release Tracking Number

3 - 13302

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

1. Street Address: 430 Boston Post Road

City/Town: Wayland Zip Code: 01778

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

1. Name: Wayland Meadows Development, Inc.

2. Street Address: 20 Pickering Street, Second Floor

City/Town: Needham Zip Code: 02492

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: Jonathan Hone, Raytheon Company

Street Address: 50 Apple Hill Drive

City/Town: Tewksbury Zip Code: 01876

Telephone: (978) 858-4784 Email: Jonathan_R_Hone@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: 480-133988-1
Client Project/Site: IDS Wayland

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

Attn: Vicki Pariyar

Steve Hartmann

Authorized for release by:
4/23/2018 4:56:36 PM
Steve Hartmann, Project Manager I
(413)572-4000
steve.hartmann@testamericainc.com

Designee for

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

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

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

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

1
2
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10
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12
13
14
15

Table of Contents

Cover Page 1
Table of Contents 2
Definitions/Glossary 3
Case Narrative 4
Detection Summary 8
Client Sample Results 13
Surrogate Summary 51
QC Sample Results 53
QC Association Summary 80
Lab Chronicle 86
Certification Summary 92
Method Summary 93
Sample Summary 94
Receipt Checklists 95
Chain of Custody 97

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control 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	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
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 (Radiochemistry)
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)

Case Narrative

Job ID: 480-133988-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-133988-1

Comments
No additional comments.

Receipt
The samples were received on 4/12/2018 1:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.0º C and 1.8º C.

GC/MS VOA
Method 8260C: The continuing calibration verification (CCV) for sec-Butylbenzene, Acetone, n-Butylbenzene, 1,4-Dioxane and Hexachlorobutadiene associated with batch 480-409348 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 : DEP-21-20180411 (480-133988-1), MW-264M-20180411 (480-133988-2), MW-265S-20180411 (480-133988-3), MW-265M-20180411 (480-133988-4), MW-265D-20180411 (480-133988-5), MW-266Ma-20180411 (480-133988-6), MW-266Mb-20180411 (480-133988-7), MW-269Ma-20180411 (480-133988-8), MW-561-20180411 (480-133988-9), MW-563-20180411 (480-133988-10), REW-1-20180411 (480-133988-11), REW-4-20180411 (480-133988-12) and REW-5-20180411 (480-133988-13).

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-409387 recovered outside the MCP control limit criteria for the following analyte: Acetone. 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-8-20180411 (480-133988-14) and DUP4-20180411 (480-133988-19).

Method 8260C: The continuing calibration verification (CCV) for Acetone and 1,4-Dioxane associated with batch 480-409598 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-9-20180411 (480-133988-15), REW-10-20180411 (480-133988-16) and Trip Blanks (480-133988-20).

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-409631 recovered outside the MCP control limit criteria for the following analytes: Bromomethane, Trichlorofluoromethane, 1,4-Dioxane and Acetone . 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-12-20180411 (480-133988-17) and DUP3-20180411 (480-133988-18).

Method 8260C: The laboratory control sample (LCS) and / or the laboratory control sample duplicate (LCSD) for batch 480-409348 exceeded control limits for the following analytes: 2-Butanone and Tetrahydrofuran. Unlike the calibration standards, this is due to the coelution with Ethyl Acetate and 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.

Method 8260C: The laboratory control sample (LCS) and / or the laboratory control sample duplicate (LCSD) for batch 480-409348 exceeded control limits for the following analytes: Acetone and 1,4-Dioxane. MCP protocol allows for 10% of the target compounds to be outside of the limits provided the recoveries are over 10%. The following samples were affected : DEP-21-20180411 (480-133988-1), MW-264M-20180411 (480-133988-2), MW-265S-20180411 (480-133988-3), MW-265M-20180411 (480-133988-4), MW-265D-20180411 (480-133988-5), MW-266Ma-20180411 (480-133988-6), MW-266Mb-20180411 (480-133988-7), MW-269Ma-20180411 (480-133988-8), MW-561-20180411 (480-133988-9), MW-563-20180411 (480-133988-10), REW-1-20180411 (480-133988-11), REW-4-20180411 (480-133988-12) and REW-5-20180411 (480-133988-13).

Method 8260C: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch analytical batch 480-409348 recovered outside control limits for the following analyte: 1,4-Dioxane. The following samples are impacted: DEP-21-20180411 (480-133988-1), MW-264M-20180411 (480-133988-2), MW-265S-20180411 (480-133988-3), MW-265M-20180411 (480-133988-4), MW-265D-20180411 (480-133988-5), MW-266Ma-20180411 (480-133988-6), MW-266Mb-20180411 (480-133988-7), MW-269Ma-20180411 (480-133988-8), MW-561-20180411 (480-133988-9), MW-563-20180411 (480-133988-10), REW-1-20180411

Job ID: 480-133988-1 (Continued)

Laboratory: TestAmerica Buffalo (Continued)

(480-133988-11), REW-4-20180411 (480-133988-12) and REW-5-20180411 (480-133988-13)

Method 8260C: The laboratory control sample (LCS) and/or the laboratory control sample duplicate (LCSD) for batch 480-409387 exceeded control limits for the following analytes: 1,4-Dioxane and Acetone. MCP protocol allows for 10% of the target compounds to be outside of the limits provided the recoveries are over 10%. The following samples were affected : REW-8-20180411 (480-133988-14) and DUP4-20180411 (480-133988-19).

Method 8260C: The laboratory control sample (LCS) and / or the laboratory control sample duplicate (LCSD) for batch 480-409598 exceeded control limits for the following analytes: Acetone and 1,4-Dioxane. MCP protocol allows for 10% of the target compounds to be outside of the limits provided the recoveries are over 10%. The following samples were affected : REW-9-20180411 (480-133988-15), REW-10-20180411 (480-133988-16) and Trip Blanks (480-133988-20).

Method 8260C: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch analytical batch 480-409387 recovered outside control limits for the following analyte: 1,4-Dioxane.

Method 8260C: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch analytical batch 480-409598 recovered outside control limits for the following analyte: 1,4-Dioxane. The following samples are impacted: REW-9-20180411 (480-133988-15), REW-10-20180411 (480-133988-16) and Trip Blanks (480-133988-20)

Method 8260C: The laboratory control sample duplicate (LCSD) for batch 480-409631 recovered outside control limits but were greater than 10% for the following analytes: Acetone. MCP protocol allows for 10% of the target compounds to be outside of the limits provided the recoveries are over 10%. The following samples are impacted: REW-12-20180411 (480-133988-17) and DUP3-20180411 (480-133988-18).

Method 8260C: The RPD of the laboratory control sample duplicate (LCSD) for batch analytical batch 480-409631 recovered outside control limits for the following analytes: 1,4-Dioxane.

Method 8260C: The following sample was 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-20180411 (480-133988-4). The sample was analyzed within 7 days per EPA recommendation.

Method 8260C: The following volatiles sample was diluted due to foaming at the time of purging during the original sample analysis: MW-265M-20180411 (480-133988-4). Elevated reporting limits (RLs) are provided.

Method 8260C: The following volatile sample was analyzed with significant headspace in the sample containers: REW-9-20180411 (480-133988-15). Significant headspace is defined as a bubble greater than 6 mm in diameter.

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.

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

GC/MS Semi VOA

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

HPLC/IC

Method 300.0: The following samples were reported with elevated reporting limits for all analytes: MW-265M-20180411 (480-133988-4), MW-561-20180411 (480-133988-9), REW-1-20180411 (480-133988-11), REW-5-20180411 (480-133988-13) and REW-12-20180411 (480-133988-17). 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

Job ID: 480-133988-1 (Continued)

Laboratory: TestAmerica Buffalo (Continued)

At the request of the client, an abbreviated MCP analyte list was reported for this job.

No 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-265M-20180411 (480-133988-4), MW-561-20180411 (480-133988-9), MW-563-20180411 (480-133988-10), REW-1-20180411 (480-133988-11), REW-4-20180411 (480-133988-12), REW-5-20180411 (480-133988-13), REW-8-20180411 (480-133988-14), REW-9-20180411 (480-133988-15), REW-10-20180411 (480-133988-16) and REW-12-20180411 (480-133988-17).

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

Organic Prep
Method 3535A: The reference method requires samples to be preserved to a pH of <2. The following sample was received with insufficient preservation at a pH of 3 : MW-265M-20180411 (480-133988-4). The sample(s) was preserved to the appropriate pH in the laboratory.

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

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MassDEP Analytical Protocol Certification Form

Laboratory Name: **TestAmerica Buffalo** Project #: **480-133988**

Project Location: **IDS Wayland** RTN:

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

480-133988-[1-20]

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

CAM Protocols (check all that apply below):

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

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

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding time.	☒ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☒ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☒ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☒ Yes ☐ No
E	a. VPH, EPH and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☒ Yes ☐ No

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

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

<u>Data User Note:</u> Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WCS-07-350

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

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

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

Signature:

Position: Service Center Manager
TestAmerica Westfield

Printed Name: Steven C. Hartmann

Date: 4/23/18 16:46

This form has been electronically signed and approved

Detection Summary

Client Sample ID: MW-264M-20180411 Lab Sample ID: 480-133988-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	1.6		1.0		ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	24		1.0		ug/L	1		8260C	Total/NA
Tetrachloroethene	1.1		1.0		ug/L	1		8260C	Total/NA
Trichloroethene	9.3		1.0		ug/L	1		8260C	Total/NA
Vinyl chloride	23		1.0		ug/L	1		8260C	Total/NA

Detection Summary

[redacted]

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Innovative Engineering Solutions, Inc
TestAmerica Job ID: 480-133988-1
Project/Site: IDS Wayland

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This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Innovative Engineering Solutions, Inc
TestAmerica Job ID: 480-133988-1
Project/Site: IDS Wayland

This Detection Summary does not include radiochemical test results.

Detection Summary

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

TestAmerica Job ID: 480-133988-1

This Detection Summary does not include radiochemical test results.

[redacted]

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[redacted]

Client Sample ID: MW-264M-20180411

Lab Sample ID: 480-133988-2

Date Collected: 04/11/18 07:50
Matrix: Water
Date Received: 04/12/18 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			04/17/18 23:14	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/17/18 23:14	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			04/17/18 23:14	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/17/18 23:14	1
1,1-Dichloroethane	**1.6**		1.0		ug/L			04/17/18 23:14	1
1,1-Dichloroethene	ND		1.0		ug/L			04/17/18 23:14	1
1,1-Dichloropropene	ND		1.0		ug/L			04/17/18 23:14	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/17/18 23:14	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/17/18 23:14	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/17/18 23:14	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/17/18 23:14	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			04/17/18 23:14	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/17/18 23:14	1
1,2-Dichloroethane	ND		1.0		ug/L			04/17/18 23:14	1
1,2-Dichloropropane	ND		1.0		ug/L			04/17/18 23:14	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/17/18 23:14	1

Client Sample ID: MW-264M-20180411
Date Collected: 04/11/18 07:50
Date Received: 04/12/18 01:00

Lab Sample ID: 480-133988-2
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			04/17/18 23:14	1
1,3-Dichloropropane	ND		1.0		ug/L			04/17/18 23:14	1
1,4-Dichlorobenzene	ND		1.0		ug/L			04/17/18 23:14	1
1,4-Dioxane	ND	*	50		ug/L			04/17/18 23:14	1
2,2-Dichloropropane	ND		1.0		ug/L			04/17/18 23:14	1
2-Butanone (MEK)	ND	*	10		ug/L			04/17/18 23:14	1
2-Chlorotoluene	ND		1.0		ug/L			04/17/18 23:14	1
2-Hexanone	ND		10		ug/L			04/17/18 23:14	1
4-Chlorotoluene	ND		1.0		ug/L			04/17/18 23:14	1
4-Isopropyltoluene	ND		1.0		ug/L			04/17/18 23:14	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			04/17/18 23:14	1
Acetone	ND	*	50		ug/L			04/17/18 23:14	1
Benzene	ND		1.0		ug/L			04/17/18 23:14	1
Bromobenzene	ND		1.0		ug/L			04/17/18 23:14	1
Bromoform	ND		1.0		ug/L			04/17/18 23:14	1
Bromomethane	ND		2.0		ug/L			04/17/18 23:14	1
Carbon disulfide	ND		10		ug/L			04/17/18 23:14	1
Carbon tetrachloride	ND		1.0		ug/L			04/17/18 23:14	1
Chlorobenzene	ND		1.0		ug/L			04/17/18 23:14	1
Chlorobromomethane	ND		1.0		ug/L			04/17/18 23:14	1
Chlorodibromomethane	ND		0.50		ug/L			04/17/18 23:14	1
Chloroethane	ND		2.0		ug/L			04/17/18 23:14	1
Chloroform	ND		1.0		ug/L			04/17/18 23:14	1
Chloromethane	ND		2.0		ug/L			04/17/18 23:14	1
cis-1,2-Dichloroethene	**24**		1.0		ug/L			04/17/18 23:14	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			04/17/18 23:14	1
Dichlorobromomethane	ND		0.50		ug/L			04/17/18 23:14	1
Dichlorodifluoromethane	ND		1.0		ug/L			04/17/18 23:14	1
Ethyl ether	ND		1.0		ug/L			04/17/18 23:14	1
Ethylbenzene	ND		1.0		ug/L			04/17/18 23:14	1
Ethylene Dibromide	ND		1.0		ug/L			04/17/18 23:14	1
Hexachlorobutadiene	ND		0.40		ug/L			04/17/18 23:14	1
Isopropyl ether	ND		10		ug/L			04/17/18 23:14	1
Isopropylbenzene	ND		1.0		ug/L			04/17/18 23:14	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/17/18 23:14	1
Methylene Chloride	ND		1.0		ug/L			04/17/18 23:14	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/17/18 23:14	1
Naphthalene	ND		5.0		ug/L			04/17/18 23:14	1
n-Butylbenzene	ND		1.0		ug/L			04/17/18 23:14	1
N-Propylbenzene	ND		1.0		ug/L			04/17/18 23:14	1
o-Xylene	ND		1.0		ug/L			04/17/18 23:14	1
sec-Butylbenzene	ND		1.0		ug/L			04/17/18 23:14	1
Styrene	ND		1.0		ug/L			04/17/18 23:14	1
Tert-amyl methyl ether	ND		5.0		ug/L			04/17/18 23:14	1
Tert-butyl ethyl ether	ND		5.0		ug/L			04/17/18 23:14	1
tert-Butylbenzene	ND		1.0		ug/L			04/17/18 23:14	1
Tetrachloroethene	**1.1**		1.0		ug/L			04/17/18 23:14	1
Tetrahydrofuran	ND	*	10		ug/L			04/17/18 23:14	1
Toluene	ND		1.0		ug/L			04/17/18 23:14	1

Client Sample ID: MW-264M-20180411
Lab Sample ID: 480-133988-2
Date Collected: 04/11/18 07:50
Matrix: Water
Date Received: 04/12/18 01:00

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			04/17/18 23:14	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			04/17/18 23:14	1
Trichloroethene	**9.3**		1.0		ug/L			04/17/18 23:14	1
Trichlorofluoromethane	ND		1.0		ug/L			04/17/18 23:14	1
Vinyl chloride	**23**		1.0		ug/L			04/17/18 23:14	1
Dibromomethane	ND		1.0		ug/L			04/17/18 23:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*70 - 130*		*04/17/18 23:14*	*1*
1,2-Dichloroethane-d4 (Surr)	*112*		*70 - 130*		*04/17/18 23:14*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*04/17/18 23:14*	*1*

[redacted]

Client Sample Results

[redacted]

Client Sample Results

[redacted]

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Client Sample Results

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Client Sample Results

[redacted]

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Client Sample Results

Client: Innovative Engineering Solutions, Inc
TestAmerica Job ID: 480-133988-1
Project/Site: IDS Wayland

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Client Sample Results

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Client Sample Results

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Client Sample Results

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Client Sample Results

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Client Sample Results

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Client Sample Results

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Client Sample Results

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Surrogate Summary

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

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

		Percent Surrogate Recovery (Acceptance Limits)		
		TOL	DCA	BFB
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
480-133988-1	DEP-21-20180411	100	114	104
480-133988-2	MW-264M-20180411	99	112	100
480-133988-3	MW-265S-20180411	98	107	103
480-133988-4	MW-265M-20180411	98	116	101
480-133988-5	MW-265D-20180411	98	108	104
480-133988-6	MW-266Ma-20180411	98	113	102
480-133988-7	MW-266Mb-20180411	98	113	103
480-133988-8	MW-269Ma-20180411	97	112	104
480-133988-9	MW-561-20180411	100	113	104
480-133988-10	MW-563-20180411	95	113	102
480-133988-11	REW-1-20180411	98	112	101
480-133988-12	REW-4-20180411	100	111	103
480-133988-13	REW-5-20180411	98	110	102
480-133988-14	REW-8-20180411	96	111	103
480-133988-15	REW-9-20180411	95	109	101
480-133988-16	REW-10-20180411	94	113	99
480-133988-17	REW-12-20180411	95	114	96
480-133988-18	DUP3-20180411	91	112	97
480-133988-19	DUP4-20180411	94	107	100
480-133988-20	Trip Blanks	97	110	98
LCS 480-409348/5	Lab Control Sample	99	114	104
LCS 480-409387/5	Lab Control Sample	102	109	107
LCS 480-409598/5	Lab Control Sample	97	121	103
LCS 480-409631/5	Lab Control Sample	96	109	100
LCSD 480-409348/6	Lab Control Sample Dup	98	110	100
LCSD 480-409387/6	Lab Control Sample Dup	97	111	100
LCSD 480-409598/6	Lab Control Sample Dup	97	111	101
LCSD 480-409631/6	Lab Control Sample Dup	96	111	100
MB 480-409348/8	Method Blank	99	111	103
MB 480-409387/8	Method Blank	95	114	98
MB 480-409598/8	Method Blank	96	108	103
MB 480-409631/8	Method Blank	95	110	97

Surrogate Legend

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

Method: 522 - 1,4 Dioxane (GC/MS SIM)

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

		Percent Surrogate Recovery (Acceptance Limits)
		DXE
Lab Sample ID	Client Sample ID	(46-130)
480-133988-4	MW-265M-20180411	100
480-133988-6	MW-266Ma-20180411	90
480-133988-8	MW-269Ma-20180411	71
480-133988-19	DUP4-20180411	96
LCS 200-128409/2-A	Lab Control Sample	100

