From: Clementine Dulieu
Sent: Thursday, January 17, 2019 10:32 AM
To: David Costello
Subject: Wayland - IESI October lab reports
Attachments: IESI Lab Reports_October 2018.pdf; National Development BWSC-123 Form.pdf

Hi David,

Innovative Engineering Solutions, Inc. (IESI) collected groundwater samples from monitoring wells located on National Development property at the former Raytheon Facility (the "Site") located at 430 Boston Post Road in Wayland, MA in October 2018. The analytical results and BWSC-123 form are attached to this email.

These results were previously included in the November 2018 ROS report for the Site, and are being sent via email for National Development's records.

Please let me know if you have any questions or require any additional information.

Thanks,

Clementine Dulieu
Project Geologist

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Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC123

This Notice is Related to:
Release Tracking Number

3 - 13302

NOTICE OF ENVIRONMENTAL SAMPLING

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

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

1. Street Address: 430 Boston Post Road

City/Town: Wayland Zip Code: 01778

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

1. Name: National Development
2. Street Address: 2310 Washington Street

City/Town: Newton Lower Falls Zip Code: 02462

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

☑ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☑ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☑ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

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

1. Street Address: 430 Boston Post Road

City/Town: Wayland Zip Code: 01778

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

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☑ Phase V/Remedy Operation Status
☐ Post-Temporary Solution Operation, Maintenance and Monitoring
☐ Other _____ (specify)

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

☐ residential ☑ commercial ☐ industrial ☐ school/playground ☐ Other _____ (specify)

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

Collection of groundwater samples from existing monitoring wells

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

Contact Name: 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.

ANALYTICAL REPORT

Lab Number:	L1841261
Client:	Innovative Engineering Solutions, Inc. 25 Spring Street Walpole, MA 02081
ATTN:	Vicki Pariyar
Phone:	(508) 668-0033
Project Name:	RAYTHEON WAYLAND
Project Number:	RA-008
Report Date:	10/19/18

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: RAYTHEON WAYLAND
Project Number: RA-008

Lab Number: L1841261
Report Date: 10/19/18

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1841261-01	MW-261S-20181010	WATER	WAYLAND, MA	10/10/18 08:50	10/11/18
L1841261-02	MW-265M-20181010	WATER	WAYLAND, MA	10/10/18 13:45	10/11/18
L1841261-03	MW-267S-20181009	WATER	WAYLAND, MA	10/09/18 12:10	10/11/18
L1841261-04	MW-268S-20181009	WATER	WAYLAND, MA	10/09/18 08:35	10/11/18
L1841261-05	MW-268M-20181009	WATER	WAYLAND, MA	10/09/18 09:15	10/11/18
L1841261-06	MW-551-20181010	WATER	WAYLAND, MA	10/10/18 09:30	10/11/18
L1841261-07	MW-552-20181010	WATER	WAYLAND, MA	10/10/18 08:10	10/11/18
L1841261-08	MW-553-20181010	WATER	WAYLAND, MA	10/10/18 07:20	10/11/18
L1841261-09	MW-560-20181011	WATER	WAYLAND, MA	10/11/18 10:45	10/11/18
L1841261-10	MW-561-20181011	WATER	WAYLAND, MA	10/11/18 10:00	10/11/18
L1841261-11	MW-562-20181010	WATER	WAYLAND, MA	10/10/18 10:15	10/11/18
L1841261-12	MW-563-20181011	WATER	WAYLAND, MA	10/11/18 11:25	10/11/18
L1841261-13	REW-1-20181010	WATER	WAYLAND, MA	10/10/18 11:05	10/11/18
L1841261-14	REW-4-20181010	WATER	WAYLAND, MA	10/10/18 11:45	10/11/18
L1841261-15	REW-5-20181010	WATER	WAYLAND, MA	10/10/18 12:30	10/11/18
L1841261-16	REW-6-20181009	WATER	WAYLAND, MA	10/09/18 11:25	10/11/18
L1841261-17	REW-7-20181009	WATER	WAYLAND, MA	10/09/18 13:30	10/11/18
L1841261-18	REW-8-20181009	WATER	WAYLAND, MA	10/09/18 14:10	10/11/18
L1841261-19	REW-9-20181009	WATER	WAYLAND, MA	10/09/18 14:50	10/11/18
L1841261-20	REW-10-20181011	WATER	WAYLAND, MA	10/11/18 12:05	10/11/18
L1841261-21	REW-11-20181009	WATER	WAYLAND, MA	10/09/18 10:35	10/11/18
L1841261-22	REW-12-20181011	WATER	WAYLAND, MA	10/11/18 06:50	10/11/18

Project Name: RAYTHEON WAYLAND
Project Number: RA-008
Lab Number: L1841261
Report Date: 10/19/18

Case Narrative

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

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

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

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

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

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

Project Name: RAYTHEON WAYLAND **Lab Number:** L1841261
Project Number: RA-008 **Report Date:** 10/19/18

Case Narrative (continued)

Dissolved Gases

L1841261-01 through -03, -05 through -08, and -20: The samples were-analyzed on dilution in order to quantify the results within the calibration range. The result(s) should be considered estimated, and are qualified with an E flag, for any compound(s) that exceeded the calibration range in the initial analysis. The re-analysis was performed only for the compound(s) that exceeded the calibration range.

L1841261-01, -03, -07, and -08 were collected in a pre-preserved vial; however, the pH of the sample was determined to be greater than two

L1841261-02, 09, -10, and -11 were collected in a pre-preserved vial; however, the pH of the sample was determined to be greater than two

L1841261-02, -09, -11, & -12: The samples have elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

L1841261-12-22: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

L1841261-13, -15, -16, -21, and -22 were collected in a pre-preserved vial; however, the pH of the sample was determined to be greater than two

L1841261-14: The sample was re-analyzed on dilution in order to quantify the results within the calibration range. The result(s) should be considered estimated, and are qualified with an E flag, for any compound(s) that exceeded the calibration range in the initial analysis. The re-analysis was performed only for the compound(s) that exceeded the calibration range.

The WG1169161-5 MS/MSD recoveries, performed on L1841261-11, are outside the acceptance criteria for methane (659%). The unacceptable percent recoveries are attributed to the elevated concentrations of target compounds present in the native sample.

The WG1169161-5 MS/MSD recoveries, performed on L1841261-11, are outside the acceptance criteria for ethene (54%) and ethane (56%); however, the associated LCS/LCSD recoveries are within overall method allowances. No further action was required.

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

Authorized Signature: Christopher J. Anderson

Title: Technical Director/Representative Date: 10/19/18

ORGANICS

VOLATILES

Project Name: RAYTHEON WAYLAND
Lab Number: L1841261
Project Number: RA-008
Report Date: 10/19/18

SAMPLE RESULTS

Lab ID: L1841261-01
Client ID: MW-261S-20181010
Sample Location: WAYLAND, MA

Date Collected: 10/10/18 08:50
Date Received: 10/11/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 10/16/18 22:50
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	19700	E	ug/l	1.00	--	1	A
Ethene	1.68		ug/l	0.500	--	1	A
Ethane	16.2		ug/l	0.500	--	1	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1841261
Project Number: RA-008
Report Date: 10/19/18

SAMPLE RESULTS

Lab ID: L1841261-01 D
Client ID: MW-261S-20181010
Sample Location: WAYLAND, MA

Date Collected: 10/10/18 08:50
Date Received: 10/11/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 10/17/18 12:09
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	15900		ug/l	5.00	--	5	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1841261
Project Number: RA-008
Report Date: 10/19/18

SAMPLE RESULTS

Lab ID: L1841261-02 D
Client ID: MW-265M-20181010
Sample Location: WAYLAND, MA

Date Collected: 10/10/18 13:45
Date Received: 10/11/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 10/17/18 12:40
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	13500		ug/l	5.00	--	5	A
Ethene	ND		ug/l	2.50	--	5	A
Ethane	ND		ug/l	2.50	--	5	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1841261
Project Number: RA-008
Report Date: 10/19/18

SAMPLE RESULTS

Lab ID: L1841261-03
Client ID: MW-267S-20181009
Sample Location: WAYLAND, MA

Date Collected: 10/09/18 12:10
Date Received: 10/11/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 10/16/18 23:25
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	16200	E	ug/l	1.00	--	1	A
Ethene	5.63		ug/l	0.500	--	1	A
Ethane	1.02		ug/l	0.500	--	1	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1841261
Project Number: RA-008
Report Date: 10/19/18

SAMPLE RESULTS

Lab ID: L1841261-03 D
Client ID: MW-267S-20181009
Sample Location: WAYLAND, MA

Date Collected: 10/09/18 12:10
Date Received: 10/11/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 10/17/18 10:01
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	13400		ug/l	5.00	--	5	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1841261
Project Number: RA-008
Report Date: 10/19/18

SAMPLE RESULTS

Lab ID: L1841261-04
Client ID: MW-268S-20181009
Sample Location: WAYLAND, MA

Date Collected: 10/09/18 08:35
Date Received: 10/11/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 10/16/18 23:43
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	7110		ug/l	1.00	--	1	A
Ethene	3.57		ug/l	0.500	--	1	A
Ethane	0.936		ug/l	0.500	--	1	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1841261
Project Number: RA-008
Report Date: 10/19/18

SAMPLE RESULTS

Lab ID: L1841261-05
Client ID: MW-268M-20181009
Sample Location: WAYLAND, MA
Date Collected: 10/09/18 09:15
Date Received: 10/11/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 10/17/18 00:00
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	35700	E	ug/l	1.00	--	1	A
Ethene	14.0		ug/l	0.500	--	1	A
Ethane	9.98		ug/l	0.500	--	1	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1841261
Project Number: RA-008
Report Date: 10/19/18

SAMPLE RESULTS

Lab ID: L1841261-05 D
Client ID: MW-268M-20181009
Sample Location: WAYLAND, MA

Date Collected: 10/09/18 09:15
Date Received: 10/11/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 10/17/18 10:55
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	27900		ug/l	10.0	--	10	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1841261
Project Number: RA-008
Report Date: 10/19/18

SAMPLE RESULTS

Lab ID: L1841261-06
Client ID: MW-551-20181010
Sample Location: WAYLAND, MA

Date Collected: 10/10/18 09:30
Date Received: 10/11/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 10/17/18 00:18
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	26000	E	ug/l	1.00	--	1	A
Ethene	1.71		ug/l	0.500	--	1	A
Ethane	4.04		ug/l	0.500	--	1	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1841261
Project Number: RA-008
Report Date: 10/19/18

SAMPLE RESULTS

Lab ID: L1841261-06 D
Client ID: MW-551-20181010
Sample Location: WAYLAND, MA

Date Collected: 10/10/18 09:30
Date Received: 10/11/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 10/17/18 10:18
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	21400		ug/l	5.00	--	5	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1841261
Project Number: RA-008
Report Date: 10/19/18

SAMPLE RESULTS

Lab ID: L1841261-07
Client ID: MW-552-20181010
Sample Location: WAYLAND, MA
Date Collected: 10/10/18 08:10
Date Received: 10/11/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 10/17/18 00:36
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	17700	E	ug/l	1.00	--	1	A
Ethene	0.583		ug/l	0.500	--	1	A
Ethane	10.7		ug/l	0.500	--	1	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1841261
Project Number: RA-008
Report Date: 10/19/18

SAMPLE RESULTS

Lab ID: L1841261-07 D
Client ID: MW-552-20181010
Sample Location: WAYLAND, MA

Date Collected: 10/10/18 08:10
Date Received: 10/11/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 10/17/18 10:36
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	14300		ug/l	5.00	--	5	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1841261
Project Number: RA-008
Report Date: 10/19/18

SAMPLE RESULTS

Lab ID: L1841261-08
Client ID: MW-553-20181010
Sample Location: WAYLAND, MA

Date Collected: 10/10/18 07:20
Date Received: 10/11/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 10/17/18 00:53
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	14300	E	ug/l	1.00	--	1	A
Ethene	3.85		ug/l	0.500	--	1	A
Ethane	1.77		ug/l	0.500	--	1	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1841261
Project Number: RA-008
Report Date: 10/19/18

SAMPLE RESULTS

Lab ID: L1841261-08 D
Client ID: MW-553-20181010
Sample Location: WAYLAND, MA

Date Collected: 10/10/18 07:20
Date Received: 10/11/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 10/17/18 09:25
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	11600		ug/l	2.50	--	2.5	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1841261
Project Number: RA-008
Report Date: 10/19/18

SAMPLE RESULTS

Lab ID: L1841261-09 D
Client ID: MW-560-20181011
Sample Location: WAYLAND, MA

Date Collected: 10/11/18 10:45
Date Received: 10/11/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 10/17/18 12:56
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	15700		ug/l	5.00	--	5	A
Ethene	ND		ug/l	2.50	--	5	A
Ethane	ND		ug/l	2.50	--	5	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1841261
Project Number: RA-008
Report Date: 10/19/18

SAMPLE RESULTS

Lab ID: L1841261-10 D
Client ID: MW-561-20181011
Sample Location: WAYLAND, MA

Date Collected: 10/11/18 10:00
Date Received: 10/11/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 10/17/18 13:14
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	19500		ug/l	5.00	--	5	A
Ethene	ND		ug/l	2.50	--	5	A
Ethane	4.60		ug/l	2.50	--	5	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1841261
Project Number: RA-008
Report Date: 10/19/18

SAMPLE RESULTS

Lab ID: L1841261-11 D
Client ID: MW-562-20181010
Sample Location: WAYLAND, MA

Date Collected: 10/10/18 10:15
Date Received: 10/11/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 10/17/18 13:31
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	14100		ug/l	5.00	--	5	A
Ethene	ND		ug/l	2.50	--	5	A
Ethane	ND		ug/l	2.50	--	5	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1841261
Project Number: RA-008
Report Date: 10/19/18

SAMPLE RESULTS

Lab ID: L1841261-12 D
Client ID: MW-563-20181011
Sample Location: WAYLAND, MA

Date Collected: 10/11/18 11:25
Date Received: 10/11/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 10/17/18 19:39
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	28800		ug/l	5.00	--	5	A
Ethene	ND		ug/l	2.50	--	5	A
Ethane	ND		ug/l	2.50	--	5	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1841261
Project Number: RA-008
Report Date: 10/19/18

SAMPLE RESULTS

Lab ID: L1841261-13 D
Client ID: REW-1-20181010
Sample Location: WAYLAND, MA

Date Collected: 10/10/18 11:05
Date Received: 10/11/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 10/17/18 19:55
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	13600		ug/l	5.00	--	5	A
Ethene	ND		ug/l	2.50	--	5	A
Ethane	ND		ug/l	2.50	--	5	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1841261
Project Number: RA-008
Report Date: 10/19/18

SAMPLE RESULTS

Lab ID: L1841261-14
Client ID: REW-4-20181010
Sample Location: WAYLAND, MA
Date Collected: 10/10/18 11:45
Date Received: 10/11/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 10/18/18 14:46
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	20100	E	ug/l	1.00	--	1	A
Ethene	ND		ug/l	0.500	--	1	A
Ethane	1.28		ug/l	0.500	--	1	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1841261
Project Number: RA-008
Report Date: 10/19/18

SAMPLE RESULTS

Lab ID: L1841261-14 D
Client ID: REW-4-20181010
Sample Location: WAYLAND, MA

Date Collected: 10/10/18 11:45
Date Received: 10/11/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 10/18/18 15:24
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	16300		ug/l	5.00	--	5	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1841261
Project Number: RA-008
Report Date: 10/19/18

SAMPLE RESULTS

Lab ID: L1841261-15 D
Client ID: REW-5-20181010
Sample Location: WAYLAND, MA

Date Collected: 10/10/18 12:30
Date Received: 10/11/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 10/17/18 20:30
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	16000		ug/l	5.00	--	5	A
Ethene	ND		ug/l	2.50	--	5	A
Ethane	10.4		ug/l	2.50	--	5	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1841261
Project Number: RA-008
Report Date: 10/19/18

SAMPLE RESULTS

Lab ID: L1841261-16 D
Client ID: REW-6-20181009
Sample Location: WAYLAND, MA

Date Collected: 10/09/18 11:25
Date Received: 10/11/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 10/17/18 20:48
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	23300		ug/l	5.00	--	5	A
Ethene	ND		ug/l	2.50	--	5	A
Ethane	4.10		ug/l	2.50	--	5	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1841261
Project Number: RA-008
Report Date: 10/19/18

SAMPLE RESULTS

Lab ID: L1841261-17 D
Client ID: REW-7-20181009
Sample Location: WAYLAND, MA

Date Collected: 10/09/18 13:30
Date Received: 10/11/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 10/17/18 21:05
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	28300		ug/l	5.00	--	5	A
Ethene	ND		ug/l	2.50	--	5	A
Ethane	11.3		ug/l	2.50	--	5	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1841261
Project Number: RA-008
Report Date: 10/19/18

SAMPLE RESULTS

Lab ID: L1841261-18 D
Client ID: REW-8-20181009
Sample Location: WAYLAND, MA

Date Collected: 10/09/18 14:10
Date Received: 10/11/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 10/17/18 21:23
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	25000		ug/l	5.00	--	5	A
Ethene	ND		ug/l	2.50	--	5	A
Ethane	ND		ug/l	2.50	--	5	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1841261
Project Number: RA-008
Report Date: 10/19/18

SAMPLE RESULTS

Lab ID: L1841261-19 D
Client ID: REW-9-20181009
Sample Location: WAYLAND, MA

Date Collected: 10/09/18 14:50
Date Received: 10/11/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 10/17/18 21:40
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	21100		ug/l	5.00	--	5	A
Ethene	ND		ug/l	2.50	--	5	A
Ethane	ND		ug/l	2.50	--	5	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1841261
Project Number: RA-008
Report Date: 10/19/18

SAMPLE RESULTS

Lab ID: L1841261-20
Client ID: REW-10-20181011
Sample Location: WAYLAND, MA
Date Collected: 10/11/18 12:05
Date Received: 10/11/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 10/16/18 23:07
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	35600	E	ug/l	1.00	--	1	A
Ethene	0.836		ug/l	0.500	--	1	A
Ethane	3.31		ug/l	0.500	--	1	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1841261
Project Number: RA-008
Report Date: 10/19/18

SAMPLE RESULTS

Lab ID: L1841261-20 D
Client ID: REW-10-20181011
Sample Location: WAYLAND, MA

Date Collected: 10/11/18 12:05
Date Received: 10/11/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 10/17/18 11:11
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	26500		ug/l	10.0	--	10	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1841261
Project Number: RA-008
Report Date: 10/19/18

SAMPLE RESULTS

Lab ID: L1841261-21 D
Client ID: REW-11-20181009
Sample Location: WAYLAND, MA

Date Collected: 10/09/18 10:35
Date Received: 10/11/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 10/17/18 21:58
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	25800		ug/l	5.00	--	5	A
Ethene	6.78		ug/l	2.50	--	5	A
Ethane	19.8		ug/l	2.50	--	5	A

Project Name: RAYTHEON WAYLAND
Lab Number: L1841261
Project Number: RA-008
Report Date: 10/19/18

SAMPLE RESULTS

Lab ID: L1841261-22 D
Client ID: REW-12-20181011
Sample Location: WAYLAND, MA

Date Collected: 10/11/18 06:50
Date Received: 10/11/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 10/17/18 22:15
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	21300		ug/l	5.00	--	5	A
Ethene	ND		ug/l	2.50	--	5	A
Ethane	6.34		ug/l	2.50	--	5	A

Project Name: RAYTHEON WAYLAND
Project Number: RA-008
Lab Number: L1841261
Report Date: 10/19/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 117,-
Analytical Date: 10/16/18 18:24
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	
Dissolved Gases by GC - Mansfield Lab for sample(s): 01,03-08,20 Batch: WG1168743-3						
Methane	ND		ug/l	1.00	--	A
Ethene	ND		ug/l	0.500	--	A
Ethane	ND		ug/l	0.500	--	A

Project Name: RAYTHEON WAYLAND
Project Number: RA-008
Lab Number: L1841261
Report Date: 10/19/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 117,-
Analytical Date: 10/17/18 08:51
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	
Dissolved Gases by GC - Mansfield Lab for sample(s): 01-03,05-11,20 Batch: WG1169161-3						
Methane	ND		ug/l	1.00	--	A
Ethene	ND		ug/l	0.500	--	A
Ethane	ND		ug/l	0.500	--	A

Project Name: RAYTHEON WAYLAND
Project Number: RA-008
Lab Number: L1841261
Report Date: 10/19/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 117,-
Analytical Date: 10/17/18 16:03
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	
Dissolved Gases by GC - Mansfield Lab for sample(s): 12-13,15-19,21-22 Batch: WG1169253-3						
Methane	ND		ug/l	1.00	--	A
Ethene	ND		ug/l	0.500	--	A
Ethane	ND		ug/l	0.500	--	A

Project Name: RAYTHEON WAYLAND
Project Number: RA-008
Lab Number: L1841261
Report Date: 10/19/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 117,-
Analytical Date: 10/18/18 10:01
Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL	
Dissolved Gases by GC - Mansfield Lab for sample(s): 14 Batch: WG1169595-3						
Methane	ND		ug/l	1.00	--	A
Ethene	ND		ug/l	0.500	--	A
Ethane	ND		ug/l	0.500	--	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Project Number: RA-008

Lab Number: L1841261

Report Date: 10/19/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Dissolved Gases by GC - Mansfield Lab Associated sample(s): 01,03-08,20 Batch: WG1168743-2									
Methane	103		-		80-120	-		25	A
Ethene	108		-		80-120	-		25	A
Ethane	106		-		80-120	-		25	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Project Number: RA-008

Lab Number: L1841261

Report Date: 10/19/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Dissolved Gases by GC - Mansfield Lab Associated sample(s): 01-03,05-11,20 Batch: WG1169161-2									
Methane	99		-		80-120	-		25	A
Ethene	94		-		80-120	-		25	A
Ethane	91		-		80-120	-		25	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Project Number: RA-008

Lab Number: L1841261

Report Date: 10/19/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Dissolved Gases by GC - Mansfield Lab Associated sample(s): 12-13,15-19,21-22 Batch: WG1169253-2									
Methane	103		-		80-120	-		25	A
Ethene	104		-		80-120	-		25	A
Ethane	104		-		80-120	-		25	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Project Number: RA-008

Lab Number: L1841261

Report Date: 10/19/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Dissolved Gases by GC - Mansfield Lab Associated sample(s): 14 Batch: WG1169595-2									
Methane	102		-		80-120	-		25	A
Ethene	100		-		80-120	-		25	A
Ethane	97		-		80-120	-		25	A

Matrix Spike Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Project Number: RA-008

Lab Number: L1841261

Report Date: 10/19/18

Parameter	*Native Sample*	*MS Added*	*MS Found*	*MS %Recovery*	*Qual*	*MSD Found*	*MSD %Recovery*	*Qual*	*Recovery Limits*	*RPD*	*Qual*	*RPD Limits*	*Column*
Dissolved Gases by GC - Mansfield Lab Associated sample(s): 01-03,05-11,20 QC Batch ID: WG1169161-5 QC Sample: L1841261-11 Client ID: MW-562-20181010													
Methane	14100	273	15900	**659**	Q	-	-		80-120	-		25	A
Ethene	ND	478	51.1	**54**	Q	-	-		80-120	-		25	A
Ethane	ND	512	56.6	**56**	Q	-	-		80-120	-		25	A

Lab Duplicate Analysis
Batch Quality Control

Project Name: RAYTHEON WAYLAND
Project Number: RA-008

Lab Number: L1841261
Report Date: 10/19/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits	
Dissolved Gases by GC - Mansfield Lab Associated sample(s): 01-03,05-11,20 QC Batch ID: WG1169161-4 QC Sample: L1841261-10 Client ID: MW-561-20181011							
Methane	19500	20400	ug/l	5		25	A
Ethene	ND	ND	ug/l	NC		25	A
Ethane	4.60	4.66	ug/l	1		25	A

Project Name: RAYTHEON WAYLAND
Project Number: RA-008

Lab Number: L1841261
Report Date: 10/19/18

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1841261-01A	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-01B	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-02A	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-02B	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-03A	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-03B	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-04A	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-04B	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-05A	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-05B	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-06A	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-06B	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-07A	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-07B	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-08A	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-08B	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-09A	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-09B	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-10A	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-10B	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-11A	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-11B	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-12A	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)

*Values in parentheses indicate holding time in days

Project Name: RAYTHEON WAYLAND
Project Number: RA-008

Lab Number: L1841261
Report Date: 10/19/18

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1841261-12B	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-13A	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-13B	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-14A	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-14B	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-15A	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-15B	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-16A	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-16B	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-17A	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-17B	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-18A	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-18B	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-19A	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-19B	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-20A	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-20B	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-21A	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-21B	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-22A	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)
L1841261-22B	20ml Vial HCl preserved	A	NA		3.8	Y	Absent		DISSGAS(14)

*Values in parentheses indicate holding time in days

Project Name:	RAYTHEON WAYLAND	**Lab Number:**	L1841261
Project Number:	RA-008	**Report Date:**	10/19/18

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample¿s toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Report Format: Data Usability Report

Project Name:	RAYTHEON WAYLAND	**Lab Number:**	L1841261
Project Number:	RA-008	**Report Date:**	10/19/18

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

Project Name:	RAYTHEON WAYLAND	**Lab Number:**	L1841261
Project Number:	RA-008	**Report Date:**	10/19/18

REFERENCES

117 Technical Guidance for the Natural Attenuation Indicators: Methane, Ethane, and Ethene, EPA-NE, Revision 1, February 21, 2002 and Sample Preparation & Calculations for Dissolved Gas Analysis in Water Samples using a GC Headspace Equilibration Technique, EPA RSKSOP-175, Revision 2, May 2004.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 6860: SCM: Perchlorate

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY

PAGE 1 OF 3

ALPHA ANALYTICAL
8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Date Rec'd in Lab: 10/11/18

ALPHA Job #: L1841261

Client Information

Client: Innovative Engineering Solutions, Inc.
Address: 25 Spring St
Walpole, MA 02081
Phone: 508-668-0033
Email: v.perriyer@ieisolutions.com

Additional Project Information:

Project Information

Project Name: Raytheon Wayland
Project Location: Wayland MA
Project #: RA-008
Project Manager: Vicki Perriyer
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)
Date Due: 5 days 10/18/18

Report Information - Data Deliverables

☐ ADEx ☒ EMAIL

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

☐ Yes ☒ No MA MCP Analytical Methods ☐ Yes ☒ No CT RCP Analytical Methods
☐ Yes ☒ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☒ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☒ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

ANALYSIS

VOC: ☐ 8260 ☐ 624 ☐ 524.2
SVOC: ☐ ABN ☐ PAH
METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 16
METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13
EPH: ☐ Ranges & Targets ☐ Ranges Only
VPH: ☐ Ranges & Targets ☐ Ranges Only
☐ PCB ☐ PEST
TPH: ☐ Quant Only ☐ Fingerprint
Dissolved Gases (Methane, Ethene, Ethane)

SAMPLE INFO
Filtration
☐ Field
☐ Lab to do
Preservation
☐ Lab to do

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	Dissolved Gases	Sample Comments	TOTAL # BOTTLES
41261-01	MW-361S-20181010	10/10/18	0850	GW		X		2
-02	MW-365M-20181010	10/10/18	1345	GW		X		2
-03	MW-367S-20181009	10/9/18	1210	GW		X	GW-3	2
-04	MW-368S-20181009	10/9/18	0835	GW		X	REQUIREMENTS	2
-05	MW-368M-20181009	10/9/18	0915	GW		X		2
-06	MW-551-20181010	10/10/18	0930	GW		X		2
-07	MW-552-20181010	10/10/18	0810	GW		X		2
-08	MW-553-20181010	10/10/18	0720	GW		X		2
-09	MW-560-20181011	10/11/18	1045	GW		X		2
-10	MW-561-20181011	10/11/18	1000	GW		X		2
						Container Type		V
						Preservative		B

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
B= HCl
C= HNO_3
D= H_2SO_4
E= NaOH
F= MeOH
G= $NaHSO_4$
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = NH_4Cl
K= Zn Acetate
O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
	10/11/18 1327	AAL	10/11/18 13:27

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

CHAIN OF CUSTODY

PAGE 2 OF 3

ALPHA ANALYTICAL

8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Date Rec'd in Lab: 10/11/18

ALPHA Job #: L1841261

Client Information

Client: Innovative Engineering Solutions Inc
Address: 25 Spring St, Walpole MA 02081
Phone: 508-668-0033
Email: vparigyan@IESI online.com

Project Information

Project Name: Raytheon Wayland
Project Location: Wayland MA
Project #: RA-008
Project Manager: Vicki Parigyan
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)
3 days
Date Due: 10/18/18

Additional Project Information:

Report Information - Data Deliverables

☐ ADEx ☒ EMAIL

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

☐ Yes ☒ No MA MCP Analytical Methods
☒ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☒ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☒ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☒ No NPDES RGP
☐ Other State /Fed Program ______ Criteria ______

ANALYSIS: VOC: ☐ 8260 ☐ 624 ☐ 524.2; SVOC: ☐ ABN ☐ PAH; METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15; METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13; EPH: ☐ Ranges & Targets ☐ Ranges Only; VPH: ☐ Ranges & Targets ☐ Ranges Only; ☐ PCB ☐ PEST; TPH: ☐ Quant Only ☐ Fingerprint; Dissolved Gases (methane, ethane, ethene)

SAMPLE INFO — Filtration: ☐ Field ☐ Lab to do; Preservation: ☐ Lab to do

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	Dissolved Gases	Sample Comments	TOTAL # BOTTLES
-11	MW-562-20181010	10/10/18	1015	GW	[illegible]	X	GW-3	2
-12	MW-563-20181011	10/11/18	1125	GW	[illegible]	X	Requirements	2
-13	REW-1-20181010	10/10/18	1105	GW	[illegible]	X		2
-14	REW-4-20181010	10/10/18	1145	GW	[illegible]	X		2
-15	REW-5-20181010	10/10/18	1230	GW	[illegible]	X		2
-16	REW-6-20181009	10/9/18	1125	GW	[illegible]	X		2
-17	REW-7-20181009	10/9/18	1330	GW	[illegible]	X		2
-18	REW-8-20181009	10/9/18	1410	GW	[illegible]	X		2
-19	REW-9-20181009	10/09/18	1450	GW	[illegible]	X		2
-20	REW-10-20181011	10/11/18	1205	GW	[illegible]	X		2
	Container Type					V		
	Preservative					B		

Container Type: P= Plastic, A= Amber glass, V= Vial, G= Glass, B= Bacteria cup, C= Cube, O= Other, E= Encore, D= BOD Bottle

Preservative: A= None, B= HCl, C= HNO_3, D= H_2SO_4, E= NaOH, F= MeOH, G= $NaHSO_4$, H = $Na_2S_2O_3$, I= Ascorbic Acid, J = NH_4Cl, K= Zn Acetate, O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
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FORM NO: 01-01 (rev. 12-Mar-2012)

CHAIN OF CUSTODY

PAGE 3 OF 3

ALPHA ANALYTICAL
8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Date Rec'd in Lab: 10/11/18

ALPHA Job #: L1841261

Client Information

Client: Innovative Engineering Solutions, Inc.
Address: 95 Spring St, Wilmington MA 01887
Phone: 508-668-0033
Email: vparkinson@iesonline.com

Project Information

Project Name: Raytheon Wayland
Project Location: Wayland MA
Project #: RA-005
Project Manager: Vicki Parkinson
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)
Date Due: 5 days 10/18/18

Additional Project Information:

Report Information - Data Deliverables

☐ ADEx ☒ EMAIL

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

ANALYSIS

VOC: ☐ 8260 ☐ 624 ☐ 524.2
SVOC: ☐ ABN ☐ PAH
METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15
METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13
EPH: ☐ Ranges & Targets ☐ Ranges Only
VPH: ☐ Ranges & Targets ☐ Ranges Only
☐ PCB ☐ PEST
TPH: ☐ Quant Only ☐ Fingerprint
Dissolved Gases (Methane, Ethane, Ethene)

SAMPLE INFO
Filtration
☐ Field
☐ Lab to do
Preservation
☐ Lab to do

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	Sample Comments	TOTAL # BOTTLES
.21	REW-11-20181009	10/9/18	1035	GW	CJ	X	2
-22	REW-12-20181011	10/11/18	0850	GW	CJ	X	2
	Temp Blank	—	—	—	—		1

GW-3 requirements

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
B= HCl
C= HNO_3
D= H_2SO_4
E= NaOH
F= MeOH
G= $NaHSO_4$
H= $Na_2S_2O_3$
I= Ascorbic Acid
J= NH_4Cl
K= Zn Acetate
O= Other

Container Type											
Preservative											

Relinquished By:	Date/Time	Received By:	Date/Time
	10/11/18 1327	AAL	10/11/18 13:27

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

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: 480-143274-1
Client Project/Site: IDS Wayland

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

Attn: Vicki Pariyar

Authorized for release by:
10/22/2018 2:45:17 PM

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

Table of Contents

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.