Surrogate Summary

Method: 522 - 1,4 Dioxane (GC/MS SIM) (Continued)

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

		Percent Surrogate Recovery (Acceptance Limits)
		DXE
Lab Sample ID	Client Sample ID	(46-130)
MB 200-128409/1-A	Method Blank	94

Surrogate Legend

DXE = 1,4-Dioxane-d8 (Surr)

QC Sample Results

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

Lab Sample ID: MB 480-409348/8
Matrix: Water
Analysis Batch: 409348

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			04/17/18 22:16	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/17/18 22:16	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			04/17/18 22:16	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/17/18 22:16	1
1,1-Dichloroethane	ND		1.0		ug/L			04/17/18 22:16	1
1,1-Dichloroethene	ND		1.0		ug/L			04/17/18 22:16	1
1,1-Dichloropropene	ND		1.0		ug/L			04/17/18 22:16	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/17/18 22:16	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/17/18 22:16	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/17/18 22:16	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/17/18 22:16	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			04/17/18 22:16	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/17/18 22:16	1
1,2-Dichloroethane	ND		1.0		ug/L			04/17/18 22:16	1
1,2-Dichloropropane	ND		1.0		ug/L			04/17/18 22:16	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/17/18 22:16	1
1,3-Dichlorobenzene	ND		1.0		ug/L			04/17/18 22:16	1
1,3-Dichloropropane	ND		1.0		ug/L			04/17/18 22:16	1
1,4-Dichlorobenzene	ND		1.0		ug/L			04/17/18 22:16	1
1,4-Dioxane	ND		50		ug/L			04/17/18 22:16	1
2,2-Dichloropropane	ND		1.0		ug/L			04/17/18 22:16	1
2-Butanone (MEK)	ND		10		ug/L			04/17/18 22:16	1
2-Chlorotoluene	ND		1.0		ug/L			04/17/18 22:16	1
2-Hexanone	ND		10		ug/L			04/17/18 22:16	1
4-Chlorotoluene	ND		1.0		ug/L			04/17/18 22:16	1
4-Isopropyltoluene	ND		1.0		ug/L			04/17/18 22:16	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			04/17/18 22:16	1
Acetone	ND		50		ug/L			04/17/18 22:16	1
Benzene	ND		1.0		ug/L			04/17/18 22:16	1
Bromobenzene	ND		1.0		ug/L			04/17/18 22:16	1
Bromoform	ND		1.0		ug/L			04/17/18 22:16	1
Bromomethane	ND		2.0		ug/L			04/17/18 22:16	1
Carbon disulfide	ND		10		ug/L			04/17/18 22:16	1
Carbon tetrachloride	ND		1.0		ug/L			04/17/18 22:16	1
Chlorobenzene	ND		1.0		ug/L			04/17/18 22:16	1
Chlorobromomethane	ND		1.0		ug/L			04/17/18 22:16	1
Chlorodibromomethane	ND		0.50		ug/L			04/17/18 22:16	1
Chloroethane	ND		2.0		ug/L			04/17/18 22:16	1
Chloroform	ND		1.0		ug/L			04/17/18 22:16	1
Chloromethane	ND		2.0		ug/L			04/17/18 22:16	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			04/17/18 22:16	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			04/17/18 22:16	1
Dichlorobromomethane	ND		0.50		ug/L			04/17/18 22:16	1
Dichlorodifluoromethane	ND		1.0		ug/L			04/17/18 22:16	1
Ethyl ether	ND		1.0		ug/L			04/17/18 22:16	1
Ethylbenzene	ND		1.0		ug/L			04/17/18 22:16	1
Ethylene Dibromide	ND		1.0		ug/L			04/17/18 22:16	1
Hexachlorobutadiene	ND		0.40		ug/L			04/17/18 22:16	1

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

Lab Sample ID: MB 480-409348/8
Matrix: Water
Analysis Batch: 409348

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			04/17/18 22:16	1
Isopropylbenzene	ND		1.0		ug/L			04/17/18 22:16	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/17/18 22:16	1
Methylene Chloride	ND		1.0		ug/L			04/17/18 22:16	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/17/18 22:16	1
Naphthalene	ND		5.0		ug/L			04/17/18 22:16	1
n-Butylbenzene	ND		1.0		ug/L			04/17/18 22:16	1
N-Propylbenzene	ND		1.0		ug/L			04/17/18 22:16	1
o-Xylene	ND		1.0		ug/L			04/17/18 22:16	1
sec-Butylbenzene	ND		1.0		ug/L			04/17/18 22:16	1
Styrene	ND		1.0		ug/L			04/17/18 22:16	1
Tert-amyl methyl ether	ND		5.0		ug/L			04/17/18 22:16	1
Tert-butyl ethyl ether	ND		5.0		ug/L			04/17/18 22:16	1
tert-Butylbenzene	ND		1.0		ug/L			04/17/18 22:16	1
Tetrachloroethene	ND		1.0		ug/L			04/17/18 22:16	1
Tetrahydrofuran	ND		10		ug/L			04/17/18 22:16	1
Toluene	ND		1.0		ug/L			04/17/18 22:16	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/17/18 22:16	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			04/17/18 22:16	1
Trichloroethene	ND		1.0		ug/L			04/17/18 22:16	1
Trichlorofluoromethane	ND		1.0		ug/L			04/17/18 22:16	1
Vinyl chloride	ND		1.0		ug/L			04/17/18 22:16	1
Dibromomethane	ND		1.0		ug/L			04/17/18 22:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*70 - 130*		*04/17/18 22:16*	*1*
1,2-Dichloroethane-d4 (Surr)	*111*		*70 - 130*		*04/17/18 22:16*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*04/17/18 22:16*	*1*

Lab Sample ID: LCS 480-409348/5
Matrix: Water
Analysis Batch: 409348

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	27.0		ug/L		108	70 - 130
1,1,1-Trichloroethane	25.0	27.0		ug/L		108	70 - 130
1,1,2,2-Tetrachloroethane	25.0	28.2		ug/L		113	70 - 130
1,1,2-Trichloroethane	25.0	26.1		ug/L		104	70 - 130
1,1-Dichloroethane	25.0	26.7		ug/L		107	70 - 130
1,1-Dichloroethene	25.0	27.5		ug/L		110	70 - 130
1,1-Dichloropropene	25.0	26.3		ug/L		105	70 - 130
1,2,3-Trichlorobenzene	25.0	25.4		ug/L		102	70 - 130
1,2,3-Trichloropropane	25.0	27.7		ug/L		111	70 - 130
1,2,4-Trichlorobenzene	25.0	25.5		ug/L		102	70 - 130
1,2,4-Trimethylbenzene	25.0	25.4		ug/L		101	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	28.0		ug/L		112	70 - 130
1,2-Dichlorobenzene	25.0	26.1		ug/L		105	70 - 130
1,2-Dichloroethane	25.0	27.8		ug/L		111	70 - 130

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

Lab Sample ID: LCS 480-409348/5
Matrix: Water
Analysis Batch: 409348

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	26.5		ug/L		106	70 - 130
1,3,5-Trimethylbenzene	25.0	24.5		ug/L		98	70 - 130
1,3-Dichlorobenzene	25.0	26.1		ug/L		105	70 - 130
1,3-Dichloropropane	25.0	26.2		ug/L		105	70 - 130
1,4-Dichlorobenzene	25.0	25.7		ug/L		103	70 - 130
1,4-Dioxane	500	519		ug/L		104	70 - 130
2,2-Dichloropropane	25.0	25.3		ug/L		101	70 - 130
2-Butanone (MEK)	125	267	*	ug/L		213	70 - 130
2-Chlorotoluene	25.0	24.7		ug/L		99	70 - 130
2-Hexanone	125	153		ug/L		122	70 - 130
4-Chlorotoluene	25.0	24.6		ug/L		98	70 - 130
4-Isopropyltoluene	25.0	25.3		ug/L		101	70 - 130
4-Methyl-2-pentanone (MIBK)	125	146		ug/L		117	70 - 130
Acetone	125	174	*	ug/L		139	70 - 130
Benzene	25.0	25.9		ug/L		104	70 - 130
Bromobenzene	25.0	26.1		ug/L		104	70 - 130
Bromoform	25.0	26.3		ug/L		105	70 - 130
Bromomethane	25.0	30.1		ug/L		121	70 - 130
Carbon disulfide	25.0	25.8		ug/L		103	70 - 130
Carbon tetrachloride	25.0	26.8		ug/L		107	70 - 130
Chlorobenzene	25.0	25.1		ug/L		101	70 - 130
Chlorobromomethane	25.0	29.1		ug/L		117	70 - 130
Chlorodibromomethane	25.0	27.0		ug/L		108	70 - 130
Chloroethane	25.0	29.0		ug/L		116	70 - 130
Chloroform	25.0	26.2		ug/L		105	70 - 130
Chloromethane	25.0	23.5		ug/L		94	70 - 130
cis-1,2-Dichloroethene	25.0	27.3		ug/L		109	70 - 130
cis-1,3-Dichloropropene	25.0	27.3		ug/L		109	70 - 130
Dichlorobromomethane	25.0	26.7		ug/L		107	70 - 130
Dichlorodifluoromethane	25.0	26.7		ug/L		107	70 - 130
Ethyl ether	25.0	28.2		ug/L		113	70 - 130
Ethylbenzene	25.0	25.5		ug/L		102	70 - 130
Ethylene Dibromide	25.0	28.4		ug/L		114	70 - 130
Hexachlorobutadiene	25.0	26.1		ug/L		105	70 - 130
Isopropyl ether	25.0	23.4		ug/L		94	70 - 130
Isopropylbenzene	25.0	24.3		ug/L		97	70 - 130
Methyl tert-butyl ether	25.0	28.2		ug/L		113	70 - 130
Methylene Chloride	25.0	26.1		ug/L		104	70 - 130
m-Xylene & p-Xylene	25.0	25.2		ug/L		101	70 - 130
Naphthalene	25.0	29.1		ug/L		116	70 - 130
n-Butylbenzene	25.0	25.3		ug/L		101	70 - 130
N-Propylbenzene	25.0	24.2		ug/L		97	70 - 130
o-Xylene	25.0	25.2		ug/L		101	70 - 130
sec-Butylbenzene	25.0	24.6		ug/L		99	70 - 130
Styrene	25.0	25.9		ug/L		104	70 - 130
Tert-amyl methyl ether	25.0	27.6		ug/L		110	70 - 130
Tert-butyl ethyl ether	25.0	25.1		ug/L		101	70 - 130
tert-Butylbenzene	25.0	26.4		ug/L		106	70 - 130

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

Lab Sample ID: LCS 480-409348/5
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 409348

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Tetrachloroethene	25.0	29.4		ug/L		118	70 - 130
Tetrahydrofuran	50.0	72.9	*	ug/L		146	70 - 130
Toluene	25.0	25.0		ug/L		100	70 - 130
trans-1,2-Dichloroethene	25.0	25.5		ug/L		102	70 - 130
trans-1,3-Dichloropropene	25.0	26.7		ug/L		107	70 - 130
Trichloroethene	25.0	27.1		ug/L		109	70 - 130
Trichlorofluoromethane	25.0	29.3		ug/L		117	70 - 130
Vinyl chloride	25.0	26.0		ug/L		104	70 - 130
Dibromomethane	25.0	28.8		ug/L		115	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*99*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*114*		*70 - 130*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 480-409348/6
Client Sample ID: Lab Control Sample Dup
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 409348

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	25.0	28.1		ug/L		113	70 - 130	4	20
1,1,1-Trichloroethane	25.0	27.3		ug/L		109	70 - 130	1	20
1,1,2,2-Tetrachloroethane	25.0	29.0		ug/L		116	70 - 130	3	20
1,1,2-Trichloroethane	25.0	27.3		ug/L		109	70 - 130	4	20
1,1-Dichloroethane	25.0	26.9		ug/L		108	70 - 130	1	20
1,1-Dichloroethene	25.0	26.9		ug/L		108	70 - 130	2	20
1,1-Dichloropropene	25.0	26.4		ug/L		106	70 - 130	0	20
1,2,3-Trichlorobenzene	25.0	26.7		ug/L		107	70 - 130	5	20
1,2,3-Trichloropropane	25.0	32.1		ug/L		128	70 - 130	15	20
1,2,4-Trichlorobenzene	25.0	26.7		ug/L		107	70 - 130	5	20
1,2,4-Trimethylbenzene	25.0	26.0		ug/L		104	70 - 130	3	20
1,2-Dibromo-3-Chloropropane	25.0	30.8		ug/L		123	70 - 130	10	20
1,2-Dichlorobenzene	25.0	27.2		ug/L		109	70 - 130	4	20
1,2-Dichloroethane	25.0	28.8		ug/L		115	70 - 130	3	20
1,2-Dichloropropane	25.0	27.1		ug/L		108	70 - 130	2	20
1,3,5-Trimethylbenzene	25.0	25.5		ug/L		102	70 - 130	4	20
1,3-Dichlorobenzene	25.0	27.1		ug/L		108	70 - 130	3	20
1,3-Dichloropropane	25.0	26.7		ug/L		107	70 - 130	2	20
1,4-Dichlorobenzene	25.0	26.7		ug/L		107	70 - 130	4	20
1,4-Dioxane	500	676	*	ug/L		135	70 - 130	26	20
2,2-Dichloropropane	25.0	26.1		ug/L		104	70 - 130	3	20
2-Butanone (MEK)	125	272	*	ug/L		217	70 - 130	2	20
2-Chlorotoluene	25.0	25.0		ug/L		100	70 - 130	1	20
2-Hexanone	125	153		ug/L		122	70 - 130	0	20
4-Chlorotoluene	25.0	25.4		ug/L		102	70 - 130	3	20
4-Isopropyltoluene	25.0	27.1		ug/L		108	70 - 130	7	20
4-Methyl-2-pentanone (MIBK)	125	148		ug/L		118	70 - 130	1	20
Acetone	125	177	*	ug/L		142	70 - 130	2	20

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

Lab Sample ID: LCSD 480-409348/6
Matrix: Water
Analysis Batch: 409348

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	26.4		ug/L		106	70 - 130	2	20
Bromobenzene	25.0	26.2		ug/L		105	70 - 130	0	20
Bromoform	25.0	27.8		ug/L		111	70 - 130	5	20
Bromomethane	25.0	30.9		ug/L		123	70 - 130	2	20
Carbon disulfide	25.0	26.6		ug/L		106	70 - 130	3	20
Carbon tetrachloride	25.0	28.4		ug/L		114	70 - 130	6	20
Chlorobenzene	25.0	25.5		ug/L		102	70 - 130	2	20
Chlorobromomethane	25.0	29.1		ug/L		116	70 - 130	0	20
Chlorodibromomethane	25.0	28.5		ug/L		114	70 - 130	5	20
Chloroethane	25.0	29.8		ug/L		119	70 - 130	3	20
Chloroform	25.0	26.2		ug/L		105	70 - 130	0	20
Chloromethane	25.0	23.9		ug/L		95	70 - 130	1	20
cis-1,2-Dichloroethene	25.0	27.1		ug/L		108	70 - 130	1	20
cis-1,3-Dichloropropene	25.0	27.5		ug/L		110	70 - 130	1	20
Dichlorobromomethane	25.0	27.7		ug/L		111	70 - 130	4	20
Dichlorodifluoromethane	25.0	27.2		ug/L		109	70 - 130	2	20
Ethyl ether	25.0	27.1		ug/L		109	70 - 130	4	20
Ethylbenzene	25.0	25.8		ug/L		103	70 - 130	1	20
Ethylene Dibromide	25.0	29.1		ug/L		116	70 - 130	2	20
Hexachlorobutadiene	25.0	27.6		ug/L		110	70 - 130	6	20
Isopropyl ether	25.0	23.5		ug/L		94	70 - 130	0	20
Isopropylbenzene	25.0	25.9		ug/L		103	70 - 130	6	20
Methyl tert-butyl ether	25.0	28.2		ug/L		113	70 - 130	0	20
Methylene Chloride	25.0	26.3		ug/L		105	70 - 130	1	20
m-Xylene & p-Xylene	25.0	26.0		ug/L		104	70 - 130	3	20
Naphthalene	25.0	29.5		ug/L		118	70 - 130	1	20
n-Butylbenzene	25.0	26.6		ug/L		107	70 - 130	5	20
N-Propylbenzene	25.0	25.3		ug/L		101	70 - 130	5	20
o-Xylene	25.0	25.7		ug/L		103	70 - 130	2	20
sec-Butylbenzene	25.0	26.1		ug/L		105	70 - 130	6	20
Styrene	25.0	26.3		ug/L		105	70 - 130	2	20
Tert-amyl methyl ether	25.0	27.9		ug/L		112	70 - 130	1	20
Tert-butyl ethyl ether	25.0	25.6		ug/L		102	70 - 130	2	20
tert-Butylbenzene	25.0	27.3		ug/L		109	70 - 130	3	20
Tetrachloroethene	25.0	30.9		ug/L		123	70 - 130	5	20
Tetrahydrofuran	50.0	75.7	*	ug/L		151	70 - 130	4	20
Toluene	25.0	25.3		ug/L		101	70 - 130	1	20
trans-1,2-Dichloroethene	25.0	25.9		ug/L		104	70 - 130	2	20
trans-1,3-Dichloropropene	25.0	26.5		ug/L		106	70 - 130	1	20
Trichloroethene	25.0	27.5		ug/L		110	70 - 130	1	20
Trichlorofluoromethane	25.0	30.5		ug/L		122	70 - 130	4	20
Vinyl chloride	25.0	25.2		ug/L		101	70 - 130	3	20
Dibromomethane	25.0	29.7		ug/L		119	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*98*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*110*		*70 - 130*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*

QC Sample Results

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Lab Sample ID: MB 480-409387/8
Matrix: Water
Analysis Batch: 409387

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			04/18/18 11:00	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/18/18 11:00	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			04/18/18 11:00	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/18/18 11:00	1
1,1-Dichloroethane	ND		1.0		ug/L			04/18/18 11:00	1
1,1-Dichloroethene	ND		1.0		ug/L			04/18/18 11:00	1
1,1-Dichloropropene	ND		1.0		ug/L			04/18/18 11:00	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/18/18 11:00	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/18/18 11:00	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/18/18 11:00	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/18/18 11:00	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			04/18/18 11:00	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/18/18 11:00	1
1,2-Dichloroethane	ND		1.0		ug/L			04/18/18 11:00	1
1,2-Dichloropropane	ND		1.0		ug/L			04/18/18 11:00	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/18/18 11:00	1
1,3-Dichlorobenzene	ND		1.0		ug/L			04/18/18 11:00	1
1,3-Dichloropropane	ND		1.0		ug/L			04/18/18 11:00	1
1,4-Dichlorobenzene	ND		1.0		ug/L			04/18/18 11:00	1
1,4-Dioxane	ND		50		ug/L			04/18/18 11:00	1
2,2-Dichloropropane	ND		1.0		ug/L			04/18/18 11:00	1
2-Butanone (MEK)	ND		10		ug/L			04/18/18 11:00	1
2-Chlorotoluene	ND		1.0		ug/L			04/18/18 11:00	1
2-Hexanone	ND		10		ug/L			04/18/18 11:00	1
4-Chlorotoluene	ND		1.0		ug/L			04/18/18 11:00	1
4-Isopropyltoluene	ND		1.0		ug/L			04/18/18 11:00	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			04/18/18 11:00	1
Acetone	ND		50		ug/L			04/18/18 11:00	1
Benzene	ND		1.0		ug/L			04/18/18 11:00	1
Bromobenzene	ND		1.0		ug/L			04/18/18 11:00	1
Bromoform	ND		1.0		ug/L			04/18/18 11:00	1
Bromomethane	ND		2.0		ug/L			04/18/18 11:00	1
Carbon disulfide	ND		10		ug/L			04/18/18 11:00	1
Carbon tetrachloride	ND		1.0		ug/L			04/18/18 11:00	1
Chlorobenzene	ND		1.0		ug/L			04/18/18 11:00	1
Chlorobromomethane	ND		1.0		ug/L			04/18/18 11:00	1
Chlorodibromomethane	ND		0.50		ug/L			04/18/18 11:00	1
Chloroethane	ND		2.0		ug/L			04/18/18 11:00	1
Chloroform	ND		1.0		ug/L			04/18/18 11:00	1
Chloromethane	ND		2.0		ug/L			04/18/18 11:00	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			04/18/18 11:00	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			04/18/18 11:00	1
Dichlorobromomethane	ND		0.50		ug/L			04/18/18 11:00	1
Dichlorodifluoromethane	ND		1.0		ug/L			04/18/18 11:00	1
Ethyl ether	ND		1.0		ug/L			04/18/18 11:00	1
Ethylbenzene	ND		1.0		ug/L			04/18/18 11:00	1
Ethylene Dibromide	ND		1.0		ug/L			04/18/18 11:00	1
Hexachlorobutadiene	ND		0.40		ug/L			04/18/18 11:00	1
Isopropyl ether	ND		10		ug/L			04/18/18 11:00	1
Isopropylbenzene	ND		1.0		ug/L			04/18/18 11:00	1

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

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

Lab Sample ID: MB 480-409387/8
Matrix: Water
Analysis Batch: 409387

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			04/18/18 11:00	1
Methylene Chloride	ND		1.0		ug/L			04/18/18 11:00	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/18/18 11:00	1
Naphthalene	ND		5.0		ug/L			04/18/18 11:00	1
n-Butylbenzene	ND		1.0		ug/L			04/18/18 11:00	1
N-Propylbenzene	ND		1.0		ug/L			04/18/18 11:00	1
o-Xylene	ND		1.0		ug/L			04/18/18 11:00	1
sec-Butylbenzene	ND		1.0		ug/L			04/18/18 11:00	1
Styrene	ND		1.0		ug/L			04/18/18 11:00	1
Tert-amyl methyl ether	ND		5.0		ug/L			04/18/18 11:00	1
Tert-butyl ethyl ether	ND		5.0		ug/L			04/18/18 11:00	1
tert-Butylbenzene	ND		1.0		ug/L			04/18/18 11:00	1
Tetrachloroethene	ND		1.0		ug/L			04/18/18 11:00	1
Tetrahydrofuran	ND		10		ug/L			04/18/18 11:00	1
Toluene	ND		1.0		ug/L			04/18/18 11:00	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/18/18 11:00	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			04/18/18 11:00	1
Trichloroethene	ND		1.0		ug/L			04/18/18 11:00	1
Trichlorofluoromethane	ND		1.0		ug/L			04/18/18 11:00	1
Vinyl chloride	ND		1.0		ug/L			04/18/18 11:00	1
Dibromomethane	ND		1.0		ug/L			04/18/18 11:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*95*		*70 - 130*		*04/18/18 11:00*	*1*
1,2-Dichloroethane-d4 (Surr)	*114*		*70 - 130*		*04/18/18 11:00*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*04/18/18 11:00*	*1*

Lab Sample ID: LCS 480-409387/5
Matrix: Water
Analysis Batch: 409387

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	25.0	25.7		ug/L		103	70 - 130
1,1,1-Trichloroethane	25.0	23.9		ug/L		95	70 - 130
1,1,2,2-Tetrachloroethane	25.0	24.8		ug/L		99	70 - 130
1,1,2-Trichloroethane	25.0	24.4		ug/L		97	70 - 130
1,1-Dichloroethane	25.0	23.8		ug/L		95	70 - 130
1,1-Dichloroethene	25.0	23.6		ug/L		95	70 - 130
1,1-Dichloropropene	25.0	23.0		ug/L		92	70 - 130
1,2,3-Trichlorobenzene	25.0	24.4		ug/L		98	70 - 130
1,2,3-Trichloropropane	25.0	28.3		ug/L		113	70 - 130
1,2,4-Trichlorobenzene	25.0	23.0		ug/L		92	70 - 130
1,2,4-Trimethylbenzene	25.0	23.2		ug/L		93	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	24.5		ug/L		98	70 - 130
1,2-Dichlorobenzene	25.0	24.4		ug/L		98	70 - 130
1,2-Dichloroethane	25.0	24.8		ug/L		99	70 - 130
1,2-Dichloropropane	25.0	23.8		ug/L		95	70 - 130
1,3,5-Trimethylbenzene	25.0	22.7		ug/L		91	70 - 130

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

Lab Sample ID: LCS 480-409387/5
Matrix: Water
Analysis Batch: 409387

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	24.7		ug/L		99	70 - 130
1,3-Dichloropropane	25.0	24.4		ug/L		98	70 - 130
1,4-Dichlorobenzene	25.0	23.9		ug/L		96	70 - 130
1,4-Dioxane	500	510		ug/L		102	70 - 130
2,2-Dichloropropane	25.0	23.7		ug/L		95	70 - 130
2-Butanone (MEK)	125	246	*	ug/L		197	70 - 130
2-Chlorotoluene	25.0	22.3		ug/L		89	70 - 130
2-Hexanone	125	134		ug/L		107	70 - 130
4-Chlorotoluene	25.0	22.7		ug/L		91	70 - 130
4-Isopropyltoluene	25.0	23.5		ug/L		94	70 - 130
4-Methyl-2-pentanone (MIBK)	125	132		ug/L		106	70 - 130
Acetone	125	166	*	ug/L		133	70 - 130
Benzene	25.0	23.5		ug/L		94	70 - 130
Bromobenzene	25.0	23.2		ug/L		93	70 - 130
Bromoform	25.0	24.7		ug/L		99	70 - 130
Bromomethane	25.0	25.9		ug/L		104	70 - 130
Carbon disulfide	25.0	22.0		ug/L		88	70 - 130
Carbon tetrachloride	25.0	24.3		ug/L		97	70 - 130
Chlorobenzene	25.0	23.7		ug/L		95	70 - 130
Chlorobromomethane	25.0	26.0		ug/L		104	70 - 130
Chlorodibromomethane	25.0	24.9		ug/L		100	70 - 130
Chloroethane	25.0	24.7		ug/L		99	70 - 130
Chloroform	25.0	23.6		ug/L		94	70 - 130
Chloromethane	25.0	20.5		ug/L		82	70 - 130
cis-1,2-Dichloroethene	25.0	25.1		ug/L		100	70 - 130
cis-1,3-Dichloropropene	25.0	24.7		ug/L		99	70 - 130
Dichlorobromomethane	25.0	24.0		ug/L		96	70 - 130
Dichlorodifluoromethane	25.0	22.7		ug/L		91	70 - 130
Ethyl ether	25.0	24.6		ug/L		98	70 - 130
Ethylbenzene	25.0	24.4		ug/L		97	70 - 130
Ethylene Dibromide	25.0	26.2		ug/L		105	70 - 130
Hexachlorobutadiene	25.0	24.5		ug/L		98	70 - 130
Isopropyl ether	25.0	22.8		ug/L		91	70 - 130
Isopropylbenzene	25.0	22.4		ug/L		90	70 - 130
Methyl tert-butyl ether	25.0	24.3		ug/L		97	70 - 130
Methylene Chloride	25.0	22.7		ug/L		91	70 - 130
m-Xylene & p-Xylene	25.0	23.9		ug/L		96	70 - 130
Naphthalene	25.0	24.6		ug/L		98	70 - 130
n-Butylbenzene	25.0	23.7		ug/L		95	70 - 130
N-Propylbenzene	25.0	22.4		ug/L		89	70 - 130
o-Xylene	25.0	24.1		ug/L		96	70 - 130
sec-Butylbenzene	25.0	22.8		ug/L		91	70 - 130
Styrene	25.0	24.2		ug/L		97	70 - 130
Tert-amyl methyl ether	25.0	26.6		ug/L		106	70 - 130
Tert-butyl ethyl ether	25.0	24.5		ug/L		98	70 - 130
tert-Butylbenzene	25.0	24.6		ug/L		98	70 - 130
Tetrachloroethene	25.0	27.5		ug/L		110	70 - 130
Tetrahydrofuran	50.0	67.2	*	ug/L		134	70 - 130

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

Lab Sample ID: LCS 480-409387/5
Matrix: Water
Analysis Batch: 409387

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	23.8		ug/L		95	70 - 130
trans-1,2-Dichloroethene	25.0	23.7		ug/L		95	70 - 130
trans-1,3-Dichloropropene	25.0	24.2		ug/L		97	70 - 130
Trichloroethene	25.0	24.0		ug/L		96	70 - 130
Trichlorofluoromethane	25.0	25.7		ug/L		103	70 - 130
Vinyl chloride	25.0	20.8		ug/L		83	70 - 130
Dibromomethane	25.0	25.6		ug/L		102	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*102*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 130*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: LCSD 480-409387/6
Matrix: Water
Analysis Batch: 409387

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	26.3		ug/L		105	70 - 130	2	20
1,1,1-Trichloroethane	25.0	26.0		ug/L		104	70 - 130	9	20
1,1,2,2-Tetrachloroethane	25.0	25.2		ug/L		101	70 - 130	2	20
1,1,2-Trichloroethane	25.0	24.7		ug/L		99	70 - 130	1	20
1,1-Dichloroethane	25.0	25.3		ug/L		101	70 - 130	6	20
1,1-Dichloroethene	25.0	25.1		ug/L		100	70 - 130	6	20
1,1-Dichloropropene	25.0	25.6		ug/L		102	70 - 130	11	20
1,2,3-Trichlorobenzene	25.0	24.6		ug/L		99	70 - 130	1	20
1,2,3-Trichloropropane	25.0	27.9		ug/L		112	70 - 130	1	20
1,2,4-Trichlorobenzene	25.0	23.9		ug/L		96	70 - 130	4	20
1,2,4-Trimethylbenzene	25.0	24.2		ug/L		97	70 - 130	4	20
1,2-Dibromo-3-Chloropropane	25.0	26.3		ug/L		105	70 - 130	7	20
1,2-Dichlorobenzene	25.0	25.1		ug/L		100	70 - 130	3	20
1,2-Dichloroethane	25.0	26.5		ug/L		106	70 - 130	6	20
1,2-Dichloropropane	25.0	24.9		ug/L		100	70 - 130	5	20
1,3,5-Trimethylbenzene	25.0	24.0		ug/L		96	70 - 130	6	20
1,3-Dichlorobenzene	25.0	25.1		ug/L		100	70 - 130	2	20
1,3-Dichloropropane	25.0	24.5		ug/L		98	70 - 130	0	20
1,4-Dichlorobenzene	25.0	24.9		ug/L		100	70 - 130	4	20
1,4-Dioxane	500	668	*	ug/L		134	70 - 130	27	20
2,2-Dichloropropane	25.0	24.9		ug/L		100	70 - 130	5	20
2-Butanone (MEK)	125	253	*	ug/L		203	70 - 130	3	20
2-Chlorotoluene	25.0	24.3		ug/L		97	70 - 130	8	20
2-Hexanone	125	135		ug/L		108	70 - 130	1	20
4-Chlorotoluene	25.0	24.0		ug/L		96	70 - 130	5	20
4-Isopropyltoluene	25.0	25.1		ug/L		101	70 - 130	7	20
4-Methyl-2-pentanone (MIBK)	125	127		ug/L		101	70 - 130	4	20
Acetone	125	172	*	ug/L		138	70 - 130	4	20
Benzene	25.0	25.1		ug/L		101	70 - 130	7	20
Bromobenzene	25.0	24.4		ug/L		98	70 - 130	5	20

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

Lab Sample ID: LCSD 480-409387/6
Matrix: Water
Analysis Batch: 409387

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	24.2		ug/L		97	70 - 130	2	20
Bromomethane	25.0	28.6		ug/L		114	70 - 130	10	20
Carbon disulfide	25.0	23.9		ug/L		96	70 - 130	8	20
Carbon tetrachloride	25.0	27.1		ug/L		108	70 - 130	11	20
Chlorobenzene	25.0	23.9		ug/L		96	70 - 130	1	20
Chlorobromomethane	25.0	27.9		ug/L		112	70 - 130	7	20
Chlorodibromomethane	25.0	25.7		ug/L		103	70 - 130	3	20
Chloroethane	25.0	27.1		ug/L		109	70 - 130	9	20
Chloroform	25.0	25.0		ug/L		100	70 - 130	6	20
Chloromethane	25.0	21.5		ug/L		86	70 - 130	5	20
cis-1,2-Dichloroethene	25.0	26.3		ug/L		105	70 - 130	5	20
cis-1,3-Dichloropropene	25.0	25.6		ug/L		102	70 - 130	4	20
Dichlorobromomethane	25.0	25.8		ug/L		103	70 - 130	7	20
Dichlorodifluoromethane	25.0	24.0		ug/L		96	70 - 130	6	20
Ethyl ether	25.0	25.6		ug/L		103	70 - 130	4	20
Ethylbenzene	25.0	24.3		ug/L		97	70 - 130	0	20
Ethylene Dibromide	25.0	25.3		ug/L		101	70 - 130	3	20
Hexachlorobutadiene	25.0	26.1		ug/L		105	70 - 130	7	20
Isopropyl ether	25.0	24.4		ug/L		97	70 - 130	7	20
Isopropylbenzene	25.0	23.9		ug/L		96	70 - 130	6	20
Methyl tert-butyl ether	25.0	26.0		ug/L		104	70 - 130	7	20
Methylene Chloride	25.0	24.0		ug/L		96	70 - 130	6	20
m-Xylene & p-Xylene	25.0	24.4		ug/L		97	70 - 130	2	20
Naphthalene	25.0	25.8		ug/L		103	70 - 130	5	20
n-Butylbenzene	25.0	24.9		ug/L		99	70 - 130	5	20
N-Propylbenzene	25.0	23.7		ug/L		95	70 - 130	6	20
o-Xylene	25.0	23.9		ug/L		96	70 - 130	0	20
sec-Butylbenzene	25.0	24.4		ug/L		97	70 - 130	7	20
Styrene	25.0	24.8		ug/L		99	70 - 130	2	20
Tert-amyl methyl ether	25.0	27.6		ug/L		111	70 - 130	4	20
Tert-butyl ethyl ether	25.0	25.9		ug/L		104	70 - 130	6	20
tert-Butylbenzene	25.0	24.7		ug/L		99	70 - 130	0	20
Tetrachloroethene	25.0	27.8		ug/L		111	70 - 130	1	20
Tetrahydrofuran	50.0	69.4	*	ug/L		139	70 - 130	3	20
Toluene	25.0	24.1		ug/L		96	70 - 130	1	20
trans-1,2-Dichloroethene	25.0	24.9		ug/L		100	70 - 130	5	20
trans-1,3-Dichloropropene	25.0	23.5		ug/L		94	70 - 130	3	20
Trichloroethene	25.0	25.1		ug/L		100	70 - 130	5	20
Trichlorofluoromethane	25.0	28.1		ug/L		112	70 - 130	9	20
Vinyl chloride	25.0	23.5		ug/L		94	70 - 130	12	20
Dibromomethane	25.0	26.7		ug/L		107	70 - 130	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*97*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*111*		*70 - 130*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*