General Chemistry

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	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)

Job ID: 480-143274-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-143274-1

Receipt
The samples were received on 10/12/2018 1:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice.

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

Method 8260C: Due to the dilutions required, per question G on the MassDEP Analytical Protocol Certification Form, the CAM reporting limits specified in this CAM protocol could not be achieved for some or all samples/analytes.

Method 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-266Mb-20181011 (480-143274-3) and DUP4-20181011 (480-143274-10). Elevated reporting limits (RLs) are provided.

Method 8260C: The following samples 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-266Mb-20181011 (480-143274-3). The sample was analyzed within 7 days per EPA recommendation.

Method 8260C: The laboratory control sample (LCS) and the laboratory control sample duplicate (LCSD) for batch 480-439907 exceeded control limits for the following analyte: 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. The following samples were affected : MW-264M-20181011 (480-143274-1), MW-266Ma-20181011 (480-143274-2), MW-266Mb-20181011 (480-143274-3), MW-269Ma-20181011 (480-143274-4) and MW-360-20181011 (480-143274-5).

Method 8260C: The continuing calibration verification (CCV) for 1,4-Dioxane associated with batch 480-440046 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 : MW-561-20181011 (480-143274-6), MW-563-20181011 (480-143274-7), REW-10-20181011 (480-143274-8), REW-12-20181011 (480-143274-9), DUP4-20181011 (480-143274-10) and TRIP BLANK (480-143274-11).

Method 8260C: The laboratory control sample (LCS), the laboratory control sample duplicate (LCSD), matrix spike (MS) and matrix spike duplicate (MSD) for batch 480-440046 exceeded control limits for the following analyte: 2-Butanone. Unlike the calibration standards, this is due to the coelution with Ethyl Acetate in the spiking solution. This does not indicate a performance issue with the spike recovery, but rather the laboratory's ability to measure the two analytes together in a combined spiking solution. Through the use of spectral analysis, the two compounds can be distinguished from one another if present in a client sample. The following samples were affected : MW-561-20181011 (480-143274-6), MW-563-20181011 (480-143274-7), REW-10-20181011 (480-143274-8), REW-12-20181011 (480-143274-9), DUP4-20181011 (480-143274-10) and TRIP BLANK (480-143274-11).

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-360-20181011 (480-143274-5), MW-561-20181011 (480-143274-6), MW-563-20181011 (480-143274-7) and REW-12-20181011 (480-143274-9). The sample was analyzed at a dilution based on screening results.

Job ID: 480-143274-1 (Continued)

Laboratory: TestAmerica Buffalo (Continued)

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

Metals
Method 6010: At the request of the client, an abbreviated 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-360-20181011 (480-143274-5), MW-561-20181011 (480-143274-6), MW-563-20181011 (480-143274-7), REW-10-20181011 (480-143274-8) and REW-12-20181011 (480-143274-9).

Method SM 2320B: The following samples were received with headspace in the sample container. This sample container was received with headspace. MW-360-20181011 (480-143274-5), MW-561-20181011 (480-143274-6), MW-563-20181011 (480-143274-7), REW-10-20181011 (480-143274-8) and REW-12-20181011 (480-143274-9).

Method 353.2: The continuing calibration blank for analytical batch 480-439256 contained Nitrite as N above the reporting limit (RL). Associated sample MW-561-20181011 (480-143274-6) was not re-extracted and/or re-analyzed because results were greater than 10X the value found in the continuing calibration blank.

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

Organic Prep
Method 3535A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 200-135288.

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

MassDEP Analytical Protocol Certification Form

Laboratory Name: **TestAmerica Buffalo** Project #: **480-143274-1**

Project Location: **Wayland MA** RTN:

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

480-143274-1[1-11]

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

CAM Protocols (check all that apply below):

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

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

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

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

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

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

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

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

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

Signature: Becky Mason Position: Project Manager

Printed Name: Becky Mason Date: 10/22/18 14:43

This form has been electronically signed and approved

Client Sample ID: MW-266Ma-20181011 — Lab Sample ID: 480-143274-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	1.3		1.0		ug/L	1		8260C	Total/NA
1,4-Dioxane	0.29		0.20		ug/L	1		522	Total/NA

Client Sample ID: MW-266Mb-20181011 — Lab Sample ID: 480-143274-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	290	*	40		ug/L	4		8260C	Total/NA
Acetone	590		200		ug/L	4		8260C	Total/NA
Methylene Chloride	4.3		4.0		ug/L	4		8260C	Total/NA
Toluene	13		4.0		ug/L	4		8260C	Total/NA

Client Sample ID: MW-269Ma-20181011 — Lab Sample ID: 480-143274-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	3.8		1.0		ug/L	1		8260C	Total/NA
Trichloroethene	4.6		1.0		ug/L	1		8260C	Total/NA
1,4-Dioxane	1.0		0.20		ug/L	1		522	Total/NA

Client Sample ID: MW-360-20181011 — Lab Sample ID: 480-143274-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	6.0		0.050		mg/L	1		6010	Total/NA
Chloride	27		1.0		mg/L	2		300.0	Total/NA
Sulfate	4.0		4.0		mg/L	2		300.0	Total/NA
Ammonia	1.1		0.20		mg/L	1		350.1	Total/NA
TOC Result 1	2.3		1.0		mg/L	1		9060A	Total/NA
TOC Result 2	2.1		1.0		mg/L	1		9060A	Total/NA
Total Organic Carbon - Duplicates	2.2		1.0		mg/L	1		9060A	Total/NA
Alkalinity, Total	360		5.0		mg/L	1		SM 2320B	Total/NA
ortho-Phosphate	0.026		0.020		mg/L	1		SM 4500 P E	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	7.3	HF	0.1		SU	1		9040C	Total/NA
Temperature	20.7	HF	0.001		Degrees C	1		9040C	Total/NA

Client Sample ID: MW-561-20181011 — Lab Sample ID: 480-143274-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	2.0		1.0		ug/L	1		8260C	Total/NA
m-Xylene & p-Xylene	5.3		2.0		ug/L	1		8260C	Total/NA
o-Xylene	1.7		1.0		ug/L	1		8260C	Total/NA
Tetrahydrofuran	10		10		ug/L	1		8260C	Total/NA
Iron	86		0.050		mg/L	1		6010	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-561-20181011 (Continued) — Lab Sample ID: 480-143274-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	30		2.5		mg/L	5		300.0	Total/NA
Ammonia	1.8		0.20		mg/L	1		350.1	Total/NA
Nitrate as N	0.10		0.050		mg/L	1		353.2	Total/NA
TOC Result 1	2.6		1.0		mg/L	1		9060A	Total/NA
TOC Result 2	2.3		1.0		mg/L	1		9060A	Total/NA
Total Organic Carbon - Duplicates	2.4		1.0		mg/L	1		9060A	Total/NA
Alkalinity, Total	340		5.0		mg/L	1		SM 2320B	Total/NA
ortho-Phosphate	0.030		0.020		mg/L	1		SM 4500 P E	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	6.5	HF	0.1		SU	1		9040C	Total/NA
Temperature	20.7	HF	0.001		Degrees C	1		9040C	Total/NA

Client Sample ID: MW-563-20181011 — Lab Sample ID: 480-143274-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	12		0.050		mg/L	1		6010	Total/NA
Chloride	9.3		2.5		mg/L	5		300.0	Total/NA
Ammonia	0.56		0.20		mg/L	1		350.1	Total/NA
TOC Result 1	1.5		1.0		mg/L	1		9060A	Total/NA
TOC Result 2	1.3		1.0		mg/L	1		9060A	Total/NA
Total Organic Carbon - Duplicates	1.4		1.0		mg/L	1		9060A	Total/NA
Alkalinity, Total	130		5.0		mg/L	1		SM 2320B	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	7.1	HF	0.1		SU	1		9040C	Total/NA
Temperature	20.7	HF	0.001		Degrees C	1		9040C	Total/NA

Client Sample ID: REW-10-20181011 — Lab Sample ID: 480-143274-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	0.32		0.20		ug/L	1		522	Total/NA
Iron	5.5		0.050		mg/L	1		6010	Total/NA
Chloride	11		0.50		mg/L	1		300.0	Total/NA
Sulfate	17		2.0		mg/L	1		300.0	Total/NA
Ammonia	0.53		0.20		mg/L	1		350.1	Total/NA
TOC Result 1	1.4		1.0		mg/L	1		9060A	Total/NA
TOC Result 2	1.3		1.0		mg/L	1		9060A	Total/NA
Total Organic Carbon - Duplicates	1.3		1.0		mg/L	1		9060A	Total/NA
Alkalinity, Total	100		5.0		mg/L	1		SM 2320B	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	7.1	HF	0.1		SU	1		9040C	Total/NA
Temperature	20.7	HF	0.001		Degrees C	1		9040C	Total/NA

Client Sample ID: REW-12-20181011 — Lab Sample ID: 480-143274-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	2.1		0.20		ug/L	1		522	Total/NA
Iron	44		0.050		mg/L	1		6010	Total/NA
Chloride	39		1.0		mg/L	2		300.0	Total/NA
Ammonia	10		2.0		mg/L	10		350.1	Total/NA
TOC Result 1	2.4		1.0		mg/L	1		9060A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: REW-12-20181011 (Continued) — Lab Sample ID: 480-143274-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
TOC Result 2	2.2		1.0		mg/L	1		9060A	Total/NA
Total Organic Carbon - Duplicates	2.3		1.0		mg/L	1		9060A	Total/NA
Alkalinity, Total	240		5.0		mg/L	1		SM 2320B	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	6.8	HF	0.1		SU	1		9040C	Total/NA
Temperature	21.0	HF	0.001		Degrees C	1		9040C	Total/NA

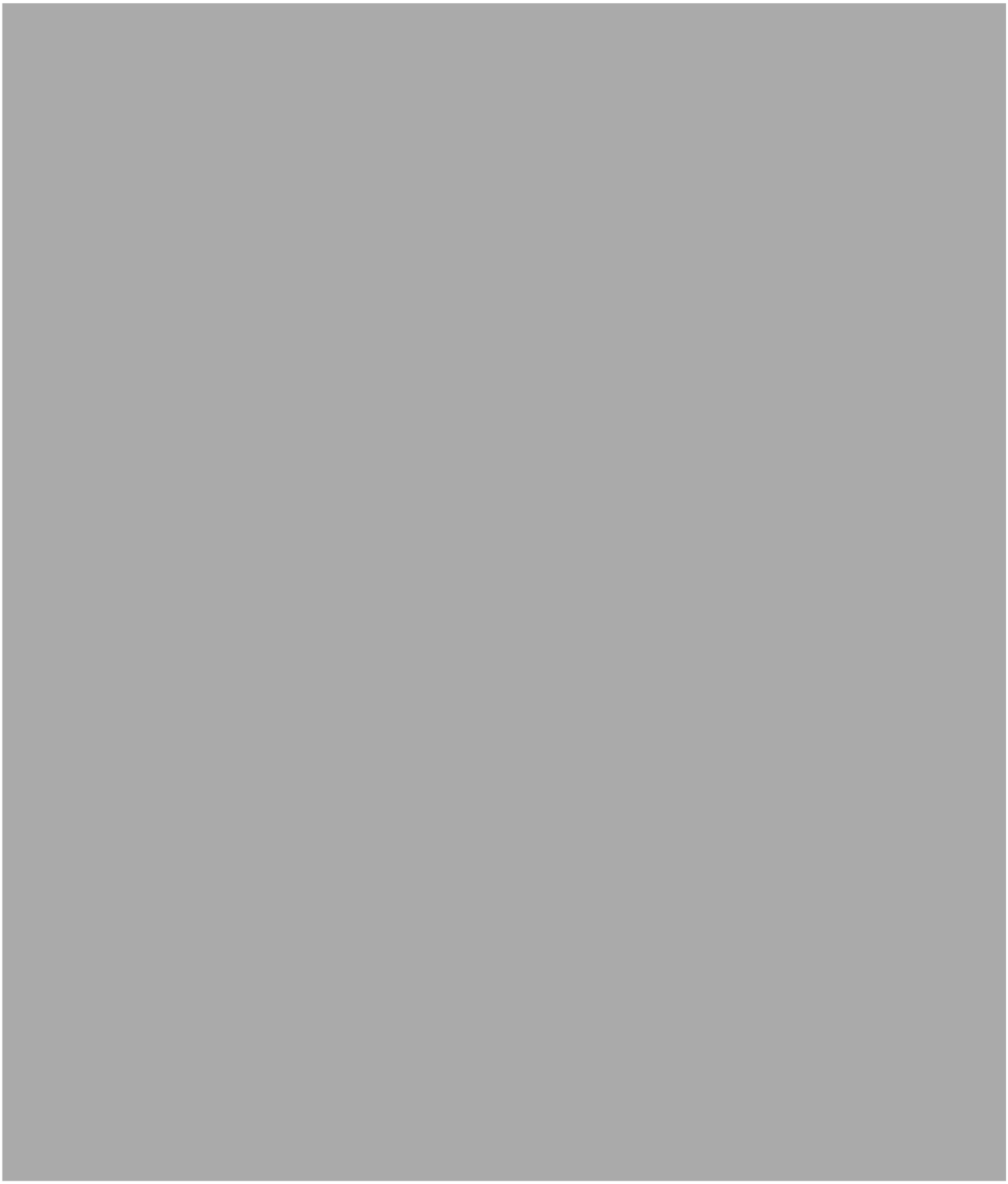
Client Sample ID: DUP4-20181011 — Lab Sample ID: 480-143274-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	250	*	50		ug/L	5		8260C	Total/NA
Acetone	640		250		ug/L	5		8260C	Total/NA
Toluene	11		5.0		ug/L	5		8260C	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-143274-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	3.6		1.0		ug/L	1		8260C	Total/NA

This Detection Summary does not include radiochemical test results.



Client Sample ID: MW-266Ma-20181011
Date Collected: 10/11/18 07:30
Date Received: 10/12/18 01:00

Lab Sample ID: 480-143274-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			10/17/18 19:08	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/17/18 19:08	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/17/18 19:08	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/17/18 19:08	1
1,1-Dichloroethane	ND		1.0		ug/L			10/17/18 19:08	1
1,1-Dichloroethene	ND		1.0		ug/L			10/17/18 19:08	1
1,1-Dichloropropene	ND		1.0		ug/L			10/17/18 19:08	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/17/18 19:08	1
1,2,3-Trichloropropane	ND		1.0		ug/L			10/17/18 19:08	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/17/18 19:08	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/17/18 19:08	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			10/17/18 19:08	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/17/18 19:08	1
1,2-Dichloroethane	ND		1.0		ug/L			10/17/18 19:08	1
1,2-Dichloropropane	ND		1.0		ug/L			10/17/18 19:08	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/17/18 19:08	1

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

TestAmerica Job ID: 480-143274-1

Client Sample ID: MW-266Ma-20181011
Date Collected: 10/11/18 07:30
Date Received: 10/12/18 01:00

Lab Sample ID: 480-143274-2
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			10/17/18 19:08	1
1,3-Dichloropropane	ND		1.0		ug/L			10/17/18 19:08	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/17/18 19:08	1
1,4-Dioxane	ND		50		ug/L			10/17/18 19:08	1
2,2-Dichloropropane	ND		1.0		ug/L			10/17/18 19:08	1
2-Butanone (MEK)	ND	*	10		ug/L			10/17/18 19:08	1
2-Chlorotoluene	ND		1.0		ug/L			10/17/18 19:08	1
2-Hexanone	ND		10		ug/L			10/17/18 19:08	1
4-Chlorotoluene	ND		1.0		ug/L			10/17/18 19:08	1
4-Isopropyltoluene	ND		1.0		ug/L			10/17/18 19:08	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			10/17/18 19:08	1
Acetone	ND		50		ug/L			10/17/18 19:08	1
Benzene	ND		1.0		ug/L			10/17/18 19:08	1
Bromobenzene	ND		1.0		ug/L			10/17/18 19:08	1
Bromoform	ND		1.0		ug/L			10/17/18 19:08	1
Bromomethane	ND		2.0		ug/L			10/17/18 19:08	1
Carbon disulfide	ND		10		ug/L			10/17/18 19:08	1
Carbon tetrachloride	ND		1.0		ug/L			10/17/18 19:08	1
Chlorobenzene	ND		1.0		ug/L			10/17/18 19:08	1
Chlorobromomethane	ND		1.0		ug/L			10/17/18 19:08	1
Chlorodibromomethane	ND		0.50		ug/L			10/17/18 19:08	1
Chloroethane	ND		2.0		ug/L			10/17/18 19:08	1
Chloroform	ND		1.0		ug/L			10/17/18 19:08	1
Chloromethane	ND		2.0		ug/L			10/17/18 19:08	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 19:08	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 19:08	1
Dichlorobromomethane	ND		0.50		ug/L			10/17/18 19:08	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/17/18 19:08	1
Ethyl ether	ND		1.0		ug/L			10/17/18 19:08	1
Ethylbenzene	ND		1.0		ug/L			10/17/18 19:08	1
Ethylene Dibromide	ND		1.0		ug/L			10/17/18 19:08	1
Hexachlorobutadiene	ND		0.40		ug/L			10/17/18 19:08	1
Isopropyl ether	ND		10		ug/L			10/17/18 19:08	1
Isopropylbenzene	ND		1.0		ug/L			10/17/18 19:08	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/17/18 19:08	1
Methylene Chloride	ND		1.0		ug/L			10/17/18 19:08	1
m-Xylene & p-Xylene	ND		2.0		ug/L			10/17/18 19:08	1
Naphthalene	ND		5.0		ug/L			10/17/18 19:08	1
n-Butylbenzene	ND		1.0		ug/L			10/17/18 19:08	1
N-Propylbenzene	ND		1.0		ug/L			10/17/18 19:08	1
o-Xylene	ND		1.0		ug/L			10/17/18 19:08	1
sec-Butylbenzene	ND		1.0		ug/L			10/17/18 19:08	1
Styrene	ND		1.0		ug/L			10/17/18 19:08	1
Tert-amyl methyl ether	ND		5.0		ug/L			10/17/18 19:08	1
Tert-butyl ethyl ether	ND		5.0		ug/L			10/17/18 19:08	1
tert-Butylbenzene	ND		1.0		ug/L			10/17/18 19:08	1
Tetrachloroethene	ND		1.0		ug/L			10/17/18 19:08	1
Tetrahydrofuran	ND	*	10		ug/L			10/17/18 19:08	1
Toluene	ND		1.0		ug/L			10/17/18 19:08	1

Client Sample ID: MW-266Ma-20181011

Lab Sample ID: 480-143274-2

Date Collected: 10/11/18 07:30

Matrix: Water

Date Received: 10/12/18 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			10/17/18 19:08	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 19:08	1
Trichloroethene	ND		1.0		ug/L			10/17/18 19:08	1
Trichlorofluoromethane	ND		1.0		ug/L			10/17/18 19:08	1
Vinyl chloride	**1.3**		1.0		ug/L			10/17/18 19:08	1
Dibromomethane	ND		1.0		ug/L			10/17/18 19:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*70 - 130*		*10/17/18 19:08*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*10/17/18 19:08*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*10/17/18 19:08*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.29**		0.20		ug/L		10/16/18 11:30	10/18/18 08:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*80*		*46 - 130*	*10/16/18 11:30*	*10/18/18 08:12*	*1*

Client Sample ID: MW-266Mb-20181011

Lab Sample ID: 480-143274-3

Date Collected: 10/11/18 08:05

Matrix: Water

Date Received: 10/12/18 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		4.0		ug/L			10/17/18 19:35	4
1,1,1-Trichloroethane	ND		4.0		ug/L			10/17/18 19:35	4
1,1,2,2-Tetrachloroethane	ND		2.0		ug/L			10/17/18 19:35	4
1,1,2-Trichloroethane	ND		4.0		ug/L			10/17/18 19:35	4
1,1-Dichloroethane	ND		4.0		ug/L			10/17/18 19:35	4
1,1-Dichloroethene	ND		4.0		ug/L			10/17/18 19:35	4
1,1-Dichloropropene	ND		4.0		ug/L			10/17/18 19:35	4
1,2,3-Trichlorobenzene	ND		4.0		ug/L			10/17/18 19:35	4
1,2,3-Trichloropropane	ND		4.0		ug/L			10/17/18 19:35	4
1,2,4-Trichlorobenzene	ND		4.0		ug/L			10/17/18 19:35	4
1,2,4-Trimethylbenzene	ND		4.0		ug/L			10/17/18 19:35	4
1,2-Dibromo-3-Chloropropane	ND		20		ug/L			10/17/18 19:35	4
1,2-Dichlorobenzene	ND		4.0		ug/L			10/17/18 19:35	4
1,2-Dichloroethane	ND		4.0		ug/L			10/17/18 19:35	4
1,2-Dichloropropane	ND		4.0		ug/L			10/17/18 19:35	4
1,3,5-Trimethylbenzene	ND		4.0		ug/L			10/17/18 19:35	4
1,3-Dichlorobenzene	ND		4.0		ug/L			10/17/18 19:35	4
1,3-Dichloropropane	ND		4.0		ug/L			10/17/18 19:35	4
1,4-Dichlorobenzene	ND		4.0		ug/L			10/17/18 19:35	4
1,4-Dioxane	ND		200		ug/L			10/17/18 19:35	4
2,2-Dichloropropane	ND		4.0		ug/L			10/17/18 19:35	4
2-Butanone (MEK)	**290**	*	40		ug/L			10/17/18 19:35	4
2-Chlorotoluene	ND		4.0		ug/L			10/17/18 19:35	4
2-Hexanone	ND		40		ug/L			10/17/18 19:35	4
4-Chlorotoluene	ND		4.0		ug/L			10/17/18 19:35	4

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

TestAmerica Job ID: 480-143274-1

Client Sample ID: MW-266Mb-20181011
Date Collected: 10/11/18 08:05
Date Received: 10/12/18 01:00

Lab Sample ID: 480-143274-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Isopropyltoluene	ND		4.0		ug/L			10/17/18 19:35	4
4-Methyl-2-pentanone (MIBK)	ND		40		ug/L			10/17/18 19:35	4
Acetone	**590**		200		ug/L			10/17/18 19:35	4
Benzene	ND		4.0		ug/L			10/17/18 19:35	4
Bromobenzene	ND		4.0		ug/L			10/17/18 19:35	4
Bromoform	ND		4.0		ug/L			10/17/18 19:35	4
Bromomethane	ND		8.0		ug/L			10/17/18 19:35	4
Carbon disulfide	ND		40		ug/L			10/17/18 19:35	4
Carbon tetrachloride	ND		4.0		ug/L			10/17/18 19:35	4
Chlorobenzene	ND		4.0		ug/L			10/17/18 19:35	4
Chlorobromomethane	ND		4.0		ug/L			10/17/18 19:35	4
Chlorodibromomethane	ND		2.0		ug/L			10/17/18 19:35	4
Chloroethane	ND		8.0		ug/L			10/17/18 19:35	4
Chloroform	ND		4.0		ug/L			10/17/18 19:35	4
Chloromethane	ND		8.0		ug/L			10/17/18 19:35	4
cis-1,2-Dichloroethene	ND		4.0		ug/L			10/17/18 19:35	4
cis-1,3-Dichloropropene	ND		1.6		ug/L			10/17/18 19:35	4
Dichlorobromomethane	ND		2.0		ug/L			10/17/18 19:35	4
Dichlorodifluoromethane	ND		4.0		ug/L			10/17/18 19:35	4
Ethyl ether	ND		4.0		ug/L			10/17/18 19:35	4
Ethylbenzene	ND		4.0		ug/L			10/17/18 19:35	4
Ethylene Dibromide	ND		4.0		ug/L			10/17/18 19:35	4
Hexachlorobutadiene	ND		1.6		ug/L			10/17/18 19:35	4
Isopropyl ether	ND		40		ug/L			10/17/18 19:35	4
Isopropylbenzene	ND		4.0		ug/L			10/17/18 19:35	4
Methyl tert-butyl ether	ND		4.0		ug/L			10/17/18 19:35	4
Methylene Chloride	**4.3**		4.0		ug/L			10/17/18 19:35	4
m-Xylene & p-Xylene	ND		8.0		ug/L			10/17/18 19:35	4
Naphthalene	ND		20		ug/L			10/17/18 19:35	4
n-Butylbenzene	ND		4.0		ug/L			10/17/18 19:35	4
N-Propylbenzene	ND		4.0		ug/L			10/17/18 19:35	4
o-Xylene	ND		4.0		ug/L			10/17/18 19:35	4
sec-Butylbenzene	ND		4.0		ug/L			10/17/18 19:35	4
Styrene	ND		4.0		ug/L			10/17/18 19:35	4
Tert-amyl methyl ether	ND		20		ug/L			10/17/18 19:35	4
Tert-butyl ethyl ether	ND		20		ug/L			10/17/18 19:35	4
tert-Butylbenzene	ND		4.0		ug/L			10/17/18 19:35	4
Tetrachloroethene	ND		4.0		ug/L			10/17/18 19:35	4
Tetrahydrofuran	ND	*	40		ug/L			10/17/18 19:35	4
Toluene	**13**		4.0		ug/L			10/17/18 19:35	4
trans-1,2-Dichloroethene	ND		4.0		ug/L			10/17/18 19:35	4
trans-1,3-Dichloropropene	ND		1.6		ug/L			10/17/18 19:35	4
Trichloroethene	ND		4.0		ug/L			10/17/18 19:35	4
Trichlorofluoromethane	ND		4.0		ug/L			10/17/18 19:35	4
Vinyl chloride	ND		4.0		ug/L			10/17/18 19:35	4
Dibromomethane	ND		4.0		ug/L			10/17/18 19:35	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*70 - 130*		*10/17/18 19:35*	*4*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*		*10/17/18 19:35*	*4*

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

TestAmerica Job ID: 480-143274-1

Client Sample ID: MW-266Mb-20181011

Lab Sample ID: 480-143274-3

Date Collected: 10/11/18 08:05

Matrix: Water

Date Received: 10/12/18 01:00

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*10/17/18 19:35*	*4*

Client Sample ID: MW-269Ma-20181011

Lab Sample ID: 480-143274-4

Date Collected: 10/11/18 09:20

Matrix: Water

Date Received: 10/12/18 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			10/17/18 20:01	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/17/18 20:01	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/17/18 20:01	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/17/18 20:01	1
1,1-Dichloroethane	ND		1.0		ug/L			10/17/18 20:01	1
1,1-Dichloroethene	ND		1.0		ug/L			10/17/18 20:01	1
1,1-Dichloropropene	ND		1.0		ug/L			10/17/18 20:01	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/17/18 20:01	1
1,2,3-Trichloropropane	ND		1.0		ug/L			10/17/18 20:01	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/17/18 20:01	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/17/18 20:01	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			10/17/18 20:01	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/17/18 20:01	1
1,2-Dichloroethane	ND		1.0		ug/L			10/17/18 20:01	1
1,2-Dichloropropane	ND		1.0		ug/L			10/17/18 20:01	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/17/18 20:01	1
1,3-Dichlorobenzene	ND		1.0		ug/L			10/17/18 20:01	1
1,3-Dichloropropane	ND		1.0		ug/L			10/17/18 20:01	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/17/18 20:01	1
1,4-Dioxane	ND		50		ug/L			10/17/18 20:01	1
2,2-Dichloropropane	ND		1.0		ug/L			10/17/18 20:01	1
2-Butanone (MEK)	ND	*	10		ug/L			10/17/18 20:01	1
2-Chlorotoluene	ND		1.0		ug/L			10/17/18 20:01	1
2-Hexanone	ND		10		ug/L			10/17/18 20:01	1
4-Chlorotoluene	ND		1.0		ug/L			10/17/18 20:01	1
4-Isopropyltoluene	ND		1.0		ug/L			10/17/18 20:01	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			10/17/18 20:01	1
Acetone	ND		50		ug/L			10/17/18 20:01	1
Benzene	ND		1.0		ug/L			10/17/18 20:01	1
Bromobenzene	ND		1.0		ug/L			10/17/18 20:01	1
Bromoform	ND		1.0		ug/L			10/17/18 20:01	1
Bromomethane	ND		2.0		ug/L			10/17/18 20:01	1
Carbon disulfide	ND		10		ug/L			10/17/18 20:01	1
Carbon tetrachloride	ND		1.0		ug/L			10/17/18 20:01	1
Chlorobenzene	ND		1.0		ug/L			10/17/18 20:01	1
Chlorobromomethane	ND		1.0		ug/L			10/17/18 20:01	1
Chlorodibromomethane	ND		0.50		ug/L			10/17/18 20:01	1
Chloroethane	ND		2.0		ug/L			10/17/18 20:01	1
Chloroform	ND		1.0		ug/L			10/17/18 20:01	1
Chloromethane	ND		2.0		ug/L			10/17/18 20:01	1
cis-1,2-Dichloroethene	**3.8**		1.0		ug/L			10/17/18 20:01	1

Client Sample ID: MW-269Ma-20181011

Lab Sample ID: 480-143274-4

Date Collected: 10/11/18 09:20

Matrix: Water

Date Received: 10/12/18 01:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 20:01	1
Dichlorobromomethane	ND		0.50		ug/L			10/17/18 20:01	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/17/18 20:01	1
Ethyl ether	ND		1.0		ug/L			10/17/18 20:01	1
Ethylbenzene	ND		1.0		ug/L			10/17/18 20:01	1
Ethylene Dibromide	ND		1.0		ug/L			10/17/18 20:01	1
Hexachlorobutadiene	ND		0.40		ug/L			10/17/18 20:01	1
Isopropyl ether	ND		10		ug/L			10/17/18 20:01	1
Isopropylbenzene	ND		1.0		ug/L			10/17/18 20:01	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/17/18 20:01	1
Methylene Chloride	ND		1.0		ug/L			10/17/18 20:01	1
m-Xylene & p-Xylene	ND		2.0		ug/L			10/17/18 20:01	1
Naphthalene	ND		5.0		ug/L			10/17/18 20:01	1
n-Butylbenzene	ND		1.0		ug/L			10/17/18 20:01	1
N-Propylbenzene	ND		1.0		ug/L			10/17/18 20:01	1
o-Xylene	ND		1.0		ug/L			10/17/18 20:01	1
sec-Butylbenzene	ND		1.0		ug/L			10/17/18 20:01	1
Styrene	ND		1.0		ug/L			10/17/18 20:01	1
Tert-amyl methyl ether	ND		5.0		ug/L			10/17/18 20:01	1
Tert-butyl ethyl ether	ND		5.0		ug/L			10/17/18 20:01	1
tert-Butylbenzene	ND		1.0		ug/L			10/17/18 20:01	1
Tetrachloroethene	ND		1.0		ug/L			10/17/18 20:01	1
Tetrahydrofuran	ND	*	10		ug/L			10/17/18 20:01	1
Toluene	ND		1.0		ug/L			10/17/18 20:01	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 20:01	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 20:01	1
Trichloroethene	**4.6**		1.0		ug/L			10/17/18 20:01	1
Trichlorofluoromethane	ND		1.0		ug/L			10/17/18 20:01	1
Vinyl chloride	ND		1.0		ug/L			10/17/18 20:01	1
Dibromomethane	ND		1.0		ug/L			10/17/18 20:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*103*		*70 - 130*		*10/17/18 20:01*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 130*		*10/17/18 20:01*	*1*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*		*10/17/18 20:01*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**1.0**		0.20		ug/L		10/16/18 11:30	10/17/18 17:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*103*		*46 - 130*	*10/16/18 11:30*	*10/17/18 17:29*	*1*

Client Sample ID: MW-360-20181011

Lab Sample ID: 480-143274-5

Date Collected: 10/11/18 10:45

Matrix: Water

Date Received: 10/12/18 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			10/17/18 20:28	1

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

TestAmerica Job ID: 480-143274-1

Client Sample ID: MW-360-20181011
Date Collected: 10/11/18 10:45
Date Received: 10/12/18 01:00