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

Lab Sample ID: MB 480-409598/8
Matrix: Water
Analysis Batch: 409598

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			04/18/18 23:02	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/18/18 23:02	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			04/18/18 23:02	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/18/18 23:02	1
1,1-Dichloroethane	ND		1.0		ug/L			04/18/18 23:02	1
1,1-Dichloroethene	ND		1.0		ug/L			04/18/18 23:02	1
1,1-Dichloropropene	ND		1.0		ug/L			04/18/18 23:02	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/18/18 23:02	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/18/18 23:02	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/18/18 23:02	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/18/18 23:02	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			04/18/18 23:02	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/18/18 23:02	1
1,2-Dichloroethane	ND		1.0		ug/L			04/18/18 23:02	1
1,2-Dichloropropane	ND		1.0		ug/L			04/18/18 23:02	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/18/18 23:02	1
1,3-Dichlorobenzene	ND		1.0		ug/L			04/18/18 23:02	1
1,3-Dichloropropane	ND		1.0		ug/L			04/18/18 23:02	1
1,4-Dichlorobenzene	ND		1.0		ug/L			04/18/18 23:02	1
1,4-Dioxane	ND		50		ug/L			04/18/18 23:02	1
2,2-Dichloropropane	ND		1.0		ug/L			04/18/18 23:02	1
2-Butanone (MEK)	ND		10		ug/L			04/18/18 23:02	1
2-Chlorotoluene	ND		1.0		ug/L			04/18/18 23:02	1
2-Hexanone	ND		10		ug/L			04/18/18 23:02	1
4-Chlorotoluene	ND		1.0		ug/L			04/18/18 23:02	1
4-Isopropyltoluene	ND		1.0		ug/L			04/18/18 23:02	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			04/18/18 23:02	1
Acetone	ND		50		ug/L			04/18/18 23:02	1
Benzene	ND		1.0		ug/L			04/18/18 23:02	1
Bromobenzene	ND		1.0		ug/L			04/18/18 23:02	1
Bromoform	ND		1.0		ug/L			04/18/18 23:02	1
Bromomethane	ND		2.0		ug/L			04/18/18 23:02	1
Carbon disulfide	ND		10		ug/L			04/18/18 23:02	1
Carbon tetrachloride	ND		1.0		ug/L			04/18/18 23:02	1
Chlorobenzene	ND		1.0		ug/L			04/18/18 23:02	1
Chlorobromomethane	ND		1.0		ug/L			04/18/18 23:02	1
Chlorodibromomethane	ND		0.50		ug/L			04/18/18 23:02	1
Chloroethane	ND		2.0		ug/L			04/18/18 23:02	1
Chloroform	ND		1.0		ug/L			04/18/18 23:02	1
Chloromethane	ND		2.0		ug/L			04/18/18 23:02	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			04/18/18 23:02	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			04/18/18 23:02	1
Dichlorobromomethane	ND		0.50		ug/L			04/18/18 23:02	1
Dichlorodifluoromethane	ND		1.0		ug/L			04/18/18 23:02	1
Ethyl ether	ND		1.0		ug/L			04/18/18 23:02	1
Ethylbenzene	ND		1.0		ug/L			04/18/18 23:02	1
Ethylene Dibromide	ND		1.0		ug/L			04/18/18 23:02	1
Hexachlorobutadiene	ND		0.40		ug/L			04/18/18 23:02	1

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

Lab Sample ID: MB 480-409598/8
Matrix: Water
Analysis Batch: 409598

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			04/18/18 23:02	1
Isopropylbenzene	ND		1.0		ug/L			04/18/18 23:02	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/18/18 23:02	1
Methylene Chloride	ND		1.0		ug/L			04/18/18 23:02	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/18/18 23:02	1
Naphthalene	ND		5.0		ug/L			04/18/18 23:02	1
n-Butylbenzene	ND		1.0		ug/L			04/18/18 23:02	1
N-Propylbenzene	ND		1.0		ug/L			04/18/18 23:02	1
o-Xylene	ND		1.0		ug/L			04/18/18 23:02	1
sec-Butylbenzene	ND		1.0		ug/L			04/18/18 23:02	1
Styrene	ND		1.0		ug/L			04/18/18 23:02	1
Tert-amyl methyl ether	ND		5.0		ug/L			04/18/18 23:02	1
Tert-butyl ethyl ether	ND		5.0		ug/L			04/18/18 23:02	1
tert-Butylbenzene	ND		1.0		ug/L			04/18/18 23:02	1
Tetrachloroethene	ND		1.0		ug/L			04/18/18 23:02	1
Tetrahydrofuran	ND		10		ug/L			04/18/18 23:02	1
Toluene	ND		1.0		ug/L			04/18/18 23:02	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/18/18 23:02	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			04/18/18 23:02	1
Trichloroethene	ND		1.0		ug/L			04/18/18 23:02	1
Trichlorofluoromethane	ND		1.0		ug/L			04/18/18 23:02	1
Vinyl chloride	ND		1.0		ug/L			04/18/18 23:02	1
Dibromomethane	ND		1.0		ug/L			04/18/18 23:02	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*70 - 130*		*04/18/18 23:02*	*1*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 130*		*04/18/18 23:02*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*04/18/18 23:02*	*1*

Lab Sample ID: LCS 480-409598/5
Matrix: Water
Analysis Batch: 409598

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	27.7		ug/L		111	70 - 130
1,1,1-Trichloroethane	25.0	28.8		ug/L		115	70 - 130
1,1,2,2-Tetrachloroethane	25.0	27.1		ug/L		108	70 - 130
1,1,2-Trichloroethane	25.0	25.9		ug/L		104	70 - 130
1,1-Dichloroethane	25.0	28.1		ug/L		113	70 - 130
1,1-Dichloroethene	25.0	28.4		ug/L		114	70 - 130
1,1-Dichloropropene	25.0	28.1		ug/L		112	70 - 130
1,2,3-Trichlorobenzene	25.0	25.3		ug/L		101	70 - 130
1,2,3-Trichloropropane	25.0	28.4		ug/L		113	70 - 130
1,2,4-Trichlorobenzene	25.0	25.1		ug/L		100	70 - 130
1,2,4-Trimethylbenzene	25.0	25.0		ug/L		100	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	28.8		ug/L		115	70 - 130
1,2-Dichlorobenzene	25.0	25.8		ug/L		103	70 - 130
1,2-Dichloroethane	25.0	29.0		ug/L		116	70 - 130

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

Lab Sample ID: LCS 480-409598/5
Matrix: Water
Analysis Batch: 409598

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	26.8		ug/L		107	70 - 130
1,3,5-Trimethylbenzene	25.0	25.0		ug/L		100	70 - 130
1,3-Dichlorobenzene	25.0	26.3		ug/L		105	70 - 130
1,3-Dichloropropane	25.0	25.8		ug/L		103	70 - 130
1,4-Dichlorobenzene	25.0	25.8		ug/L		103	70 - 130
1,4-Dioxane	500	432		ug/L		86	70 - 130
2,2-Dichloropropane	25.0	27.1		ug/L		108	70 - 130
2-Butanone (MEK)	125	272	*	ug/L		218	70 - 130
2-Chlorotoluene	25.0	24.8		ug/L		99	70 - 130
2-Hexanone	125	142		ug/L		113	70 - 130
4-Chlorotoluene	25.0	25.3		ug/L		101	70 - 130
4-Isopropyltoluene	25.0	26.6		ug/L		106	70 - 130
4-Methyl-2-pentanone (MIBK)	125	134		ug/L		107	70 - 130
Acetone	125	179	*	ug/L		143	70 - 130
Benzene	25.0	27.4		ug/L		110	70 - 130
Bromobenzene	25.0	25.6		ug/L		102	70 - 130
Bromoform	25.0	26.6		ug/L		106	70 - 130
Bromomethane	25.0	30.6		ug/L		122	70 - 130
Carbon disulfide	25.0	28.3		ug/L		113	70 - 130
Carbon tetrachloride	25.0	29.4		ug/L		118	70 - 130
Chlorobenzene	25.0	25.2		ug/L		101	70 - 130
Chlorobromomethane	25.0	30.4		ug/L		122	70 - 130
Chlorodibromomethane	25.0	26.4		ug/L		106	70 - 130
Chloroethane	25.0	29.6		ug/L		118	70 - 130
Chloroform	25.0	27.4		ug/L		110	70 - 130
Chloromethane	25.0	23.5		ug/L		94	70 - 130
cis-1,2-Dichloroethene	25.0	28.4		ug/L		114	70 - 130
cis-1,3-Dichloropropene	25.0	27.3		ug/L		109	70 - 130
Dichlorobromomethane	25.0	28.5		ug/L		114	70 - 130
Dichlorodifluoromethane	25.0	26.9		ug/L		108	70 - 130
Ethyl ether	25.0	28.2		ug/L		113	70 - 130
Ethylbenzene	25.0	25.5		ug/L		102	70 - 130
Ethylene Dibromide	25.0	26.4		ug/L		106	70 - 130
Hexachlorobutadiene	25.0	27.5		ug/L		110	70 - 130
Isopropyl ether	25.0	24.9		ug/L		100	70 - 130
Isopropylbenzene	25.0	24.8		ug/L		99	70 - 130
Methyl tert-butyl ether	25.0	27.9		ug/L		112	70 - 130
Methylene Chloride	25.0	28.2		ug/L		113	70 - 130
m-Xylene & p-Xylene	25.0	25.5		ug/L		102	70 - 130
Naphthalene	25.0	26.7		ug/L		107	70 - 130
n-Butylbenzene	25.0	26.1		ug/L		104	70 - 130
N-Propylbenzene	25.0	24.9		ug/L		100	70 - 130
o-Xylene	25.0	24.8		ug/L		99	70 - 130
sec-Butylbenzene	25.0	25.6		ug/L		102	70 - 130
Styrene	25.0	25.7		ug/L		103	70 - 130
Tert-amyl methyl ether	25.0	28.6		ug/L		114	70 - 130
Tert-butyl ethyl ether	25.0	27.0		ug/L		108	70 - 130
tert-Butylbenzene	25.0	27.0		ug/L		108	70 - 130

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

Lab Sample ID: LCS 480-409598/5
Matrix: Water
Analysis Batch: 409598

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	30.0		ug/L		120	70 - 130
Tetrahydrofuran	50.0	73.4	*	ug/L		147	70 - 130
Toluene	25.0	25.2		ug/L		101	70 - 130
trans-1,2-Dichloroethene	25.0	27.5		ug/L		110	70 - 130
trans-1,3-Dichloropropene	25.0	25.3		ug/L		101	70 - 130
Trichloroethene	25.0	28.9		ug/L		116	70 - 130
Trichlorofluoromethane	25.0	30.6		ug/L		122	70 - 130
Vinyl chloride	25.0	26.4		ug/L		105	70 - 130
Dibromomethane	25.0	29.0		ug/L		116	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*97*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*121*		*70 - 130*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 480-409598/6
Matrix: Water
Analysis Batch: 409598

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	26.9		ug/L		108	70 - 130	3	20
1,1,1-Trichloroethane	25.0	27.8		ug/L		111	70 - 130	4	20
1,1,2,2-Tetrachloroethane	25.0	26.1		ug/L		104	70 - 130	4	20
1,1,2-Trichloroethane	25.0	27.4		ug/L		110	70 - 130	6	20
1,1-Dichloroethane	25.0	27.3		ug/L		109	70 - 130	3	20
1,1-Dichloroethene	25.0	27.1		ug/L		108	70 - 130	5	20
1,1-Dichloropropene	25.0	26.7		ug/L		107	70 - 130	5	20
1,2,3-Trichlorobenzene	25.0	25.4		ug/L		101	70 - 130	0	20
1,2,3-Trichloropropane	25.0	28.5		ug/L		114	70 - 130	1	20
1,2,4-Trichlorobenzene	25.0	25.0		ug/L		100	70 - 130	0	20
1,2,4-Trimethylbenzene	25.0	24.7		ug/L		99	70 - 130	1	20
1,2-Dibromo-3-Chloropropane	25.0	26.9		ug/L		108	70 - 130	7	20
1,2-Dichlorobenzene	25.0	26.1		ug/L		104	70 - 130	1	20
1,2-Dichloroethane	25.0	27.5		ug/L		110	70 - 130	5	20
1,2-Dichloropropane	25.0	26.3		ug/L		105	70 - 130	2	20
1,3,5-Trimethylbenzene	25.0	24.9		ug/L		100	70 - 130	1	20
1,3-Dichlorobenzene	25.0	26.6		ug/L		106	70 - 130	1	20
1,3-Dichloropropane	25.0	26.4		ug/L		106	70 - 130	2	20
1,4-Dichlorobenzene	25.0	26.0		ug/L		104	70 - 130	1	20
1,4-Dioxane	500	659	*	ug/L		132	70 - 130	42	20
2,2-Dichloropropane	25.0	25.9		ug/L		104	70 - 130	4	20
2-Butanone (MEK)	125	258	*	ug/L		206	70 - 130	5	20
2-Chlorotoluene	25.0	24.1		ug/L		97	70 - 130	3	20
2-Hexanone	125	141		ug/L		113	70 - 130	1	20
4-Chlorotoluene	25.0	24.6		ug/L		98	70 - 130	3	20
4-Isopropyltoluene	25.0	26.3		ug/L		105	70 - 130	1	20
4-Methyl-2-pentanone (MIBK)	125	137		ug/L		109	70 - 130	2	20
Acetone	125	165	*	ug/L		132	70 - 130	8	20

QC Sample Results

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

TestAmerica Job ID: 480-133988-1

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

Lab Sample ID: LCSD 480-409598/6
Matrix: Water
Analysis Batch: 409598

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	26.5		ug/L		106	70 - 130	4	20
Bromobenzene	25.0	25.7		ug/L		103	70 - 130	0	20
Bromoform	25.0	25.4		ug/L		102	70 - 130	5	20
Bromomethane	25.0	28.4		ug/L		114	70 - 130	7	20
Carbon disulfide	25.0	26.0		ug/L		104	70 - 130	8	20
Carbon tetrachloride	25.0	28.1		ug/L		112	70 - 130	5	20
Chlorobenzene	25.0	25.5		ug/L		102	70 - 130	1	20
Chlorobromomethane	25.0	29.0		ug/L		116	70 - 130	5	20
Chlorodibromomethane	25.0	26.9		ug/L		107	70 - 130	2	20
Chloroethane	25.0	28.7		ug/L		115	70 - 130	3	20
Chloroform	25.0	26.2		ug/L		105	70 - 130	5	20
Chloromethane	25.0	22.8		ug/L		91	70 - 130	3	20
cis-1,2-Dichloroethene	25.0	26.9		ug/L		107	70 - 130	5	20
cis-1,3-Dichloropropene	25.0	27.1		ug/L		109	70 - 130	0	20
Dichlorobromomethane	25.0	26.7		ug/L		107	70 - 130	7	20
Dichlorodifluoromethane	25.0	24.5		ug/L		98	70 - 130	9	20
Ethyl ether	25.0	26.1		ug/L		104	70 - 130	8	20
Ethylbenzene	25.0	25.4		ug/L		102	70 - 130	0	20
Ethylene Dibromide	25.0	27.0		ug/L		108	70 - 130	2	20
Hexachlorobutadiene	25.0	27.8		ug/L		111	70 - 130	1	20
Isopropyl ether	25.0	24.1		ug/L		96	70 - 130	3	20
Isopropylbenzene	25.0	24.9		ug/L		99	70 - 130	0	20
Methyl tert-butyl ether	25.0	26.6		ug/L		106	70 - 130	5	20
Methylene Chloride	25.0	26.3		ug/L		105	70 - 130	7	20
m-Xylene & p-Xylene	25.0	25.9		ug/L		104	70 - 130	2	20
Naphthalene	25.0	26.6		ug/L		106	70 - 130	0	20
n-Butylbenzene	25.0	26.0		ug/L		104	70 - 130	0	20
N-Propylbenzene	25.0	24.6		ug/L		98	70 - 130	1	20
o-Xylene	25.0	25.8		ug/L		103	70 - 130	4	20
sec-Butylbenzene	25.0	25.0		ug/L		100	70 - 130	2	20
Styrene	25.0	26.4		ug/L		106	70 - 130	3	20
Tert-amyl methyl ether	25.0	27.6		ug/L		110	70 - 130	4	20
Tert-butyl ethyl ether	25.0	26.1		ug/L		104	70 - 130	3	20
tert-Butylbenzene	25.0	26.3		ug/L		105	70 - 130	3	20
Tetrachloroethene	25.0	30.4		ug/L		122	70 - 130	1	20
Tetrahydrofuran	50.0	70.0	*	ug/L		140	70 - 130	5	20
Toluene	25.0	25.3		ug/L		101	70 - 130	0	20
trans-1,2-Dichloroethene	25.0	25.9		ug/L		104	70 - 130	6	20
trans-1,3-Dichloropropene	25.0	25.8		ug/L		103	70 - 130	2	20
Trichloroethene	25.0	27.5		ug/L		110	70 - 130	5	20
Trichlorofluoromethane	25.0	28.6		ug/L		114	70 - 130	7	20
Vinyl chloride	25.0	23.4		ug/L		94	70 - 130	12	20
Dibromomethane	25.0	28.4		ug/L		113	70 - 130	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*97*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*111*		*70 - 130*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*

QC Sample Results

Lab Sample ID: MB 480-409631/8
Matrix: Water
Analysis Batch: 409631

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

	MB	MB							
Analyte	**Result**	**Qualifier**	**RL**	**MDL**	**Unit**	**D**	**Prepared**	**Analyzed**	**Dil Fac**
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			04/19/18 10:50	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/19/18 10:50	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			04/19/18 10:50	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/19/18 10:50	1
1,1-Dichloroethane	ND		1.0		ug/L			04/19/18 10:50	1
1,1-Dichloroethene	ND		1.0		ug/L			04/19/18 10:50	1
1,1-Dichloropropene	ND		1.0		ug/L			04/19/18 10:50	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/19/18 10:50	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/19/18 10:50	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/19/18 10:50	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/19/18 10:50	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			04/19/18 10:50	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/19/18 10:50	1
1,2-Dichloroethane	ND		1.0		ug/L			04/19/18 10:50	1
1,2-Dichloropropane	ND		1.0		ug/L			04/19/18 10:50	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/19/18 10:50	1
1,3-Dichlorobenzene	ND		1.0		ug/L			04/19/18 10:50	1
1,3-Dichloropropane	ND		1.0		ug/L			04/19/18 10:50	1
1,4-Dichlorobenzene	ND		1.0		ug/L			04/19/18 10:50	1
1,4-Dioxane	ND		50		ug/L			04/19/18 10:50	1
2,2-Dichloropropane	ND		1.0		ug/L			04/19/18 10:50	1
2-Butanone (MEK)	ND		10		ug/L			04/19/18 10:50	1
2-Chlorotoluene	ND		1.0		ug/L			04/19/18 10:50	1
2-Hexanone	ND		10		ug/L			04/19/18 10:50	1
4-Chlorotoluene	ND		1.0		ug/L			04/19/18 10:50	1
4-Isopropyltoluene	ND		1.0		ug/L			04/19/18 10:50	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			04/19/18 10:50	1
Acetone	ND		50		ug/L			04/19/18 10:50	1
Benzene	ND		1.0		ug/L			04/19/18 10:50	1
Bromobenzene	ND		1.0		ug/L			04/19/18 10:50	1
Bromoform	ND		1.0		ug/L			04/19/18 10:50	1
Bromomethane	ND		2.0		ug/L			04/19/18 10:50	1
Carbon disulfide	ND		10		ug/L			04/19/18 10:50	1
Carbon tetrachloride	ND		1.0		ug/L			04/19/18 10:50	1
Chlorobenzene	ND		1.0		ug/L			04/19/18 10:50	1
Chlorobromomethane	ND		1.0		ug/L			04/19/18 10:50	1
Chlorodibromomethane	ND		0.50		ug/L			04/19/18 10:50	1
Chloroethane	ND		2.0		ug/L			04/19/18 10:50	1
Chloroform	ND		1.0		ug/L			04/19/18 10:50	1
Chloromethane	ND		2.0		ug/L			04/19/18 10:50	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			04/19/18 10:50	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			04/19/18 10:50	1
Dichlorobromomethane	ND		0.50		ug/L			04/19/18 10:50	1
Dichlorodifluoromethane	ND		1.0		ug/L			04/19/18 10:50	1
Ethyl ether	ND		1.0		ug/L			04/19/18 10:50	1
Ethylbenzene	ND		1.0		ug/L			04/19/18 10:50	1
Ethylene Dibromide	ND		1.0		ug/L			04/19/18 10:50	1
Hexachlorobutadiene	ND		0.40		ug/L			04/19/18 10:50	1
Isopropyl ether	ND		10		ug/L			04/19/18 10:50	1
Isopropylbenzene	ND		1.0		ug/L			04/19/18 10:50	1