Lab Sample ID: 480-143274-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			10/17/18 20:28	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/17/18 20:28	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/17/18 20:28	1
1,1-Dichloroethane	ND		1.0		ug/L			10/17/18 20:28	1
1,1-Dichloroethene	ND		1.0		ug/L			10/17/18 20:28	1
1,1-Dichloropropene	ND		1.0		ug/L			10/17/18 20:28	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/17/18 20:28	1
1,2,3-Trichloropropane	ND		1.0		ug/L			10/17/18 20:28	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/17/18 20:28	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/17/18 20:28	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			10/17/18 20:28	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/17/18 20:28	1
1,2-Dichloroethane	ND		1.0		ug/L			10/17/18 20:28	1
1,2-Dichloropropane	ND		1.0		ug/L			10/17/18 20:28	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/17/18 20:28	1
1,3-Dichlorobenzene	ND		1.0		ug/L			10/17/18 20:28	1
1,3-Dichloropropane	ND		1.0		ug/L			10/17/18 20:28	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/17/18 20:28	1
1,4-Dioxane	ND		50		ug/L			10/17/18 20:28	1
2,2-Dichloropropane	ND		1.0		ug/L			10/17/18 20:28	1
2-Butanone (MEK)	ND	*	10		ug/L			10/17/18 20:28	1
2-Chlorotoluene	ND		1.0		ug/L			10/17/18 20:28	1
2-Hexanone	ND		10		ug/L			10/17/18 20:28	1
4-Chlorotoluene	ND		1.0		ug/L			10/17/18 20:28	1
4-Isopropyltoluene	ND		1.0		ug/L			10/17/18 20:28	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			10/17/18 20:28	1
Acetone	ND		50		ug/L			10/17/18 20:28	1
Benzene	ND		1.0		ug/L			10/17/18 20:28	1
Bromobenzene	ND		1.0		ug/L			10/17/18 20:28	1
Bromoform	ND		1.0		ug/L			10/17/18 20:28	1
Bromomethane	ND		2.0		ug/L			10/17/18 20:28	1
Carbon disulfide	ND		10		ug/L			10/17/18 20:28	1
Carbon tetrachloride	ND		1.0		ug/L			10/17/18 20:28	1
Chlorobenzene	ND		1.0		ug/L			10/17/18 20:28	1
Chlorobromomethane	ND		1.0		ug/L			10/17/18 20:28	1
Chlorodibromomethane	ND		0.50		ug/L			10/17/18 20:28	1
Chloroethane	ND		2.0		ug/L			10/17/18 20:28	1
Chloroform	ND		1.0		ug/L			10/17/18 20:28	1
Chloromethane	ND		2.0		ug/L			10/17/18 20:28	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 20:28	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 20:28	1
Dichlorobromomethane	ND		0.50		ug/L			10/17/18 20:28	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/17/18 20:28	1
Ethyl ether	ND		1.0		ug/L			10/17/18 20:28	1
Ethylbenzene	ND		1.0		ug/L			10/17/18 20:28	1
Ethylene Dibromide	ND		1.0		ug/L			10/17/18 20:28	1
Hexachlorobutadiene	ND		0.40		ug/L			10/17/18 20:28	1
Isopropyl ether	ND		10		ug/L			10/17/18 20:28	1
Isopropylbenzene	ND		1.0		ug/L			10/17/18 20:28	1

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

TestAmerica Job ID: 480-143274-1

Client Sample ID: MW-360-20181011
Date Collected: 10/11/18 10:45
Date Received: 10/12/18 01:00

Lab Sample ID: 480-143274-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		1.0		ug/L			10/17/18 20:28	1
Methylene Chloride	ND		1.0		ug/L			10/17/18 20:28	1
m-Xylene & p-Xylene	ND		2.0		ug/L			10/17/18 20:28	1
Naphthalene	ND		5.0		ug/L			10/17/18 20:28	1
n-Butylbenzene	ND		1.0		ug/L			10/17/18 20:28	1
N-Propylbenzene	ND		1.0		ug/L			10/17/18 20:28	1
o-Xylene	ND		1.0		ug/L			10/17/18 20:28	1
sec-Butylbenzene	ND		1.0		ug/L			10/17/18 20:28	1
Styrene	ND		1.0		ug/L			10/17/18 20:28	1
Tert-amyl methyl ether	ND		5.0		ug/L			10/17/18 20:28	1
Tert-butyl ethyl ether	ND		5.0		ug/L			10/17/18 20:28	1
tert-Butylbenzene	ND		1.0		ug/L			10/17/18 20:28	1
Tetrachloroethene	ND		1.0		ug/L			10/17/18 20:28	1
Tetrahydrofuran	ND	*	10		ug/L			10/17/18 20:28	1
Toluene	ND		1.0		ug/L			10/17/18 20:28	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 20:28	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 20:28	1
Trichloroethene	ND		1.0		ug/L			10/17/18 20:28	1
Trichlorofluoromethane	ND		1.0		ug/L			10/17/18 20:28	1
Vinyl chloride	ND		1.0		ug/L			10/17/18 20:28	1
Dibromomethane	ND		1.0		ug/L			10/17/18 20:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*70 - 130*		*10/17/18 20:28*	*1*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*		*10/17/18 20:28*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*10/17/18 20:28*	*1*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**6.0**		0.050		mg/L		10/15/18 10:08	10/15/18 15:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**27**		1.0		mg/L			10/16/18 21:36	2
Sulfate	**4.0**		4.0		mg/L			10/16/18 21:36	2
Ammonia	**1.1**		0.20		mg/L		10/15/18 01:12	10/16/18 07:39	1
Nitrate as N	ND		0.050		mg/L			10/12/18 19:37	1
TOC Result 1	**2.3**		1.0		mg/L			10/20/18 00:57	1
TOC Result 2	**2.1**		1.0		mg/L			10/20/18 00:57	1
Total Organic Carbon - Duplicates	**2.2**		1.0		mg/L			10/20/18 00:57	1
Alkalinity, Total	**360**		5.0		mg/L			10/16/18 15:15	1
ortho-Phosphate	**0.026**		0.020		mg/L			10/13/18 06:32	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**7.3**	**HF**	0.1		SU			10/16/18 11:27	1
Temperature	**20.7**	**HF**	0.001		Degrees C			10/16/18 11:27	1

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

TestAmerica Job ID: 480-143274-1

Client Sample ID: MW-561-20181011
Date Collected: 10/11/18 10:00
Date Received: 10/12/18 01:00

Lab Sample ID: 480-143274-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			10/17/18 21:02	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/17/18 21:02	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/17/18 21:02	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/17/18 21:02	1
1,1-Dichloroethane	ND		1.0		ug/L			10/17/18 21:02	1
1,1-Dichloroethene	ND		1.0		ug/L			10/17/18 21:02	1
1,1-Dichloropropene	ND		1.0		ug/L			10/17/18 21:02	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/17/18 21:02	1
1,2,3-Trichloropropane	ND		1.0		ug/L			10/17/18 21:02	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/17/18 21:02	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/17/18 21:02	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			10/17/18 21:02	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/17/18 21:02	1
1,2-Dichloroethane	ND		1.0		ug/L			10/17/18 21:02	1
1,2-Dichloropropane	ND		1.0		ug/L			10/17/18 21:02	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/17/18 21:02	1
1,3-Dichlorobenzene	ND		1.0		ug/L			10/17/18 21:02	1
1,3-Dichloropropane	ND		1.0		ug/L			10/17/18 21:02	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/17/18 21:02	1
1,4-Dioxane	ND		50		ug/L			10/17/18 21:02	1
2,2-Dichloropropane	ND		1.0		ug/L			10/17/18 21:02	1
2-Butanone (MEK)	ND	*	10		ug/L			10/17/18 21:02	1
2-Chlorotoluene	ND		1.0		ug/L			10/17/18 21:02	1
2-Hexanone	ND		10		ug/L			10/17/18 21:02	1
4-Chlorotoluene	ND		1.0		ug/L			10/17/18 21:02	1
4-Isopropyltoluene	ND		1.0		ug/L			10/17/18 21:02	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			10/17/18 21:02	1
Acetone	ND		50		ug/L			10/17/18 21:02	1
Benzene	ND		1.0		ug/L			10/17/18 21:02	1
Bromobenzene	ND		1.0		ug/L			10/17/18 21:02	1
Bromoform	ND		1.0		ug/L			10/17/18 21:02	1
Bromomethane	ND		2.0		ug/L			10/17/18 21:02	1
Carbon disulfide	ND		10		ug/L			10/17/18 21:02	1
Carbon tetrachloride	ND		1.0		ug/L			10/17/18 21:02	1
Chlorobenzene	ND		1.0		ug/L			10/17/18 21:02	1
Chlorobromomethane	ND		1.0		ug/L			10/17/18 21:02	1
Chlorodibromomethane	ND		0.50		ug/L			10/17/18 21:02	1
Chloroethane	ND		2.0		ug/L			10/17/18 21:02	1
Chloroform	ND		1.0		ug/L			10/17/18 21:02	1
Chloromethane	ND		2.0		ug/L			10/17/18 21:02	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 21:02	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 21:02	1
Dichlorobromomethane	ND		0.50		ug/L			10/17/18 21:02	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/17/18 21:02	1
Ethyl ether	ND		1.0		ug/L			10/17/18 21:02	1
Ethylbenzene	**2.0**		1.0		ug/L			10/17/18 21:02	1
Ethylene Dibromide	ND		1.0		ug/L			10/17/18 21:02	1
Hexachlorobutadiene	ND		0.40		ug/L			10/17/18 21:02	1
Isopropyl ether	ND		10		ug/L			10/17/18 21:02	1

Client Sample ID: MW-561-20181011
Date Collected: 10/11/18 10:00
Date Received: 10/12/18 01:00

Lab Sample ID: 480-143274-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			10/17/18 21:02	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/17/18 21:02	1
Methylene Chloride	ND		1.0		ug/L			10/17/18 21:02	1
m-Xylene & p-Xylene	**5.3**		2.0		ug/L			10/17/18 21:02	1
Naphthalene	ND		5.0		ug/L			10/17/18 21:02	1
n-Butylbenzene	ND		1.0		ug/L			10/17/18 21:02	1
N-Propylbenzene	ND		1.0		ug/L			10/17/18 21:02	1
o-Xylene	**1.7**		1.0		ug/L			10/17/18 21:02	1
sec-Butylbenzene	ND		1.0		ug/L			10/17/18 21:02	1
Styrene	ND		1.0		ug/L			10/17/18 21:02	1
Tert-amyl methyl ether	ND		5.0		ug/L			10/17/18 21:02	1
Tert-butyl ethyl ether	ND		5.0		ug/L			10/17/18 21:02	1
tert-Butylbenzene	ND		1.0		ug/L			10/17/18 21:02	1
Tetrachloroethene	ND		1.0		ug/L			10/17/18 21:02	1
Tetrahydrofuran	**10**		10		ug/L			10/17/18 21:02	1
Toluene	ND		1.0		ug/L			10/17/18 21:02	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 21:02	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 21:02	1
Trichloroethene	ND		1.0		ug/L			10/17/18 21:02	1
Trichlorofluoromethane	ND		1.0		ug/L			10/17/18 21:02	1
Vinyl chloride	ND		1.0		ug/L			10/17/18 21:02	1
Dibromomethane	ND		1.0		ug/L			10/17/18 21:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*70 - 130*		*10/17/18 21:02*	*1*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*		*10/17/18 21:02*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*10/17/18 21:02*	*1*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**86**		0.050		mg/L		10/15/18 10:08	10/15/18 15:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**30**		2.5		mg/L			10/16/18 21:44	5
Sulfate	ND		10		mg/L			10/16/18 21:44	5
Ammonia	**1.8**		0.20		mg/L		10/15/18 01:12	10/16/18 07:40	1
Nitrate as N	**0.10**		0.050		mg/L			10/12/18 20:28	1
TOC Result 1	**2.6**		1.0		mg/L			10/20/18 01:27	1
TOC Result 2	**2.3**		1.0		mg/L			10/20/18 01:27	1
Total Organic Carbon - Duplicates	**2.4**		1.0		mg/L			10/20/18 01:27	1
Alkalinity, Total	**340**		5.0		mg/L			10/16/18 15:21	1
ortho-Phosphate	**0.030**		0.020		mg/L			10/13/18 06:32	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**6.5**	**HF**	0.1		SU			10/16/18 11:30	1
Temperature	**20.7**	**HF**	0.001		Degrees C			10/16/18 11:30	1

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

TestAmerica Job ID: 480-143274-1

Client Sample ID: MW-563-20181011
Date Collected: 10/11/18 11:25
Date Received: 10/12/18 01:00

Lab Sample ID: 480-143274-7
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			10/17/18 21:25	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/17/18 21:25	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/17/18 21:25	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/17/18 21:25	1
1,1-Dichloroethane	ND		1.0		ug/L			10/17/18 21:25	1
1,1-Dichloroethene	ND		1.0		ug/L			10/17/18 21:25	1
1,1-Dichloropropene	ND		1.0		ug/L			10/17/18 21:25	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/17/18 21:25	1
1,2,3-Trichloropropane	ND		1.0		ug/L			10/17/18 21:25	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/17/18 21:25	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/17/18 21:25	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			10/17/18 21:25	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/17/18 21:25	1
1,2-Dichloroethane	ND		1.0		ug/L			10/17/18 21:25	1
1,2-Dichloropropane	ND		1.0		ug/L			10/17/18 21:25	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/17/18 21:25	1
1,3-Dichlorobenzene	ND		1.0		ug/L			10/17/18 21:25	1
1,3-Dichloropropane	ND		1.0		ug/L			10/17/18 21:25	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/17/18 21:25	1
1,4-Dioxane	ND		50		ug/L			10/17/18 21:25	1
2,2-Dichloropropane	ND		1.0		ug/L			10/17/18 21:25	1
2-Butanone (MEK)	ND	*	10		ug/L			10/17/18 21:25	1
2-Chlorotoluene	ND		1.0		ug/L			10/17/18 21:25	1
2-Hexanone	ND		10		ug/L			10/17/18 21:25	1
4-Chlorotoluene	ND		1.0		ug/L			10/17/18 21:25	1
4-Isopropyltoluene	ND		1.0		ug/L			10/17/18 21:25	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			10/17/18 21:25	1
Acetone	ND		50		ug/L			10/17/18 21:25	1
Benzene	ND		1.0		ug/L			10/17/18 21:25	1
Bromobenzene	ND		1.0		ug/L			10/17/18 21:25	1
Bromoform	ND		1.0		ug/L			10/17/18 21:25	1
Bromomethane	ND		2.0		ug/L			10/17/18 21:25	1
Carbon disulfide	ND		10		ug/L			10/17/18 21:25	1
Carbon tetrachloride	ND		1.0		ug/L			10/17/18 21:25	1
Chlorobenzene	ND		1.0		ug/L			10/17/18 21:25	1
Chlorobromomethane	ND		1.0		ug/L			10/17/18 21:25	1
Chlorodibromomethane	ND		0.50		ug/L			10/17/18 21:25	1
Chloroethane	ND		2.0		ug/L			10/17/18 21:25	1
Chloroform	ND		1.0		ug/L			10/17/18 21:25	1
Chloromethane	ND		2.0		ug/L			10/17/18 21:25	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 21:25	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 21:25	1
Dichlorobromomethane	ND		0.50		ug/L			10/17/18 21:25	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/17/18 21:25	1
Ethyl ether	ND		1.0		ug/L			10/17/18 21:25	1
Ethylbenzene	ND		1.0		ug/L			10/17/18 21:25	1
Ethylene Dibromide	ND		1.0		ug/L			10/17/18 21:25	1
Hexachlorobutadiene	ND		0.40		ug/L			10/17/18 21:25	1
Isopropyl ether	ND		10		ug/L			10/17/18 21:25	1

Client Sample ID: MW-563-20181011
Date Collected: 10/11/18 11:25
Date Received: 10/12/18 01:00

Lab Sample ID: 480-143274-7
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			10/17/18 21:25	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/17/18 21:25	1
Methylene Chloride	ND		1.0		ug/L			10/17/18 21:25	1
m-Xylene & p-Xylene	ND		2.0		ug/L			10/17/18 21:25	1
Naphthalene	ND		5.0		ug/L			10/17/18 21:25	1
n-Butylbenzene	ND		1.0		ug/L			10/17/18 21:25	1
N-Propylbenzene	ND		1.0		ug/L			10/17/18 21:25	1
o-Xylene	ND		1.0		ug/L			10/17/18 21:25	1
sec-Butylbenzene	ND		1.0		ug/L			10/17/18 21:25	1
Styrene	ND		1.0		ug/L			10/17/18 21:25	1
Tert-amyl methyl ether	ND		5.0		ug/L			10/17/18 21:25	1
Tert-butyl ethyl ether	ND		5.0		ug/L			10/17/18 21:25	1
tert-Butylbenzene	ND		1.0		ug/L			10/17/18 21:25	1
Tetrachloroethene	ND		1.0		ug/L			10/17/18 21:25	1
Tetrahydrofuran	ND		10		ug/L			10/17/18 21:25	1
Toluene	ND		1.0		ug/L			10/17/18 21:25	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 21:25	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 21:25	1
Trichloroethene	ND		1.0		ug/L			10/17/18 21:25	1
Trichlorofluoromethane	ND		1.0		ug/L			10/17/18 21:25	1
Vinyl chloride	ND		1.0		ug/L			10/17/18 21:25	1
Dibromomethane	ND		1.0		ug/L			10/17/18 21:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*70 - 130*		*10/17/18 21:25*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*		*10/17/18 21:25*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*10/17/18 21:25*	*1*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**12**		0.050		mg/L		10/15/18 10:08	10/15/18 15:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9.3**		2.5		mg/L			10/16/18 21:52	5
Sulfate	ND		10		mg/L			10/16/18 21:52	5
Ammonia	**0.56**		0.20		mg/L		10/15/18 01:12	10/16/18 07:40	1
Nitrate as N	ND		0.050		mg/L			10/12/18 19:39	1
TOC Result 1	**1.5**		1.0		mg/L			10/20/18 01:56	1
TOC Result 2	**1.3**		1.0		mg/L			10/20/18 01:56	1
Total Organic Carbon - Duplicates	**1.4**		1.0		mg/L			10/20/18 01:56	1
Alkalinity, Total	**130**		5.0		mg/L			10/16/18 15:26	1
ortho-Phosphate	ND		0.020		mg/L			10/13/18 06:32	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**7.1**	**HF**	0.1		SU			10/16/18 11:33	1
Temperature	**20.7**	**HF**	0.001		Degrees C			10/16/18 11:33	1

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

TestAmerica Job ID: 480-143274-1

Client Sample ID: REW-10-20181011
Date Collected: 10/11/18 12:05
Date Received: 10/12/18 01:00

Lab Sample ID: 480-143274-8
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			10/17/18 21:49	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/17/18 21:49	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/17/18 21:49	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/17/18 21:49	1
1,1-Dichloroethane	ND		1.0		ug/L			10/17/18 21:49	1
1,1-Dichloroethene	ND		1.0		ug/L			10/17/18 21:49	1
1,1-Dichloropropene	ND		1.0		ug/L			10/17/18 21:49	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/17/18 21:49	1
1,2,3-Trichloropropane	ND		1.0		ug/L			10/17/18 21:49	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/17/18 21:49	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/17/18 21:49	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			10/17/18 21:49	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/17/18 21:49	1
1,2-Dichloroethane	ND		1.0		ug/L			10/17/18 21:49	1
1,2-Dichloropropane	ND		1.0		ug/L			10/17/18 21:49	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/17/18 21:49	1
1,3-Dichlorobenzene	ND		1.0		ug/L			10/17/18 21:49	1
1,3-Dichloropropane	ND		1.0		ug/L			10/17/18 21:49	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/17/18 21:49	1
1,4-Dioxane	ND		50		ug/L			10/17/18 21:49	1
2,2-Dichloropropane	ND		1.0		ug/L			10/17/18 21:49	1
2-Butanone (MEK)	ND	*	10		ug/L			10/17/18 21:49	1
2-Chlorotoluene	ND		1.0		ug/L			10/17/18 21:49	1
2-Hexanone	ND		10		ug/L			10/17/18 21:49	1
4-Chlorotoluene	ND		1.0		ug/L			10/17/18 21:49	1
4-Isopropyltoluene	ND		1.0		ug/L			10/17/18 21:49	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			10/17/18 21:49	1
Acetone	ND		50		ug/L			10/17/18 21:49	1
Benzene	ND		1.0		ug/L			10/17/18 21:49	1
Bromobenzene	ND		1.0		ug/L			10/17/18 21:49	1
Bromoform	ND		1.0		ug/L			10/17/18 21:49	1
Bromomethane	ND		2.0		ug/L			10/17/18 21:49	1
Carbon disulfide	ND		10		ug/L			10/17/18 21:49	1
Carbon tetrachloride	ND		1.0		ug/L			10/17/18 21:49	1
Chlorobenzene	ND		1.0		ug/L			10/17/18 21:49	1
Chlorobromomethane	ND		1.0		ug/L			10/17/18 21:49	1
Chlorodibromomethane	ND		0.50		ug/L			10/17/18 21:49	1
Chloroethane	ND		2.0		ug/L			10/17/18 21:49	1
Chloroform	ND		1.0		ug/L			10/17/18 21:49	1
Chloromethane	ND		2.0		ug/L			10/17/18 21:49	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 21:49	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 21:49	1
Dichlorobromomethane	ND		0.50		ug/L			10/17/18 21:49	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/17/18 21:49	1
Ethyl ether	ND		1.0		ug/L			10/17/18 21:49	1
Ethylbenzene	ND		1.0		ug/L			10/17/18 21:49	1
Ethylene Dibromide	ND		1.0		ug/L			10/17/18 21:49	1
Hexachlorobutadiene	ND		0.40		ug/L			10/17/18 21:49	1
Isopropyl ether	ND		10		ug/L			10/17/18 21:49	1

Client Sample ID: REW-10-20181011
Date Collected: 10/11/18 12:05
Date Received: 10/12/18 01:00

Lab Sample ID: 480-143274-8
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			10/17/18 21:49	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/17/18 21:49	1
Methylene Chloride	ND		1.0		ug/L			10/17/18 21:49	1
m-Xylene & p-Xylene	ND		2.0		ug/L			10/17/18 21:49	1
Naphthalene	ND		5.0		ug/L			10/17/18 21:49	1
n-Butylbenzene	ND		1.0		ug/L			10/17/18 21:49	1
N-Propylbenzene	ND		1.0		ug/L			10/17/18 21:49	1
o-Xylene	ND		1.0		ug/L			10/17/18 21:49	1
sec-Butylbenzene	ND		1.0		ug/L			10/17/18 21:49	1
Styrene	ND		1.0		ug/L			10/17/18 21:49	1
Tert-amyl methyl ether	ND		5.0		ug/L			10/17/18 21:49	1
Tert-butyl ethyl ether	ND		5.0		ug/L			10/17/18 21:49	1
tert-Butylbenzene	ND		1.0		ug/L			10/17/18 21:49	1
Tetrachloroethene	ND		1.0		ug/L			10/17/18 21:49	1
Tetrahydrofuran	ND		10		ug/L			10/17/18 21:49	1
Toluene	ND		1.0		ug/L			10/17/18 21:49	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 21:49	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 21:49	1
Trichloroethene	ND		1.0		ug/L			10/17/18 21:49	1
Trichlorofluoromethane	ND		1.0		ug/L			10/17/18 21:49	1
Vinyl chloride	ND		1.0		ug/L			10/17/18 21:49	1
Dibromomethane	ND		1.0		ug/L			10/17/18 21:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*70 - 130*		*10/17/18 21:49*	*1*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*		*10/17/18 21:49*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*10/17/18 21:49*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.32**		0.20		ug/L		10/16/18 11:30	10/17/18 17:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*108*		*46 - 130*	*10/16/18 11:30*	*10/17/18 17:42*	*1*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**5.5**		0.050		mg/L		10/15/18 10:08	10/15/18 15:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**11**		0.50		mg/L			10/16/18 22:00	1
Sulfate	**17**		2.0		mg/L			10/16/18 22:00	1
Ammonia	**0.53**		0.20		mg/L		10/16/18 01:55	10/16/18 08:13	1
Nitrate as N	ND		0.050		mg/L			10/12/18 19:40	1
TOC Result 1	**1.4**		1.0		mg/L			10/20/18 04:55	1
TOC Result 2	**1.3**		1.0		mg/L			10/20/18 04:55	1
Total Organic Carbon - Duplicates	**1.3**		1.0		mg/L			10/20/18 04:55	1
Alkalinity, Total	**100**		5.0		mg/L			10/16/18 15:31	1
ortho-Phosphate	ND		0.020		mg/L			10/13/18 06:32	1

Client Sample ID: REW-10-20181011 — **Lab Sample ID: 480-143274-8**
Date Collected: 10/11/18 12:05 — **Matrix: Water**
Date Received: 10/12/18 01:00

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.1	HF	0.1		SU			10/16/18 11:35	1
Temperature	20.7	HF	0.001		Degrees C			10/16/18 11:35	1

Client Sample ID: REW-12-20181011 — **Lab Sample ID: 480-143274-9**
Date Collected: 10/11/18 06:50 — **Matrix: Water**
Date Received: 10/12/18 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			10/17/18 22:12	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/17/18 22:12	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/17/18 22:12	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/17/18 22:12	1
1,1-Dichloroethane	ND		1.0		ug/L			10/17/18 22:12	1
1,1-Dichloroethene	ND		1.0		ug/L			10/17/18 22:12	1
1,1-Dichloropropene	ND		1.0		ug/L			10/17/18 22:12	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/17/18 22:12	1
1,2,3-Trichloropropane	ND		1.0		ug/L			10/17/18 22:12	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/17/18 22:12	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/17/18 22:12	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			10/17/18 22:12	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/17/18 22:12	1
1,2-Dichloroethane	ND		1.0		ug/L			10/17/18 22:12	1
1,2-Dichloropropane	ND		1.0		ug/L			10/17/18 22:12	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/17/18 22:12	1
1,3-Dichlorobenzene	ND		1.0		ug/L			10/17/18 22:12	1
1,3-Dichloropropane	ND		1.0		ug/L			10/17/18 22:12	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/17/18 22:12	1
1,4-Dioxane	ND		50		ug/L			10/17/18 22:12	1
2,2-Dichloropropane	ND		1.0		ug/L			10/17/18 22:12	1
2-Butanone (MEK)	ND	*	10		ug/L			10/17/18 22:12	1
2-Chlorotoluene	ND		1.0		ug/L			10/17/18 22:12	1
2-Hexanone	ND		10		ug/L			10/17/18 22:12	1
4-Chlorotoluene	ND		1.0		ug/L			10/17/18 22:12	1
4-Isopropyltoluene	ND		1.0		ug/L			10/17/18 22:12	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			10/17/18 22:12	1
Acetone	ND		50		ug/L			10/17/18 22:12	1
Benzene	ND		1.0		ug/L			10/17/18 22:12	1
Bromobenzene	ND		1.0		ug/L			10/17/18 22:12	1
Bromoform	ND		1.0		ug/L			10/17/18 22:12	1
Bromomethane	ND		2.0		ug/L			10/17/18 22:12	1
Carbon disulfide	ND		10		ug/L			10/17/18 22:12	1
Carbon tetrachloride	ND		1.0		ug/L			10/17/18 22:12	1
Chlorobenzene	ND		1.0		ug/L			10/17/18 22:12	1
Chlorobromomethane	ND		1.0		ug/L			10/17/18 22:12	1
Chlorodibromomethane	ND		0.50		ug/L			10/17/18 22:12	1
Chloroethane	ND		2.0		ug/L			10/17/18 22:12	1
Chloroform	ND		1.0		ug/L			10/17/18 22:12	1
Chloromethane	ND		2.0		ug/L			10/17/18 22:12	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 22:12	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 22:12	1

Client Sample ID: REW-12-20181011
Date Collected: 10/11/18 06:50
Date Received: 10/12/18 01:00

Lab Sample ID: 480-143274-9
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorobromomethane	ND		0.50		ug/L			10/17/18 22:12	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/17/18 22:12	1
Ethyl ether	ND		1.0		ug/L			10/17/18 22:12	1
Ethylbenzene	ND		1.0		ug/L			10/17/18 22:12	1
Ethylene Dibromide	ND		1.0		ug/L			10/17/18 22:12	1
Hexachlorobutadiene	ND		0.40		ug/L			10/17/18 22:12	1
Isopropyl ether	ND		10		ug/L			10/17/18 22:12	1
Isopropylbenzene	ND		1.0		ug/L			10/17/18 22:12	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/17/18 22:12	1
Methylene Chloride	ND		1.0		ug/L			10/17/18 22:12	1
m-Xylene & p-Xylene	ND		2.0		ug/L			10/17/18 22:12	1
Naphthalene	ND		5.0		ug/L			10/17/18 22:12	1
n-Butylbenzene	ND		1.0		ug/L			10/17/18 22:12	1
N-Propylbenzene	ND		1.0		ug/L			10/17/18 22:12	1
o-Xylene	ND		1.0		ug/L			10/17/18 22:12	1
sec-Butylbenzene	ND		1.0		ug/L			10/17/18 22:12	1
Styrene	ND		1.0		ug/L			10/17/18 22:12	1
Tert-amyl methyl ether	ND		5.0		ug/L			10/17/18 22:12	1
Tert-butyl ethyl ether	ND		5.0		ug/L			10/17/18 22:12	1
tert-Butylbenzene	ND		1.0		ug/L			10/17/18 22:12	1
Tetrachloroethene	ND		1.0		ug/L			10/17/18 22:12	1
Tetrahydrofuran	ND		10		ug/L			10/17/18 22:12	1
Toluene	ND		1.0		ug/L			10/17/18 22:12	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 22:12	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 22:12	1
Trichloroethene	ND		1.0		ug/L			10/17/18 22:12	1
Trichlorofluoromethane	ND		1.0		ug/L			10/17/18 22:12	1
Vinyl chloride	ND		1.0		ug/L			10/17/18 22:12	1
Dibromomethane	ND		1.0		ug/L			10/17/18 22:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*70 - 130*		*10/17/18 22:12*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 130*		*10/17/18 22:12*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*10/17/18 22:12*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**2.1**		0.20		ug/L		10/16/18 11:30	10/18/18 08:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*63*		*46 - 130*	*10/16/18 11:30*	*10/18/18 08:26*	*1*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**44**		0.050		mg/L		10/15/18 10:08	10/15/18 15:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**39**		1.0		mg/L			10/16/18 22:08	2
Sulfate	ND		4.0		mg/L			10/16/18 22:08	2
Ammonia	**10**		2.0		mg/L		10/16/18 01:55	10/16/18 08:18	10

Client Sample ID: REW-12-20181011

Lab Sample ID: 480-143274-9

Date Collected: 10/11/18 06:50

Matrix: Water

Date Received: 10/12/18 01:00

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.050		mg/L			10/12/18 19:41	1
TOC Result 1	**2.4**		1.0		mg/L			10/20/18 05:25	1
TOC Result 2	**2.2**		1.0		mg/L			10/20/18 05:25	1
Total Organic Carbon - Duplicates	**2.3**		1.0		mg/L			10/20/18 05:25	1
Alkalinity, Total	**240**		5.0		mg/L			10/16/18 15:36	1
ortho-Phosphate	ND		0.020		mg/L			10/13/18 06:32	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**6.8**	**HF**	0.1		SU			10/16/18 11:38	1
Temperature	**21.0**	**HF**	0.001		Degrees C			10/16/18 11:38	1

Client Sample ID: DUP4-20181011

Lab Sample ID: 480-143274-10

Date Collected: 10/11/18 00:00

Matrix: Water

Date Received: 10/12/18 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		5.0		ug/L			10/17/18 22:36	5
1,1,1-Trichloroethane	ND		5.0		ug/L			10/17/18 22:36	5
1,1,2,2-Tetrachloroethane	ND		2.5		ug/L			10/17/18 22:36	5
1,1,2-Trichloroethane	ND		5.0		ug/L			10/17/18 22:36	5
1,1-Dichloroethane	ND		5.0		ug/L			10/17/18 22:36	5
1,1-Dichloroethene	ND		5.0		ug/L			10/17/18 22:36	5
1,1-Dichloropropene	ND		5.0		ug/L			10/17/18 22:36	5
1,2,3-Trichlorobenzene	ND		5.0		ug/L			10/17/18 22:36	5
1,2,3-Trichloropropane	ND		5.0		ug/L			10/17/18 22:36	5
1,2,4-Trichlorobenzene	ND		5.0		ug/L			10/17/18 22:36	5
1,2,4-Trimethylbenzene	ND		5.0		ug/L			10/17/18 22:36	5
1,2-Dibromo-3-Chloropropane	ND		25		ug/L			10/17/18 22:36	5
1,2-Dichlorobenzene	ND		5.0		ug/L			10/17/18 22:36	5
1,2-Dichloroethane	ND		5.0		ug/L			10/17/18 22:36	5
1,2-Dichloropropane	ND		5.0		ug/L			10/17/18 22:36	5
1,3,5-Trimethylbenzene	ND		5.0		ug/L			10/17/18 22:36	5
1,3-Dichlorobenzene	ND		5.0		ug/L			10/17/18 22:36	5
1,3-Dichloropropane	ND		5.0		ug/L			10/17/18 22:36	5
1,4-Dichlorobenzene	ND		5.0		ug/L			10/17/18 22:36	5
1,4-Dioxane	ND		250		ug/L			10/17/18 22:36	5
2,2-Dichloropropane	ND		5.0		ug/L			10/17/18 22:36	5
2-Butanone (MEK)	**250**	*	50		ug/L			10/17/18 22:36	5
2-Chlorotoluene	ND		5.0		ug/L			10/17/18 22:36	5
2-Hexanone	ND		50		ug/L			10/17/18 22:36	5
4-Chlorotoluene	ND		5.0		ug/L			10/17/18 22:36	5
4-Isopropyltoluene	ND		5.0		ug/L			10/17/18 22:36	5
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			10/17/18 22:36	5
Acetone	**640**		250		ug/L			10/17/18 22:36	5
Benzene	ND		5.0		ug/L			10/17/18 22:36	5
Bromobenzene	ND		5.0		ug/L			10/17/18 22:36	5
Bromoform	ND		5.0		ug/L			10/17/18 22:36	5
Bromomethane	ND		10		ug/L			10/17/18 22:36	5
Carbon disulfide	ND		50		ug/L			10/17/18 22:36	5

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

TestAmerica Job ID: 480-143274-1

Client Sample ID: DUP4-20181011
Date Collected: 10/11/18 00:00
Date Received: 10/12/18 01:00

Lab Sample ID: 480-143274-10
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		5.0		ug/L			10/17/18 22:36	5
Chlorobenzene	ND		5.0		ug/L			10/17/18 22:36	5
Chlorobromomethane	ND		5.0		ug/L			10/17/18 22:36	5
Chlorodibromomethane	ND		2.5		ug/L			10/17/18 22:36	5
Chloroethane	ND		10		ug/L			10/17/18 22:36	5
Chloroform	ND		5.0		ug/L			10/17/18 22:36	5
Chloromethane	ND		10		ug/L			10/17/18 22:36	5
cis-1,2-Dichloroethene	ND		5.0		ug/L			10/17/18 22:36	5
cis-1,3-Dichloropropene	ND		2.0		ug/L			10/17/18 22:36	5
Dichlorobromomethane	ND		2.5		ug/L			10/17/18 22:36	5
Dichlorodifluoromethane	ND		5.0		ug/L			10/17/18 22:36	5
Ethyl ether	ND		5.0		ug/L			10/17/18 22:36	5
Ethylbenzene	ND		5.0		ug/L			10/17/18 22:36	5
Ethylene Dibromide	ND		5.0		ug/L			10/17/18 22:36	5
Hexachlorobutadiene	ND		2.0		ug/L			10/17/18 22:36	5
Isopropyl ether	ND		50		ug/L			10/17/18 22:36	5
Isopropylbenzene	ND		5.0		ug/L			10/17/18 22:36	5
Methyl tert-butyl ether	ND		5.0		ug/L			10/17/18 22:36	5
Methylene Chloride	ND		5.0		ug/L			10/17/18 22:36	5
m-Xylene & p-Xylene	ND		10		ug/L			10/17/18 22:36	5
Naphthalene	ND		25		ug/L			10/17/18 22:36	5
n-Butylbenzene	ND		5.0		ug/L			10/17/18 22:36	5
N-Propylbenzene	ND		5.0		ug/L			10/17/18 22:36	5
o-Xylene	ND		5.0		ug/L			10/17/18 22:36	5
sec-Butylbenzene	ND		5.0		ug/L			10/17/18 22:36	5
Styrene	ND		5.0		ug/L			10/17/18 22:36	5
Tert-amyl methyl ether	ND		25		ug/L			10/17/18 22:36	5
Tert-butyl ethyl ether	ND		25		ug/L			10/17/18 22:36	5
tert-Butylbenzene	ND		5.0		ug/L			10/17/18 22:36	5
Tetrachloroethene	ND		5.0		ug/L			10/17/18 22:36	5
Tetrahydrofuran	ND		50		ug/L			10/17/18 22:36	5
Toluene	**11**		5.0		ug/L			10/17/18 22:36	5
trans-1,2-Dichloroethene	ND		5.0		ug/L			10/17/18 22:36	5
trans-1,3-Dichloropropene	ND		2.0		ug/L			10/17/18 22:36	5
Trichloroethene	ND		5.0		ug/L			10/17/18 22:36	5
Trichlorofluoromethane	ND		5.0		ug/L			10/17/18 22:36	5
Vinyl chloride	ND		5.0		ug/L			10/17/18 22:36	5
Dibromomethane	ND		5.0		ug/L			10/17/18 22:36	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*70 - 130*		*10/17/18 22:36*	*5*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*10/17/18 22:36*	*5*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*10/17/18 22:36*	*5*

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

TestAmerica Job ID: 480-143274-1

Client Sample ID: TRIP BLANK
Date Collected: 10/11/18 00:00
Date Received: 10/12/18 01:00

Lab Sample ID: 480-143274-11
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			10/17/18 23:00	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/17/18 23:00	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/17/18 23:00	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/17/18 23:00	1
1,1-Dichloroethane	ND		1.0		ug/L			10/17/18 23:00	1
1,1-Dichloroethene	ND		1.0		ug/L			10/17/18 23:00	1
1,1-Dichloropropene	ND		1.0		ug/L			10/17/18 23:00	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/17/18 23:00	1
1,2,3-Trichloropropane	ND		1.0		ug/L			10/17/18 23:00	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/17/18 23:00	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/17/18 23:00	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			10/17/18 23:00	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/17/18 23:00	1
1,2-Dichloroethane	ND		1.0		ug/L			10/17/18 23:00	1
1,2-Dichloropropane	ND		1.0		ug/L			10/17/18 23:00	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/17/18 23:00	1
1,3-Dichlorobenzene	ND		1.0		ug/L			10/17/18 23:00	1
1,3-Dichloropropane	ND		1.0		ug/L			10/17/18 23:00	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/17/18 23:00	1
1,4-Dioxane	ND		50		ug/L			10/17/18 23:00	1
2,2-Dichloropropane	ND		1.0		ug/L			10/17/18 23:00	1
2-Butanone (MEK)	ND	*	10		ug/L			10/17/18 23:00	1
2-Chlorotoluene	ND		1.0		ug/L			10/17/18 23:00	1
2-Hexanone	ND		10		ug/L			10/17/18 23:00	1
4-Chlorotoluene	ND		1.0		ug/L			10/17/18 23:00	1
4-Isopropyltoluene	ND		1.0		ug/L			10/17/18 23:00	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			10/17/18 23:00	1
Acetone	ND		50		ug/L			10/17/18 23:00	1
Benzene	ND		1.0		ug/L			10/17/18 23:00	1
Bromobenzene	ND		1.0		ug/L			10/17/18 23:00	1
Bromoform	ND		1.0		ug/L			10/17/18 23:00	1
Bromomethane	ND		2.0		ug/L			10/17/18 23:00	1
Carbon disulfide	ND		10		ug/L			10/17/18 23:00	1
Carbon tetrachloride	ND		1.0		ug/L			10/17/18 23:00	1
Chlorobenzene	ND		1.0		ug/L			10/17/18 23:00	1
Chlorobromomethane	ND		1.0		ug/L			10/17/18 23:00	1
Chlorodibromomethane	ND		0.50		ug/L			10/17/18 23:00	1
Chloroethane	ND		2.0		ug/L			10/17/18 23:00	1
Chloroform	**3.6**		1.0		ug/L			10/17/18 23:00	1
Chloromethane	ND		2.0		ug/L			10/17/18 23:00	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 23:00	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 23:00	1
Dichlorobromomethane	ND		0.50		ug/L			10/17/18 23:00	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/17/18 23:00	1
Ethyl ether	ND		1.0		ug/L			10/17/18 23:00	1
Ethylbenzene	ND		1.0		ug/L			10/17/18 23:00	1
Ethylene Dibromide	ND		1.0		ug/L			10/17/18 23:00	1
Hexachlorobutadiene	ND		0.40		ug/L			10/17/18 23:00	1
Isopropyl ether	ND		10		ug/L			10/17/18 23:00	1

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

TestAmerica Job ID: 480-143274-1

Client Sample ID: TRIP BLANK
Date Collected: 10/11/18 00:00
Date Received: 10/12/18 01:00

Lab Sample ID: 480-143274-11
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			10/17/18 23:00	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/17/18 23:00	1
Methylene Chloride	ND		1.0		ug/L			10/17/18 23:00	1
m-Xylene & p-Xylene	ND		2.0		ug/L			10/17/18 23:00	1
Naphthalene	ND		5.0		ug/L			10/17/18 23:00	1
n-Butylbenzene	ND		1.0		ug/L			10/17/18 23:00	1
N-Propylbenzene	ND		1.0		ug/L			10/17/18 23:00	1
o-Xylene	ND		1.0		ug/L			10/17/18 23:00	1
sec-Butylbenzene	ND		1.0		ug/L			10/17/18 23:00	1
Styrene	ND		1.0		ug/L			10/17/18 23:00	1
Tert-amyl methyl ether	ND		5.0		ug/L			10/17/18 23:00	1
Tert-butyl ethyl ether	ND		5.0		ug/L			10/17/18 23:00	1
tert-Butylbenzene	ND		1.0		ug/L			10/17/18 23:00	1
Tetrachloroethene	ND		1.0		ug/L			10/17/18 23:00	1
Tetrahydrofuran	ND		10		ug/L			10/17/18 23:00	1
Toluene	ND		1.0		ug/L			10/17/18 23:00	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 23:00	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 23:00	1
Trichloroethene	ND		1.0		ug/L			10/17/18 23:00	1
Trichlorofluoromethane	ND		1.0		ug/L			10/17/18 23:00	1
Vinyl chloride	ND		1.0		ug/L			10/17/18 23:00	1
Dibromomethane	ND		1.0		ug/L			10/17/18 23:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*70 - 130*		*10/17/18 23:00*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*		*10/17/18 23:00*	*1*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*		*10/17/18 23:00*	*1*

Surrogate Summary

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

TestAmerica Job ID: 480-143274-1

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)
480-143274-1	MW-264M-20181011	103	100	102
480-143274-2	MW-266Ma-20181011	97	100	98
480-143274-3	MW-266Mb-20181011	100	97	100
480-143274-4	MW-269Ma-20181011	103	98	104
480-143274-5	MW-360-20181011	101	97	101
480-143274-6	MW-561-20181011	100	97	102
480-143274-7	MW-563-20181011	98	104	102
480-143274-8	REW-10-20181011	102	97	100
480-143274-9	REW-12-20181011	100	96	100
480-143274-10	DUP4-20181011	99	100	102
480-143274-11	TRIP BLANK	99	104	95
LCS 480-439907/5	Lab Control Sample	97	100	96
LCS 480-440046/5	Lab Control Sample	101	98	102
LCSD 480-439907/6	Lab Control Sample Dup	100	99	99
LCSD 480-440046/6	Lab Control Sample Dup	96	99	97
MB 480-439907/8	Method Blank	100	98	102
MB 480-440046/8	Method Blank	101	100	100

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)
480-143274-2	MW-266Ma-20181011	80
480-143274-4	MW-269Ma-20181011	103
480-143274-8	REW-10-20181011	108
480-143274-9	REW-12-20181011	63
LCS 200-135288/2-A	Lab Control Sample	94
LCSD 200-135288/3-A	Lab Control Sample Dup	106
MB 200-135288/1-A	Method Blank	91

Surrogate Legend

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

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

Lab Sample ID: MB 480-439907/8
Matrix: Water
Analysis Batch: 439907

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			10/17/18 11:49	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/17/18 11:49	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/17/18 11:49	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/17/18 11:49	1
1,1-Dichloroethane	ND		1.0		ug/L			10/17/18 11:49	1
1,1-Dichloroethene	ND		1.0		ug/L			10/17/18 11:49	1
1,1-Dichloropropene	ND		1.0		ug/L			10/17/18 11:49	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/17/18 11:49	1
1,2,3-Trichloropropane	ND		1.0		ug/L			10/17/18 11:49	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/17/18 11:49	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/17/18 11:49	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			10/17/18 11:49	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/17/18 11:49	1
1,2-Dichloroethane	ND		1.0		ug/L			10/17/18 11:49	1
1,2-Dichloropropane	ND		1.0		ug/L			10/17/18 11:49	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/17/18 11:49	1
1,3-Dichlorobenzene	ND		1.0		ug/L			10/17/18 11:49	1
1,3-Dichloropropane	ND		1.0		ug/L			10/17/18 11:49	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/17/18 11:49	1
1,4-Dioxane	ND		50		ug/L			10/17/18 11:49	1
2,2-Dichloropropane	ND		1.0		ug/L			10/17/18 11:49	1
2-Butanone (MEK)	ND		10		ug/L			10/17/18 11:49	1
2-Chlorotoluene	ND		1.0		ug/L			10/17/18 11:49	1
2-Hexanone	ND		10		ug/L			10/17/18 11:49	1
4-Chlorotoluene	ND		1.0		ug/L			10/17/18 11:49	1
4-Isopropyltoluene	ND		1.0		ug/L			10/17/18 11:49	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			10/17/18 11:49	1
Acetone	ND		50		ug/L			10/17/18 11:49	1
Benzene	ND		1.0		ug/L			10/17/18 11:49	1
Bromobenzene	ND		1.0		ug/L			10/17/18 11:49	1
Bromoform	ND		1.0		ug/L			10/17/18 11:49	1
Bromomethane	ND		2.0		ug/L			10/17/18 11:49	1
Carbon disulfide	ND		10		ug/L			10/17/18 11:49	1
Carbon tetrachloride	ND		1.0		ug/L			10/17/18 11:49	1
Chlorobenzene	ND		1.0		ug/L			10/17/18 11:49	1
Chlorobromomethane	ND		1.0		ug/L			10/17/18 11:49	1
Chlorodibromomethane	ND		0.50		ug/L			10/17/18 11:49	1
Chloroethane	ND		2.0		ug/L			10/17/18 11:49	1
Chloroform	ND		1.0		ug/L			10/17/18 11:49	1
Chloromethane	ND		2.0		ug/L			10/17/18 11:49	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 11:49	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 11:49	1
Dichlorobromomethane	ND		0.50		ug/L			10/17/18 11:49	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/17/18 11:49	1
Ethyl ether	ND		1.0		ug/L			10/17/18 11:49	1
Ethylbenzene	ND		1.0		ug/L			10/17/18 11:49	1
Ethylene Dibromide	ND		1.0		ug/L			10/17/18 11:49	1
Hexachlorobutadiene	ND		0.40		ug/L			10/17/18 11:49	1

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

Lab Sample ID: MB 480-439907/8
Matrix: Water
Analysis Batch: 439907

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			10/17/18 11:49	1
Isopropylbenzene	ND		1.0		ug/L			10/17/18 11:49	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/17/18 11:49	1
Methylene Chloride	ND		1.0		ug/L			10/17/18 11:49	1
m-Xylene & p-Xylene	ND		2.0		ug/L			10/17/18 11:49	1
Naphthalene	ND		5.0		ug/L			10/17/18 11:49	1
n-Butylbenzene	ND		1.0		ug/L			10/17/18 11:49	1
N-Propylbenzene	ND		1.0		ug/L			10/17/18 11:49	1
o-Xylene	ND		1.0		ug/L			10/17/18 11:49	1
sec-Butylbenzene	ND		1.0		ug/L			10/17/18 11:49	1
Styrene	ND		1.0		ug/L			10/17/18 11:49	1
Tert-amyl methyl ether	ND		5.0		ug/L			10/17/18 11:49	1
Tert-butyl ethyl ether	ND		5.0		ug/L			10/17/18 11:49	1
tert-Butylbenzene	ND		1.0		ug/L			10/17/18 11:49	1
Tetrachloroethene	ND		1.0		ug/L			10/17/18 11:49	1
Tetrahydrofuran	ND		10		ug/L			10/17/18 11:49	1
Toluene	ND		1.0		ug/L			10/17/18 11:49	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 11:49	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 11:49	1
Trichloroethene	ND		1.0		ug/L			10/17/18 11:49	1
Trichlorofluoromethane	ND		1.0		ug/L			10/17/18 11:49	1
Vinyl chloride	ND		1.0		ug/L			10/17/18 11:49	1
Dibromomethane	ND		1.0		ug/L			10/17/18 11:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*70 - 130*		*10/17/18 11:49*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 130*		*10/17/18 11:49*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*10/17/18 11:49*	*1*

Lab Sample ID: LCS 480-439907/5
Matrix: Water
Analysis Batch: 439907

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	25.0	24.9		ug/L		99	70 - 130
1,1,1-Trichloroethane	25.0	26.2		ug/L		105	70 - 130
1,1,2,2-Tetrachloroethane	25.0	25.5		ug/L		102	70 - 130
1,1,2-Trichloroethane	25.0	24.5		ug/L		98	70 - 130
1,1-Dichloroethane	25.0	26.8		ug/L		107	70 - 130
1,1-Dichloroethene	25.0	25.7		ug/L		103	70 - 130
1,1-Dichloropropene	25.0	27.9		ug/L		111	70 - 130
1,2,3-Trichlorobenzene	25.0	26.0		ug/L		104	70 - 130
1,2,3-Trichloropropane	25.0	26.0		ug/L		104	70 - 130
1,2,4-Trichlorobenzene	25.0	26.5		ug/L		106	70 - 130
1,2,4-Trimethylbenzene	25.0	28.5		ug/L		114	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	23.0		ug/L		92	70 - 130
1,2-Dichlorobenzene	25.0	26.2		ug/L		105	70 - 130
1,2-Dichloroethane	25.0	25.4		ug/L		102	70 - 130

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

Lab Sample ID: LCS 480-439907/5
Matrix: Water
Analysis Batch: 439907

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	28.2		ug/L		113	70 - 130
1,3,5-Trimethylbenzene	25.0	28.5		ug/L		114	70 - 130
1,3-Dichlorobenzene	25.0	26.4		ug/L		105	70 - 130
1,3-Dichloropropane	25.0	25.6		ug/L		102	70 - 130
1,4-Dichlorobenzene	25.0	26.2		ug/L		105	70 - 130
1,4-Dioxane	500	545		ug/L		109	70 - 130
2,2-Dichloropropane	25.0	27.9		ug/L		111	70 - 130
2-Butanone (MEK)	125	261	*	ug/L		208	70 - 130
2-Chlorotoluene	25.0	26.7		ug/L		107	70 - 130
2-Hexanone	125	131		ug/L		105	70 - 130
4-Chlorotoluene	25.0	28.1		ug/L		112	70 - 130
4-Isopropyltoluene	25.0	27.9		ug/L		112	70 - 130
4-Methyl-2-pentanone (MIBK)	125	126		ug/L		101	70 - 130
Acetone	125	136		ug/L		108	70 - 130
Benzene	25.0	27.7		ug/L		111	70 - 130
Bromobenzene	25.0	27.7		ug/L		111	70 - 130
Bromoform	25.0	21.9		ug/L		88	70 - 130
Bromomethane	25.0	21.8		ug/L		87	70 - 130
Carbon disulfide	25.0	24.9		ug/L		99	70 - 130
Carbon tetrachloride	25.0	26.6		ug/L		107	70 - 130
Chlorobenzene	25.0	24.9		ug/L		100	70 - 130
Chlorobromomethane	25.0	26.6		ug/L		106	70 - 130
Chlorodibromomethane	25.0	23.5		ug/L		94	70 - 130
Chloroethane	25.0	23.8		ug/L		95	70 - 130
Chloroform	25.0	25.2		ug/L		101	70 - 130
Chloromethane	25.0	23.7		ug/L		95	70 - 130
cis-1,2-Dichloroethene	25.0	26.4		ug/L		106	70 - 130
cis-1,3-Dichloropropene	25.0	31.6		ug/L		126	70 - 130
Dichlorobromomethane	25.0	27.5		ug/L		110	70 - 130
Dichlorodifluoromethane	25.0	27.5		ug/L		110	70 - 130
Ethyl ether	25.0	25.6		ug/L		102	70 - 130
Ethylbenzene	25.0	25.1		ug/L		100	70 - 130
Ethylene Dibromide	25.0	25.9		ug/L		104	70 - 130
Hexachlorobutadiene	25.0	26.7		ug/L		107	70 - 130
Isopropyl ether	25.0	29.1		ug/L		116	70 - 130
Isopropylbenzene	25.0	27.8		ug/L		111	70 - 130
Methyl tert-butyl ether	25.0	27.0		ug/L		108	70 - 130
Methylene Chloride	25.0	25.9		ug/L		104	70 - 130
m-Xylene & p-Xylene	25.0	25.4		ug/L		102	70 - 130
Naphthalene	25.0	26.0		ug/L		104	70 - 130
n-Butylbenzene	25.0	26.8		ug/L		107	70 - 130
N-Propylbenzene	25.0	27.5		ug/L		110	70 - 130
o-Xylene	25.0	25.1		ug/L		101	70 - 130
sec-Butylbenzene	25.0	28.0		ug/L		112	70 - 130
Styrene	25.0	25.7		ug/L		103	70 - 130
Tert-amyl methyl ether	25.0	29.7		ug/L		119	70 - 130
Tert-butyl ethyl ether	25.0	28.4		ug/L		114	70 - 130
tert-Butylbenzene	25.0	28.8		ug/L		115	70 - 130

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

Lab Sample ID: LCS 480-439907/5
Matrix: Water
Analysis Batch: 439907

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	27.2		ug/L		109	70 - 130		
Tetrahydrofuran			50.0	67.8	*	ug/L		136	70 - 130		
Toluene			25.0	24.4		ug/L		98	70 - 130		
trans-1,2-Dichloroethene			25.0	24.6		ug/L		98	70 - 130		
trans-1,3-Dichloropropene			25.0	26.4		ug/L		106	70 - 130		
Trichloroethene			25.0	27.1		ug/L		108	70 - 130		
Trichlorofluoromethane			25.0	27.7		ug/L		111	70 - 130		
Vinyl chloride			25.0	26.8		ug/L		107	70 - 130		
Dibromomethane			25.0	28.0		ug/L		112	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*97*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: LCSD 480-439907/6
Matrix: Water
Analysis Batch: 439907

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	27.1		ug/L		109	70 - 130	9	20
1,1,1-Trichloroethane			25.0	26.7		ug/L		107	70 - 130	2	20
1,1,2,2-Tetrachloroethane			25.0	26.1		ug/L		104	70 - 130	2	20
1,1,2-Trichloroethane			25.0	27.4		ug/L		110	70 - 130	11	20
1,1-Dichloroethane			25.0	27.4		ug/L		110	70 - 130	3	20
1,1-Dichloroethene			25.0	26.8		ug/L		107	70 - 130	4	20
1,1-Dichloropropene			25.0	28.1		ug/L		113	70 - 130	1	20
1,2,3-Trichlorobenzene			25.0	27.0		ug/L		108	70 - 130	4	20
1,2,3-Trichloropropane			25.0	26.6		ug/L		106	70 - 130	2	20
1,2,4-Trichlorobenzene			25.0	27.3		ug/L		109	70 - 130	3	20
1,2,4-Trimethylbenzene			25.0	29.5		ug/L		118	70 - 130	4	20
1,2-Dibromo-3-Chloropropane			25.0	24.2		ug/L		97	70 - 130	5	20
1,2-Dichlorobenzene			25.0	26.8		ug/L		107	70 - 130	2	20
1,2-Dichloroethane			25.0	24.4		ug/L		97	70 - 130	4	20
1,2-Dichloropropane			25.0	27.2		ug/L		109	70 - 130	4	20
1,3,5-Trimethylbenzene			25.0	30.8		ug/L		123	70 - 130	8	20
1,3-Dichlorobenzene			25.0	26.9		ug/L		108	70 - 130	2	20
1,3-Dichloropropane			25.0	26.5		ug/L		106	70 - 130	3	20
1,4-Dichlorobenzene			25.0	26.9		ug/L		108	70 - 130	3	20
1,4-Dioxane			500	550		ug/L		110	70 - 130	1	20
2,2-Dichloropropane			25.0	28.2		ug/L		113	70 - 130	1	20
2-Butanone (MEK)			125	254	*	ug/L		203	70 - 130	3	20
2-Chlorotoluene			25.0	27.7		ug/L		111	70 - 130	4	20
2-Hexanone			125	141		ug/L		113	70 - 130	7	20
4-Chlorotoluene			25.0	28.9		ug/L		115	70 - 130	3	20
4-Isopropyltoluene			25.0	29.9		ug/L		120	70 - 130	7	20
4-Methyl-2-pentanone (MIBK)			125	136		ug/L		109	70 - 130	8	20
Acetone			125	125		ug/L		100	70 - 130	8	20

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

Lab Sample ID: LCSD 480-439907/6
Matrix: Water
Analysis Batch: 439907

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	27.5		ug/L		110	70 - 130	1	20
Bromobenzene	25.0	28.3		ug/L		113	70 - 130	2	20
Bromoform	25.0	24.6		ug/L		98	70 - 130	11	20
Bromomethane	25.0	23.0		ug/L		92	70 - 130	5	20
Carbon disulfide	25.0	26.7		ug/L		107	70 - 130	7	20
Carbon tetrachloride	25.0	27.3		ug/L		109	70 - 130	3	20
Chlorobenzene	25.0	26.4		ug/L		105	70 - 130	6	20
Chlorobromomethane	25.0	25.8		ug/L		103	70 - 130	3	20
Chlorodibromomethane	25.0	24.8		ug/L		99	70 - 130	5	20
Chloroethane	25.0	25.3		ug/L		101	70 - 130	6	20
Chloroform	25.0	25.0		ug/L		100	70 - 130	1	20
Chloromethane	25.0	24.3		ug/L		97	70 - 130	2	20
cis-1,2-Dichloroethene	25.0	26.3		ug/L		105	70 - 130	0	20
cis-1,3-Dichloropropene	25.0	29.9		ug/L		120	70 - 130	6	20
Dichlorobromomethane	25.0	27.7		ug/L		111	70 - 130	1	20
Dichlorodifluoromethane	25.0	29.4		ug/L		118	70 - 130	7	20
Ethyl ether	25.0	24.9		ug/L		100	70 - 130	2	20
Ethylbenzene	25.0	27.1		ug/L		108	70 - 130	8	20
Ethylene Dibromide	25.0	27.0		ug/L		108	70 - 130	4	20
Hexachlorobutadiene	25.0	29.2		ug/L		117	70 - 130	9	20
Isopropyl ether	25.0	29.1		ug/L		116	70 - 130	0	20
Isopropylbenzene	25.0	29.4		ug/L		117	70 - 130	5	20
Methyl tert-butyl ether	25.0	27.4		ug/L		109	70 - 130	1	20
Methylene Chloride	25.0	26.9		ug/L		107	70 - 130	4	20
m-Xylene & p-Xylene	25.0	28.2		ug/L		113	70 - 130	10	20
Naphthalene	25.0	27.3		ug/L		109	70 - 130	5	20
n-Butylbenzene	25.0	29.2		ug/L		117	70 - 130	9	20
N-Propylbenzene	25.0	28.6		ug/L		115	70 - 130	4	20
o-Xylene	25.0	27.8		ug/L		111	70 - 130	10	20
sec-Butylbenzene	25.0	29.1		ug/L		117	70 - 130	4	20
Styrene	25.0	27.9		ug/L		112	70 - 130	8	20
Tert-amyl methyl ether	25.0	29.6		ug/L		118	70 - 130	0	20
Tert-butyl ethyl ether	25.0	28.2		ug/L		113	70 - 130	1	20
tert-Butylbenzene	25.0	29.9		ug/L		120	70 - 130	4	20
Tetrachloroethene	25.0	30.0		ug/L		120	70 - 130	10	20
Tetrahydrofuran	50.0	69.1	*	ug/L		138	70 - 130	2	20
Toluene	25.0	26.0		ug/L		104	70 - 130	6	20
trans-1,2-Dichloroethene	25.0	25.8		ug/L		103	70 - 130	5	20
trans-1,3-Dichloropropene	25.0	27.2		ug/L		109	70 - 130	3	20
Trichloroethene	25.0	27.8		ug/L		111	70 - 130	3	20
Trichlorofluoromethane	25.0	28.4		ug/L		113	70 - 130	2	20
Vinyl chloride	25.0	28.1		ug/L		112	70 - 130	5	20
Dibromomethane	25.0	26.9		ug/L		108	70 - 130	4	20

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

Lab Sample ID: MB 480-440046/8
Matrix: Water
Analysis Batch: 440046

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			10/17/18 20:14	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/17/18 20:14	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/17/18 20:14	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/17/18 20:14	1
1,1-Dichloroethane	ND		1.0		ug/L			10/17/18 20:14	1
1,1-Dichloroethene	ND		1.0		ug/L			10/17/18 20:14	1
1,1-Dichloropropene	ND		1.0		ug/L			10/17/18 20:14	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/17/18 20:14	1
1,2,3-Trichloropropane	ND		1.0		ug/L			10/17/18 20:14	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/17/18 20:14	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/17/18 20:14	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			10/17/18 20:14	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/17/18 20:14	1
1,2-Dichloroethane	ND		1.0		ug/L			10/17/18 20:14	1
1,2-Dichloropropane	ND		1.0		ug/L			10/17/18 20:14	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/17/18 20:14	1
1,3-Dichlorobenzene	ND		1.0		ug/L			10/17/18 20:14	1
1,3-Dichloropropane	ND		1.0		ug/L			10/17/18 20:14	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/17/18 20:14	1
1,4-Dioxane	ND		50		ug/L			10/17/18 20:14	1
2,2-Dichloropropane	ND		1.0		ug/L			10/17/18 20:14	1
2-Butanone (MEK)	ND		10		ug/L			10/17/18 20:14	1
2-Chlorotoluene	ND		1.0		ug/L			10/17/18 20:14	1
2-Hexanone	ND		10		ug/L			10/17/18 20:14	1
4-Chlorotoluene	ND		1.0		ug/L			10/17/18 20:14	1
4-Isopropyltoluene	ND		1.0		ug/L			10/17/18 20:14	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			10/17/18 20:14	1
Acetone	ND		50		ug/L			10/17/18 20:14	1
Benzene	ND		1.0		ug/L			10/17/18 20:14	1
Bromobenzene	ND		1.0		ug/L			10/17/18 20:14	1
Bromoform	ND		1.0		ug/L			10/17/18 20:14	1
Bromomethane	ND		2.0		ug/L			10/17/18 20:14	1
Carbon disulfide	ND		10		ug/L			10/17/18 20:14	1
Carbon tetrachloride	ND		1.0		ug/L			10/17/18 20:14	1
Chlorobenzene	ND		1.0		ug/L			10/17/18 20:14	1
Chlorobromomethane	ND		1.0		ug/L			10/17/18 20:14	1
Chlorodibromomethane	ND		0.50		ug/L			10/17/18 20:14	1
Chloroethane	ND		2.0		ug/L			10/17/18 20:14	1
Chloroform	ND		1.0		ug/L			10/17/18 20:14	1
Chloromethane	ND		2.0		ug/L			10/17/18 20:14	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 20:14	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 20:14	1
Dichlorobromomethane	ND		0.50		ug/L			10/17/18 20:14	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/17/18 20:14	1
Ethyl ether	ND		1.0		ug/L			10/17/18 20:14	1
Ethylbenzene	ND		1.0		ug/L			10/17/18 20:14	1
Ethylene Dibromide	ND		1.0		ug/L			10/17/18 20:14	1
Hexachlorobutadiene	ND		0.40		ug/L			10/17/18 20:14	1
Isopropyl ether	ND		10		ug/L			10/17/18 20:14	1
Isopropylbenzene	ND		1.0		ug/L			10/17/18 20:14	1

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

Lab Sample ID: MB 480-440046/8
Matrix: Water
Analysis Batch: 440046

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			10/17/18 20:14	1
Methylene Chloride	ND		1.0		ug/L			10/17/18 20:14	1
m-Xylene & p-Xylene	ND		2.0		ug/L			10/17/18 20:14	1
Naphthalene	ND		5.0		ug/L			10/17/18 20:14	1
n-Butylbenzene	ND		1.0		ug/L			10/17/18 20:14	1
N-Propylbenzene	ND		1.0		ug/L			10/17/18 20:14	1
o-Xylene	ND		1.0		ug/L			10/17/18 20:14	1
sec-Butylbenzene	ND		1.0		ug/L			10/17/18 20:14	1
Styrene	ND		1.0		ug/L			10/17/18 20:14	1
Tert-amyl methyl ether	ND		5.0		ug/L			10/17/18 20:14	1
Tert-butyl ethyl ether	ND		5.0		ug/L			10/17/18 20:14	1
tert-Butylbenzene	ND		1.0		ug/L			10/17/18 20:14	1
Tetrachloroethene	ND		1.0		ug/L			10/17/18 20:14	1
Tetrahydrofuran	ND		10		ug/L			10/17/18 20:14	1
Toluene	ND		1.0		ug/L			10/17/18 20:14	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 20:14	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 20:14	1
Trichloroethene	ND		1.0		ug/L			10/17/18 20:14	1
Trichlorofluoromethane	ND		1.0		ug/L			10/17/18 20:14	1
Vinyl chloride	ND		1.0		ug/L			10/17/18 20:14	1
Dibromomethane	ND		1.0		ug/L			10/17/18 20:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*70 - 130*		*10/17/18 20:14*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*10/17/18 20:14*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*10/17/18 20:14*	*1*