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

Lab Sample ID: MB 480-409631/8
Matrix: Water
Analysis Batch: 409631

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			04/19/18 10:50	1
Methylene Chloride	ND		1.0		ug/L			04/19/18 10:50	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/19/18 10:50	1
Naphthalene	ND		5.0		ug/L			04/19/18 10:50	1
n-Butylbenzene	ND		1.0		ug/L			04/19/18 10:50	1
N-Propylbenzene	ND		1.0		ug/L			04/19/18 10:50	1
o-Xylene	ND		1.0		ug/L			04/19/18 10:50	1
sec-Butylbenzene	ND		1.0		ug/L			04/19/18 10:50	1
Styrene	ND		1.0		ug/L			04/19/18 10:50	1
Tert-amyl methyl ether	ND		5.0		ug/L			04/19/18 10:50	1
Tert-butyl ethyl ether	ND		5.0		ug/L			04/19/18 10:50	1
tert-Butylbenzene	ND		1.0		ug/L			04/19/18 10:50	1
Tetrachloroethene	ND		1.0		ug/L			04/19/18 10:50	1
Tetrahydrofuran	ND		10		ug/L			04/19/18 10:50	1
Toluene	ND		1.0		ug/L			04/19/18 10:50	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/19/18 10:50	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			04/19/18 10:50	1
Trichloroethene	ND		1.0		ug/L			04/19/18 10:50	1
Trichlorofluoromethane	ND		1.0		ug/L			04/19/18 10:50	1
Vinyl chloride	ND		1.0		ug/L			04/19/18 10:50	1
Dibromomethane	ND		1.0		ug/L			04/19/18 10:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*95*		*70 - 130*		*04/19/18 10:50*	*1*
1,2-Dichloroethane-d4 (Surr)	*110*		*70 - 130*		*04/19/18 10:50*	*1*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*04/19/18 10:50*	*1*

Lab Sample ID: LCS 480-409631/5
Matrix: Water
Analysis Batch: 409631

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	25.0	25.1		ug/L		101	70 - 130
1,1,1-Trichloroethane	25.0	26.1		ug/L		104	70 - 130
1,1,2,2-Tetrachloroethane	25.0	24.1		ug/L		96	70 - 130
1,1,2-Trichloroethane	25.0	23.3		ug/L		93	70 - 130
1,1-Dichloroethane	25.0	25.2		ug/L		101	70 - 130
1,1-Dichloroethene	25.0	25.2		ug/L		101	70 - 130
1,1-Dichloropropene	25.0	25.4		ug/L		102	70 - 130
1,2,3-Trichlorobenzene	25.0	23.5		ug/L		94	70 - 130
1,2,3-Trichloropropane	25.0	26.5		ug/L		106	70 - 130
1,2,4-Trichlorobenzene	25.0	23.0		ug/L		92	70 - 130
1,2,4-Trimethylbenzene	25.0	23.8		ug/L		95	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	24.9		ug/L		100	70 - 130
1,2-Dichlorobenzene	25.0	24.2		ug/L		97	70 - 130
1,2-Dichloroethane	25.0	26.1		ug/L		105	70 - 130
1,2-Dichloropropane	25.0	25.2		ug/L		101	70 - 130
1,3,5-Trimethylbenzene	25.0	23.0		ug/L		92	70 - 130

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

Lab Sample ID: LCS 480-409631/5
Matrix: Water
Analysis Batch: 409631

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	24.4		ug/L		97	70 - 130
1,3-Dichloropropane	25.0	23.9		ug/L		96	70 - 130
1,4-Dichlorobenzene	25.0	24.2		ug/L		97	70 - 130
1,4-Dioxane	500	389		ug/L		78	70 - 130
2,2-Dichloropropane	25.0	25.1		ug/L		100	70 - 130
2-Butanone (MEK)	125	242	*	ug/L		194	70 - 130
2-Chlorotoluene	25.0	23.0		ug/L		92	70 - 130
2-Hexanone	125	126		ug/L		101	70 - 130
4-Chlorotoluene	25.0	23.2		ug/L		93	70 - 130
4-Isopropyltoluene	25.0	24.2		ug/L		97	70 - 130
4-Methyl-2-pentanone (MIBK)	125	122		ug/L		98	70 - 130
Acetone	125	159		ug/L		127	70 - 130
Benzene	25.0	24.7		ug/L		99	70 - 130
Bromobenzene	25.0	23.9		ug/L		96	70 - 130
Bromoform	25.0	22.8		ug/L		91	70 - 130
Bromomethane	25.0	29.2		ug/L		117	70 - 130
Carbon disulfide	25.0	23.5		ug/L		94	70 - 130
Carbon tetrachloride	25.0	26.5		ug/L		106	70 - 130
Chlorobenzene	25.0	24.4		ug/L		97	70 - 130
Chlorobromomethane	25.0	27.4		ug/L		110	70 - 130
Chlorodibromomethane	25.0	24.9		ug/L		100	70 - 130
Chloroethane	25.0	28.2		ug/L		113	70 - 130
Chloroform	25.0	24.9		ug/L		100	70 - 130
Chloromethane	25.0	22.0		ug/L		88	70 - 130
cis-1,2-Dichloroethene	25.0	25.6		ug/L		103	70 - 130
cis-1,3-Dichloropropene	25.0	25.2		ug/L		101	70 - 130
Dichlorobromomethane	25.0	25.6		ug/L		102	70 - 130
Dichlorodifluoromethane	25.0	25.4		ug/L		102	70 - 130
Ethyl ether	25.0	25.4		ug/L		102	70 - 130
Ethylbenzene	25.0	23.6		ug/L		94	70 - 130
Ethylene Dibromide	25.0	24.5		ug/L		98	70 - 130
Hexachlorobutadiene	25.0	24.7		ug/L		99	70 - 130
Isopropyl ether	25.0	23.9		ug/L		96	70 - 130
Isopropylbenzene	25.0	22.7		ug/L		91	70 - 130
Methyl tert-butyl ether	25.0	24.9		ug/L		100	70 - 130
Methylene Chloride	25.0	23.4		ug/L		94	70 - 130
m-Xylene & p-Xylene	25.0	23.7		ug/L		95	70 - 130
Naphthalene	25.0	24.4		ug/L		98	70 - 130
n-Butylbenzene	25.0	24.0		ug/L		96	70 - 130
N-Propylbenzene	25.0	22.9		ug/L		92	70 - 130
o-Xylene	25.0	23.7		ug/L		95	70 - 130
sec-Butylbenzene	25.0	23.6		ug/L		95	70 - 130
Styrene	25.0	24.6		ug/L		98	70 - 130
Tert-amyl methyl ether	25.0	27.1		ug/L		108	70 - 130
Tert-butyl ethyl ether	25.0	25.0		ug/L		100	70 - 130
tert-Butylbenzene	25.0	23.9		ug/L		96	70 - 130
Tetrachloroethene	25.0	26.4		ug/L		106	70 - 130
Tetrahydrofuran	50.0	65.5	*	ug/L		131	70 - 130

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

Lab Sample ID: LCS 480-409631/5
Matrix: Water
Analysis Batch: 409631

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	23.6		ug/L		94	70 - 130
trans-1,2-Dichloroethene	25.0	24.0		ug/L		96	70 - 130
trans-1,3-Dichloropropene	25.0	23.3		ug/L		93	70 - 130
Trichloroethene	25.0	25.9		ug/L		104	70 - 130
Trichlorofluoromethane	25.0	28.4		ug/L		114	70 - 130
Vinyl chloride	25.0	23.8		ug/L		95	70 - 130
Dibromomethane	25.0	26.5		ug/L		106	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*96*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 130*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 480-409631/6
Matrix: Water
Analysis Batch: 409631

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	25.0	25.8		ug/L		103	70 - 130	3	20
1,1,1-Trichloroethane	25.0	26.9		ug/L		107	70 - 130	3	20
1,1,2,2-Tetrachloroethane	25.0	24.4		ug/L		98	70 - 130	1	20
1,1,2-Trichloroethane	25.0	23.9		ug/L		96	70 - 130	3	20
1,1-Dichloroethane	25.0	26.1		ug/L		105	70 - 130	4	20
1,1-Dichloroethene	25.0	26.9		ug/L		108	70 - 130	7	20
1,1-Dichloropropene	25.0	26.5		ug/L		106	70 - 130	4	20
1,2,3-Trichlorobenzene	25.0	23.2		ug/L		93	70 - 130	1	20
1,2,3-Trichloropropane	25.0	25.6		ug/L		102	70 - 130	3	20
1,2,4-Trichlorobenzene	25.0	24.1		ug/L		96	70 - 130	5	20
1,2,4-Trimethylbenzene	25.0	24.3		ug/L		97	70 - 130	2	20
1,2-Dibromo-3-Chloropropane	25.0	24.8		ug/L		99	70 - 130	0	20
1,2-Dichlorobenzene	25.0	25.2		ug/L		101	70 - 130	4	20
1,2-Dichloroethane	25.0	26.5		ug/L		106	70 - 130	1	20
1,2-Dichloropropane	25.0	25.4		ug/L		101	70 - 130	1	20
1,3,5-Trimethylbenzene	25.0	24.3		ug/L		97	70 - 130	6	20
1,3-Dichlorobenzene	25.0	25.2		ug/L		101	70 - 130	3	20
1,3-Dichloropropane	25.0	24.7		ug/L		99	70 - 130	3	20
1,4-Dichlorobenzene	25.0	25.2		ug/L		101	70 - 130	4	20
1,4-Dioxane	500	614	*	ug/L		123	70 - 130	45	20
2,2-Dichloropropane	25.0	26.2		ug/L		105	70 - 130	4	20
2-Butanone (MEK)	125	249	*	ug/L		199	70 - 130	3	20
2-Chlorotoluene	25.0	23.6		ug/L		94	70 - 130	3	20
2-Hexanone	125	130		ug/L		104	70 - 130	3	20
4-Chlorotoluene	25.0	24.1		ug/L		96	70 - 130	4	20
4-Isopropyltoluene	25.0	25.9		ug/L		104	70 - 130	7	20
4-Methyl-2-pentanone (MIBK)	125	126		ug/L		101	70 - 130	3	20
Acetone	125	166	*	ug/L		132	70 - 130	4	20
Benzene	25.0	25.3		ug/L		101	70 - 130	2	20
Bromobenzene	25.0	24.5		ug/L		98	70 - 130	2	20

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

Lab Sample ID: LCSD 480-409631/6
Matrix: Water
Analysis Batch: 409631

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	24.6		ug/L		98	70 - 130	8	20
Bromomethane	25.0	30.8		ug/L		123	70 - 130	6	20
Carbon disulfide	25.0	24.3		ug/L		97	70 - 130	4	20
Carbon tetrachloride	25.0	27.6		ug/L		110	70 - 130	4	20
Chlorobenzene	25.0	24.9		ug/L		100	70 - 130	2	20
Chlorobromomethane	25.0	26.9		ug/L		108	70 - 130	2	20
Chlorodibromomethane	25.0	25.3		ug/L		101	70 - 130	2	20
Chloroethane	25.0	29.8		ug/L		119	70 - 130	5	20
Chloroform	25.0	25.6		ug/L		102	70 - 130	2	20
Chloromethane	25.0	22.8		ug/L		91	70 - 130	4	20
cis-1,2-Dichloroethene	25.0	26.2		ug/L		105	70 - 130	2	20
cis-1,3-Dichloropropene	25.0	26.2		ug/L		105	70 - 130	4	20
Dichlorobromomethane	25.0	26.5		ug/L		106	70 - 130	4	20
Dichlorodifluoromethane	25.0	25.9		ug/L		103	70 - 130	2	20
Ethyl ether	25.0	25.5		ug/L		102	70 - 130	1	20
Ethylbenzene	25.0	24.6		ug/L		98	70 - 130	4	20
Ethylene Dibromide	25.0	25.2		ug/L		101	70 - 130	3	20
Hexachlorobutadiene	25.0	27.3		ug/L		109	70 - 130	10	20
Isopropyl ether	25.0	24.4		ug/L		98	70 - 130	2	20
Isopropylbenzene	25.0	24.3		ug/L		97	70 - 130	7	20
Methyl tert-butyl ether	25.0	25.1		ug/L		100	70 - 130	1	20
Methylene Chloride	25.0	23.3		ug/L		93	70 - 130	0	20
m-Xylene & p-Xylene	25.0	24.3		ug/L		97	70 - 130	2	20
Naphthalene	25.0	24.9		ug/L		100	70 - 130	2	20
n-Butylbenzene	25.0	25.4		ug/L		102	70 - 130	6	20
N-Propylbenzene	25.0	24.1		ug/L		96	70 - 130	5	20
o-Xylene	25.0	24.3		ug/L		97	70 - 130	3	20
sec-Butylbenzene	25.0	24.4		ug/L		98	70 - 130	3	20
Styrene	25.0	24.6		ug/L		99	70 - 130	0	20
Tert-amyl methyl ether	25.0	27.1		ug/L		108	70 - 130	0	20
Tert-butyl ethyl ether	25.0	25.9		ug/L		104	70 - 130	3	20
tert-Butylbenzene	25.0	25.1		ug/L		100	70 - 130	5	20
Tetrachloroethene	25.0	28.2		ug/L		113	70 - 130	7	20
Tetrahydrofuran	50.0	68.4	*	ug/L		137	70 - 130	4	20
Toluene	25.0	24.6		ug/L		98	70 - 130	4	20
trans-1,2-Dichloroethene	25.0	26.0		ug/L		104	70 - 130	8	20
trans-1,3-Dichloropropene	25.0	24.2		ug/L		97	70 - 130	3	20
Trichloroethene	25.0	26.3		ug/L		105	70 - 130	1	20
Trichlorofluoromethane	25.0	30.0		ug/L		120	70 - 130	6	20
Vinyl chloride	25.0	25.3		ug/L		101	70 - 130	6	20
Dibromomethane	25.0	26.9		ug/L		108	70 - 130	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*96*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*111*		*70 - 130*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*

QC Sample Results

Method: 522 - 1,4 Dioxane (GC/MS SIM)

Lab Sample ID: MB 200-128409/1-A
Matrix: Water
Analysis Batch: 128413

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 128409

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20		ug/L		04/12/18 13:25	04/12/18 21:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*94*		*46 - 130*	*04/12/18 13:25*	*04/12/18 21:53*	*1*

Lab Sample ID: LCS 200-128409/2-A
Matrix: Water
Analysis Batch: 128413

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 128409

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	2.00	2.23		ug/L		112	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*100*		*46 - 130*

Method: 6010 - Metals (ICP)

Lab Sample ID: MB 480-408769/1-A
Matrix: Water
Analysis Batch: 409179

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 408769

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050		mg/L		04/14/18 09:34	04/16/18 14:59	1

Lab Sample ID: LCS 480-408769/2-A
Matrix: Water
Analysis Batch: 409179

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 408769

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	9.47		mg/L		95	80 - 120

Lab Sample ID: LCSD 480-408769/25-A
Matrix: Water
Analysis Batch: 409179

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 408769

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	10.0	9.53		mg/L		95	80 - 120	1	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-408864/29
Matrix: Water
Analysis Batch: 408864

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			04/14/18 18:36	1
Sulfate	ND		2.0		mg/L			04/14/18 18:36	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 480-408864/28
Matrix: Water
Analysis Batch: 408864

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	52.9		mg/L		106	90 - 110
Sulfate			50.0	51.0		mg/L		102	90 - 110

Lab Sample ID: 480-133988-9 MS
Matrix: Water
Analysis Batch: 408864

Client Sample ID: MW-561-20180411
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	33		250	312		mg/L		112	81 - 120
Sulfate	ND		250	265		mg/L		106	80 - 120

Lab Sample ID: MB 480-408869/5
Matrix: Water
Analysis Batch: 408869

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			04/14/18 12:36	1
Sulfate	ND		2.0		mg/L			04/14/18 12:36	1

Lab Sample ID: LCS 480-408869/4
Matrix: Water
Analysis Batch: 408869

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	49.0		mg/L		98	90 - 110
Sulfate			50.0	47.2		mg/L		94	90 - 110

Lab Sample ID: 480-133988-17 MS
Matrix: Water
Analysis Batch: 408869

Client Sample ID: REW-12-20180411
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25		100	127		mg/L		102	81 - 120
Sulfate	ND		100	98.8		mg/L		98	80 - 120

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-408609/1-A
Matrix: Water
Analysis Batch: 409125

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 408609

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.20		mg/L		04/12/18 20:20	04/16/18 21:04	1

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: LCS 480-408609/2-A
Matrix: Water
Analysis Batch: 409125
Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 408609

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.06		mg/L		106	90 - 110

Lab Sample ID: 480-133988-10 MS
Matrix: Water
Analysis Batch: 409125
Client Sample ID: MW-563-20180411
Prep Type: Total/NA
Prep Batch: 408609