Lab Sample ID: LCS 480-440046/5
Matrix: Water
Analysis Batch: 440046

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	26.5		ug/L		106	70 - 130
1,1,1-Trichloroethane	25.0	24.3		ug/L		97	70 - 130
1,1,2,2-Tetrachloroethane	25.0	24.7		ug/L		99	70 - 130
1,1,2-Trichloroethane	25.0	25.1		ug/L		100	70 - 130
1,1-Dichloroethane	25.0	25.0		ug/L		100	70 - 130
1,1-Dichloroethene	25.0	24.3		ug/L		97	70 - 130
1,1-Dichloropropene	25.0	26.1		ug/L		104	70 - 130
1,2,3-Trichlorobenzene	25.0	24.0		ug/L		96	70 - 130
1,2,3-Trichloropropane	25.0	23.3		ug/L		93	70 - 130
1,2,4-Trichlorobenzene	25.0	23.9		ug/L		96	70 - 130
1,2,4-Trimethylbenzene	25.0	24.5		ug/L		98	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	27.0		ug/L		108	70 - 130
1,2-Dichlorobenzene	25.0	23.7		ug/L		95	70 - 130
1,2-Dichloroethane	25.0	23.8		ug/L		95	70 - 130
1,2-Dichloropropane	25.0	23.2		ug/L		93	70 - 130
1,3,5-Trimethylbenzene	25.0	24.8		ug/L		99	70 - 130

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

Lab Sample ID: LCS 480-440046/5
Matrix: Water
Analysis Batch: 440046

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	24.2		ug/L		97	70 - 130
1,3-Dichloropropane	25.0	25.4		ug/L		102	70 - 130
1,4-Dichlorobenzene	25.0	23.8		ug/L		95	70 - 130
1,4-Dioxane	500	613		ug/L		123	70 - 130
2,2-Dichloropropane	25.0	23.8		ug/L		95	70 - 130
2-Butanone (MEK)	125	226	*	ug/L		181	70 - 130
2-Chlorotoluene	25.0	24.3		ug/L		97	70 - 130
2-Hexanone	125	133		ug/L		106	70 - 130
4-Chlorotoluene	25.0	26.0		ug/L		104	70 - 130
4-Isopropyltoluene	25.0	25.4		ug/L		102	70 - 130
4-Methyl-2-pentanone (MIBK)	125	129		ug/L		103	70 - 130
Acetone	125	121		ug/L		97	70 - 130
Benzene	25.0	23.7		ug/L		95	70 - 130
Bromobenzene	25.0	22.9		ug/L		92	70 - 130
Bromoform	25.0	25.1		ug/L		100	70 - 130
Bromomethane	25.0	25.0		ug/L		100	70 - 130
Carbon disulfide	25.0	25.0		ug/L		100	70 - 130
Carbon tetrachloride	25.0	24.7		ug/L		99	70 - 130
Chlorobenzene	25.0	25.2		ug/L		101	70 - 130
Chlorobromomethane	25.0	21.9		ug/L		88	70 - 130
Chlorodibromomethane	25.0	25.2		ug/L		101	70 - 130
Chloroethane	25.0	23.5		ug/L		94	70 - 130
Chloroform	25.0	22.9		ug/L		92	70 - 130
Chloromethane	25.0	23.1		ug/L		92	70 - 130
cis-1,2-Dichloroethene	25.0	22.2		ug/L		89	70 - 130
cis-1,3-Dichloropropene	25.0	24.4		ug/L		98	70 - 130
Dichlorobromomethane	25.0	23.4		ug/L		94	70 - 130
Dichlorodifluoromethane	25.0	25.0		ug/L		100	70 - 130
Ethyl ether	25.0	23.3		ug/L		93	70 - 130
Ethylbenzene	25.0	25.9		ug/L		104	70 - 130
Ethylene Dibromide	25.0	24.5		ug/L		98	70 - 130
Hexachlorobutadiene	25.0	23.0		ug/L		92	70 - 130
Isopropyl ether	25.0	26.6		ug/L		106	70 - 130
Isopropylbenzene	25.0	24.6		ug/L		98	70 - 130
Methyl tert-butyl ether	25.0	23.4		ug/L		94	70 - 130
Methylene Chloride	25.0	24.3		ug/L		97	70 - 130
m-Xylene & p-Xylene	25.0	24.5		ug/L		98	70 - 130
Naphthalene	25.0	23.7		ug/L		95	70 - 130
n-Butylbenzene	25.0	25.5		ug/L		102	70 - 130
N-Propylbenzene	25.0	24.3		ug/L		97	70 - 130
o-Xylene	25.0	24.6		ug/L		98	70 - 130
sec-Butylbenzene	25.0	25.3		ug/L		101	70 - 130
Styrene	25.0	26.3		ug/L		105	70 - 130
Tert-amyl methyl ether	25.0	25.6		ug/L		102	70 - 130
Tert-butyl ethyl ether	25.0	25.5		ug/L		102	70 - 130
tert-Butylbenzene	25.0	24.3		ug/L		97	70 - 130
Tetrachloroethene	25.0	28.9		ug/L		116	70 - 130
Tetrahydrofuran	50.0	62.8		ug/L		126	70 - 130

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

Lab Sample ID: LCS 480-440046/5
Matrix: Water
Analysis Batch: 440046

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	24.4		ug/L		97	70 - 130
trans-1,2-Dichloroethene	25.0	23.9		ug/L		96	70 - 130
trans-1,3-Dichloropropene	25.0	25.6		ug/L		102	70 - 130
Trichloroethene	25.0	24.8		ug/L		99	70 - 130
Trichlorofluoromethane	25.0	27.1		ug/L		108	70 - 130
Vinyl chloride	25.0	24.1		ug/L		96	70 - 130
Dibromomethane	25.0	24.1		ug/L		96	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*101*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 130*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: LCSD 480-440046/6
Matrix: Water
Analysis Batch: 440046

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	25.1		ug/L		100	70 - 130	5	20
1,1,1-Trichloroethane	25.0	24.7		ug/L		99	70 - 130	2	20
1,1,2,2-Tetrachloroethane	25.0	24.4		ug/L		97	70 - 130	1	20
1,1,2-Trichloroethane	25.0	23.6		ug/L		94	70 - 130	6	20
1,1-Dichloroethane	25.0	24.8		ug/L		99	70 - 130	1	20
1,1-Dichloroethene	25.0	24.2		ug/L		97	70 - 130	0	20
1,1-Dichloropropene	25.0	25.0		ug/L		100	70 - 130	4	20
1,2,3-Trichlorobenzene	25.0	24.4		ug/L		98	70 - 130	2	20
1,2,3-Trichloropropane	25.0	24.3		ug/L		97	70 - 130	4	20
1,2,4-Trichlorobenzene	25.0	25.1		ug/L		100	70 - 130	5	20
1,2,4-Trimethylbenzene	25.0	25.4		ug/L		102	70 - 130	4	20
1,2-Dibromo-3-Chloropropane	25.0	25.5		ug/L		102	70 - 130	6	20
1,2-Dichlorobenzene	25.0	24.7		ug/L		99	70 - 130	4	20
1,2-Dichloroethane	25.0	23.4		ug/L		93	70 - 130	2	20
1,2-Dichloropropane	25.0	23.4		ug/L		94	70 - 130	1	20
1,3,5-Trimethylbenzene	25.0	25.5		ug/L		102	70 - 130	2	20
1,3-Dichlorobenzene	25.0	25.1		ug/L		100	70 - 130	3	20
1,3-Dichloropropane	25.0	23.3		ug/L		93	70 - 130	9	20
1,4-Dichlorobenzene	25.0	24.5		ug/L		98	70 - 130	3	20
1,4-Dioxane	500	576		ug/L		115	70 - 130	6	20
2,2-Dichloropropane	25.0	24.2		ug/L		97	70 - 130	2	20
2-Butanone (MEK)	125	227	*	ug/L		181	70 - 130	0	20
2-Chlorotoluene	25.0	24.3		ug/L		97	70 - 130	0	20
2-Hexanone	125	123		ug/L		98	70 - 130	8	20
4-Chlorotoluene	25.0	26.5		ug/L		106	70 - 130	2	20
4-Isopropyltoluene	25.0	26.2		ug/L		105	70 - 130	3	20
4-Methyl-2-pentanone (MIBK)	125	119		ug/L		96	70 - 130	7	20
Acetone	125	118		ug/L		95	70 - 130	2	20
Benzene	25.0	23.5		ug/L		94	70 - 130	1	20
Bromobenzene	25.0	23.8		ug/L		95	70 - 130	4	20

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

Lab Sample ID: LCSD 480-440046/6
Matrix: Water
Analysis Batch: 440046

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	24.7		ug/L		99	70 - 130	1	20
Bromomethane			25.0	24.1		ug/L		96	70 - 130	4	20
Carbon disulfide			25.0	24.7		ug/L		99	70 - 130	1	20
Carbon tetrachloride			25.0	24.9		ug/L		100	70 - 130	1	20
Chlorobenzene			25.0	23.6		ug/L		94	70 - 130	7	20
Chlorobromomethane			25.0	22.7		ug/L		91	70 - 130	3	20
Chlorodibromomethane			25.0	23.6		ug/L		95	70 - 130	7	20
Chloroethane			25.0	24.5		ug/L		98	70 - 130	4	20
Chloroform			25.0	23.0		ug/L		92	70 - 130	0	20
Chloromethane			25.0	23.6		ug/L		94	70 - 130	2	20
cis-1,2-Dichloroethene			25.0	22.3		ug/L		89	70 - 130	0	20
cis-1,3-Dichloropropene			25.0	24.1		ug/L		97	70 - 130	1	20
Dichlorobromomethane			25.0	23.9		ug/L		95	70 - 130	2	20
Dichlorodifluoromethane			25.0	24.2		ug/L		97	70 - 130	3	20
Ethyl ether			25.0	22.8		ug/L		91	70 - 130	2	20
Ethylbenzene			25.0	24.1		ug/L		96	70 - 130	7	20
Ethylene Dibromide			25.0	23.6		ug/L		94	70 - 130	4	20
Hexachlorobutadiene			25.0	23.7		ug/L		95	70 - 130	3	20
Isopropyl ether			25.0	25.8		ug/L		103	70 - 130	3	20
Isopropylbenzene			25.0	25.8		ug/L		103	70 - 130	5	20
Methyl tert-butyl ether			25.0	23.0		ug/L		92	70 - 130	2	20
Methylene Chloride			25.0	23.5		ug/L		94	70 - 130	4	20
m-Xylene & p-Xylene			25.0	22.3		ug/L		89	70 - 130	9	20
Naphthalene			25.0	24.9		ug/L		99	70 - 130	5	20
n-Butylbenzene			25.0	25.8		ug/L		103	70 - 130	1	20
N-Propylbenzene			25.0	25.8		ug/L		103	70 - 130	6	20
o-Xylene			25.0	23.0		ug/L		92	70 - 130	7	20
sec-Butylbenzene			25.0	26.2		ug/L		105	70 - 130	3	20
Styrene			25.0	24.9		ug/L		99	70 - 130	6	20
Tert-amyl methyl ether			25.0	26.0		ug/L		104	70 - 130	1	20
Tert-butyl ethyl ether			25.0	24.7		ug/L		99	70 - 130	3	20
tert-Butylbenzene			25.0	25.2		ug/L		101	70 - 130	4	20
Tetrachloroethene			25.0	26.7		ug/L		107	70 - 130	8	20
Tetrahydrofuran			50.0	61.0		ug/L		122	70 - 130	3	20
Toluene			25.0	23.4		ug/L		94	70 - 130	4	20
trans-1,2-Dichloroethene			25.0	23.6		ug/L		94	70 - 130	1	20
trans-1,3-Dichloropropene			25.0	23.7		ug/L		95	70 - 130	7	20
Trichloroethene			25.0	24.2		ug/L		97	70 - 130	2	20
Trichlorofluoromethane			25.0	25.4		ug/L		102	70 - 130	6	20
Vinyl chloride			25.0	24.1		ug/L		96	70 - 130	0	20
Dibromomethane			25.0	23.7		ug/L		95	70 - 130	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*96*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*

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

Lab Sample ID: MB 200-135288/1-A
Matrix: Water
Analysis Batch: 135347

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 135288

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20		ug/L		10/16/18 11:30	10/17/18 13:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*91*		*46 - 130*	*10/16/18 11:30*	*10/17/18 13:45*	*1*

Lab Sample ID: LCS 200-135288/2-A
Matrix: Water
Analysis Batch: 135347

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 135288

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	2.00	2.09		ug/L		105	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*94*		*46 - 130*

Lab Sample ID: LCSD 200-135288/3-A
Matrix: Water
Analysis Batch: 135347

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 135288

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane	2.00	2.40		ug/L		120	70 - 130	14	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*106*		*46 - 130*

Method: 6010 - Metals (ICP)

Lab Sample ID: MB 480-439342/1-A
Matrix: Water
Analysis Batch: 439627

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 439342

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050		mg/L		10/15/18 10:08	10/15/18 14:37	1

Lab Sample ID: LCS 480-439342/2-A
Matrix: Water
Analysis Batch: 439627

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 439342

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	10.0		mg/L		100	80 - 120

Lab Sample ID: LCSD 480-439342/25-A
Matrix: Water
Analysis Batch: 439627

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 439342

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	10.0	10.2		mg/L		102	80 - 120	2	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-439811/4
Matrix: Water
Analysis Batch: 439811

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			10/16/18 19:50	1
Sulfate	ND		2.0		mg/L			10/16/18 19:50	1

Lab Sample ID: LCS 480-439811/3
Matrix: Water
Analysis Batch: 439811

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	53.7		mg/L		107	90 - 110
Sulfate	50.0	51.5		mg/L		103	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-439371/1-A
Matrix: Water
Analysis Batch: 439600

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 439371

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.20		mg/L		10/15/18 01:12	10/16/18 07:22	1

Lab Sample ID: LCS 480-439371/2-A
Matrix: Water
Analysis Batch: 439600

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 439371

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	0.967		mg/L		97	90 - 110

Lab Sample ID: MB 480-438412/1-B
Matrix: Water
Analysis Batch: 439638

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 439576

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.20		mg/L		10/16/18 01:55	10/16/18 07:58	1

Lab Sample ID: LCS 480-439576/2-A
Matrix: Water
Analysis Batch: 439638

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 439576

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.02		mg/L		102	90 - 110

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

Lab Sample ID: MB 480-440885/4
Matrix: Water
Analysis Batch: 440885

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			10/19/18 21:29	1

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

Lab Sample ID: MB 480-440885/4
Matrix: Water
Analysis Batch: 440885

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TOC Result 2	ND		1.0		mg/L			10/19/18 21:29	1
Total Organic Carbon - Duplicates	ND		1.0		mg/L			10/19/18 21:29	1

Lab Sample ID: MB 480-440885/51
Matrix: Water
Analysis Batch: 440885

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			10/20/18 21:46	1
TOC Result 2	ND		1.0		mg/L			10/20/18 21:46	1
Total Organic Carbon - Duplicates	ND		1.0		mg/L			10/20/18 21:46	1

Lab Sample ID: LCS 480-440885/5
Matrix: Water
Analysis Batch: 440885

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
TOC Result 1	60.0	57.0		mg/L		95	90 - 110
TOC Result 2	60.0	57.7		mg/L		96	90 - 110
Total Organic Carbon - Duplicates	60.0	57.3		mg/L		96	90 - 110

Lab Sample ID: LCS 480-440885/52
Matrix: Water
Analysis Batch: 440885

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	55.4		mg/L		92	90 - 110
TOC Result 2	60.0	55.7		mg/L		93	90 - 110
Total Organic Carbon - Duplicates	60.0	55.6		mg/L		93	90 - 110

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-439910/7
Matrix: Water
Analysis Batch: 439910

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			10/16/18 14:16	1

Lab Sample ID: LCS 480-439910/8
Matrix: Water
Analysis Batch: 439910

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	93.6		mg/L		94	90 - 110

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

TestAmerica Job ID: 480-143274-1

Method: SM 4500 P E - Orthophosphate

Lab Sample ID: MB 480-439294/3
Matrix: Water
Analysis Batch: 439294

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			10/13/18 06:32	1

Lab Sample ID: LCS 480-439294/4
Matrix: Water
Analysis Batch: 439294

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	0.183		mg/L		91	90 - 110		

Lab Sample ID: 480-143274-5 MS
Matrix: Water
Analysis Batch: 439294

Client Sample ID: MW-360-20181011
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
ortho-Phosphate	0.026		1.00	1.01		mg/L		99	49 - 138		

Lab Sample ID: 480-143274-5 MSD
Matrix: Water
Analysis Batch: 439294

Client Sample ID: MW-360-20181011
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	0.026		1.00	1.07		mg/L		105	49 - 138	5	20

GC/MS VOA

Analysis Batch: 439907

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143274-1	MW-264M-20181011	Total/NA	Water	8260C	
480-143274-2	MW-266Ma-20181011	Total/NA	Water	8260C	
480-143274-3	MW-266Mb-20181011	Total/NA	Water	8260C	
480-143274-4	MW-269Ma-20181011	Total/NA	Water	8260C	
480-143274-5	MW-360-20181011	Total/NA	Water	8260C	
MB 480-439907/8	Method Blank	Total/NA	Water	8260C	
LCS 480-439907/5	Lab Control Sample	Total/NA	Water	8260C	
LCSD 480-439907/6	Lab Control Sample Dup	Total/NA	Water	8260C	

Analysis Batch: 440046

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143274-6	MW-561-20181011	Total/NA	Water	8260C	
480-143274-7	MW-563-20181011	Total/NA	Water	8260C	
480-143274-8	REW-10-20181011	Total/NA	Water	8260C	
480-143274-9	REW-12-20181011	Total/NA	Water	8260C	
480-143274-10	DUP4-20181011	Total/NA	Water	8260C	
480-143274-11	TRIP BLANK	Total/NA	Water	8260C	
MB 480-440046/8	Method Blank	Total/NA	Water	8260C	
LCS 480-440046/5	Lab Control Sample	Total/NA	Water	8260C	
LCSD 480-440046/6	Lab Control Sample Dup	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 135288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143274-2	MW-266Ma-20181011	Total/NA	Water	3535A	
480-143274-4	MW-269Ma-20181011	Total/NA	Water	3535A	
480-143274-8	REW-10-20181011	Total/NA	Water	3535A	
480-143274-9	REW-12-20181011	Total/NA	Water	3535A	
MB 200-135288/1-A	Method Blank	Total/NA	Water	3535A	
LCS 200-135288/2-A	Lab Control Sample	Total/NA	Water	3535A	
LCSD 200-135288/3-A	Lab Control Sample Dup	Total/NA	Water	3535A	

Analysis Batch: 135347

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143274-4	MW-269Ma-20181011	Total/NA	Water	522	135288
480-143274-8	REW-10-20181011	Total/NA	Water	522	135288
MB 200-135288/1-A	Method Blank	Total/NA	Water	522	135288
LCS 200-135288/2-A	Lab Control Sample	Total/NA	Water	522	135288
LCSD 200-135288/3-A	Lab Control Sample Dup	Total/NA	Water	522	135288

Analysis Batch: 135405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143274-2	MW-266Ma-20181011	Total/NA	Water	522	135288
480-143274-9	REW-12-20181011	Total/NA	Water	522	135288

Metals

Prep Batch: 439342

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143274-5	MW-360-20181011	Total/NA	Water	3005A	
480-143274-6	MW-561-20181011	Total/NA	Water	3005A	
480-143274-7	MW-563-20181011	Total/NA	Water	3005A	
480-143274-8	REW-10-20181011	Total/NA	Water	3005A	
480-143274-9	REW-12-20181011	Total/NA	Water	3005A	
MB 480-439342/1-A	Method Blank	Total/NA	Water	3005A	
LCS 480-439342/2-A	Lab Control Sample	Total/NA	Water	3005A	
LCSD 480-439342/25-A	Lab Control Sample Dup	Total/NA	Water	3005A	

Analysis Batch: 439627

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143274-5	MW-360-20181011	Total/NA	Water	6010	439342
480-143274-6	MW-561-20181011	Total/NA	Water	6010	439342
480-143274-7	MW-563-20181011	Total/NA	Water	6010	439342
480-143274-8	REW-10-20181011	Total/NA	Water	6010	439342
480-143274-9	REW-12-20181011	Total/NA	Water	6010	439342
MB 480-439342/1-A	Method Blank	Total/NA	Water	6010	439342
LCS 480-439342/2-A	Lab Control Sample	Total/NA	Water	6010	439342
LCSD 480-439342/25-A	Lab Control Sample Dup	Total/NA	Water	6010	439342

General Chemistry

Analysis Batch: 439294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143274-5	MW-360-20181011	Total/NA	Water	SM 4500 P E	
480-143274-6	MW-561-20181011	Total/NA	Water	SM 4500 P E	
480-143274-7	MW-563-20181011	Total/NA	Water	SM 4500 P E	
480-143274-8	REW-10-20181011	Total/NA	Water	SM 4500 P E	
480-143274-9	REW-12-20181011	Total/NA	Water	SM 4500 P E	
MB 480-439294/3	Method Blank	Total/NA	Water	SM 4500 P E	
LCS 480-439294/4	Lab Control Sample	Total/NA	Water	SM 4500 P E	
480-143274-5 MS	MW-360-20181011	Total/NA	Water	SM 4500 P E	
480-143274-5 MSD	MW-360-20181011	Total/NA	Water	SM 4500 P E	

Analysis Batch: 439306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143274-5	MW-360-20181011	Total/NA	Water	353.2	
480-143274-6	MW-561-20181011	Total/NA	Water	353.2	
480-143274-7	MW-563-20181011	Total/NA	Water	353.2	
480-143274-8	REW-10-20181011	Total/NA	Water	353.2	
480-143274-9	REW-12-20181011	Total/NA	Water	353.2	

Prep Batch: 439371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143274-5	MW-360-20181011	Total/NA	Water	Distill/Ammonia	
480-143274-6	MW-561-20181011	Total/NA	Water	Distill/Ammonia	
480-143274-7	MW-563-20181011	Total/NA	Water	Distill/Ammonia	
MB 480-439371/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 480-439371/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

General Chemistry (Continued)

Prep Batch: 439576

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143274-8	REW-10-20181011	Total/NA	Water	Distill/Ammonia	
480-143274-9	REW-12-20181011	Total/NA	Water	Distill/Ammonia	
MB 480-438412/1-B	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 480-439576/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 439600

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143274-5	MW-360-20181011	Total/NA	Water	350.1	439371
480-143274-6	MW-561-20181011	Total/NA	Water	350.1	439371
480-143274-7	MW-563-20181011	Total/NA	Water	350.1	439371
MB 480-439371/1-A	Method Blank	Total/NA	Water	350.1	439371
LCS 480-439371/2-A	Lab Control Sample	Total/NA	Water	350.1	439371

Analysis Batch: 439638

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143274-8	REW-10-20181011	Total/NA	Water	350.1	439576
480-143274-9	REW-12-20181011	Total/NA	Water	350.1	439576
MB 480-438412/1-B	Method Blank	Total/NA	Water	350.1	439576
LCS 480-439576/2-A	Lab Control Sample	Total/NA	Water	350.1	439576

Analysis Batch: 439712

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143274-5	MW-360-20181011	Total/NA	Water	9040C	
480-143274-6	MW-561-20181011	Total/NA	Water	9040C	
480-143274-7	MW-563-20181011	Total/NA	Water	9040C	
480-143274-8	REW-10-20181011	Total/NA	Water	9040C	
480-143274-9	REW-12-20181011	Total/NA	Water	9040C	
LCS 480-439712/1	Lab Control Sample	Total/NA	Water	9040C	

Analysis Batch: 439811

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143274-5	MW-360-20181011	Total/NA	Water	300.0	
480-143274-6	MW-561-20181011	Total/NA	Water	300.0	
480-143274-7	MW-563-20181011	Total/NA	Water	300.0	
480-143274-8	REW-10-20181011	Total/NA	Water	300.0	
480-143274-9	REW-12-20181011	Total/NA	Water	300.0	
MB 480-439811/4	Method Blank	Total/NA	Water	300.0	
LCS 480-439811/3	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 439910

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143274-5	MW-360-20181011	Total/NA	Water	SM 2320B	
480-143274-6	MW-561-20181011	Total/NA	Water	SM 2320B	
480-143274-7	MW-563-20181011	Total/NA	Water	SM 2320B	
480-143274-8	REW-10-20181011	Total/NA	Water	SM 2320B	
480-143274-9	REW-12-20181011	Total/NA	Water	SM 2320B	
MB 480-439910/7	Method Blank	Total/NA	Water	SM 2320B	
LCS 480-439910/8	Lab Control Sample	Total/NA	Water	SM 2320B	

General Chemistry (Continued)

Analysis Batch: 440885

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143274-5	MW-360-20181011	Total/NA	Water	9060A	
480-143274-6	MW-561-20181011	Total/NA	Water	9060A	
480-143274-7	MW-563-20181011	Total/NA	Water	9060A	
480-143274-8	REW-10-20181011	Total/NA	Water	9060A	
480-143274-9	REW-12-20181011	Total/NA	Water	9060A	
MB 480-440885/4	Method Blank	Total/NA	Water	9060A	
MB 480-440885/51	Method Blank	Total/NA	Water	9060A	
LCS 480-440885/5	Lab Control Sample	Total/NA	Water	9060A	
LCS 480-440885/52	Lab Control Sample	Total/NA	Water	9060A	

Client Sample ID: MW-264M-20181011 — Lab Sample ID: 480-143274-1

Date Collected: 10/11/18 08:45 — **Matrix: Water**
Date Received: 10/12/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	439907	10/17/18 18:41	NMC	TAL BUF

Client Sample ID: MW-266Ma-20181011 — Lab Sample ID: 480-143274-2

Date Collected: 10/11/18 07:30 — **Matrix: Water**
Date Received: 10/12/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	439907	10/17/18 19:08	NMC	TAL BUF
Total/NA	Prep	3535A			135288	10/16/18 11:30	MJW	TAL BUR
Total/NA	Analysis	522		1	135405	10/18/18 08:12	TPB	TAL BUR

Client Sample ID: MW-266Mb-20181011 — Lab Sample ID: 480-143274-3

Date Collected: 10/11/18 08:05 — **Matrix: Water**
Date Received: 10/12/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		4	439907	10/17/18 19:35	NMC	TAL BUF

Client Sample ID: MW-269Ma-20181011 — Lab Sample ID: 480-143274-4

Date Collected: 10/11/18 09:20 — **Matrix: Water**
Date Received: 10/12/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	439907	10/17/18 20:01	NMC	TAL BUF
Total/NA	Prep	3535A			135288	10/16/18 11:30	MJW	TAL BUR
Total/NA	Analysis	522		1	135347	10/17/18 17:29	A1B	TAL BUR

Client Sample ID: MW-360-20181011 — Lab Sample ID: 480-143274-5

Date Collected: 10/11/18 10:45 — **Matrix: Water**
Date Received: 10/12/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	439907	10/17/18 20:28	NMC	TAL BUF
Total/NA	Prep	3005A			439342	10/15/18 10:08	VEG	TAL BUF
Total/NA	Analysis	6010		1	439627	10/15/18 15:03	EMB	TAL BUF
Total/NA	Analysis	300.0		2	439811	10/16/18 21:36	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			439371	10/15/18 01:12	MLS	TAL BUF
Total/NA	Analysis	350.1		1	439600	10/16/18 07:39	CLT	TAL BUF
Total/NA	Analysis	353.2		1	439306	10/12/18 19:37	DCB	TAL BUF
Total/NA	Analysis	9040C		1	439712	10/16/18 11:27	KEB	TAL BUF
Total/NA	Analysis	9060A		1	440885	10/20/18 00:57	MRF	TAL BUF
Total/NA	Analysis	SM 2320B		1	439910	10/16/18 15:15	KEB	TAL BUF

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

TestAmerica Job ID: 480-143274-1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 P E		1	439294	10/13/18 06:32	AED	TAL BUF

Client Sample ID: MW-561-20181011

Lab Sample ID: 480-143274-6

Date Collected: 10/11/18 10:00

Matrix: Water

Date Received: 10/12/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	440046	10/17/18 21:02	KMN	TAL BUF
Total/NA	Prep	3005A			439342	10/15/18 10:08	VEG	TAL BUF
Total/NA	Analysis	6010		1	439627	10/15/18 15:07	EMB	TAL BUF
Total/NA	Analysis	300.0		5	439811	10/16/18 21:44	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			439371	10/15/18 01:12	MLS	TAL BUF
Total/NA	Analysis	350.1		1	439600	10/16/18 07:40	CLT	TAL BUF
Total/NA	Analysis	353.2		1	439306	10/12/18 20:28	DCB	TAL BUF
Total/NA	Analysis	9040C		1	439712	10/16/18 11:30	KEB	TAL BUF
Total/NA	Analysis	9060A		1	440885	10/20/18 01:27	MRF	TAL BUF
Total/NA	Analysis	SM 2320B		1	439910	10/16/18 15:21	KEB	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	439294	10/13/18 06:32	AED	TAL BUF

Client Sample ID: MW-563-20181011

Lab Sample ID: 480-143274-7

Date Collected: 10/11/18 11:25

Matrix: Water

Date Received: 10/12/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	440046	10/17/18 21:25	KMN	TAL BUF
Total/NA	Prep	3005A			439342	10/15/18 10:08	VEG	TAL BUF
Total/NA	Analysis	6010		1	439627	10/15/18 15:11	EMB	TAL BUF
Total/NA	Analysis	300.0		5	439811	10/16/18 21:52	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			439371	10/15/18 01:12	MLS	TAL BUF
Total/NA	Analysis	350.1		1	439600	10/16/18 07:40	CLT	TAL BUF
Total/NA	Analysis	353.2		1	439306	10/12/18 19:39	DCB	TAL BUF
Total/NA	Analysis	9040C		1	439712	10/16/18 11:33	KEB	TAL BUF
Total/NA	Analysis	9060A		1	440885	10/20/18 01:56	MRF	TAL BUF
Total/NA	Analysis	SM 2320B		1	439910	10/16/18 15:26	KEB	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	439294	10/13/18 06:32	AED	TAL BUF

Client Sample ID: REW-10-20181011

Lab Sample ID: 480-143274-8

Date Collected: 10/11/18 12:05

Matrix: Water

Date Received: 10/12/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	440046	10/17/18 21:49	KMN	TAL BUF
Total/NA	Prep	3535A			135288	10/16/18 11:30	MJW	TAL BUR
Total/NA	Analysis	522		1	135347	10/17/18 17:42	A1B	TAL BUR
Total/NA	Prep	3005A			439342	10/15/18 10:08	VEG	TAL BUF
Total/NA	Analysis	6010		1	439627	10/15/18 15:15	EMB	TAL BUF

Lab Chronicle

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

TestAmerica Job ID: 480-143274-1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	439811	10/16/18 22:00	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			439576	10/16/18 01:55	MLS	TAL BUF
Total/NA	Analysis	350.1		1	439638	10/16/18 08:13	CLT	TAL BUF
Total/NA	Analysis	353.2		1	439306	10/12/18 19:40	DCB	TAL BUF
Total/NA	Analysis	9040C		1	439712	10/16/18 11:35	KEB	TAL BUF
Total/NA	Analysis	9060A		1	440885	10/20/18 04:55	MRF	TAL BUF
Total/NA	Analysis	SM 2320B		1	439910	10/16/18 15:31	KEB	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	439294	10/13/18 06:32	AED	TAL BUF

Client Sample ID: REW-12-20181011

Lab Sample ID: 480-143274-9

Date Collected: 10/11/18 06:50

Matrix: Water

Date Received: 10/12/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	440046	10/17/18 22:12	KMN	TAL BUF
Total/NA	Prep	3535A			135288	10/16/18 11:30	MJW	TAL BUR
Total/NA	Analysis	522		1	135405	10/18/18 08:26	TPB	TAL BUR
Total/NA	Prep	3005A			439342	10/15/18 10:08	VEG	TAL BUF
Total/NA	Analysis	6010		1	439627	10/15/18 15:18	EMB	TAL BUF
Total/NA	Analysis	300.0		2	439811	10/16/18 22:08	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			439576	10/16/18 01:55	MLS	TAL BUF
Total/NA	Analysis	350.1		10	439638	10/16/18 08:18	CLT	TAL BUF
Total/NA	Analysis	353.2		1	439306	10/12/18 19:41	DCB	TAL BUF
Total/NA	Analysis	9040C		1	439712	10/16/18 11:38	KEB	TAL BUF
Total/NA	Analysis	9060A		1	440885	10/20/18 05:25	MRF	TAL BUF
Total/NA	Analysis	SM 2320B		1	439910	10/16/18 15:36	KEB	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	439294	10/13/18 06:32	AED	TAL BUF

Client Sample ID: DUP4-20181011

Lab Sample ID: 480-143274-10

Date Collected: 10/11/18 00:00

Matrix: Water

Date Received: 10/12/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		5	440046	10/17/18 22:36	KMN	TAL BUF

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-143274-11

Date Collected: 10/11/18 00:00

Matrix: Water

Date Received: 10/12/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	440046	10/17/18 23:00	KMN	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

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

TestAmerica Job ID: 480-143274-1

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	07-06-19
California	State Program	9	2931	04-01-19
Connecticut	State Program	1	PH-0568	09-30-20
Florida	NELAP	4	E87672	06-30-19
Georgia	State Program	4	10026 (NY)	03-31-19
Georgia	State Program	4	956	03-31-19
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	06-30-19
Maine	State Program	1	NY00044	12-04-18 *
Maryland	State Program	3	294	03-31-19
Massachusetts	State Program	1	M-NY044	06-30-19
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	06-30-19
New York	NELAP	2	10026	03-31-19
North Dakota	State Program	8	R-176	03-31-19
Oklahoma	State Program	6	9421	08-31-19
Oregon	NELAP	10	NY200003	06-09-19
Pennsylvania	NELAP	3	68-00281	07-31-19
Rhode Island	State Program	1	LAO00328	12-30-18
Tennessee	State Program	4	TN02970	03-31-19
Texas	NELAP	6	T104704412-15-6	07-31-19
USDA	Federal		P330-11-00386	02-06-21
Virginia	NELAP	3	460185	09-14-19
Washington	State Program	10	C784	02-10-19
Wisconsin	State Program	5	998310390	08-31-19

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
Maine	State Program	1	VT00008	04-17-19
Minnesota	NELAP	5	050-999-436	12-31-18
New Hampshire	NELAP	1	2006	12-18-18
New Jersey	NELAP	2	VT972	06-30-19
New York	NELAP	2	10391	04-01-19
Pennsylvania	NELAP	3	68-00489	04-30-19
Rhode Island	State Program	1	LAO00298	12-30-18
US Fish & Wildlife	Federal		LE-058448-0	07-31-19
USDA	Federal		P330-11-00093	07-24-20
Vermont	State Program	1	VT-4000	12-31-18

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

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

TestAmerica Job ID: 480-143274-1

Laboratory: TestAmerica Burlington (Continued)

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
Virginia	NELAP	3	460209	12-14-18

Method Summary

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

TestAmerica Job ID: 480-143274-1

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: 480-143274-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-143274-1	MW-264M-20181011	Water	10/11/18 08:45	10/12/18 01:00
480-143274-2	MW-266Ma-20181011	Water	10/11/18 07:30	10/12/18 01:00
480-143274-3	MW-266Mb-20181011	Water	10/11/18 08:05	10/12/18 01:00
480-143274-4	MW-269Ma-20181011	Water	10/11/18 09:20	10/12/18 01:00
480-143274-5	MW-360-20181011	Water	10/11/18 10:45	10/12/18 01:00
480-143274-6	MW-561-20181011	Water	10/11/18 10:00	10/12/18 01:00
480-143274-7	MW-563-20181011	Water	10/11/18 11:25	10/12/18 01:00
480-143274-8	REW-10-20181011	Water	10/11/18 12:05	10/12/18 01:00
480-143274-9	REW-12-20181011	Water	10/11/18 06:50	10/12/18 01:00
480-143274-10	DUP4-20181011	Water	10/11/18 00:00	10/12/18 01:00
480-143274-11	TRIP BLANK	Water	10/11/18 00:00	10/12/18 01:00

Login Sample Receipt Checklist

Client: Innovative Engineering Solutions, Inc

Job Number: 480-143274-1

Login Number: 143274

List Source: TestAmerica Buffalo

List Number: 1

Creator: Mason, Becky C

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background		
The cooler's custody seal, if present, is intact.		
The cooler or samples do not appear to have been compromised or tampered with.		
Samples were received on ice.		
Cooler Temperature is acceptable.		
Cooler Temperature is recorded.		
COC is present.		
COC is filled out in ink and legible.		
COC is filled out with all pertinent information.		
Is the Field Sampler's name present on COC?		
There are no discrepancies between the sample IDs on the containers and the COC.		
Samples are received within Holding Time (Excluding tests with immediate HTs)..		
Sample containers have legible labels.		
Containers are not broken or leaking.		
Sample collection date/times are provided.		
Appropriate sample containers are used.		
Sample bottles are completely filled.		
Sample Preservation Verified		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs		
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.		
If necessary, staff have been informed of any short hold time or quick TAT needs		
Multiphasic samples are not present.		
Samples do not require splitting or compositing.		
Sampling Company provided.		
Samples received within 48 hours of sampling.		
Samples requiring field filtration have been filtered in the field.		
Chlorine Residual checked.		