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	0.37		0.500	0.866		mg/L		99	90 - 110

Lab Sample ID: MB 480-409093/1-A
Matrix: Water
Analysis Batch: 409125
Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 409093

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.20		mg/L		04/16/18 18:18	04/16/18 21:12	1

Lab Sample ID: LCS 480-409093/2-A
Matrix: Water
Analysis Batch: 409125
Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 409093

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	0.984		mg/L		98	90 - 110

Lab Sample ID: MB 480-409364/1-A
Matrix: Water
Analysis Batch: 409530
Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 409364

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.20		mg/L		04/17/18 16:09	04/18/18 13:33	1

Lab Sample ID: LCS 480-409364/2-A
Matrix: Water
Analysis Batch: 409530
Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 409364

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.09		mg/L		109	90 - 110

Lab Sample ID: MB 480-409848/1-A
Matrix: Water
Analysis Batch: 410062
Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 409848

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.20		mg/L		04/19/18 16:36	04/20/18 17:02	1

Lab Sample ID: MB 480-409848/1-A
Matrix: Water
Analysis Batch: 410073
Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 409848

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.20		mg/L		04/19/18 16:36	04/20/18 18:45	1

QC Sample Results

Lab Sample ID: LCS 480-409848/2-A
Matrix: Water
Analysis Batch: 410062

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 409848

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	0.965		mg/L		97	90 - 110

Lab Sample ID: LCS 480-409848/2-A
Matrix: Water
Analysis Batch: 410073

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 409848

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	0.927		mg/L		93	90 - 110

Method: 9040C - pH

Lab Sample ID: 480-133988-14 DU
Matrix: Water
Analysis Batch: 408831

Client Sample ID: REW-8-20180411
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.0	HF	6.9		SU		1	5
Temperature	21.0	HF	21.2		Degrees C		1	10

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

Lab Sample ID: MB 480-408957/28
Matrix: Water
Analysis Batch: 408957

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			04/14/18 21:26	1
TOC Result 2	ND		1.0		mg/L			04/14/18 21:26	1
Total Organic Carbon - Duplicates	ND		1.0		mg/L			04/14/18 21:26	1

Lab Sample ID: MB 480-408957/4
Matrix: Water
Analysis Batch: 408957

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			04/14/18 10:18	1
TOC Result 2	ND		1.0		mg/L			04/14/18 10:18	1
Total Organic Carbon - Duplicates	ND		1.0		mg/L			04/14/18 10:18	1

Lab Sample ID: MB 480-408957/52
Matrix: Water
Analysis Batch: 408957

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			04/15/18 08:35	1
TOC Result 2	ND		1.0		mg/L			04/15/18 08:35	1
Total Organic Carbon - Duplicates	ND		1.0		mg/L			04/15/18 08:35	1

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

Lab Sample ID: LCS 480-408957/29
Matrix: Water
Analysis Batch: 408957

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	58.5		mg/L		97	90 - 110
TOC Result 2			60.0	60.3		mg/L		101	90 - 110
Total Organic Carbon - Duplicates			60.0	59.4		mg/L		99	90 - 110

Lab Sample ID: LCS 480-408957/5
Matrix: Water
Analysis Batch: 408957

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	59.8		mg/L		100	90 - 110
Total Organic Carbon - Duplicates			60.0	59.1		mg/L		99	90 - 110

Lab Sample ID: LCS 480-408957/53
Matrix: Water
Analysis Batch: 408957

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	59.6		mg/L		99	90 - 110
TOC Result 2			60.0	59.6		mg/L		99	90 - 110
Total Organic Carbon - Duplicates			60.0	59.6		mg/L		99	90 - 110

Lab Sample ID: 480-133988-13 MS
Matrix: Water
Analysis Batch: 408957

Client Sample ID: REW-5-20180411
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
TOC Result 1	1.5		20.0	22.7		mg/L		106	54 - 131
TOC Result 2	1.4		20.0	23.2		mg/L		109	54 - 131
Total Organic Carbon - Duplicates	1.5		20.0	23.0		mg/L		107	54 - 131

Lab Sample ID: 480-133988-12 DU
Matrix: Water
Analysis Batch: 408957

Client Sample ID: REW-4-20180411
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
TOC Result 1	ND		ND		mg/L		NC	20
TOC Result 2	ND		ND		mg/L		NC	20
Total Organic Carbon - Duplicates	ND		ND		mg/L		NC	20

QC Sample Results

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

Lab Sample ID: 480-133988-17 DU
Matrix: Water
Analysis Batch: 408957

Client Sample ID: REW-12-20180411
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
TOC Result 1	5.6		6.05		mg/L		8	20
TOC Result 2	5.6		5.63		mg/L		1	20
Total Organic Carbon - Duplicates	5.6		5.84		mg/L		5	20

Lab Sample ID: MB 480-410102/28
Matrix: Water
Analysis Batch: 410102

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			04/18/18 21:49	1
TOC Result 2	ND		1.0		mg/L			04/18/18 21:49	1
Total Organic Carbon - Duplicates	ND		1.0		mg/L			04/18/18 21:49	1

Lab Sample ID: MB 480-410102/4
Matrix: Water
Analysis Batch: 410102

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			04/18/18 10:45	1
TOC Result 2	ND		1.0		mg/L			04/18/18 10:45	1
Total Organic Carbon - Duplicates	ND		1.0		mg/L			04/18/18 10:45	1

Lab Sample ID: LCS 480-410102/29
Matrix: Water
Analysis Batch: 410102

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	60.4		mg/L		101	90 - 110
TOC Result 2	60.0	59.7		mg/L		99	90 - 110
Total Organic Carbon - Duplicates	60.0	60.0		mg/L		100	90 - 110

Lab Sample ID: LCS 480-410102/5
Matrix: Water
Analysis Batch: 410102

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	59.7		mg/L		99	90 - 110
TOC Result 2	60.0	60.9		mg/L		101	90 - 110
Total Organic Carbon - Duplicates	60.0	60.3		mg/L		100	90 - 110

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-409772/7
Matrix: Water
Analysis Batch: 409772

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			04/19/18 11:36	1

Lab Sample ID: LCS 480-409772/8
Matrix: Water
Analysis Batch: 409772

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	97.9		mg/L		98	90 - 110

Method: SM 4500 P E - Orthophosphate

Lab Sample ID: MB 480-408564/3
Matrix: Water
Analysis Batch: 408564

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			04/12/18 08:23	1

Lab Sample ID: LCS 480-408564/4
Matrix: Water
Analysis Batch: 408564

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		97	90 - 110

Lab Sample ID: 480-133988-12 MS
Matrix: Water
Analysis Batch: 408564

Client Sample ID: REW-4-20180411
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
ortho-Phosphate	0.090		1.00	1.11		mg/L		102	49 - 138

Lab Sample ID: 480-133988-12 MSD
Matrix: Water
Analysis Batch: 408564

Client Sample ID: REW-4-20180411
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	0.090		1.00	1.12		mg/L		103	49 - 138	1	20

QC Association Summary

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

TestAmerica Job ID: 480-133988-1

GC/MS VOA

Analysis Batch: 409348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-133988-1	DEP-21-20180411	Total/NA	Water	8260C	
480-133988-2	MW-264M-20180411	Total/NA	Water	8260C	
480-133988-3	MW-265S-20180411	Total/NA	Water	8260C	
480-133988-4	MW-265M-20180411	Total/NA	Water	8260C	
480-133988-5	MW-265D-20180411	Total/NA	Water	8260C	
480-133988-6	MW-266Ma-20180411	Total/NA	Water	8260C	
480-133988-7	MW-266Mb-20180411	Total/NA	Water	8260C	
480-133988-8	MW-269Ma-20180411	Total/NA	Water	8260C	
480-133988-9	MW-561-20180411	Total/NA	Water	8260C	
480-133988-10	MW-563-20180411	Total/NA	Water	8260C	
480-133988-11	REW-1-20180411	Total/NA	Water	8260C	
480-133988-12	REW-4-20180411	Total/NA	Water	8260C	
480-133988-13	REW-5-20180411	Total/NA	Water	8260C	
MB 480-409348/8	Method Blank	Total/NA	Water	8260C	
LCS 480-409348/5	Lab Control Sample	Total/NA	Water	8260C	
LCSD 480-409348/6	Lab Control Sample Dup	Total/NA	Water	8260C	

Analysis Batch: 409387

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-133988-14	REW-8-20180411	Total/NA	Water	8260C	
480-133988-19	DUP4-20180411	Total/NA	Water	8260C	
MB 480-409387/8	Method Blank	Total/NA	Water	8260C	
LCS 480-409387/5	Lab Control Sample	Total/NA	Water	8260C	
LCSD 480-409387/6	Lab Control Sample Dup	Total/NA	Water	8260C	

Analysis Batch: 409598

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-133988-15	REW-9-20180411	Total/NA	Water	8260C	
480-133988-16	REW-10-20180411	Total/NA	Water	8260C	
480-133988-20	Trip Blanks	Total/NA	Water	8260C	
MB 480-409598/8	Method Blank	Total/NA	Water	8260C	
LCS 480-409598/5	Lab Control Sample	Total/NA	Water	8260C	
LCSD 480-409598/6	Lab Control Sample Dup	Total/NA	Water	8260C	

Analysis Batch: 409631

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-133988-17	REW-12-20180411	Total/NA	Water	8260C	
480-133988-18	DUP3-20180411	Total/NA	Water	8260C	
MB 480-409631/8	Method Blank	Total/NA	Water	8260C	
LCS 480-409631/5	Lab Control Sample	Total/NA	Water	8260C	
LCSD 480-409631/6	Lab Control Sample Dup	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 128409

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-133988-4	MW-265M-20180411	Total/NA	Water	3535A	
480-133988-6	MW-266Ma-20180411	Total/NA	Water	3535A	
480-133988-8	MW-269Ma-20180411	Total/NA	Water	3535A	
480-133988-19	DUP4-20180411	Total/NA	Water	3535A	

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

GC/MS Semi VOA (Continued)

Prep Batch: 128409 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 200-128409/1-A	Method Blank	Total/NA	Water	3535A	
LCS 200-128409/2-A	Lab Control Sample	Total/NA	Water	3535A	

Analysis Batch: 128413

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-133988-4	MW-265M-20180411	Total/NA	Water	522	128409
480-133988-6	MW-266Ma-20180411	Total/NA	Water	522	128409
480-133988-8	MW-269Ma-20180411	Total/NA	Water	522	128409
480-133988-19	DUP4-20180411	Total/NA	Water	522	128409
MB 200-128409/1-A	Method Blank	Total/NA	Water	522	128409
LCS 200-128409/2-A	Lab Control Sample	Total/NA	Water	522	128409

Metals

Prep Batch: 408769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-133988-4	MW-265M-20180411	Total/NA	Water	3005A	
480-133988-9	MW-561-20180411	Total/NA	Water	3005A	
480-133988-10	MW-563-20180411	Total/NA	Water	3005A	
480-133988-11	REW-1-20180411	Total/NA	Water	3005A	
480-133988-12	REW-4-20180411	Total/NA	Water	3005A	
480-133988-13	REW-5-20180411	Total/NA	Water	3005A	
480-133988-14	REW-8-20180411	Total/NA	Water	3005A	
480-133988-15	REW-9-20180411	Total/NA	Water	3005A	
480-133988-16	REW-10-20180411	Total/NA	Water	3005A	
480-133988-17	REW-12-20180411	Total/NA	Water	3005A	
MB 480-408769/1-A	Method Blank	Total/NA	Water	3005A	
LCS 480-408769/2-A	Lab Control Sample	Total/NA	Water	3005A	
LCSD 480-408769/25-A	Lab Control Sample Dup	Total/NA	Water	3005A	

Analysis Batch: 409179

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-133988-4	MW-265M-20180411	Total/NA	Water	6010	408769
480-133988-9	MW-561-20180411	Total/NA	Water	6010	408769
480-133988-10	MW-563-20180411	Total/NA	Water	6010	408769
480-133988-11	REW-1-20180411	Total/NA	Water	6010	408769
480-133988-12	REW-4-20180411	Total/NA	Water	6010	408769
480-133988-13	REW-5-20180411	Total/NA	Water	6010	408769
480-133988-14	REW-8-20180411	Total/NA	Water	6010	408769
480-133988-15	REW-9-20180411	Total/NA	Water	6010	408769
480-133988-16	REW-10-20180411	Total/NA	Water	6010	408769
480-133988-17	REW-12-20180411	Total/NA	Water	6010	408769
MB 480-408769/1-A	Method Blank	Total/NA	Water	6010	408769
LCS 480-408769/2-A	Lab Control Sample	Total/NA	Water	6010	408769
LCSD 480-408769/25-A	Lab Control Sample Dup	Total/NA	Water	6010	408769

General Chemistry

Analysis Batch: 408532

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-133988-4	MW-265M-20180411	Total/NA	Water	9040C	
480-133988-9	MW-561-20180411	Total/NA	Water	9040C	
480-133988-10	MW-563-20180411	Total/NA	Water	9040C	
480-133988-11	REW-1-20180411	Total/NA	Water	9040C	
480-133988-12	REW-4-20180411	Total/NA	Water	9040C	
480-133988-13	REW-5-20180411	Total/NA	Water	9040C	
LCS 480-408532/45	Lab Control Sample	Total/NA	Water	9040C	

Analysis Batch: 408564

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-133988-4	MW-265M-20180411	Total/NA	Water	SM 4500 P E	
480-133988-9	MW-561-20180411	Total/NA	Water	SM 4500 P E	
480-133988-10	MW-563-20180411	Total/NA	Water	SM 4500 P E	
480-133988-11	REW-1-20180411	Total/NA	Water	SM 4500 P E	
480-133988-12	REW-4-20180411	Total/NA	Water	SM 4500 P E	
480-133988-13	REW-5-20180411	Total/NA	Water	SM 4500 P E	
480-133988-14	REW-8-20180411	Total/NA	Water	SM 4500 P E	
480-133988-15	REW-9-20180411	Total/NA	Water	SM 4500 P E	
480-133988-16	REW-10-20180411	Total/NA	Water	SM 4500 P E	
480-133988-17	REW-12-20180411	Total/NA	Water	SM 4500 P E	
MB 480-408564/3	Method Blank	Total/NA	Water	SM 4500 P E	
LCS 480-408564/4	Lab Control Sample	Total/NA	Water	SM 4500 P E	
480-133988-12 MS	REW-4-20180411	Total/NA	Water	SM 4500 P E	
480-133988-12 MSD	REW-4-20180411	Total/NA	Water	SM 4500 P E	

Prep Batch: 408609

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-133988-10	MW-563-20180411	Total/NA	Water	Distill/Ammonia	
MB 480-408609/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 480-408609/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	
480-133988-10 MS	MW-563-20180411	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 408628

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-133988-4	MW-265M-20180411	Total/NA	Water	353.2	
480-133988-9	MW-561-20180411	Total/NA	Water	353.2	
480-133988-10	MW-563-20180411	Total/NA	Water	353.2	
480-133988-11	REW-1-20180411	Total/NA	Water	353.2	
480-133988-12	REW-4-20180411	Total/NA	Water	353.2	
480-133988-13	REW-5-20180411	Total/NA	Water	353.2	
480-133988-14	REW-8-20180411	Total/NA	Water	353.2	
480-133988-15	REW-9-20180411	Total/NA	Water	353.2	
480-133988-16	REW-10-20180411	Total/NA	Water	353.2	
480-133988-17	REW-12-20180411	Total/NA	Water	353.2	

Analysis Batch: 408831

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-133988-14	REW-8-20180411	Total/NA	Water	9040C	
480-133988-15	REW-9-20180411	Total/NA	Water	9040C	
480-133988-16	REW-10-20180411	Total/NA	Water	9040C	
480-133988-17	REW-12-20180411	Total/NA	Water	9040C	

General Chemistry (Continued)

Analysis Batch: 408831 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-408831/1	Lab Control Sample	Total/NA	Water	9040C	
480-133988-14 DU	REW-8-20180411	Total/NA	Water	9040C	

Analysis Batch: 408864

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-133988-4	MW-265M-20180411	Total/NA	Water	300.0	
480-133988-9	MW-561-20180411	Total/NA	Water	300.0	
MB 480-408864/29	Method Blank	Total/NA	Water	300.0	
LCS 480-408864/28	Lab Control Sample	Total/NA	Water	300.0	
480-133988-9 MS	MW-561-20180411	Total/NA	Water	300.0	

Analysis Batch: 408869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-133988-10	MW-563-20180411	Total/NA	Water	300.0	
480-133988-11	REW-1-20180411	Total/NA	Water	300.0	
480-133988-12	REW-4-20180411	Total/NA	Water	300.0	
480-133988-13	REW-5-20180411	Total/NA	Water	300.0	
480-133988-14	REW-8-20180411	Total/NA	Water	300.0	
480-133988-15	REW-9-20180411	Total/NA	Water	300.0	
480-133988-16	REW-10-20180411	Total/NA	Water	300.0	
480-133988-17	REW-12-20180411	Total/NA	Water	300.0	
MB 480-408869/5	Method Blank	Total/NA	Water	300.0	
LCS 480-408869/4	Lab Control Sample	Total/NA	Water	300.0	
480-133988-17 MS	REW-12-20180411	Total/NA	Water	300.0	

Analysis Batch: 408957

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-133988-9	MW-561-20180411	Total/NA	Water	9060A	
480-133988-11	REW-1-20180411	Total/NA	Water	9060A	
480-133988-12	REW-4-20180411	Total/NA	Water	9060A	
480-133988-13	REW-5-20180411	Total/NA	Water	9060A	
480-133988-14	REW-8-20180411	Total/NA	Water	9060A	
480-133988-15	REW-9-20180411	Total/NA	Water	9060A	
480-133988-16	REW-10-20180411	Total/NA	Water	9060A	
480-133988-17	REW-12-20180411	Total/NA	Water	9060A	
MB 480-408957/28	Method Blank	Total/NA	Water	9060A	
MB 480-408957/4	Method Blank	Total/NA	Water	9060A	
MB 480-408957/52	Method Blank	Total/NA	Water	9060A	
LCS 480-408957/29	Lab Control Sample	Total/NA	Water	9060A	
LCS 480-408957/5	Lab Control Sample	Total/NA	Water	9060A	
LCS 480-408957/53	Lab Control Sample	Total/NA	Water	9060A	
480-133988-13 MS	REW-5-20180411	Total/NA	Water	9060A	
480-133988-12 DU	REW-4-20180411	Total/NA	Water	9060A	
480-133988-17 DU	REW-12-20180411	Total/NA	Water	9060A	