Login Sample Receipt Checklist

Client: Innovative Engineering Solutions, Inc

Job Number: 480-143274-1

Login Number: 143274
List Number: 2
Creator: Lavigne, Scott M

List Source: TestAmerica Burlington
List Creation: 10/12/18 05:17 PM

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	2.5ºC
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 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	

TestAmerica Westfield 360325-Boston
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

COC No: 41110
Page: 1 of 2
Job #:

480-143274 COC

Client Information:	Sample Collector's Name (Please Print Neatly): Danny Jones	Lab PM:	Lab COC B
Client Contact: Vicki Pariyar	Sample Collector's Phone: 508-404-3196	E-Mail:	

Company: Innovative Engineering Solutions Inc
Address: 25 Spring St
City: Walpole
State and Zip: MA 02081
Client's Phone: 508-668-003
Client's Contact Email: VPariyar@IESIonline.com
Client's Project Name/Number: Raytheon Wayland RA-008
Sample Collection Site Name & Location: Wayland MA

Due Date Requested: 10/18/18
Turnaround Time (TAT) Requested (business days): 5 days
Quote # or Project #:
PO #: RA-008
WO #:
PWS ID #:

Analysis Requested

Sample Identification	Sample Collection Date (MM/DD/YY)	Sample Collection Time (24 Hour Clock)	Sample Type: C=Comp G=Grab	Matrix Type **	8260 mcp	522 Dioxane	9060A TOC	6010 mcp Total IAAS	350.1 NH3	2320B Alkalinity	300.0-28D SO4,Cl- / 9040C pH	4500-P-E Ortho PO4 / 353.2 NO3	Total Number of Containers (enter total for each line)	Special Instructions & Notes:
Preservation Codes =>					A	A	A	D	H	N	N	N	↓	
MW-24M - 20181011	10/11/18	0845	G	W	X								3	GW-3 Requirements
MW-26 Ma - 20181011	10/11/18	0730	G	W	X	X							4	
MW-26Mb - 20181011	10/11/18	0805	G	W	X								3	
MW-26M Ma - 20181011	10/11/18	0920	G	W	X	X							4	
MW-360 - 20181011	10/11/18	1045	G	W	X		X	X	X	X	X	X	10	
MW-361 - 20181011	10/11/18	1000	G	W	X		X	X	X	X	X	X	10	
MW-363 - 20181011	10/11/18	1125	G	W	X		X	X	X	X	X	X	10	
REW-10 - 20181011	10/11/18	1205	G	W	X	X	X	X	X	X	X	X	11	
REW-12 - 20181011	10/11/18	0650	G	W	X	X	X	X	X	X	X	X	11	
Dup4 - 20181011	10/11/18	—	G	W	X								3	

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

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

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

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

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

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

► NOTE!! ALL SAMPLES MUST BE TRANSPORTED IN A COOLER, ON ICE !! ◄

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	10/11/18 1240	IESI	To TestAmerica Locker Box		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 10/11/18 1245	Company TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 10/12/18 0108	Company TA

Custody Seals Intact: △ Yes △ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 2.4°C, 2.1°C #3

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

360325-Boston 360325-Boston

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information:	Sample Collector's Name (Please Print Neatly): Dary Fortes	Lab PM:	Lab COC Barcode Label	COC No: 41109
Client Contact: Vicki Parsons	Sample Collector's Phone: 508-404-3196	E-Mail:		Page: 2 of 2

Company: Innovative Engineering Solutions Inc

Address: 93 Spring St
City: Walpole
State and Zip: MA 02081
Client's Phone: 508-668-0033
Client's Contact Email: vparsons@IESIonline.com
Client's Project Name/Number: Raytheon Wayland RA-008
Sample Collection Site Name & Location: Wayland MA

Due Date Requested: 10/18/18
Turnaround Time (TAT) Requested (business days): 5 days
Quote # or Project #:
PO #: RA-008
WO #:
PWS ID #:

Analysis Requested

Sample Identification	Sample Collection Date (MM/DD/YY)	Sample Collection Time (24 Hour Clock)	Sample Type: C=Comp G=Grab	Matrix Type **	8260 MCP	Total Number of Containers (enter total for each line)
			Preservation Codes ▸			
Trip Blank	—	—	—	W	X	2

Special Instructions & Notes: GW-3 Requirements

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

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

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

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

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

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

► NOTE!! ALL SAMPLES MUST BE TRANSPORTED IN A COOLER, ON ICE !! ◄

	Date/Time	Company		Date/Time	Company
Relinquished by:	10/11/18 1240	JESI	Received by: To TestAmerica Lock Box		
Relinquished by:	10-11-18 1800		Received by:	10/11-18 1245	T
Relinquished by:			Received by:	10/12/18 0100	TABS

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 7.4°C, 7.1°C #3

WI-QA-010 rev 8

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

TestAmerica Westfield 360325-Boston
501 Southampton Road
Westfield MA 01085
Phone: (413) 572-4000 Fax: (303) 467-7247

TestAmerica Boston 360325-Boston
240 Bear Hill Road -- Suite 104
Waltham MA 02451
Phone: (781) 466-6900 Fax: (781) 466-6901

Chain of Custody Record 360325-Boston

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information:	Sample Collector's Name (Please Print Neatly): Danny Sparks	Lab PM:	Lab COC Barcode Label	COC No: 41110
Client Contact: Vicki Perkins	Sample Collector's Phone: 508-404-3196	E-Mail:		Page: 1 of 2
Company: Innovative Engineering Solutions Inc				Job #:
Address: 23 Spring St	Due Date Requested: 10/18/18			
City: Walpole	Turnaround Time (TAT) Requested (business days): 5 days			
State and Zip: MA 02081				
Client's Phone: 508-668-003	Quote # or Project #:			
Client's Contact Email: VPerkins@IESIgroup.com	PO #: RA-008			
Client's Project Name/Number: Raytheon Wayland RA-008	WO #:			
Sample Collection Site Name & Location: Wayland MA	PWS ID #:			

Analysis Requested

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

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

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

Sample Identification	Sample Collection Date (MM/DD/YY)	Sample Collection Time (24 Hour Clock)	Sample Type: C=Comp G=Grab	Matrix Type **	8260 MSD	522 Dioxane	9060A TOC	6010 MSD Total Iron	350.1 NH3	2320B Alkalinity	300.0-SO4 Chloride	9040C pH	4500-P-E Ortho PO4	353.2 NO3	Total Number of Containers (enter total for each line)	Special Instructions & Notes:
Preservation Codes →					A	A	B	D								
MW-264M - 20181011	10/11/18	0845	G	W	X											GW-3 Requirements
MW-266Ma - 20181011	10/11/18	0730	G	W	X	X										
MW-266Mb - 20181011	10/11/18	0805	G	W	X											
MW-268Ma - 20181011	10/11/18	0920	G	W	X	X										
MW-360 - 20181011	10/11/18	1045	G	W	X		X	X	X	X	X	X			10	
MW-361 - 20181011	10/11/18	1000	G	W	X		X	X	X	X	X	X			10	
MW-363 - 20181011	10/11/18	1125	G	W	X		X	X	X	X	X	X			10	
REW-10 - 20181011	10/11/18	1905	G	W	X	X	X	X	X	X	X	X			11	
REW-12 - 20181011	10/11/18	0650	G	W	X	X	X	X	X	X	X	X			11	
Dup4 - 20181011	10/11/18	—	G	W	X										3	

480-143274 Chain of Custody

522-1-4 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:	Company	Received by:	Date/Time:	Company
1		10/11/18 1240	IESI	To Test America Lock Box		
2					10/11/18 1245	TA
3				Taylor Johnson	10/12/18 1035	TA WBR

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

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

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10/22/2018

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

SHIP DATE: 11OCT18
ACTWGT: 29.70 LB
CAD: 590687/CAFE3211

BILL RECIPIENT

TO SAMPLE RECEIVING
TESTAMERICA BURLINGTON
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403

(802) 660-1990 REF:
INV:
PO: DEPT:

FedEx Express

FRI - 12 OCT 10:30A
PRIORITY OVERNIGHT

TRK# 0201 4258 8393 6693

NC BTVA

05403
VT-US BTV

551C1/BBF3/104C

J181118060501uv

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: 480-143220-1
Client Project/Site: IDS Wayland

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

Attn: Vicki Pariyar

Authorized for release by:
10/23/2018 8:52:51 AM

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

Table of Contents

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
H	Sample was prepped or analyzed beyond the specified holding time
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

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)

Job ID: 480-143220-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-143220-1

Receipt
The samples were received on 10/11/2018 1:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.2º C and 1.7º C.

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

Method 8260C: The laboratory control sample (LCS) and / or the laboratory control sample duplicate (LCSD) for batch 480-439826 exceeded control limits for the following analyte: 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. The following samples were affected: MW-265S-20181010 (480-143220-1), MW-265D-20181010 (480-143220-3), MW-261S-20181010 (480-143220-4), MW-531-20181010 (480-143220-5), MW-552-20181010 (480-143220-6), MW-553-20181010 (480-143220-7), REW-1-20181010 (480-143220-9), REW-4-20181010 (480-143220-10), REW-5-20181010 (480-143220-11) and TRIP BLANKS (480-143220-14).

Method 8260C: The continuing calibration verification (CCV) for cis-1,3-Dichloropropene associated with batch 480-439826 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 : MW-265S-20181010 (480-143220-1), MW-265D-20181010 (480-143220-3), MW-261S-20181010 (480-143220-4), MW-531-20181010 (480-143220-5), MW-552-20181010 (480-143220-6), MW-553-20181010 (480-143220-7), REW-1-20181010 (480-143220-9), REW-4-20181010 (480-143220-10), REW-5-20181010 (480-143220-11) and TRIP BLANKS (480-143220-14).

Method 8260C: The laboratory control sample (LCS) and the laboratory control sample duplicate (LCSD) for batch 480-439907 exceeded control limits for the following analyte: 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. The following samples were affected : MW-265M-20181010 (480-143220-2), MW-562-20181010 (480-143220-8), DUP2-20181010 (480-143220-12) and DUP3-20181010 (480-143220-13).

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-20181010 (480-143220-2) and MW-261S-20181010 (480-143220-4). The sample was analyzed at a dilution based on screening results.

Method 300.0: The following samples were reported with elevated reporting limits for all analytes: MW-553-20181010 (480-143220-7), REW-1-20181010 (480-143220-9) and REW-5-20181010 (480-143220-11). The sample was analyzed at a dilution based on screening results.

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

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

Job ID: 480-143220-1 (Continued)

Laboratory: TestAmerica Buffalo (Continued)

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

General Chemistry
Method SM 4500 P E: The following sample(s) was received with less than 2 days remaining on the holding time or less than one shift (8 hours) remaining on a test with a holding time of 48 hours or less. As such, the laboratory had insufficient time remaining to perform the analysis within holding time: MW-553-20181010 (480-143220-7).

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-20181010 (480-143220-2), MW-261S-20181010 (480-143220-4), MW-531-20181010 (480-143220-5), MW-552-20181010 (480-143220-6), MW-553-20181010 (480-143220-7), MW-562-20181010 (480-143220-8), REW-1-20181010 (480-143220-9), REW-4-20181010 (480-143220-10) and REW-5-20181010 (480-143220-11).

Method Distill/Ammonia: The following sample was diluted due to excessive foaming. MW-265M-20181010 (480-143220-2

Method SM 2320B: The following samples were received with headspace in the sample container. This sample container was received with headspace. MW-265M-20181010 (480-143220-2), MW-261S-20181010 (480-143220-4), MW-531-20181010 (480-143220-5), MW-553-20181010 (480-143220-7) and MW-562-20181010 (480-143220-8).

Method 353.2: Reanalysis of the following samples were performed outside of the analytical holding time due to QC failure in previous batch. : MW-265M-20181010 (480-143220-2), MW-261S-20181010 (480-143220-4), MW-553-20181010 (480-143220-7) and MW-562-20181010 (480-143220-8).

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

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

MassDEP Analytical Protocol Certification Form

Laboratory Name: **TestAmerica Buffalo** Project #: **480-143220-1**

Project Location: **Wayland MA** RTN:

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

480-143220-1[1-14]

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

CAM Protocols (check all that apply below):

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

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

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

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

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

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

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

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

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

Signature: Becky Mason Position: Project Manager

Printed Name: Becky Mason Date: 10/23/18 8:51

This form has been electronically signed and approved

Detection Summary

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

TestAmerica Job ID: 480-143220-1

Client Sample ID: MW-265S-20181010 — Lab Sample ID: 480-143220-1

No Detections.

Client Sample ID: MW-265M-20181010 — Lab Sample ID: 480-143220-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	2.5		1.0		ug/L	1		8260C	Total/NA
Ethylbenzene	3.2		1.0		ug/L	1		8260C	Total/NA
m-Xylene & p-Xylene	13		2.0		ug/L	1		8260C	Total/NA
o-Xylene	3.6		1.0		ug/L	1		8260C	Total/NA
Tetrahydrofuran	13	*	10		ug/L	1		8260C	Total/NA
Toluene	1.6		1.0		ug/L	1		8260C	Total/NA
Vinyl chloride	1.0		1.0		ug/L	1		8260C	Total/NA
1,4-Dioxane	2.6		0.20		ug/L	1		522	Total/NA
Iron	130		0.050		mg/L	1		6010	Total/NA
Chloride	23		2.5		mg/L	5		300.0	Total/NA
Ammonia	2.9		0.80		mg/L	1		350.1	Total/NA
TOC Result 1	4.2		1.0		mg/L	1		9060A	Total/NA
TOC Result 2	4.1		1.0		mg/L	1		9060A	Total/NA
Total Organic Carbon - Duplicates	4.2		1.0		mg/L	1		9060A	Total/NA
Alkalinity, Total	750		5.0		mg/L	1		SM 2320B	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	6.7	HF	0.1		SU	1		9040C	Total/NA
Temperature	16.9	HF	0.001		Degrees C	1		9040C	Total/NA

Client Sample ID: MW-265D-20181010 — Lab Sample ID: 480-143220-3

No Detections.

Client Sample ID: MW-261S-20181010 — Lab Sample ID: 480-143220-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
m-Xylene & p-Xylene	2.5		2.0		ug/L	1		8260C	Total/NA
1,4-Dioxane	0.92		0.20		ug/L	1		522	Total/NA
Iron	35		0.050		mg/L	1		6010	Total/NA
Chloride	16		1.0		mg/L	2		300.0	Total/NA
Ammonia	0.21		0.20		mg/L	1		350.1	Total/NA
TOC Result 1	2.3		1.0		mg/L	1		9060A	Total/NA
TOC Result 2	2.2		1.0		mg/L	1		9060A	Total/NA
Total Organic Carbon - Duplicates	2.2		1.0		mg/L	1		9060A	Total/NA
Alkalinity, Total	380		5.0		mg/L	1		SM 2320B	Total/NA
ortho-Phosphate	0.066		0.020		mg/L	1		SM 4500 P E	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	6.9	HF	0.1		SU	1		9040C	Total/NA
Temperature	16.5	HF	0.001		Degrees C	1		9040C	Total/NA

Client Sample ID: MW-531-20181010 — Lab Sample ID: 480-143220-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	19		0.050		mg/L	1		6010	Total/NA
Chloride	9.5		0.50		mg/L	1		300.0	Total/NA
Sulfate	15		2.0		mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-531-20181010 (Continued) — Lab Sample ID: 480-143220-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
TOC Result 1	1.3		1.0		mg/L	1		9060A	Total/NA
TOC Result 2	1.2		1.0		mg/L	1		9060A	Total/NA
Total Organic Carbon - Duplicates	1.3		1.0		mg/L	1		9060A	Total/NA
Alkalinity, Total	130		5.0		mg/L	1		SM 2320B	Total/NA
ortho-Phosphate	0.085		0.020		mg/L	1		SM 4500 P E	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	6.5	HF	0.1		SU	1		9040C	Total/NA
Temperature	16.4	HF	0.001		Degrees C	1		9040C	Total/NA

Client Sample ID: MW-552-20181010 — Lab Sample ID: 480-143220-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	0.40		0.20		ug/L	1		522	Total/NA
Iron	18		0.050		mg/L	1		6010	Total/NA
Chloride	9.0		0.50		mg/L	1		300.0	Total/NA
Sulfate	5.0		2.0		mg/L	1		300.0	Total/NA
Ammonia	0.26		0.20		mg/L	1		350.1	Total/NA
TOC Result 1	1.6		1.0		mg/L	1		9060A	Total/NA
TOC Result 2	1.5		1.0		mg/L	1		9060A	Total/NA
Total Organic Carbon - Duplicates	1.6		1.0		mg/L	1		9060A	Total/NA
Alkalinity, Total	260		5.0		mg/L	1		SM 2320B	Total/NA
ortho-Phosphate	0.031		0.020		mg/L	1		SM 4500 P E	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	6.9	HF	0.1		SU	1		9040C	Total/NA
Temperature	16.8	HF	0.001		Degrees C	1		9040C	Total/NA

Client Sample ID: MW-553-20181010 — Lab Sample ID: 480-143220-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	2.9		1.0		ug/L	1		8260C	Total/NA
Ethylbenzene	3.0		1.0		ug/L	1		8260C	Total/NA
m-Xylene & p-Xylene	12		2.0		ug/L	1		8260C	Total/NA
o-Xylene	2.8		1.0		ug/L	1		8260C	Total/NA
Toluene	4.2		1.0		ug/L	1		8260C	Total/NA
Vinyl chloride	8.7		1.0		ug/L	1		8260C	Total/NA
Iron	37		0.050		mg/L	1		6010	Total/NA
Chloride	15		2.5		mg/L	5		300.0	Total/NA
Ammonia	0.23		0.20		mg/L	1		350.1	Total/NA
TOC Result 1	2.6		1.0		mg/L	1		9060A	Total/NA
TOC Result 2	2.5		1.0		mg/L	1		9060A	Total/NA
Total Organic Carbon - Duplicates	2.5		1.0		mg/L	1		9060A	Total/NA
Alkalinity, Total	680		5.0		mg/L	1		SM 2320B	Total/NA
ortho-Phosphate	0.094	H	0.020		mg/L	1		SM 4500 P E	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	6.9	HF	0.1		SU	1		9040C	Total/NA
Temperature	16.6	HF	0.001		Degrees C	1		9040C	Total/NA

Client Sample ID: MW-562-20181010 — Lab Sample ID: 480-143220-8

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-562-20181010 (Continued) — Lab Sample ID: 480-143220-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
m-Xylene & p-Xylene	3.1		2.0		ug/L	1		8260C	Total/NA
Toluene	1.1		1.0		ug/L	1		8260C	Total/NA
Iron	110		0.050		mg/L	1		6010	Total/NA
Chloride	10		0.50		mg/L	1		300.0	Total/NA
Ammonia	5.5		1.0		mg/L	5		350.1	Total/NA
TOC Result 1	11		1.0		mg/L	1		9060A	Total/NA
TOC Result 2	10		1.0		mg/L	1		9060A	Total/NA
Total Organic Carbon - Duplicates	11		1.0		mg/L	1		9060A	Total/NA
Alkalinity, Total	290		5.0		mg/L	1		SM 2320B	Total/NA
ortho-Phosphate	0.20		0.020		mg/L	1		SM 4500 P E	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	6.3	HF	0.1		SU	1		9040C	Total/NA
Temperature	16.6	HF	0.001		Degrees C	1		9040C	Total/NA

Client Sample ID: REW-1-20181010 — Lab Sample ID: 480-143220-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
m-Xylene & p-Xylene	2.8		2.0		ug/L	1		8260C	Total/NA
1,4-Dioxane	0.35		0.20		ug/L	1		522	Total/NA
Iron	43		0.050		mg/L	1		6010	Total/NA
Chloride	7.2		1.0		mg/L	2		300.0	Total/NA
Ammonia	7.3		1.0		mg/L	5		350.1	Total/NA
TOC Result 1	3.9		1.0		mg/L	1		9060A	Total/NA
TOC Result 2	3.4		1.0		mg/L	1		9060A	Total/NA
Total Organic Carbon - Duplicates	3.7		1.0		mg/L	1		9060A	Total/NA
Alkalinity, Total	460		5.0		mg/L	1		SM 2320B	Total/NA
ortho-Phosphate	0.13		0.020		mg/L	1		SM 4500 P E	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	6.8	HF	0.1		SU	1		9040C	Total/NA
Temperature	16.7	HF	0.001		Degrees C	1		9040C	Total/NA

Client Sample ID: REW-4-20181010 — Lab Sample ID: 480-143220-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	3.4		1.0		ug/L	1		8260C	Total/NA
Iron	6.5		0.050		mg/L	1		6010	Total/NA
Chloride	4.3		0.50		mg/L	1		300.0	Total/NA
Sulfate	14		2.0		mg/L	1		300.0	Total/NA
Ammonia	0.21		0.20		mg/L	1		350.1	Total/NA
TOC Result 1	1.3		1.0		mg/L	1		9060A	Total/NA
TOC Result 2	1.1		1.0		mg/L	1		9060A	Total/NA
Total Organic Carbon - Duplicates	1.2		1.0		mg/L	1		9060A	Total/NA
Alkalinity, Total	94		5.0		mg/L	1		SM 2320B	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	6.6	HF	0.1		SU	1		9040C	Total/NA
Temperature	16.4	HF	0.001		Degrees C	1		9040C	Total/NA

Client Sample ID: REW-5-20181010 — Lab Sample ID: 480-143220-11

This Detection Summary does not include radiochemical test results.

Client Sample ID: REW-5-20181010 (Continued) — Lab Sample ID: 480-143220-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	3.6		1.0		ug/L	1		8260C	Total/NA
Vinyl chloride	2.2		1.0		ug/L	1		8260C	Total/NA
1,4-Dioxane	0.22		0.20		ug/L	1		522	Total/NA
Iron	11		0.050		mg/L	1		6010	Total/NA
Chloride	6.5		1.0		mg/L	2		300.0	Total/NA
Ammonia	0.56		0.20		mg/L	1		350.1	Total/NA
TOC Result 1	1.6		1.0		mg/L	1		9060A	Total/NA
TOC Result 2	1.5		1.0		mg/L	1		9060A	Total/NA
Total Organic Carbon - Duplicates	1.6		1.0		mg/L	1		9060A	Total/NA
Alkalinity, Total	370		5.0		mg/L	1		SM 2320B	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	6.8	HF	0.1		SU	1		9040C	Total/NA
Temperature	16.4	HF	0.001		Degrees C	1		9040C	Total/NA

Client Sample ID: DUP2-20181010 — Lab Sample ID: 480-143220-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	0.45		0.20		ug/L	1		522	Total/NA

Client Sample ID: DUP3-20181010 — Lab Sample ID: 480-143220-13

No Detections.

Client Sample ID: TRIP BLANKS — Lab Sample ID: 480-143220-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	3.8		1.0		ug/L	1		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-265S-20181010
Date Collected: 10/10/18 13:10
Date Received: 10/11/18 01:15

Lab Sample ID: 480-143220-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			10/17/18 01:27	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/17/18 01:27	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/17/18 01:27	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/17/18 01:27	1
1,1-Dichloroethane	ND		1.0		ug/L			10/17/18 01:27	1
1,1-Dichloroethene	ND		1.0		ug/L			10/17/18 01:27	1
1,1-Dichloropropene	ND		1.0		ug/L			10/17/18 01:27	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/17/18 01:27	1
1,2,3-Trichloropropane	ND		1.0		ug/L			10/17/18 01:27	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/17/18 01:27	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/17/18 01:27	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			10/17/18 01:27	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/17/18 01:27	1
1,2-Dichloroethane	ND		1.0		ug/L			10/17/18 01:27	1
1,2-Dichloropropane	ND		1.0		ug/L			10/17/18 01:27	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/17/18 01:27	1
1,3-Dichlorobenzene	ND		1.0		ug/L			10/17/18 01:27	1
1,3-Dichloropropane	ND		1.0		ug/L			10/17/18 01:27	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/17/18 01:27	1
1,4-Dioxane	ND		50		ug/L			10/17/18 01:27	1
2,2-Dichloropropane	ND		1.0		ug/L			10/17/18 01:27	1
2-Butanone (MEK)	ND	*	10		ug/L			10/17/18 01:27	1
2-Chlorotoluene	ND		1.0		ug/L			10/17/18 01:27	1
2-Hexanone	ND		10		ug/L			10/17/18 01:27	1
4-Chlorotoluene	ND		1.0		ug/L			10/17/18 01:27	1
4-Isopropyltoluene	ND		1.0		ug/L			10/17/18 01:27	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			10/17/18 01:27	1
Acetone	ND		50		ug/L			10/17/18 01:27	1
Benzene	ND		1.0		ug/L			10/17/18 01:27	1
Bromobenzene	ND		1.0		ug/L			10/17/18 01:27	1
Bromoform	ND		1.0		ug/L			10/17/18 01:27	1
Bromomethane	ND		2.0		ug/L			10/17/18 01:27	1
Carbon disulfide	ND		10		ug/L			10/17/18 01:27	1
Carbon tetrachloride	ND		1.0		ug/L			10/17/18 01:27	1
Chlorobenzene	ND		1.0		ug/L			10/17/18 01:27	1
Chlorobromomethane	ND		1.0		ug/L			10/17/18 01:27	1
Chlorodibromomethane	ND		0.50		ug/L			10/17/18 01:27	1
Chloroethane	ND		2.0		ug/L			10/17/18 01:27	1
Chloroform	ND		1.0		ug/L			10/17/18 01:27	1
Chloromethane	ND		2.0		ug/L			10/17/18 01:27	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 01:27	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 01:27	1
Dichlorobromomethane	ND		0.50		ug/L			10/17/18 01:27	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/17/18 01:27	1
Ethyl ether	ND		1.0		ug/L			10/17/18 01:27	1
Ethylbenzene	ND		1.0		ug/L			10/17/18 01:27	1
Ethylene Dibromide	ND		1.0		ug/L			10/17/18 01:27	1
Hexachlorobutadiene	ND		0.40		ug/L			10/17/18 01:27	1
Isopropyl ether	ND		10		ug/L			10/17/18 01:27	1

Client Sample ID: MW-265S-20181010

Lab Sample ID: 480-143220-1

Date Collected: 10/10/18 13:10

Matrix: Water

Date Received: 10/11/18 01:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			10/17/18 01:27	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/17/18 01:27	1
Methylene Chloride	ND		1.0		ug/L			10/17/18 01:27	1
m-Xylene & p-Xylene	ND		2.0		ug/L			10/17/18 01:27	1
Naphthalene	ND		5.0		ug/L			10/17/18 01:27	1
n-Butylbenzene	ND		1.0		ug/L			10/17/18 01:27	1
N-Propylbenzene	ND		1.0		ug/L			10/17/18 01:27	1
o-Xylene	ND		1.0		ug/L			10/17/18 01:27	1
sec-Butylbenzene	ND		1.0		ug/L			10/17/18 01:27	1
Styrene	ND		1.0		ug/L			10/17/18 01:27	1
Tert-amyl methyl ether	ND		5.0		ug/L			10/17/18 01:27	1
Tert-butyl ethyl ether	ND		5.0		ug/L			10/17/18 01:27	1
tert-Butylbenzene	ND		1.0		ug/L			10/17/18 01:27	1
Tetrachloroethene	ND		1.0		ug/L			10/17/18 01:27	1
Tetrahydrofuran	ND	*	10		ug/L			10/17/18 01:27	1
Toluene	ND		1.0		ug/L			10/17/18 01:27	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 01:27	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 01:27	1
Trichloroethene	ND		1.0		ug/L			10/17/18 01:27	1
Trichlorofluoromethane	ND		1.0		ug/L			10/17/18 01:27	1
Vinyl chloride	ND		1.0		ug/L			10/17/18 01:27	1
Dibromomethane	ND		1.0		ug/L			10/17/18 01:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*105*		*70 - 130*		*10/17/18 01:27*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*10/17/18 01:27*	*1*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*		*10/17/18 01:27*	*1*

Client Sample ID: MW-265M-20181010

Lab Sample ID: 480-143220-2

Date Collected: 10/10/18 13:45

Matrix: Water

Date Received: 10/11/18 01:15

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			10/17/18 12:29	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/17/18 12:29	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/17/18 12:29	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/17/18 12:29	1
1,1-Dichloroethane	ND		1.0		ug/L			10/17/18 12:29	1
1,1-Dichloroethene	ND		1.0		ug/L			10/17/18 12:29	1
1,1-Dichloropropene	ND		1.0		ug/L			10/17/18 12:29	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/17/18 12:29	1
1,2,3-Trichloropropane	ND		1.0		ug/L			10/17/18 12:29	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/17/18 12:29	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/17/18 12:29	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			10/17/18 12:29	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/17/18 12:29	1
1,2-Dichloroethane	ND		1.0		ug/L			10/17/18 12:29	1
1,2-Dichloropropane	ND		1.0		ug/L			10/17/18 12:29	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/17/18 12:29	1

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

TestAmerica Job ID: 480-143220-1

Client Sample ID: MW-265M-20181010
Date Collected: 10/10/18 13:45
Date Received: 10/11/18 01:15

Lab Sample ID: 480-143220-2
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			10/17/18 12:29	1
1,3-Dichloropropane	ND		1.0		ug/L			10/17/18 12:29	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/17/18 12:29	1
1,4-Dioxane	ND		50		ug/L			10/17/18 12:29	1
2,2-Dichloropropane	ND		1.0		ug/L			10/17/18 12:29	1
2-Butanone (MEK)	ND	*	10		ug/L			10/17/18 12:29	1
2-Chlorotoluene	ND		1.0		ug/L			10/17/18 12:29	1
2-Hexanone	ND		10		ug/L			10/17/18 12:29	1
4-Chlorotoluene	ND		1.0		ug/L			10/17/18 12:29	1
4-Isopropyltoluene	ND		1.0		ug/L			10/17/18 12:29	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			10/17/18 12:29	1
Acetone	ND		50		ug/L			10/17/18 12:29	1
Benzene	ND		1.0		ug/L			10/17/18 12:29	1
Bromobenzene	ND		1.0		ug/L			10/17/18 12:29	1
Bromoform	ND		1.0		ug/L			10/17/18 12:29	1
Bromomethane	ND		2.0		ug/L			10/17/18 12:29	1
Carbon disulfide	ND		10		ug/L			10/17/18 12:29	1
Carbon tetrachloride	ND		1.0		ug/L			10/17/18 12:29	1
Chlorobenzene	ND		1.0		ug/L			10/17/18 12:29	1
Chlorobromomethane	ND		1.0		ug/L			10/17/18 12:29	1
Chlorodibromomethane	ND		0.50		ug/L			10/17/18 12:29	1
Chloroethane	ND		2.0		ug/L			10/17/18 12:29	1
Chloroform	ND		1.0		ug/L			10/17/18 12:29	1
Chloromethane	ND		2.0		ug/L			10/17/18 12:29	1
cis-1,2-Dichloroethene	**2.5**		1.0		ug/L			10/17/18 12:29	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 12:29	1
Dichlorobromomethane	ND		0.50		ug/L			10/17/18 12:29	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/17/18 12:29	1
Ethyl ether	ND		1.0		ug/L			10/17/18 12:29	1
Ethylbenzene	**3.2**		1.0		ug/L			10/17/18 12:29	1
Ethylene Dibromide	ND		1.0		ug/L			10/17/18 12:29	1
Hexachlorobutadiene	ND		0.40		ug/L			10/17/18 12:29	1
Isopropyl ether	ND		10		ug/L			10/17/18 12:29	1
Isopropylbenzene	ND		1.0		ug/L			10/17/18 12:29	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/17/18 12:29	1
Methylene Chloride	ND		1.0		ug/L			10/17/18 12:29	1
m-Xylene & p-Xylene	**13**		2.0		ug/L			10/17/18 12:29	1
Naphthalene	ND		5.0		ug/L			10/17/18 12:29	1
n-Butylbenzene	ND		1.0		ug/L			10/17/18 12:29	1
N-Propylbenzene	ND		1.0		ug/L			10/17/18 12:29	1
o-Xylene	**3.6**		1.0		ug/L			10/17/18 12:29	1
sec-Butylbenzene	ND		1.0		ug/L			10/17/18 12:29	1
Styrene	ND		1.0		ug/L			10/17/18 12:29	1
Tert-amyl methyl ether	ND		5.0		ug/L			10/17/18 12:29	1
Tert-butyl ethyl ether	ND		5.0		ug/L			10/17/18 12:29	1
tert-Butylbenzene	ND		1.0		ug/L			10/17/18 12:29	1
Tetrachloroethene	ND		1.0		ug/L			10/17/18 12:29	1
Tetrahydrofuran	**13**	*	10		ug/L			10/17/18 12:29	1
Toluene	**1.6**		1.0		ug/L			10/17/18 12:29	1

Client Sample ID: MW-265M-20181010

Lab Sample ID: 480-143220-2

Date Collected: 10/10/18 13:45

Matrix: Water

Date Received: 10/11/18 01:15

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			10/17/18 12:29	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 12:29	1
Trichloroethene	ND		1.0		ug/L			10/17/18 12:29	1
Trichlorofluoromethane	ND		1.0		ug/L			10/17/18 12:29	1
Vinyl chloride	**1.0**		1.0		ug/L			10/17/18 12:29	1
Dibromomethane	ND		1.0		ug/L			10/17/18 12:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*70 - 130*		*10/17/18 12:29*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*10/17/18 12:29*	*1*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*		*10/17/18 12:29*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**2.6**		0.20		ug/L		10/19/18 15:20	10/20/18 14:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*82*		*46 - 130*	*10/19/18 15:20*	*10/20/18 14:34*	*1*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**130**		0.050		mg/L		10/13/18 09:16	10/15/18 13:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**23**		2.5		mg/L			10/16/18 18:53	5
Sulfate	ND		10		mg/L			10/16/18 18:53	5
Ammonia	**2.9**		0.80		mg/L		10/15/18 01:12	10/16/18 07:24	1
Nitrate as N	ND		0.050		mg/L			10/11/18 11:18	1
TOC Result 1	**4.2**		1.0		mg/L			10/21/18 04:50	1
TOC Result 2	**4.1**		1.0		mg/L			10/21/18 04:50	1
Total Organic Carbon - Duplicates	**4.2**		1.0		mg/L			10/21/18 04:50	1
Alkalinity, Total	**750**		5.0		mg/L			10/15/18 09:48	1
ortho-Phosphate	ND		0.020		mg/L			10/12/18 08:05	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**6.7**	**HF**	0.1		SU			10/14/18 12:56	1
Temperature	**16.9**	**HF**	0.001		Degrees C			10/14/18 12:56	1

Client Sample ID: MW-265D-20181010

Lab Sample ID: 480-143220-3

Date Collected: 10/10/18 14:25

Matrix: Water

Date Received: 10/11/18 01:15

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			10/17/18 02:20	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/17/18 02:20	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/17/18 02:20	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/17/18 02:20	1
1,1-Dichloroethane	ND		1.0		ug/L			10/17/18 02:20	1
1,1-Dichloroethene	ND		1.0		ug/L			10/17/18 02:20	1
1,1-Dichloropropene	ND		1.0		ug/L			10/17/18 02:20	1

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

TestAmerica Job ID: 480-143220-1

Client Sample ID: MW-265D-20181010
Date Collected: 10/10/18 14:25
Date Received: 10/11/18 01:15

Lab Sample ID: 480-143220-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/17/18 02:20	1
1,2,3-Trichloropropane	ND		1.0		ug/L			10/17/18 02:20	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/17/18 02:20	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/17/18 02:20	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			10/17/18 02:20	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/17/18 02:20	1
1,2-Dichloroethane	ND		1.0		ug/L			10/17/18 02:20	1
1,2-Dichloropropane	ND		1.0		ug/L			10/17/18 02:20	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/17/18 02:20	1
1,3-Dichlorobenzene	ND		1.0		ug/L			10/17/18 02:20	1
1,3-Dichloropropane	ND		1.0		ug/L			10/17/18 02:20	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/17/18 02:20	1
1,4-Dioxane	ND		50		ug/L			10/17/18 02:20	1
2,2-Dichloropropane	ND		1.0		ug/L			10/17/18 02:20	1
2-Butanone (MEK)	ND	*	10		ug/L			10/17/18 02:20	1
2-Chlorotoluene	ND		1.0		ug/L			10/17/18 02:20	1
2-Hexanone	ND		10		ug/L			10/17/18 02:20	1
4-Chlorotoluene	ND		1.0		ug/L			10/17/18 02:20	1
4-Isopropyltoluene	ND		1.0		ug/L			10/17/18 02:20	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			10/17/18 02:20	1
Acetone	ND		50		ug/L			10/17/18 02:20	1
Benzene	ND		1.0		ug/L			10/17/18 02:20	1
Bromobenzene	ND		1.0		ug/L			10/17/18 02:20	1
Bromoform	ND		1.0		ug/L			10/17/18 02:20	1
Bromomethane	ND		2.0		ug/L			10/17/18 02:20	1
Carbon disulfide	ND		10		ug/L			10/17/18 02:20	1
Carbon tetrachloride	ND		1.0		ug/L			10/17/18 02:20	1
Chlorobenzene	ND		1.0		ug/L			10/17/18 02:20	1
Chlorobromomethane	ND		1.0		ug/L			10/17/18 02:20	1
Chlorodibromomethane	ND		0.50		ug/L			10/17/18 02:20	1
Chloroethane	ND		2.0		ug/L			10/17/18 02:20	1
Chloroform	ND		1.0		ug/L			10/17/18 02:20	1
Chloromethane	ND		2.0		ug/L			10/17/18 02:20	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 02:20	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 02:20	1
Dichlorobromomethane	ND		0.50		ug/L			10/17/18 02:20	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/17/18 02:20	1
Ethyl ether	ND		1.0		ug/L			10/17/18 02:20	1
Ethylbenzene	ND		1.0		ug/L			10/17/18 02:20	1
Ethylene Dibromide	ND		1.0		ug/L			10/17/18 02:20	1
Hexachlorobutadiene	ND		0.40		ug/L			10/17/18 02:20	1
Isopropyl ether	ND		10		ug/L			10/17/18 02:20	1
Isopropylbenzene	ND		1.0		ug/L			10/17/18 02:20	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/17/18 02:20	1
Methylene Chloride	ND		1.0		ug/L			10/17/18 02:20	1
m-Xylene & p-Xylene	ND		2.0		ug/L			10/17/18 02:20	1
Naphthalene	ND		5.0		ug/L			10/17/18 02:20	1
n-Butylbenzene	ND		1.0		ug/L			10/17/18 02:20	1
N-Propylbenzene	ND		1.0		ug/L			10/17/18 02:20	1

Client Sample ID: MW-265D-20181010

Lab Sample ID: 480-143220-3

Date Collected: 10/10/18 14:25

Matrix: Water

Date Received: 10/11/18 01:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		1.0		ug/L			10/17/18 02:20	1
sec-Butylbenzene	ND		1.0		ug/L			10/17/18 02:20	1
Styrene	ND		1.0		ug/L			10/17/18 02:20	1
Tert-amyl methyl ether	ND		5.0		ug/L			10/17/18 02:20	1
Tert-butyl ethyl ether	ND		5.0		ug/L			10/17/18 02:20	1
tert-Butylbenzene	ND		1.0		ug/L			10/17/18 02:20	1
Tetrachloroethene	ND		1.0		ug/L			10/17/18 02:20	1
Tetrahydrofuran	ND	*	10		ug/L			10/17/18 02:20	1
Toluene	ND		1.0		ug/L			10/17/18 02:20	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 02:20	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 02:20	1
Trichloroethene	ND		1.0		ug/L			10/17/18 02:20	1
Trichlorofluoromethane	ND		1.0		ug/L			10/17/18 02:20	1
Vinyl chloride	ND		1.0		ug/L			10/17/18 02:20	1
Dibromomethane	ND		1.0		ug/L			10/17/18 02:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*70 - 130*		*10/17/18 02:20*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*10/17/18 02:20*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*10/17/18 02:20*	*1*

Client Sample ID: MW-261S-20181010

Lab Sample ID: 480-143220-4

Date Collected: 10/10/18 08:50

Matrix: Water

Date Received: 10/11/18 01:15

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			10/17/18 02:47	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/17/18 02:47	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/17/18 02:47	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/17/18 02:47	1
1,1-Dichloroethane	ND		1.0		ug/L			10/17/18 02:47	1
1,1-Dichloroethene	ND		1.0		ug/L			10/17/18 02:47	1
1,1-Dichloropropene	ND		1.0		ug/L			10/17/18 02:47	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/17/18 02:47	1
1,2,3-Trichloropropane	ND		1.0		ug/L			10/17/18 02:47	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/17/18 02:47	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/17/18 02:47	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			10/17/18 02:47	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/17/18 02:47	1
1,2-Dichloroethane	ND		1.0		ug/L			10/17/18 02:47	1
1,2-Dichloropropane	ND		1.0		ug/L			10/17/18 02:47	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/17/18 02:47	1
1,3-Dichlorobenzene	ND		1.0		ug/L			10/17/18 02:47	1
1,3-Dichloropropane	ND		1.0		ug/L			10/17/18 02:47	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/17/18 02:47	1
1,4-Dioxane	ND		50		ug/L			10/17/18 02:47	1
2,2-Dichloropropane	ND		1.0		ug/L			10/17/18 02:47	1
2-Butanone (MEK)	ND	*	10		ug/L			10/17/18 02:47	1
2-Chlorotoluene	ND		1.0		ug/L			10/17/18 02:47	1

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

TestAmerica Job ID: 480-143220-1

Client Sample ID: MW-261S-20181010
Date Collected: 10/10/18 08:50
Date Received: 10/11/18 01:15

Lab Sample ID: 480-143220-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Hexanone	ND		10		ug/L			10/17/18 02:47	1
4-Chlorotoluene	ND		1.0		ug/L			10/17/18 02:47	1
4-Isopropyltoluene	ND		1.0		ug/L			10/17/18 02:47	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			10/17/18 02:47	1
Acetone	ND		50		ug/L			10/17/18 02:47	1
Benzene	ND		1.0		ug/L			10/17/18 02:47	1
Bromobenzene	ND		1.0		ug/L			10/17/18 02:47	1
Bromoform	ND		1.0		ug/L			10/17/18 02:47	1
Bromomethane	ND		2.0		ug/L			10/17/18 02:47	1
Carbon disulfide	ND		10		ug/L			10/17/18 02:47	1
Carbon tetrachloride	ND		1.0		ug/L			10/17/18 02:47	1
Chlorobenzene	ND		1.0		ug/L			10/17/18 02:47	1
Chlorobromomethane	ND		1.0		ug/L			10/17/18 02:47	1
Chlorodibromomethane	ND		0.50		ug/L			10/17/18 02:47	1
Chloroethane	ND		2.0		ug/L			10/17/18 02:47	1
Chloroform	ND		1.0		ug/L			10/17/18 02:47	1
Chloromethane	ND		2.0		ug/L			10/17/18 02:47	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 02:47	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 02:47	1
Dichlorobromomethane	ND		0.50		ug/L			10/17/18 02:47	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/17/18 02:47	1
Ethyl ether	ND		1.0		ug/L			10/17/18 02:47	1
Ethylbenzene	ND		1.0		ug/L			10/17/18 02:47	1
Ethylene Dibromide	ND		1.0		ug/L			10/17/18 02:47	1
Hexachlorobutadiene	ND		0.40		ug/L			10/17/18 02:47	1
Isopropyl ether	ND		10		ug/L			10/17/18 02:47	1
Isopropylbenzene	ND		1.0		ug/L			10/17/18 02:47	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/17/18 02:47	1
Methylene Chloride	ND		1.0		ug/L			10/17/18 02:47	1
m-Xylene & p-Xylene	**2.5**		2.0		ug/L			10/17/18 02:47	1
Naphthalene	ND		5.0		ug/L			10/17/18 02:47	1
n-Butylbenzene	ND		1.0		ug/L			10/17/18 02:47	1
N-Propylbenzene	ND		1.0		ug/L			10/17/18 02:47	1
o-Xylene	ND		1.0		ug/L			10/17/18 02:47	1
sec-Butylbenzene	ND		1.0		ug/L			10/17/18 02:47	1
Styrene	ND		1.0		ug/L			10/17/18 02:47	1
Tert-amyl methyl ether	ND		5.0		ug/L			10/17/18 02:47	1
Tert-butyl ethyl ether	ND		5.0		ug/L			10/17/18 02:47	1
tert-Butylbenzene	ND		1.0		ug/L			10/17/18 02:47	1
Tetrachloroethene	ND		1.0		ug/L			10/17/18 02:47	1
Tetrahydrofuran	ND	*	10		ug/L			10/17/18 02:47	1
Toluene	ND		1.0		ug/L			10/17/18 02:47	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 02:47	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 02:47	1
Trichloroethene	ND		1.0		ug/L			10/17/18 02:47	1
Trichlorofluoromethane	ND		1.0		ug/L			10/17/18 02:47	1
Vinyl chloride	ND		1.0		ug/L			10/17/18 02:47	1
Dibromomethane	ND		1.0		ug/L			10/17/18 02:47	1

Client Sample ID: MW-261S-20181010

Lab Sample ID: 480-143220-4

Date Collected: 10/10/18 08:50

Matrix: Water

Date Received: 10/11/18 01:15

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*70 - 130*		*10/17/18 02:47*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 130*		*10/17/18 02:47*	*1*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*		*10/17/18 02:47*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.92**		0.20		ug/L		10/19/18 15:20	10/20/18 14:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*81*		*46 - 130*	*10/19/18 15:20*	*10/20/18 14:49*	*1*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**35**		0.050		mg/L		10/13/18 09:16	10/15/18 13:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**16**		1.0		mg/L			10/16/18 15:29	2
Sulfate	ND		4.0		mg/L			10/16/18 15:29	2
Ammonia	**0.21**		0.20		mg/L		10/15/18 01:12	10/16/18 07:25	1
Nitrate as N	ND		0.050		mg/L			10/11/18 11:18	1
TOC Result 1	**2.3**		1.0		mg/L			10/20/18 22:45	1
TOC Result 2	**2.2**		1.0		mg/L			10/20/18 22:45	1
Total Organic Carbon - Duplicates	**2.2**		1.0		mg/L			10/20/18 22:45	1
Alkalinity, Total	**380**		5.0		mg/L			10/15/18 09:53	1
ortho-Phosphate	**0.066**		0.020		mg/L			10/12/18 08:05	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**6.9**	**HF**	0.1		SU			10/14/18 13:01	1
Temperature	**16.5**	**HF**	0.001		Degrees C			10/14/18 13:01	1

Client Sample ID: MW-531-20181010

Lab Sample ID: 480-143220-5

Date Collected: 10/10/18 09:30

Matrix: Water

Date Received: 10/11/18 01:15

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			10/17/18 03:13	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/17/18 03:13	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/17/18 03:13	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/17/18 03:13	1
1,1-Dichloroethane	ND		1.0		ug/L			10/17/18 03:13	1
1,1-Dichloroethene	ND		1.0		ug/L			10/17/18 03:13	1
1,1-Dichloropropene	ND		1.0		ug/L			10/17/18 03:13	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/17/18 03:13	1
1,2,3-Trichloropropane	ND		1.0		ug/L			10/17/18 03:13	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/17/18 03:13	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/17/18 03:13	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			10/17/18 03:13	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/17/18 03:13	1
1,2-Dichloroethane	ND		1.0		ug/L			10/17/18 03:13	1
1,2-Dichloropropane	ND		1.0		ug/L			10/17/18 03:13	1

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

TestAmerica Job ID: 480-143220-1

Client Sample ID: MW-531-20181010
Date Collected: 10/10/18 09:30
Date Received: 10/11/18 01:15

Lab Sample ID: 480-143220-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/17/18 03:13	1
1,3-Dichlorobenzene	ND		1.0		ug/L			10/17/18 03:13	1
1,3-Dichloropropane	ND		1.0		ug/L			10/17/18 03:13	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/17/18 03:13	1
1,4-Dioxane	ND		50		ug/L			10/17/18 03:13	1
2,2-Dichloropropane	ND		1.0		ug/L			10/17/18 03:13	1
2-Butanone (MEK)	ND	*	10		ug/L			10/17/18 03:13	1
2-Chlorotoluene	ND		1.0		ug/L			10/17/18 03:13	1
2-Hexanone	ND		10		ug/L			10/17/18 03:13	1
4-Chlorotoluene	ND		1.0		ug/L			10/17/18 03:13	1
4-Isopropyltoluene	ND		1.0		ug/L			10/17/18 03:13	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			10/17/18 03:13	1
Acetone	ND		50		ug/L			10/17/18 03:13	1
Benzene	ND		1.0		ug/L			10/17/18 03:13	1
Bromobenzene	ND		1.0		ug/L			10/17/18 03:13	1
Bromoform	ND		1.0		ug/L			10/17/18 03:13	1
Bromomethane	ND		2.0		ug/L			10/17/18 03:13	1
Carbon disulfide	ND		10		ug/L			10/17/18 03:13	1
Carbon tetrachloride	ND		1.0		ug/L			10/17/18 03:13	1
Chlorobenzene	ND		1.0		ug/L			10/17/18 03:13	1
Chlorobromomethane	ND		1.0		ug/L			10/17/18 03:13	1
Chlorodibromomethane	ND		0.50		ug/L			10/17/18 03:13	1
Chloroethane	ND		2.0		ug/L			10/17/18 03:13	1
Chloroform	ND		1.0		ug/L			10/17/18 03:13	1
Chloromethane	ND		2.0		ug/L			10/17/18 03:13	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 03:13	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 03:13	1
Dichlorobromomethane	ND		0.50		ug/L			10/17/18 03:13	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/17/18 03:13	1
Ethyl ether	ND		1.0		ug/L			10/17/18 03:13	1
Ethylbenzene	ND		1.0		ug/L			10/17/18 03:13	1
Ethylene Dibromide	ND		1.0		ug/L			10/17/18 03:13	1
Hexachlorobutadiene	ND		0.40		ug/L			10/17/18 03:13	1
Isopropyl ether	ND		10		ug/L			10/17/18 03:13	1
Isopropylbenzene	ND		1.0		ug/L			10/17/18 03:13	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/17/18 03:13	1
Methylene Chloride	ND		1.0		ug/L			10/17/18 03:13	1
m-Xylene & p-Xylene	ND		2.0		ug/L			10/17/18 03:13	1
Naphthalene	ND		5.0		ug/L			10/17/18 03:13	1
n-Butylbenzene	ND		1.0		ug/L			10/17/18 03:13	1
N-Propylbenzene	ND		1.0		ug/L			10/17/18 03:13	1
o-Xylene	ND		1.0		ug/L			10/17/18 03:13	1
sec-Butylbenzene	ND		1.0		ug/L			10/17/18 03:13	1
Styrene	ND		1.0		ug/L			10/17/18 03:13	1
Tert-amyl methyl ether	ND		5.0		ug/L			10/17/18 03:13	1
Tert-butyl ethyl ether	ND		5.0		ug/L			10/17/18 03:13	1
tert-Butylbenzene	ND		1.0		ug/L			10/17/18 03:13	1
Tetrachloroethene	ND		1.0		ug/L			10/17/18 03:13	1
Tetrahydrofuran	ND	*	10		ug/L			10/17/18 03:13	1

Client Sample ID: MW-531-20181010

Lab Sample ID: 480-143220-5

Date Collected: 10/10/18 09:30

Matrix: Water

Date Received: 10/11/18 01:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		1.0		ug/L			10/17/18 03:13	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 03:13	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 03:13	1
Trichloroethene	ND		1.0		ug/L			10/17/18 03:13	1
Trichlorofluoromethane	ND		1.0		ug/L			10/17/18 03:13	1
Vinyl chloride	ND		1.0		ug/L			10/17/18 03:13	1
Dibromomethane	ND		1.0		ug/L			10/17/18 03:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*103*		*70 - 130*		*10/17/18 03:13*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 130*		*10/17/18 03:13*	*1*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*		*10/17/18 03:13*	*1*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**19**		0.050		mg/L		10/13/18 09:16	10/15/18 14:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9.5**		0.50		mg/L			10/16/18 19:58	1
Sulfate	**15**		2.0		mg/L			10/16/18 19:58	1
Ammonia	ND		0.20		mg/L		10/15/18 01:12	10/16/18 07:36	1
Nitrate as N	ND		0.050		mg/L			10/11/18 20:07	1
TOC Result 1	**1.3**		1.0		mg/L			10/20/18 23:45	1
TOC Result 2	**1.2**		1.0		mg/L			10/20/18 23:45	1
Total Organic Carbon - Duplicates	**1.3**		1.0		mg/L			10/20/18 23:45	1
Alkalinity, Total	**130**		5.0		mg/L			10/15/18 09:58	1
ortho-Phosphate	**0.085**		0.020		mg/L			10/12/18 08:05	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**6.5**	**HF**	0.1		SU			10/14/18 13:03	1
Temperature	**16.4**	**HF**	0.001		Degrees C			10/14/18 13:03	1

Client Sample ID: MW-552-20181010

Lab Sample ID: 480-143220-6

Date Collected: 10/10/18 08:10

Matrix: Water

Date Received: 10/11/18 01:15

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			10/17/18 03:41	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/17/18 03:41	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/17/18 03:41	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/17/18 03:41	1
1,1-Dichloroethane	ND		1.0		ug/L			10/17/18 03:41	1
1,1-Dichloroethene	ND		1.0		ug/L			10/17/18 03:41	1
1,1-Dichloropropene	ND		1.0		ug/L			10/17/18 03:41	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/17/18 03:41	1
1,2,3-Trichloropropane	ND		1.0		ug/L			10/17/18 03:41	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/17/18 03:41	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/17/18 03:41	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			10/17/18 03:41	1

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

TestAmerica Job ID: 480-143220-1

Client Sample ID: MW-552-20181010
Date Collected: 10/10/18 08:10
Date Received: 10/11/18 01:15

Lab Sample ID: 480-143220-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		1.0		ug/L			10/17/18 03:41	1
1,2-Dichloroethane	ND		1.0		ug/L			10/17/18 03:41	1
1,2-Dichloropropane	ND		1.0		ug/L			10/17/18 03:41	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/17/18 03:41	1
1,3-Dichlorobenzene	ND		1.0		ug/L			10/17/18 03:41	1
1,3-Dichloropropane	ND		1.0		ug/L			10/17/18 03:41	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/17/18 03:41	1
1,4-Dioxane	ND		50		ug/L			10/17/18 03:41	1
2,2-Dichloropropane	ND		1.0		ug/L			10/17/18 03:41	1
2-Butanone (MEK)	ND	*	10		ug/L			10/17/18 03:41	1
2-Chlorotoluene	ND		1.0		ug/L			10/17/18 03:41	1
2-Hexanone	ND		10		ug/L			10/17/18 03:41	1
4-Chlorotoluene	ND		1.0		ug/L			10/17/18 03:41	1
4-Isopropyltoluene	ND		1.0		ug/L			10/17/18 03:41	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			10/17/18 03:41	1
Acetone	ND		50		ug/L			10/17/18 03:41	1
Benzene	ND		1.0		ug/L			10/17/18 03:41	1
Bromobenzene	ND		1.0		ug/L			10/17/18 03:41	1
Bromoform	ND		1.0		ug/L			10/17/18 03:41	1
Bromomethane	ND		2.0		ug/L			10/17/18 03:41	1
Carbon disulfide	ND		10		ug/L			10/17/18 03:41	1
Carbon tetrachloride	ND		1.0		ug/L			10/17/18 03:41	1
Chlorobenzene	ND		1.0		ug/L			10/17/18 03:41	1
Chlorobromomethane	ND		1.0		ug/L			10/17/18 03:41	1
Chlorodibromomethane	ND		0.50		ug/L			10/17/18 03:41	1
Chloroethane	ND		2.0		ug/L			10/17/18 03:41	1
Chloroform	ND		1.0		ug/L			10/17/18 03:41	1
Chloromethane	ND		2.0		ug/L			10/17/18 03:41	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 03:41	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 03:41	1
Dichlorobromomethane	ND		0.50		ug/L			10/17/18 03:41	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/17/18 03:41	1
Ethyl ether	ND		1.0		ug/L			10/17/18 03:41	1
Ethylbenzene	ND		1.0		ug/L			10/17/18 03:41	1
Ethylene Dibromide	ND		1.0		ug/L			10/17/18 03:41	1
Hexachlorobutadiene	ND		0.40		ug/L			10/17/18 03:41	1
Isopropyl ether	ND		10		ug/L			10/17/18 03:41	1
Isopropylbenzene	ND		1.0		ug/L			10/17/18 03:41	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/17/18 03:41	1
Methylene Chloride	ND		1.0		ug/L			10/17/18 03:41	1
m-Xylene & p-Xylene	ND		2.0		ug/L			10/17/18 03:41	1
Naphthalene	ND		5.0		ug/L			10/17/18 03:41	1
n-Butylbenzene	ND		1.0		ug/L			10/17/18 03:41	1
N-Propylbenzene	ND		1.0		ug/L			10/17/18 03:41	1
o-Xylene	ND		1.0		ug/L			10/17/18 03:41	1
sec-Butylbenzene	ND		1.0		ug/L			10/17/18 03:41	1
Styrene	ND		1.0		ug/L			10/17/18 03:41	1
Tert-amyl methyl ether	ND		5.0		ug/L			10/17/18 03:41	1
Tert-butyl ethyl ether	ND		5.0		ug/L			10/17/18 03:41	1

Client Sample ID: MW-552-20181010

Lab Sample ID: 480-143220-6

Date Collected: 10/10/18 08:10

Matrix: Water

Date Received: 10/11/18 01:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
tert-Butylbenzene	ND		1.0		ug/L			10/17/18 03:41	1
Tetrachloroethene	ND		1.0		ug/L			10/17/18 03:41	1
Tetrahydrofuran	ND	*	10		ug/L			10/17/18 03:41	1
Toluene	ND		1.0		ug/L			10/17/18 03:41	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 03:41	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 03:41	1
Trichloroethene	ND		1.0		ug/L			10/17/18 03:41	1
Trichlorofluoromethane	ND		1.0		ug/L			10/17/18 03:41	1
Vinyl chloride	ND		1.0		ug/L			10/17/18 03:41	1
Dibromomethane	ND		1.0		ug/L			10/17/18 03:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*70 - 130*		*10/17/18 03:41*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*		*10/17/18 03:41*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*10/17/18 03:41*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.40**		0.20		ug/L		10/19/18 15:20	10/20/18 15:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*82*		*46 - 130*	*10/19/18 15:20*	*10/20/18 15:03*	*1*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**18**		0.050		mg/L		10/13/18 09:16	10/15/18 14:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9.0**		0.50		mg/L			10/16/18 20:06	1
Sulfate	**5.0**		2.0		mg/L			10/16/18 20:06	1
Ammonia	**0.26**		0.20		mg/L		10/15/18 01:12	10/16/18 07:26	1
Nitrate as N	ND		0.050		mg/L			10/11/18 20:08	1
TOC Result 1	**1.6**		1.0		mg/L			10/21/18 03:44	1
TOC Result 2	**1.5**		1.0		mg/L			10/21/18 03:44	1
Total Organic Carbon - Duplicates	**1.6**		1.0		mg/L			10/21/18 03:44	1
Alkalinity, Total	**260**		5.0		mg/L			10/15/18 10:03	1
ortho-Phosphate	**0.031**		0.020		mg/L			10/12/18 08:05	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**6.9**	**HF**	0.1		SU			10/14/18 13:06	1
Temperature	**16.8**	**HF**	0.001		Degrees C			10/14/18 13:06	1

Client Sample ID: MW-553-20181010

Lab Sample ID: 480-143220-7

Date Collected: 10/10/18 07:20

Matrix: Water

Date Received: 10/11/18 01:15

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			10/17/18 04:07	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/17/18 04:07	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/17/18 04:07	1

Client Sample ID: MW-553-20181010
Date Collected: 10/10/18 07:20
Date Received: 10/11/18 01:15