Prep Batch: 409093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-133988-4	MW-265M-20180411	Total/NA	Water	Distill/Ammonia	
MB 480-409093/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 480-409093/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

General Chemistry (Continued)

Analysis Batch: 409125

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-133988-4	MW-265M-20180411	Total/NA	Water	350.1	409093
480-133988-10	MW-563-20180411	Total/NA	Water	350.1	408609
MB 480-408609/1-A	Method Blank	Total/NA	Water	350.1	408609
MB 480-409093/1-A	Method Blank	Total/NA	Water	350.1	409093
LCS 480-408609/2-A	Lab Control Sample	Total/NA	Water	350.1	408609
LCS 480-409093/2-A	Lab Control Sample	Total/NA	Water	350.1	409093
480-133988-10 MS	MW-563-20180411	Total/NA	Water	350.1	408609

Prep Batch: 409364

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-133988-11	REW-1-20180411	Total/NA	Water	Distill/Ammonia	
480-133988-12	REW-4-20180411	Total/NA	Water	Distill/Ammonia	
480-133988-13	REW-5-20180411	Total/NA	Water	Distill/Ammonia	
480-133988-14	REW-8-20180411	Total/NA	Water	Distill/Ammonia	
480-133988-15	REW-9-20180411	Total/NA	Water	Distill/Ammonia	
480-133988-16	REW-10-20180411	Total/NA	Water	Distill/Ammonia	
MB 480-409364/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 480-409364/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 409530

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-133988-11	REW-1-20180411	Total/NA	Water	350.1	409364
480-133988-12	REW-4-20180411	Total/NA	Water	350.1	409364
480-133988-13	REW-5-20180411	Total/NA	Water	350.1	409364
480-133988-14	REW-8-20180411	Total/NA	Water	350.1	409364
480-133988-15	REW-9-20180411	Total/NA	Water	350.1	409364
480-133988-16	REW-10-20180411	Total/NA	Water	350.1	409364
MB 480-409364/1-A	Method Blank	Total/NA	Water	350.1	409364
LCS 480-409364/2-A	Lab Control Sample	Total/NA	Water	350.1	409364

Analysis Batch: 409772

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-133988-4	MW-265M-20180411	Total/NA	Water	SM 2320B	
480-133988-9	MW-561-20180411	Total/NA	Water	SM 2320B	
480-133988-10	MW-563-20180411	Total/NA	Water	SM 2320B	
480-133988-11	REW-1-20180411	Total/NA	Water	SM 2320B	
480-133988-12	REW-4-20180411	Total/NA	Water	SM 2320B	
480-133988-13	REW-5-20180411	Total/NA	Water	SM 2320B	
480-133988-14	REW-8-20180411	Total/NA	Water	SM 2320B	
480-133988-15	REW-9-20180411	Total/NA	Water	SM 2320B	
480-133988-16	REW-10-20180411	Total/NA	Water	SM 2320B	
480-133988-17	REW-12-20180411	Total/NA	Water	SM 2320B	
MB 480-409772/7	Method Blank	Total/NA	Water	SM 2320B	
LCS 480-409772/8	Lab Control Sample	Total/NA	Water	SM 2320B	

Prep Batch: 409848

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-133988-9	MW-561-20180411	Total/NA	Water	Distill/Ammonia	
480-133988-17	REW-12-20180411	Total/NA	Water	Distill/Ammonia	
MB 480-409848/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 480-409848/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 410062

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-133988-9	MW-561-20180411	Total/NA	Water	350.1	409848
MB 480-409848/1-A	Method Blank	Total/NA	Water	350.1	409848
LCS 480-409848/2-A	Lab Control Sample	Total/NA	Water	350.1	409848

Analysis Batch: 410073

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-133988-17	REW-12-20180411	Total/NA	Water	350.1	409848
MB 480-409848/1-A	Method Blank	Total/NA	Water	350.1	409848
LCS 480-409848/2-A	Lab Control Sample	Total/NA	Water	350.1	409848

Analysis Batch: 410102

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-133988-4	MW-265M-20180411	Total/NA	Water	9060A	
480-133988-10	MW-563-20180411	Total/NA	Water	9060A	
MB 480-410102/28	Method Blank	Total/NA	Water	9060A	
MB 480-410102/4	Method Blank	Total/NA	Water	9060A	
LCS 480-410102/29	Lab Control Sample	Total/NA	Water	9060A	
LCS 480-410102/5	Lab Control Sample	Total/NA	Water	9060A	

Lab Chronicle

Client Sample ID: DEP-21-20180411

Lab Sample ID: 480-133988-1

Date Collected: 04/11/18 07:00

Matrix: Water

Date Received: 04/12/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	409348	04/17/18 22:51	RRS	TAL BUF

Client Sample ID: MW-264M-20180411

Lab Sample ID: 480-133988-2

Date Collected: 04/11/18 07:50

Matrix: Water

Date Received: 04/12/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	409348	04/17/18 23:14	RRS	TAL BUF

Client Sample ID: MW-265S-20180411

Lab Sample ID: 480-133988-3

Date Collected: 04/11/18 09:10

Matrix: Water

Date Received: 04/12/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	409348	04/17/18 23:38	RRS	TAL BUF

Client Sample ID: MW-265M-20180411

Lab Sample ID: 480-133988-4

Date Collected: 04/11/18 09:15

Matrix: Water

Date Received: 04/12/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		2	409348	04/18/18 00:02	RRS	TAL BUF
Total/NA	Prep	3535A			128409	04/12/18 13:25	AKH	TAL BUR
Total/NA	Analysis	522		1	128413	04/13/18 01:44	TPB	TAL BUR
Total/NA	Prep	3005A			408769	04/14/18 09:34	JAK	TAL BUF
Total/NA	Analysis	6010		1	409179	04/16/18 15:07	LMH	TAL BUF
Total/NA	Analysis	300.0		5	408864	04/14/18 22:58	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			409093	04/16/18 18:18	DCB	TAL BUF
Total/NA	Analysis	350.1		2	409125	04/16/18 22:00	DCB	TAL BUF
Total/NA	Analysis	353.2		1	408628	04/12/18 18:22	DCB	TAL BUF
Total/NA	Analysis	9040C		1	408532	04/12/18 13:15	ALZ	TAL BUF
Total/NA	Analysis	9060A		1	410102	04/18/18 11:41	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	409772	04/19/18 11:55	ALZ	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	408564	04/12/18 08:23	DSC	TAL BUF

Client Sample ID: MW-265D-20180411

Lab Sample ID: 480-133988-5

Date Collected: 04/11/18 09:55

Matrix: Water

Date Received: 04/12/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	409348	04/18/18 00:26	RRS	TAL BUF

Client Sample ID: MW-266Ma-20180411

Lab Sample ID: 480-133988-6

Date Collected: 04/11/18 10:05
Date Received: 04/12/18 01:00
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	409348	04/18/18 00:50	RRS	TAL BUF
Total/NA	Prep	3535A			128409	04/12/18 13:25	AKH	TAL BUR
Total/NA	Analysis	522		1	128413	04/13/18 01:59	TPB	TAL BUR

Client Sample ID: MW-266Mb-20180411

Lab Sample ID: 480-133988-7

Date Collected: 04/11/18 09:20
Date Received: 04/12/18 01:00
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	409348	04/18/18 01:13	RRS	TAL BUF

Client Sample ID: MW-269Ma-20180411

Lab Sample ID: 480-133988-8

Date Collected: 04/11/18 10:15
Date Received: 04/12/18 01:00
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	409348	04/18/18 01:37	RRS	TAL BUF
Total/NA	Prep	3535A			128409	04/12/18 13:25	AKH	TAL BUR
Total/NA	Analysis	522		1	128413	04/13/18 02:14	TPB	TAL BUR

Client Sample ID: MW-561-20180411

Lab Sample ID: 480-133988-9

Date Collected: 04/11/18 08:30
Date Received: 04/12/18 01:00
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	409348	04/18/18 02:00	RRS	TAL BUF
Total/NA	Prep	3005A			408769	04/14/18 09:34	JAK	TAL BUF
Total/NA	Analysis	6010		1	409179	04/16/18 15:10	LMH	TAL BUF
Total/NA	Analysis	300.0		5	408864	04/14/18 23:13	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			409848	04/19/18 16:36	DCB	TAL BUF
Total/NA	Analysis	350.1		1	410062	04/20/18 17:04	DCB	TAL BUF
Total/NA	Analysis	353.2		1	408628	04/12/18 22:47	DCB	TAL BUF
Total/NA	Analysis	9040C		1	408532	04/12/18 13:17	ALZ	TAL BUF
Total/NA	Analysis	9060A		1	408957	04/14/18 19:08	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	409772	04/19/18 12:02	ALZ	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	408564	04/12/18 08:23	DSC	TAL BUF

Client Sample ID: MW-563-20180411

Lab Sample ID: 480-133988-10

Date Collected: 04/11/18 10:50

Matrix: Water

Date Received: 04/12/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	409348	04/18/18 02:24	RRS	TAL BUF
Total/NA	Prep	3005A			408769	04/14/18 09:34	JAK	TAL BUF
Total/NA	Analysis	6010		1	409179	04/16/18 15:14	LMH	TAL BUF
Total/NA	Analysis	300.0		1	408869	04/14/18 14:53	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			408609	04/12/18 20:20	DCB	TAL BUF
Total/NA	Analysis	350.1		1	409125	04/16/18 21:09	DCB	TAL BUF
Total/NA	Analysis	353.2		1	408628	04/12/18 18:28	DCB	TAL BUF
Total/NA	Analysis	9040C		1	408532	04/12/18 13:20	ALZ	TAL BUF
Total/NA	Analysis	9060A		1	410102	04/18/18 12:09	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	409772	04/19/18 12:08	ALZ	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	408564	04/12/18 08:23	DSC	TAL BUF

Client Sample ID: REW-1-20180411

Lab Sample ID: 480-133988-11

Date Collected: 04/11/18 12:20

Matrix: Water

Date Received: 04/12/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	409348	04/18/18 02:47	RRS	TAL BUF
Total/NA	Prep	3005A			408769	04/14/18 09:34	JAK	TAL BUF
Total/NA	Analysis	6010		1	409179	04/16/18 15:17	LMH	TAL BUF
Total/NA	Analysis	300.0		2	408869	04/14/18 15:01	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			409364	04/17/18 16:09	DCB	TAL BUF
Total/NA	Analysis	350.1		1	409530	04/18/18 13:46	DCB	TAL BUF
Total/NA	Analysis	353.2		1	408628	04/12/18 18:29	DCB	TAL BUF
Total/NA	Analysis	9040C		1	408532	04/12/18 13:24	ALZ	TAL BUF
Total/NA	Analysis	9060A		1	408957	04/14/18 20:03	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	409772	04/19/18 12:17	ALZ	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	408564	04/12/18 08:23	DSC	TAL BUF

Client Sample ID: REW-4-20180411

Lab Sample ID: 480-133988-12

Date Collected: 04/11/18 11:40

Matrix: Water

Date Received: 04/12/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	409348	04/18/18 03:11	RRS	TAL BUF
Total/NA	Prep	3005A			408769	04/14/18 09:34	JAK	TAL BUF
Total/NA	Analysis	6010		1	409179	04/16/18 15:21	LMH	TAL BUF
Total/NA	Analysis	300.0		1	408869	04/14/18 15:09	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			409364	04/17/18 16:09	DCB	TAL BUF
Total/NA	Analysis	350.1		1	409530	04/18/18 13:47	DCB	TAL BUF
Total/NA	Analysis	353.2		1	408628	04/12/18 18:30	DCB	TAL BUF

Lab Chronicle

Client Sample ID: REW-4-20180411

Lab Sample ID: 480-133988-12

Date Collected: 04/11/18 11:40

Matrix: Water

Date Received: 04/12/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9040C		1	408532	04/12/18 13:26	ALZ	TAL BUF
Total/NA	Analysis	9060A		1	408957	04/14/18 22:21	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	409772	04/19/18 12:24	ALZ	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	408564	04/12/18 08:23	DSC	TAL BUF

Client Sample ID: REW-5-20180411

Lab Sample ID: 480-133988-13

Date Collected: 04/11/18 10:40

Matrix: Water

Date Received: 04/12/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	409348	04/18/18 03:34	RRS	TAL BUF
Total/NA	Prep	3005A			408769	04/14/18 09:34	JAK	TAL BUF
Total/NA	Analysis	6010		1	409179	04/16/18 15:36	LMH	TAL BUF
Total/NA	Analysis	300.0		2	408869	04/14/18 15:17	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			409364	04/17/18 16:09	DCB	TAL BUF
Total/NA	Analysis	350.1		1	409530	04/18/18 13:48	DCB	TAL BUF
Total/NA	Analysis	353.2		1	408628	04/12/18 18:31	DCB	TAL BUF
Total/NA	Analysis	9040C		1	408532	04/12/18 13:30	ALZ	TAL BUF
Total/NA	Analysis	9060A		1	408957	04/14/18 23:17	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	409772	04/19/18 12:30	ALZ	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	408564	04/12/18 08:23	DSC	TAL BUF

Client Sample ID: REW-8-20180411

Lab Sample ID: 480-133988-14

Date Collected: 04/11/18 07:55

Matrix: Water

Date Received: 04/12/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	409387	04/18/18 15:58	GSR	TAL BUF
Total/NA	Prep	3005A			408769	04/14/18 09:34	JAK	TAL BUF
Total/NA	Analysis	6010		1	409179	04/16/18 15:39	LMH	TAL BUF
Total/NA	Analysis	300.0		1	408869	04/14/18 15:25	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			409364	04/17/18 16:09	DCB	TAL BUF
Total/NA	Analysis	350.1		1	409530	04/18/18 13:48	DCB	TAL BUF
Total/NA	Analysis	353.2		1	408628	04/12/18 18:32	DCB	TAL BUF
Total/NA	Analysis	9040C		1	408831	04/13/18 16:55	ALZ	TAL BUF
Total/NA	Analysis	9060A		1	408957	04/15/18 00:13	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	409772	04/19/18 12:37	ALZ	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	408564	04/12/18 08:23	DSC	TAL BUF

Client Sample ID: REW-9-20180411

Lab Sample ID: 480-133988-15

Date Collected: 04/11/18 08:40

Matrix: Water

Date Received: 04/12/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	409598	04/19/18 01:38	RRS	TAL BUF
Total/NA	Prep	3005A			408769	04/14/18 09:34	JAK	TAL BUF
Total/NA	Analysis	6010		1	409179	04/16/18 15:43	LMH	TAL BUF
Total/NA	Analysis	300.0		1	408869	04/14/18 15:33	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			409364	04/17/18 16:09	DCB	TAL BUF
Total/NA	Analysis	350.1		1	409530	04/18/18 13:49	DCB	TAL BUF
Total/NA	Analysis	353.2		1	408628	04/12/18 18:33	DCB	TAL BUF
Total/NA	Analysis	9040C		1	408831	04/13/18 17:01	ALZ	TAL BUF
Total/NA	Analysis	9060A		1	408957	04/15/18 00:41	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	409772	04/19/18 12:58	ALZ	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	408564	04/12/18 08:23	DSC	TAL BUF

Client Sample ID: REW-10-20180411

Lab Sample ID: 480-133988-16

Date Collected: 04/11/18 09:25

Matrix: Water

Date Received: 04/12/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	409598	04/19/18 02:02	RRS	TAL BUF
Total/NA	Prep	3005A			408769	04/14/18 09:34	JAK	TAL BUF
Total/NA	Analysis	6010		1	409179	04/16/18 15:47	LMH	TAL BUF
Total/NA	Analysis	300.0		1	408869	04/14/18 15:42	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			409364	04/17/18 16:09	DCB	TAL BUF
Total/NA	Analysis	350.1		1	409530	04/18/18 13:50	DCB	TAL BUF
Total/NA	Analysis	353.2		1	408628	04/12/18 18:35	DCB	TAL BUF
Total/NA	Analysis	9040C		1	408831	04/13/18 17:04	ALZ	TAL BUF
Total/NA	Analysis	9060A		1	408957	04/15/18 01:09	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	409772	04/19/18 13:05	ALZ	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	408564	04/12/18 08:23	DSC	TAL BUF

Client Sample ID: REW-12-20180411

Lab Sample ID: 480-133988-17

Date Collected: 04/11/18 11:05

Matrix: Water

Date Received: 04/12/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	409631	04/19/18 11:50	AEM	TAL BUF
Total/NA	Prep	3005A			408769	04/14/18 09:34	JAK	TAL BUF
Total/NA	Analysis	6010		1	409179	04/16/18 15:50	LMH	TAL BUF
Total/NA	Analysis	300.0		2	408869	04/14/18 15:50	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			409848	04/19/18 16:36	DCB	TAL BUF
Total/NA	Analysis	350.1		10	410073	04/20/18 18:50	DCB	TAL BUF
Total/NA	Analysis	353.2		1	408628	04/12/18 18:41	DCB	TAL BUF

Client Sample ID: REW-12-20180411

Lab Sample ID: 480-133988-17

Date Collected: 04/11/18 11:05

Matrix: Water

Date Received: 04/12/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9040C		1	408831	04/13/18 17:08	ALZ	TAL BUF
Total/NA	Analysis	9060A		1	408957	04/15/18 03:01	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	409772	04/19/18 13:13	ALZ	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	408564	04/12/18 08:23	DSC	TAL BUF

Client Sample ID: DUP3-20180411

Lab Sample ID: 480-133988-18

Date Collected: 04/11/18 00:00

Matrix: Water

Date Received: 04/12/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	409631	04/19/18 12:14	AEM	TAL BUF

Client Sample ID: DUP4-20180411

Lab Sample ID: 480-133988-19

Date Collected: 04/11/18 00:00

Matrix: Water

Date Received: 04/12/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	409387	04/18/18 16:21	GSR	TAL BUF
Total/NA	Prep	3535A			128409	04/12/18 13:25	AKH	TAL BUR
Total/NA	Analysis	522		1	128413	04/13/18 02:29	TPB	TAL BUR

Client Sample ID: Trip Blanks

Lab Sample ID: 480-133988-20

Date Collected: 04/11/18 00:00

Matrix: Water

Date Received: 04/12/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	409598	04/19/18 03:12	RRS	TAL BUF

Laboratory References:

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

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Accreditation/Certification Summary

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-18
California	State Program	9	2931	04-01-19
Connecticut	State Program	1	PH-0568	09-30-18
Florida	NELAP	4	E87672	06-30-18
Georgia	State Program	4	956	03-31-18 *
Illinois	NELAP	5	200003	09-30-18
Iowa	State Program	7	374	03-01-19
Kansas	NELAP	7	E-10187	01-31-19
Kentucky (DW)	State Program	4	90029	12-31-18
Kentucky (UST)	State Program	4	30	03-31-19
Kentucky (WW)	State Program	4	90029	12-31-18
Louisiana	NELAP	6	02031	06-30-18
Maine	State Program	1	NY00044	12-04-18
Maryland	State Program	3	294	03-31-19
Massachusetts	State Program	1	M-NY044	06-30-18
Michigan	State Program	5	9937	03-31-19
Minnesota	NELAP	5	036-999-337	12-31-18
New Hampshire	NELAP	1	2337	11-17-18
New Jersey	NELAP	2	NY455	06-30-18
New York	NELAP	2	10026	03-31-18 *
North Dakota	State Program	8	R-176	03-31-18 *
Oklahoma	State Program	6	9421	08-31-18
Oregon	NELAP	10	NY200003	06-09-18
Pennsylvania	NELAP	3	68-00281	07-31-18
Rhode Island	State Program	1	LAO00328	12-30-18
Tennessee	State Program	4	TN02970	03-31-19
Texas	NELAP	6	T104704412-15-6	07-31-18
USDA	Federal		P330-11-00386	02-06-21
Virginia	NELAP	3	460185	09-14-18
Washington	State Program	10	C784	02-10-19
Wisconsin	State Program	5	998310390	08-31-18

Laboratory: TestAmerica Burlington

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

Authority	Program	EPA Region	Identification Number	Expiration Date
ANAB	DoD ELAP		L2336	02-25-20
Connecticut	State Program	1	PH-0751	09-30-19
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-01-19
Florida	NELAP	4	E87467	06-30-18
Maine	State Program	1	VT00008	04-17-19
Minnesota	NELAP	5	050-999-436	12-31-18
New Jersey	NELAP	2	VT972	06-30-18
New York	NELAP	2	10391	04-01-19
Pennsylvania	NELAP	3	68-00489	04-30-18 *
Rhode Island	State Program	1	LAO00298	12-30-18
US Fish & Wildlife	Federal		LE-058448-0	07-31-18
USDA	Federal		P330-11-00093	07-24-20
Vermont	State Program	1	VT-4000	12-31-18
Virginia	NELAP	3	460209	12-14-18

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

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

TestAmerica Job ID: 480-133988-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds (GC/MS)	MA DEP	TAL BUF
522	1,4 Dioxane (GC/MS SIM)	EPA	TAL BUR
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
3005A	Preparation, Total Metals	SW846	TAL BUF
3535A	Solid Phase Extraction (SPE)	SW846	TAL BUR
5030C	Purge and Trap	SW846	TAL BUF
Distill/Ammonia	Distillation, Ammonia	None	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.
None = None
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
TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Sample Summary

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

TestAmerica Job ID: 480-133988-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-133988-1	DEP-21-20180411	Water	04/11/18 07:00	04/12/18 01:00
480-133988-2	MW-264M-20180411	Water	04/11/18 07:50	04/12/18 01:00
480-133988-3	MW-265S-20180411	Water	04/11/18 09:10	04/12/18 01:00
480-133988-4	MW-265M-20180411	Water	04/11/18 09:15	04/12/18 01:00
480-133988-5	MW-265D-20180411	Water	04/11/18 09:55	04/12/18 01:00
480-133988-6	MW-266Ma-20180411	Water	04/11/18 10:05	04/12/18 01:00
480-133988-7	MW-266Mb-20180411	Water	04/11/18 09:20	04/12/18 01:00
480-133988-8	MW-269Ma-20180411	Water	04/11/18 10:15	04/12/18 01:00
480-133988-9	MW-561-20180411	Water	04/11/18 08:30	04/12/18 01:00
480-133988-10	MW-563-20180411	Water	04/11/18 10:50	04/12/18 01:00
480-133988-11	REW-1-20180411	Water	04/11/18 12:20	04/12/18 01:00
480-133988-12	REW-4-20180411	Water	04/11/18 11:40	04/12/18 01:00
480-133988-13	REW-5-20180411	Water	04/11/18 10:40	04/12/18 01:00
480-133988-14	REW-8-20180411	Water	04/11/18 07:55	04/12/18 01:00
480-133988-15	REW-9-20180411	Water	04/11/18 08:40	04/12/18 01:00
480-133988-16	REW-10-20180411	Water	04/11/18 09:25	04/12/18 01:00
480-133988-17	REW-12-20180411	Water	04/11/18 11:05	04/12/18 01:00
480-133988-18	DUP3-20180411	Water	04/11/18 00:00	04/12/18 01:00
480-133988-19	DUP4-20180411	Water	04/11/18 00:00	04/12/18 01:00
480-133988-20	Trip Blanks	Water	04/11/18 00:00	04/12/18 01:00

Login Sample Receipt Checklist

Client: Innovative Engineering Solutions, Inc

Job Number: 480-133988-1

Login Number: 133988

List Source: TestAmerica Buffalo

List Number: 1

Creator: Kinecki, Kenneth P

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	

Login Sample Receipt Checklist

Client: Innovative Engineering Solutions, Inc

Job Number: 480-133988-1

Login Number: 133988

List Number: 2

Creator: Urbon, Sam A

List Source: TestAmerica Burlington

List Creation: 04/12/18 11:34 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	Seal present with no number.
Sample custody seals, if present, are 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	1.9ºC
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?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received 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.	N/A	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

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: Vishi Parmar	Sample Collector's Name (Please Print Neatly): Danny Jones, Darren Rolls
Company: Innovative Engineering Solutions Inc	Sample Collector's Phone: 508-404-3196
Address: 35 Spring St	Due Date Requested: 4/18/18
City: Walpole	Turnaround Time (TAT) Requested (business days): 5 day
State and Zip: MA 02081	Quote # or Project #:
Client's Phone: 508-668-0033	PO #: RA-008
Client's Contact Email: v.parmar@IESTonline.com	WO #:
Client's Project Name/Number: Raytheon Wayland RA-008	PWS ID #:
Sample Collection Site Name & Location: Wayland MA	

Lab PM: Caitlin Hirsch
E-Mail:
Lab COC Barcode Label
COC No: 40781
Page: 1 of 2
Job #:

Analysis Requested

Sample Identification	Sample Collection Date (MM/DD/YY)	Sample Collection Time (24 Hour Clock)	Sample Type: C=Comp G=Grab	Matrix Type **	8260C	522 1,4 Dioxane	6010A TOC	9040C pH / 300.0_28D SO3, Cl	350.1 NH3	6010 MEP Total Iron	2320B Alkalinity	4500-P-E Ortho PO4 / 353.2 NO3 calc	Total Number of Containers (enter total for each line)	Special Instructions & Notes:
				Preservation Codes =>	A	A	A	N	S	D	N	N	↓	
DEP-21-20180411	4/11/18	0700	G	W	X								3	GW-3 requirement SD
MW-264M-20180411	4/11/18	0750	G	W	X								3	
MW-265S-20180411	4/11/18	0910	G	W	X								3	
MW-265M-20180411	4/11/18	0915	G	W	X	X	X	X	X	X	X	X	11	
MW-265D-20180411	4/11/18	0955	G	W	X								3	
MW-266Ma-20180411	4/11/18	1005	G	W	X	X							4	
MW-266Mb-20180411	4/11/18	0920	G	W	X								3	
MW-269Ma-20180411	4/11/18	1015	G	W	X	X							4	
MW-561-20180411	4/11/18	0830	G	W	X		X	X	X	X	X	X	10	
MW-563-2018411	4/11/18	1050	G	W	X		X	X	X	X	X	X	10	

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 ☐
RCP ☐
DEP Form ☐
eDEP Filing ☐
GW1/S1 ☐
CT RSR ☐
EDD Required ☐
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.

480-133988 COC

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: 4/11/18 1333	Company: IEST	Received by: To Test America Lock Box	Date/Time:	Company
Relinquished by:	Date/Time: 4-11-18 1800	Company: TA	Received by:	Date/Time: 4-11-18 1500	Company: TAT
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time: 4/12/18 0100	Company: TAB
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 1.0, 1.8°C #4		

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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:	Sample Collector's Name (Please Print Neatly): Dusty Jones, Danna Doll, Chris Hirsch	Lab PM:	Lab COC Barcode Label
Client Contact: Vicki Pariyar	Sample Collector's Phone: 508-404-3196	E-Mail:	
Company: Innovative Engineering Solutions Inc			
Address: 23 Spring St	Due Date Requested:		
City: Walpole	Turnaround Time (TAT) Requested (business days): 5 days		
State and Zip: MA 02081			
Client's Phone: 508-668-0033	Quote # or Project #:		
Client's Contact Email: vpariyar@iesinc.com	PO #: RA-008		
Client's Project Name/Number: Raytheon Wayland RA-008	WO #:		
Sample Collection Site Name & Location: Wayland MA	PWS ID #:		

COC No.: 40782
Page: 2 of 2
Job #:

Analysis Requested

Sample Identification	Sample Collection Date (MM/DD/YY)	Sample Collection Time (24 Hour Clock)	Sample Type: C=Comp G=Grab	Matrix Type **	8260C	522 1,4 Dioxane	9060A TOC	9040C pH/300.0-28D SO4, Cl	350.1 NH3	6010 MCP Total Iron	2320B Alkalinity	4500-P-E Ortho PO4 / 353.2 NO3, NO2	Total Number of Containers (enter total for each line)	Special Instructions & Notes:
			Preservation Codes =>		A	A	A	N	S	D	N	N	↓	
REW-1 - 20180411	4/11/18	1220	G	W	X		X	X	X	X	X	X	10	GW-3 Requirements
REW-4 - 20180411	4/11/18	1140	G	W	X		X	X	X	X	X	X	10	
REW-5 - 2018-0411	4/11/18	1040	G	W	X		X	X	X	X	X	X	10	
REW-8 - 20180411	4/11/18	0755	G	W	X		X	X	X	X	X	X	10	
REW-9 - 20180411	4/11/18	0840	G	W	X		X	X	X	X	X	X	10	
REW-10 - 20180411	4/11/18	0925	G	W	X		X	X	X	X	X	X	10	
REW-12-20180411	4/11/18	1105	G	W	X		X	X	X	X	X	X	10	
Dup3 - 20180411	4/11/18	—	G	W	X								3	
Dup4 - 20180411	4/11/18	—	G	W	X	X							4	
Trip Blanks	—	—	—	W	X								2	

Preservation Codes:

A - Hydrochloric Acid	J - Deionized Water
B - Sodium Hydroxide	M - Hexane
C - Zinc Acetate	N - No Preservative
D - Nitric Acid	P - Sodium Sulfate
E - Sodium Bisulfite	Q - Sodium Sulfite
F - Methanol	R - Sodium Thiosulfate
H - Ascorbic Acid	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: 4/11/18 1335	Company: IESI	Received by: To TEST America	Date/Time: Lock Box	Company:
Relinquished by:	Date/Time: 4-11-18 1810	Company: TA	Received by:	Date/Time: 4-11-18 1810	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time: 4/12/18 0100	Company: TABS
Custody Seals Intact: △ Yes △ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 1.0, 1.8°C #4		

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360325-Boston

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

480-133988 Chain of Custody

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information:	Sample Collector's Name (Please Print Neatly): Denny Jones, Deanna Polls	Lab PM: Hirsch	Lab COC Barcode Label
Client Contact: Vicki Pearson	Sample Collector's Phone: 508-404-3196	E-Mail:	
Company: Innovative Engineering Solutions Inc			
Address: 25 Spring St	Due Date Requested: 4/18/18		
City: Walpole	Turnaround Time (TAT) Requested (business days): 5 day		
State and Zip: MA 02081			
Client's Phone: 508-668-0033	Quote # or Project #:		
Client's Contact Email: v.pearson@IESTonline.com	PO #: RA-008		
Client's Project Name/Number: Raytheon Wayland RA-008	WO #:		
Sample Collection Site Name & Location: Wayland MA	PWS ID #:		

COC No: 40781
Page: 1 of 2
Job #:

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.

Analysis Requested

Sample Identification	Sample Collection Date (MM/DD/YY)	Sample Collection Time (24 Hour Clock)	Sample Type: C=Comp G=Grab	Matrix Type **	8260C	522 1,4 Dioxane	6010A TOC	9040C pH / 300.0_28D SO3, Cl	350.1 NH3	6010 MP Total Iron	2320B Alkalinity / 353.2 NO3	4500-P-E Ortho PO4 / NO3 Calc	Total Number of Containers (enter total for each line)	Special Instructions & Notes:
			Preservation Codes ⇒		A	A	A	N	S	D	N	N	↓	
DEP-21-20180411	4/11/18	0700	G	W	X								3	GW-3 exceedance std
MW-264M-20180411	4/11/18	0750	G	W	X								3	
MW-265S-20180411	4/11/18	0910	G	W	X								3	
MW-265M-20180411	4/11/18	0915	G	W	X	X	X	X	X	X	X	X	11	522-1,4-Dioxane
MW-265D-20180411	4/11/18	0955	G	W	X								3	To Burlington
MW-266Ma-20180411	4/11/18	1005	G	W	X	X							4	
MW-266Mb-20180411	4/11/18	0920	G	W	X								3	
MW-269Ma-20180411	4/11/18	1615	G	W	X	X							4	
MW-561-20180411	4/11/18	0830	G	W	X		X	X	X	X	X	X	10	
MW-563-2018411	4/11/18	1050	G	W	X		X	X	X	X	X	X	10	

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: 4/11/18 1333	Company: IEST	Received by: To Test America Lock Box	Date/Time:	Company
Relinquished by:	Date/Time: 4-11-18 1800	Company: TA	Received by:	Date/Time: 4-11-18 1900	Company: TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.: no #s		Cooler Temperature(s) °C and Other Remarks: 1.9		

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15

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 Pariyar	Sample Collector's Name (Please Print Neatly): Dunn Jones, Donna Roll
Company: Innovative Engineering Solutions Inc	Sample Collector's Phone: 508-404-3196
Address: 23 Spring St	Lab PM: [illegible] Hirsch
City: Walpole	E-Mail:
State and Zip: MA 02081	Due Date Requested:
Client's Phone: 508-668-0033	Turnaround Time (TAT) Requested (business days): 5 days
Client's Contact Email: vpariyar@iesinc.com	Quote # or Project #:
Client's Project Name/Number: Raytheon Wayland RA-008	PO #: RA-008
Sample Collection Site Name & Location: Wayland MA	WO #:
	PWS ID #:

Lab COC Barcode Label

COC No: 40782
Page: 2 of 2
Job #:

Analysis Requested

Sample Identification	Sample Collection Date (MM/DD/YY)	Sample Collection Time (24 Hour Clock)	Sample Type: C=Comp G=Grab	Matrix Type **	8260C	8270 1,4 Dioxane	6010A TOC	9040C pH/300.0_353D SO3 Cl-	350.1 NH3	6010 MCP Total Iron	2320B Alkalinity	4500-P-E Ortho PO4 / 353 NO3								Total Number of Containers (enter total for each line)
				Preservation Codes:	A	D	A	N	S	D	N	N								↓
REW-1--20180411	4/11/18	1220	G	W	X		X	X	X	X	X	X								10
REW-4 - 20180411	4/11/18	1140	G	W	X		X	X	X	X	X	X								10
REW-5 - 2018-0411	4/11/18	1040	G	W	X		X	X	X	X	X	X								10
REW-8 - 20180411	4/11/18	0755	G	W	X		X	X	X	X	X	X								10
REW-9 - 20180411	4/11/18	0840	G	W	X		X	X	X	X	X	X								10
REW-10 - 20180411	4/11/18	0925	G	W	X		X	X	X	X	X	X								10
REW-~~B~~12-20180411	4/11/18	1105	G	W	X		X	X	X	X	X	X								10
Dup3 - 20180411	4/11/18	—	G	W	X															3
Dup4 - 20180411	4/11/18	—	G	W	X	X														4
Trip Blanks	—	—	—	W	X															2

Preservation Codes:

A - Hydrochloric Acid	J - Deionized Water
B - Sodium Hydroxide	M - Hexane
C - Zinc Acetate	N - No Preservative
D - Nitric Acid	P - Sodium Sulfate
E - Sodium Bisulfite	Q - Sodium Sulfite
F - Methanol	R - Sodium Thiosulfate
H - Ascorbic Acid	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:

GW-3 Requirements

8270-1-4 Dioxane To Burlington

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: 4/11/18 1335	Company: IESI	Received by: To Test America	Date/Time: Lock Box	Company
Relinquished by:	Date/Time: 4-11-18 1[illegible]	Company: [illegible]	Received by:	Date/Time: 4-11-18	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☑ Yes △ No
Custody Seal No.: no #s
Cooler Temperature(s) °C and Other Remarks: 1.9

WI-QA-010 rev 8

Revised 10/29/2014
TAL-8245-360R

ORIGIN ID:BXCA (781) 466-6900
PAUL HOBART
TESTAMERICA
240 BEAR HILL ROAD
SUITE 104
WALTHAM, MA 02451
UNITED STATES US

SHIP DATE: 11APR18
ACTWGT: 29.85 LB
CAD: 590687/CAFE3111

BILL RECIPIENT

546C1/9132/53C1

TO **SAMPLE RECEIVING**
TESTAMERICA BURLINGTON
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403
(802) 660-1990 REF:
INV:
PO: DEPT:

FedEx
Express

E

J17101610200Iuv

THU - 12 APR 10:30A
PRIORITY OVERNIGHT

TRK# 0201 **4258 8393 0560**

NC BTVA

05403
VT-US **BTV**