Lab Sample ID: 480-143220-7
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	ND		1.0		ug/L			10/17/18 04:07	1
1,1-Dichloroethane	ND		1.0		ug/L			10/17/18 04:07	1
1,1-Dichloroethene	ND		1.0		ug/L			10/17/18 04:07	1
1,1-Dichloropropene	ND		1.0		ug/L			10/17/18 04:07	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/17/18 04:07	1
1,2,3-Trichloropropane	ND		1.0		ug/L			10/17/18 04:07	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/17/18 04:07	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/17/18 04:07	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			10/17/18 04:07	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/17/18 04:07	1
1,2-Dichloroethane	ND		1.0		ug/L			10/17/18 04:07	1
1,2-Dichloropropane	ND		1.0		ug/L			10/17/18 04:07	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/17/18 04:07	1
1,3-Dichlorobenzene	ND		1.0		ug/L			10/17/18 04:07	1
1,3-Dichloropropane	ND		1.0		ug/L			10/17/18 04:07	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/17/18 04:07	1
1,4-Dioxane	ND		50		ug/L			10/17/18 04:07	1
2,2-Dichloropropane	ND		1.0		ug/L			10/17/18 04:07	1
2-Butanone (MEK)	ND	*	10		ug/L			10/17/18 04:07	1
2-Chlorotoluene	ND		1.0		ug/L			10/17/18 04:07	1
2-Hexanone	ND		10		ug/L			10/17/18 04:07	1
4-Chlorotoluene	ND		1.0		ug/L			10/17/18 04:07	1
4-Isopropyltoluene	ND		1.0		ug/L			10/17/18 04:07	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			10/17/18 04:07	1
Acetone	ND		50		ug/L			10/17/18 04:07	1
Benzene	ND		1.0		ug/L			10/17/18 04:07	1
Bromobenzene	ND		1.0		ug/L			10/17/18 04:07	1
Bromoform	ND		1.0		ug/L			10/17/18 04:07	1
Bromomethane	ND		2.0		ug/L			10/17/18 04:07	1
Carbon disulfide	ND		10		ug/L			10/17/18 04:07	1
Carbon tetrachloride	ND		1.0		ug/L			10/17/18 04:07	1
Chlorobenzene	ND		1.0		ug/L			10/17/18 04:07	1
Chlorobromomethane	ND		1.0		ug/L			10/17/18 04:07	1
Chlorodibromomethane	ND		0.50		ug/L			10/17/18 04:07	1
Chloroethane	ND		2.0		ug/L			10/17/18 04:07	1
Chloroform	ND		1.0		ug/L			10/17/18 04:07	1
Chloromethane	ND		2.0		ug/L			10/17/18 04:07	1
cis-1,2-Dichloroethene	**2.9**		1.0		ug/L			10/17/18 04:07	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 04:07	1
Dichlorobromomethane	ND		0.50		ug/L			10/17/18 04:07	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/17/18 04:07	1
Ethyl ether	ND		1.0		ug/L			10/17/18 04:07	1
Ethylbenzene	**3.0**		1.0		ug/L			10/17/18 04:07	1
Ethylene Dibromide	ND		1.0		ug/L			10/17/18 04:07	1
Hexachlorobutadiene	ND		0.40		ug/L			10/17/18 04:07	1
Isopropyl ether	ND		10		ug/L			10/17/18 04:07	1
Isopropylbenzene	ND		1.0		ug/L			10/17/18 04:07	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/17/18 04:07	1
Methylene Chloride	ND		1.0		ug/L			10/17/18 04:07	1

Client Sample ID: MW-553-20181010
Date Collected: 10/10/18 07:20
Date Received: 10/11/18 01:15

Lab Sample ID: 480-143220-7
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	**12**		2.0		ug/L			10/17/18 04:07	1
Naphthalene	ND		5.0		ug/L			10/17/18 04:07	1
n-Butylbenzene	ND		1.0		ug/L			10/17/18 04:07	1
N-Propylbenzene	ND		1.0		ug/L			10/17/18 04:07	1
o-Xylene	**2.8**		1.0		ug/L			10/17/18 04:07	1
sec-Butylbenzene	ND		1.0		ug/L			10/17/18 04:07	1
Styrene	ND		1.0		ug/L			10/17/18 04:07	1
Tert-amyl methyl ether	ND		5.0		ug/L			10/17/18 04:07	1
Tert-butyl ethyl ether	ND		5.0		ug/L			10/17/18 04:07	1
tert-Butylbenzene	ND		1.0		ug/L			10/17/18 04:07	1
Tetrachloroethene	ND		1.0		ug/L			10/17/18 04:07	1
Tetrahydrofuran	ND	*	10		ug/L			10/17/18 04:07	1
Toluene	**4.2**		1.0		ug/L			10/17/18 04:07	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 04:07	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 04:07	1
Trichloroethene	ND		1.0		ug/L			10/17/18 04:07	1
Trichlorofluoromethane	ND		1.0		ug/L			10/17/18 04:07	1
Vinyl chloride	**8.7**		1.0		ug/L			10/17/18 04:07	1
Dibromomethane	ND		1.0		ug/L			10/17/18 04:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*70 - 130*		*10/17/18 04:07*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*10/17/18 04:07*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*10/17/18 04:07*	*1*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**37**		0.050		mg/L		10/13/18 09:16	10/15/18 14:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**15**		2.5		mg/L			10/16/18 20:14	5
Sulfate	ND		10		mg/L			10/16/18 20:14	5
Ammonia	**0.23**		0.20		mg/L		10/15/18 01:12	10/16/18 07:27	1
Nitrate as N	ND		0.050		mg/L			10/11/18 11:18	1
TOC Result 1	**2.6**		1.0		mg/L			10/21/18 04:43	1
TOC Result 2	**2.5**		1.0		mg/L			10/21/18 04:43	1
Total Organic Carbon - Duplicates	**2.5**		1.0		mg/L			10/21/18 04:43	1
Alkalinity, Total	**680**		5.0		mg/L			10/15/18 10:10	1
ortho-Phosphate	**0.094**	**H**	0.020		mg/L			10/12/18 08:05	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**6.9**	**HF**	0.1		SU			10/14/18 13:09	1
Temperature	**16.6**	**HF**	0.001		Degrees C			10/14/18 13:09	1

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

TestAmerica Job ID: 480-143220-1

Client Sample ID: MW-562-20181010
Date Collected: 10/10/18 10:15
Date Received: 10/11/18 01:15

Lab Sample ID: 480-143220-8
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			10/17/18 12:56	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/17/18 12:56	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/17/18 12:56	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/17/18 12:56	1
1,1-Dichloroethane	ND		1.0		ug/L			10/17/18 12:56	1
1,1-Dichloroethene	ND		1.0		ug/L			10/17/18 12:56	1
1,1-Dichloropropene	ND		1.0		ug/L			10/17/18 12:56	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/17/18 12:56	1
1,2,3-Trichloropropane	ND		1.0		ug/L			10/17/18 12:56	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/17/18 12:56	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/17/18 12:56	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			10/17/18 12:56	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/17/18 12:56	1
1,2-Dichloroethane	ND		1.0		ug/L			10/17/18 12:56	1
1,2-Dichloropropane	ND		1.0		ug/L			10/17/18 12:56	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/17/18 12:56	1
1,3-Dichlorobenzene	ND		1.0		ug/L			10/17/18 12:56	1
1,3-Dichloropropane	ND		1.0		ug/L			10/17/18 12:56	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/17/18 12:56	1
1,4-Dioxane	ND		50		ug/L			10/17/18 12:56	1
2,2-Dichloropropane	ND		1.0		ug/L			10/17/18 12:56	1
2-Butanone (MEK)	ND	*	10		ug/L			10/17/18 12:56	1
2-Chlorotoluene	ND		1.0		ug/L			10/17/18 12:56	1
2-Hexanone	ND		10		ug/L			10/17/18 12:56	1
4-Chlorotoluene	ND		1.0		ug/L			10/17/18 12:56	1
4-Isopropyltoluene	ND		1.0		ug/L			10/17/18 12:56	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			10/17/18 12:56	1
Acetone	ND		50		ug/L			10/17/18 12:56	1
Benzene	ND		1.0		ug/L			10/17/18 12:56	1
Bromobenzene	ND		1.0		ug/L			10/17/18 12:56	1
Bromoform	ND		1.0		ug/L			10/17/18 12:56	1
Bromomethane	ND		2.0		ug/L			10/17/18 12:56	1
Carbon disulfide	ND		10		ug/L			10/17/18 12:56	1
Carbon tetrachloride	ND		1.0		ug/L			10/17/18 12:56	1
Chlorobenzene	ND		1.0		ug/L			10/17/18 12:56	1
Chlorobromomethane	ND		1.0		ug/L			10/17/18 12:56	1
Chlorodibromomethane	ND		0.50		ug/L			10/17/18 12:56	1
Chloroethane	ND		2.0		ug/L			10/17/18 12:56	1
Chloroform	ND		1.0		ug/L			10/17/18 12:56	1
Chloromethane	ND		2.0		ug/L			10/17/18 12:56	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 12:56	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 12:56	1
Dichlorobromomethane	ND		0.50		ug/L			10/17/18 12:56	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/17/18 12:56	1
Ethyl ether	ND		1.0		ug/L			10/17/18 12:56	1
Ethylbenzene	ND		1.0		ug/L			10/17/18 12:56	1
Ethylene Dibromide	ND		1.0		ug/L			10/17/18 12:56	1
Hexachlorobutadiene	ND		0.40		ug/L			10/17/18 12:56	1
Isopropyl ether	ND		10		ug/L			10/17/18 12:56	1

Client Sample ID: MW-562-20181010
Date Collected: 10/10/18 10:15
Date Received: 10/11/18 01:15

Lab Sample ID: 480-143220-8
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			10/17/18 12:56	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/17/18 12:56	1
Methylene Chloride	ND		1.0		ug/L			10/17/18 12:56	1
m-Xylene & p-Xylene	**3.1**		2.0		ug/L			10/17/18 12:56	1
Naphthalene	ND		5.0		ug/L			10/17/18 12:56	1
n-Butylbenzene	ND		1.0		ug/L			10/17/18 12:56	1
N-Propylbenzene	ND		1.0		ug/L			10/17/18 12:56	1
o-Xylene	ND		1.0		ug/L			10/17/18 12:56	1
sec-Butylbenzene	ND		1.0		ug/L			10/17/18 12:56	1
Styrene	ND		1.0		ug/L			10/17/18 12:56	1
Tert-amyl methyl ether	ND		5.0		ug/L			10/17/18 12:56	1
Tert-butyl ethyl ether	ND		5.0		ug/L			10/17/18 12:56	1
tert-Butylbenzene	ND		1.0		ug/L			10/17/18 12:56	1
Tetrachloroethene	ND		1.0		ug/L			10/17/18 12:56	1
Tetrahydrofuran	ND	*	10		ug/L			10/17/18 12:56	1
Toluene	**1.1**		1.0		ug/L			10/17/18 12:56	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 12:56	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 12:56	1
Trichloroethene	ND		1.0		ug/L			10/17/18 12:56	1
Trichlorofluoromethane	ND		1.0		ug/L			10/17/18 12:56	1
Vinyl chloride	ND		1.0		ug/L			10/17/18 12:56	1
Dibromomethane	ND		1.0		ug/L			10/17/18 12:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*103*		*70 - 130*		*10/17/18 12:56*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*		*10/17/18 12:56*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*10/17/18 12:56*	*1*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**110**		0.050		mg/L		10/13/18 09:16	10/15/18 14:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10**		0.50		mg/L			10/16/18 20:22	1
Sulfate	ND		2.0		mg/L			10/16/18 20:22	1
Ammonia	**5.5**		1.0		mg/L		10/17/18 02:55	10/17/18 17:40	5
Nitrate as N	ND		0.050		mg/L			10/11/18 11:18	1
TOC Result 1	**11**		1.0		mg/L			10/21/18 10:42	1
TOC Result 2	**10**		1.0		mg/L			10/21/18 10:42	1
Total Organic Carbon - Duplicates	**11**		1.0		mg/L			10/21/18 10:42	1
Alkalinity, Total	**290**		5.0		mg/L			10/15/18 10:16	1
ortho-Phosphate	**0.20**		0.020		mg/L			10/12/18 08:05	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**6.3**	**HF**	0.1		SU			10/14/18 13:11	1
Temperature	**16.6**	**HF**	0.001		Degrees C			10/14/18 13:11	1

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

TestAmerica Job ID: 480-143220-1

Client Sample ID: REW-1-20181010
Date Collected: 10/10/18 11:05
Date Received: 10/11/18 01:15

Lab Sample ID: 480-143220-9
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			10/17/18 05:00	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/17/18 05:00	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/17/18 05:00	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/17/18 05:00	1
1,1-Dichloroethane	ND		1.0		ug/L			10/17/18 05:00	1
1,1-Dichloroethene	ND		1.0		ug/L			10/17/18 05:00	1
1,1-Dichloropropene	ND		1.0		ug/L			10/17/18 05:00	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/17/18 05:00	1
1,2,3-Trichloropropane	ND		1.0		ug/L			10/17/18 05:00	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/17/18 05:00	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/17/18 05:00	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			10/17/18 05:00	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/17/18 05:00	1
1,2-Dichloroethane	ND		1.0		ug/L			10/17/18 05:00	1
1,2-Dichloropropane	ND		1.0		ug/L			10/17/18 05:00	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/17/18 05:00	1
1,3-Dichlorobenzene	ND		1.0		ug/L			10/17/18 05:00	1
1,3-Dichloropropane	ND		1.0		ug/L			10/17/18 05:00	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/17/18 05:00	1
1,4-Dioxane	ND		50		ug/L			10/17/18 05:00	1
2,2-Dichloropropane	ND		1.0		ug/L			10/17/18 05:00	1
2-Butanone (MEK)	ND	*	10		ug/L			10/17/18 05:00	1
2-Chlorotoluene	ND		1.0		ug/L			10/17/18 05:00	1
2-Hexanone	ND		10		ug/L			10/17/18 05:00	1
4-Chlorotoluene	ND		1.0		ug/L			10/17/18 05:00	1
4-Isopropyltoluene	ND		1.0		ug/L			10/17/18 05:00	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			10/17/18 05:00	1
Acetone	ND		50		ug/L			10/17/18 05:00	1
Benzene	ND		1.0		ug/L			10/17/18 05:00	1
Bromobenzene	ND		1.0		ug/L			10/17/18 05:00	1
Bromoform	ND		1.0		ug/L			10/17/18 05:00	1
Bromomethane	ND		2.0		ug/L			10/17/18 05:00	1
Carbon disulfide	ND		10		ug/L			10/17/18 05:00	1
Carbon tetrachloride	ND		1.0		ug/L			10/17/18 05:00	1
Chlorobenzene	ND		1.0		ug/L			10/17/18 05:00	1
Chlorobromomethane	ND		1.0		ug/L			10/17/18 05:00	1
Chlorodibromomethane	ND		0.50		ug/L			10/17/18 05:00	1
Chloroethane	ND		2.0		ug/L			10/17/18 05:00	1
Chloroform	ND		1.0		ug/L			10/17/18 05:00	1
Chloromethane	ND		2.0		ug/L			10/17/18 05:00	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 05:00	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 05:00	1
Dichlorobromomethane	ND		0.50		ug/L			10/17/18 05:00	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/17/18 05:00	1
Ethyl ether	ND		1.0		ug/L			10/17/18 05:00	1
Ethylbenzene	ND		1.0		ug/L			10/17/18 05:00	1
Ethylene Dibromide	ND		1.0		ug/L			10/17/18 05:00	1
Hexachlorobutadiene	ND		0.40		ug/L			10/17/18 05:00	1
Isopropyl ether	ND		10		ug/L			10/17/18 05:00	1

Client Sample ID: REW-1-20181010
Date Collected: 10/10/18 11:05
Date Received: 10/11/18 01:15

Lab Sample ID: 480-143220-9
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			10/17/18 05:00	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/17/18 05:00	1
Methylene Chloride	ND		1.0		ug/L			10/17/18 05:00	1
m-Xylene & p-Xylene	**2.8**		2.0		ug/L			10/17/18 05:00	1
Naphthalene	ND		5.0		ug/L			10/17/18 05:00	1
n-Butylbenzene	ND		1.0		ug/L			10/17/18 05:00	1
N-Propylbenzene	ND		1.0		ug/L			10/17/18 05:00	1
o-Xylene	ND		1.0		ug/L			10/17/18 05:00	1
sec-Butylbenzene	ND		1.0		ug/L			10/17/18 05:00	1
Styrene	ND		1.0		ug/L			10/17/18 05:00	1
Tert-amyl methyl ether	ND		5.0		ug/L			10/17/18 05:00	1
Tert-butyl ethyl ether	ND		5.0		ug/L			10/17/18 05:00	1
tert-Butylbenzene	ND		1.0		ug/L			10/17/18 05:00	1
Tetrachloroethene	ND		1.0		ug/L			10/17/18 05:00	1
Tetrahydrofuran	ND	*	10		ug/L			10/17/18 05:00	1
Toluene	ND		1.0		ug/L			10/17/18 05:00	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 05:00	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 05:00	1
Trichloroethene	ND		1.0		ug/L			10/17/18 05:00	1
Trichlorofluoromethane	ND		1.0		ug/L			10/17/18 05:00	1
Vinyl chloride	ND		1.0		ug/L			10/17/18 05:00	1
Dibromomethane	ND		1.0		ug/L			10/17/18 05:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*70 - 130*		*10/17/18 05:00*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*10/17/18 05:00*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*10/17/18 05:00*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.35**		0.20		ug/L		10/19/18 15:20	10/20/18 15:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*82*		*46 - 130*	*10/19/18 15:20*	*10/20/18 15:18*	*1*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**43**		0.050		mg/L		10/13/18 09:16	10/15/18 14:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7.2**		1.0		mg/L			10/16/18 20:31	2
Sulfate	ND		4.0		mg/L			10/16/18 20:31	2
Ammonia	**7.3**		1.0		mg/L		10/15/18 01:12	10/16/18 07:45	5
Nitrate as N	ND		0.050		mg/L			10/11/18 23:28	1
TOC Result 1	**3.9**		1.0		mg/L			10/21/18 11:42	1
TOC Result 2	**3.4**		1.0		mg/L			10/21/18 11:42	1
Total Organic Carbon - Duplicates	**3.7**		1.0		mg/L			10/21/18 11:42	1
Alkalinity, Total	**460**		5.0		mg/L			10/15/18 10:44	1
ortho-Phosphate	**0.13**		0.020		mg/L			10/12/18 08:05	1

Client Sample ID: REW-1-20181010 — **Lab Sample ID: 480-143220-9**
Date Collected: 10/10/18 11:05 — **Matrix: Water**
Date Received: 10/11/18 01:15

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.8	HF	0.1		SU			10/14/18 13:14	1
Temperature	16.7	HF	0.001		Degrees C			10/14/18 13:14	1

Client Sample ID: REW-4-20181010 — **Lab Sample ID: 480-143220-10**
Date Collected: 10/10/18 11:45 — **Matrix: Water**
Date Received: 10/11/18 01:15

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			10/17/18 05:27	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/17/18 05:27	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/17/18 05:27	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/17/18 05:27	1
1,1-Dichloroethane	ND		1.0		ug/L			10/17/18 05:27	1
1,1-Dichloroethene	ND		1.0		ug/L			10/17/18 05:27	1
1,1-Dichloropropene	ND		1.0		ug/L			10/17/18 05:27	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/17/18 05:27	1
1,2,3-Trichloropropane	ND		1.0		ug/L			10/17/18 05:27	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/17/18 05:27	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/17/18 05:27	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			10/17/18 05:27	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/17/18 05:27	1
1,2-Dichloroethane	ND		1.0		ug/L			10/17/18 05:27	1
1,2-Dichloropropane	ND		1.0		ug/L			10/17/18 05:27	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/17/18 05:27	1
1,3-Dichlorobenzene	ND		1.0		ug/L			10/17/18 05:27	1
1,3-Dichloropropane	ND		1.0		ug/L			10/17/18 05:27	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/17/18 05:27	1
1,4-Dioxane	ND		50		ug/L			10/17/18 05:27	1
2,2-Dichloropropane	ND		1.0		ug/L			10/17/18 05:27	1
2-Butanone (MEK)	ND	*	10		ug/L			10/17/18 05:27	1
2-Chlorotoluene	ND		1.0		ug/L			10/17/18 05:27	1
2-Hexanone	ND		10		ug/L			10/17/18 05:27	1
4-Chlorotoluene	ND		1.0		ug/L			10/17/18 05:27	1
4-Isopropyltoluene	ND		1.0		ug/L			10/17/18 05:27	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			10/17/18 05:27	1
Acetone	ND		50		ug/L			10/17/18 05:27	1
Benzene	ND		1.0		ug/L			10/17/18 05:27	1
Bromobenzene	ND		1.0		ug/L			10/17/18 05:27	1
Bromoform	ND		1.0		ug/L			10/17/18 05:27	1
Bromomethane	ND		2.0		ug/L			10/17/18 05:27	1
Carbon disulfide	ND		10		ug/L			10/17/18 05:27	1
Carbon tetrachloride	ND		1.0		ug/L			10/17/18 05:27	1
Chlorobenzene	ND		1.0		ug/L			10/17/18 05:27	1
Chlorobromomethane	ND		1.0		ug/L			10/17/18 05:27	1
Chlorodibromomethane	ND		0.50		ug/L			10/17/18 05:27	1
Chloroethane	ND		2.0		ug/L			10/17/18 05:27	1
Chloroform	ND		1.0		ug/L			10/17/18 05:27	1
Chloromethane	ND		2.0		ug/L			10/17/18 05:27	1
cis-1,2-Dichloroethene	3.4		1.0		ug/L			10/17/18 05:27	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 05:27	1

Client Sample ID: REW-4-20181010
Date Collected: 10/10/18 11:45
Date Received: 10/11/18 01:15

Lab Sample ID: 480-143220-10
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorobromomethane	ND		0.50		ug/L			10/17/18 05:27	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/17/18 05:27	1
Ethyl ether	ND		1.0		ug/L			10/17/18 05:27	1
Ethylbenzene	ND		1.0		ug/L			10/17/18 05:27	1
Ethylene Dibromide	ND		1.0		ug/L			10/17/18 05:27	1
Hexachlorobutadiene	ND		0.40		ug/L			10/17/18 05:27	1
Isopropyl ether	ND		10		ug/L			10/17/18 05:27	1
Isopropylbenzene	ND		1.0		ug/L			10/17/18 05:27	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/17/18 05:27	1
Methylene Chloride	ND		1.0		ug/L			10/17/18 05:27	1
m-Xylene & p-Xylene	ND		2.0		ug/L			10/17/18 05:27	1
Naphthalene	ND		5.0		ug/L			10/17/18 05:27	1
n-Butylbenzene	ND		1.0		ug/L			10/17/18 05:27	1
N-Propylbenzene	ND		1.0		ug/L			10/17/18 05:27	1
o-Xylene	ND		1.0		ug/L			10/17/18 05:27	1
sec-Butylbenzene	ND		1.0		ug/L			10/17/18 05:27	1
Styrene	ND		1.0		ug/L			10/17/18 05:27	1
Tert-amyl methyl ether	ND		5.0		ug/L			10/17/18 05:27	1
Tert-butyl ethyl ether	ND		5.0		ug/L			10/17/18 05:27	1
tert-Butylbenzene	ND		1.0		ug/L			10/17/18 05:27	1
Tetrachloroethene	ND		1.0		ug/L			10/17/18 05:27	1
Tetrahydrofuran	ND	*	10		ug/L			10/17/18 05:27	1
Toluene	ND		1.0		ug/L			10/17/18 05:27	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 05:27	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 05:27	1
Trichloroethene	ND		1.0		ug/L			10/17/18 05:27	1
Trichlorofluoromethane	ND		1.0		ug/L			10/17/18 05:27	1
Vinyl chloride	ND		1.0		ug/L			10/17/18 05:27	1
Dibromomethane	ND		1.0		ug/L			10/17/18 05:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*70 - 130*		*10/17/18 05:27*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 130*		*10/17/18 05:27*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*10/17/18 05:27*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20		ug/L		10/19/18 15:20	10/20/18 15:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*83*		*46 - 130*	*10/19/18 15:20*	*10/20/18 15:32*	*1*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**6.5**		0.050		mg/L		10/13/18 09:15	10/15/18 17:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4.3**		0.50		mg/L			10/16/18 20:39	1
Sulfate	**14**		2.0		mg/L			10/16/18 20:39	1
Ammonia	**0.21**		0.20		mg/L		10/15/18 01:12	10/16/18 07:33	1

Client Sample ID: REW-4-20181010

Lab Sample ID: 480-143220-10

Date Collected: 10/10/18 11:45

Matrix: Water

Date Received: 10/11/18 01:15

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.050		mg/L			10/11/18 20:17	1
TOC Result 1	**1.3**		1.0		mg/L			10/21/18 12:41	1
TOC Result 2	**1.1**		1.0		mg/L			10/21/18 12:41	1
Total Organic Carbon - Duplicates	**1.2**		1.0		mg/L			10/21/18 12:41	1
Alkalinity, Total	**94**		5.0		mg/L			10/15/18 10:56	1
ortho-Phosphate	ND		0.020		mg/L			10/12/18 08:05	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**6.6**	**HF**	0.1		SU			10/14/18 13:16	1
Temperature	**16.4**	**HF**	0.001		Degrees C			10/14/18 13:16	1

Client Sample ID: REW-5-20181010

Lab Sample ID: 480-143220-11

Date Collected: 10/10/18 12:30

Matrix: Water

Date Received: 10/11/18 01:15

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			10/17/18 05:53	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/17/18 05:53	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/17/18 05:53	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/17/18 05:53	1
1,1-Dichloroethane	ND		1.0		ug/L			10/17/18 05:53	1
1,1-Dichloroethene	ND		1.0		ug/L			10/17/18 05:53	1
1,1-Dichloropropene	ND		1.0		ug/L			10/17/18 05:53	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/17/18 05:53	1
1,2,3-Trichloropropane	ND		1.0		ug/L			10/17/18 05:53	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/17/18 05:53	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/17/18 05:53	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			10/17/18 05:53	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/17/18 05:53	1
1,2-Dichloroethane	ND		1.0		ug/L			10/17/18 05:53	1
1,2-Dichloropropane	ND		1.0		ug/L			10/17/18 05:53	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/17/18 05:53	1
1,3-Dichlorobenzene	ND		1.0		ug/L			10/17/18 05:53	1
1,3-Dichloropropane	ND		1.0		ug/L			10/17/18 05:53	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/17/18 05:53	1
1,4-Dioxane	ND		50		ug/L			10/17/18 05:53	1
2,2-Dichloropropane	ND		1.0		ug/L			10/17/18 05:53	1
2-Butanone (MEK)	ND	*	10		ug/L			10/17/18 05:53	1
2-Chlorotoluene	ND		1.0		ug/L			10/17/18 05:53	1
2-Hexanone	ND		10		ug/L			10/17/18 05:53	1
4-Chlorotoluene	ND		1.0		ug/L			10/17/18 05:53	1
4-Isopropyltoluene	ND		1.0		ug/L			10/17/18 05:53	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			10/17/18 05:53	1
Acetone	ND		50		ug/L			10/17/18 05:53	1
Benzene	ND		1.0		ug/L			10/17/18 05:53	1
Bromobenzene	ND		1.0		ug/L			10/17/18 05:53	1
Bromoform	ND		1.0		ug/L			10/17/18 05:53	1
Bromomethane	ND		2.0		ug/L			10/17/18 05:53	1
Carbon disulfide	ND		10		ug/L			10/17/18 05:53	1

Client Sample ID: REW-5-20181010
Date Collected: 10/10/18 12:30
Date Received: 10/11/18 01:15

Lab Sample ID: 480-143220-11
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		1.0		ug/L			10/17/18 05:53	1
Chlorobenzene	ND		1.0		ug/L			10/17/18 05:53	1
Chlorobromomethane	ND		1.0		ug/L			10/17/18 05:53	1
Chlorodibromomethane	ND		0.50		ug/L			10/17/18 05:53	1
Chloroethane	ND		2.0		ug/L			10/17/18 05:53	1
Chloroform	ND		1.0		ug/L			10/17/18 05:53	1
Chloromethane	ND		2.0		ug/L			10/17/18 05:53	1
cis-1,2-Dichloroethene	**3.6**		1.0		ug/L			10/17/18 05:53	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 05:53	1
Dichlorobromomethane	ND		0.50		ug/L			10/17/18 05:53	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/17/18 05:53	1
Ethyl ether	ND		1.0		ug/L			10/17/18 05:53	1
Ethylbenzene	ND		1.0		ug/L			10/17/18 05:53	1
Ethylene Dibromide	ND		1.0		ug/L			10/17/18 05:53	1
Hexachlorobutadiene	ND		0.40		ug/L			10/17/18 05:53	1
Isopropyl ether	ND		10		ug/L			10/17/18 05:53	1
Isopropylbenzene	ND		1.0		ug/L			10/17/18 05:53	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/17/18 05:53	1
Methylene Chloride	ND		1.0		ug/L			10/17/18 05:53	1
m-Xylene & p-Xylene	ND		2.0		ug/L			10/17/18 05:53	1
Naphthalene	ND		5.0		ug/L			10/17/18 05:53	1
n-Butylbenzene	ND		1.0		ug/L			10/17/18 05:53	1
N-Propylbenzene	ND		1.0		ug/L			10/17/18 05:53	1
o-Xylene	ND		1.0		ug/L			10/17/18 05:53	1
sec-Butylbenzene	ND		1.0		ug/L			10/17/18 05:53	1
Styrene	ND		1.0		ug/L			10/17/18 05:53	1
Tert-amyl methyl ether	ND		5.0		ug/L			10/17/18 05:53	1
Tert-butyl ethyl ether	ND		5.0		ug/L			10/17/18 05:53	1
tert-Butylbenzene	ND		1.0		ug/L			10/17/18 05:53	1
Tetrachloroethene	ND		1.0		ug/L			10/17/18 05:53	1
Tetrahydrofuran	ND	*	10		ug/L			10/17/18 05:53	1
Toluene	ND		1.0		ug/L			10/17/18 05:53	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 05:53	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 05:53	1
Trichloroethene	ND		1.0		ug/L			10/17/18 05:53	1
Trichlorofluoromethane	ND		1.0		ug/L			10/17/18 05:53	1
Vinyl chloride	**2.2**		1.0		ug/L			10/17/18 05:53	1
Dibromomethane	ND		1.0		ug/L			10/17/18 05:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*70 - 130*		*10/17/18 05:53*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*		*10/17/18 05:53*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*10/17/18 05:53*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.22**		0.20		ug/L		10/19/18 15:20	10/20/18 15:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*81*		*46 - 130*	*10/19/18 15:20*	*10/20/18 15:46*	*1*

Client Sample ID: REW-5-20181010

Lab Sample ID: 480-143220-11

Date Collected: 10/10/18 12:30

Matrix: Water

Date Received: 10/11/18 01:15

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**11**		0.050		mg/L		10/13/18 09:15	10/15/18 17:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6.5**		1.0		mg/L			10/16/18 21:19	2
Sulfate	ND		4.0		mg/L			10/16/18 21:19	2
Ammonia	**0.56**		0.20		mg/L		10/15/18 01:12	10/16/18 07:34	1
Nitrate as N	ND		0.050		mg/L			10/11/18 20:19	1
TOC Result 1	**1.6**		1.0		mg/L			10/21/18 05:17	1
TOC Result 2	**1.5**		1.0		mg/L			10/21/18 05:17	1
Total Organic Carbon - Duplicates	**1.6**		1.0		mg/L			10/21/18 05:17	1
Alkalinity, Total	**370**		5.0		mg/L			10/15/18 11:06	1
ortho-Phosphate	ND		0.020		mg/L			10/12/18 08:05	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**6.8**	**HF**	0.1		SU			10/14/18 13:19	1
Temperature	**16.4**	**HF**	0.001		Degrees C			10/14/18 13:19	1

Client Sample ID: DUP2-20181010

Lab Sample ID: 480-143220-12

Date Collected: 10/10/18 00:00

Matrix: Water

Date Received: 10/11/18 01:15

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			10/17/18 13:22	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/17/18 13:22	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/17/18 13:22	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/17/18 13:22	1
1,1-Dichloroethane	ND		1.0		ug/L			10/17/18 13:22	1
1,1-Dichloroethene	ND		1.0		ug/L			10/17/18 13:22	1
1,1-Dichloropropene	ND		1.0		ug/L			10/17/18 13:22	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/17/18 13:22	1
1,2,3-Trichloropropane	ND		1.0		ug/L			10/17/18 13:22	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/17/18 13:22	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/17/18 13:22	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			10/17/18 13:22	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/17/18 13:22	1
1,2-Dichloroethane	ND		1.0		ug/L			10/17/18 13:22	1
1,2-Dichloropropane	ND		1.0		ug/L			10/17/18 13:22	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/17/18 13:22	1
1,3-Dichlorobenzene	ND		1.0		ug/L			10/17/18 13:22	1
1,3-Dichloropropane	ND		1.0		ug/L			10/17/18 13:22	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/17/18 13:22	1
1,4-Dioxane	ND		50		ug/L			10/17/18 13:22	1
2,2-Dichloropropane	ND		1.0		ug/L			10/17/18 13:22	1
2-Butanone (MEK)	ND	*	10		ug/L			10/17/18 13:22	1
2-Chlorotoluene	ND		1.0		ug/L			10/17/18 13:22	1
2-Hexanone	ND		10		ug/L			10/17/18 13:22	1
4-Chlorotoluene	ND		1.0		ug/L			10/17/18 13:22	1
4-Isopropyltoluene	ND		1.0		ug/L			10/17/18 13:22	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			10/17/18 13:22	1

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

TestAmerica Job ID: 480-143220-1

Client Sample ID: DUP2-20181010
Date Collected: 10/10/18 00:00
Date Received: 10/11/18 01:15

Lab Sample ID: 480-143220-12
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		50		ug/L			10/17/18 13:22	1
Benzene	ND		1.0		ug/L			10/17/18 13:22	1
Bromobenzene	ND		1.0		ug/L			10/17/18 13:22	1
Bromoform	ND		1.0		ug/L			10/17/18 13:22	1
Bromomethane	ND		2.0		ug/L			10/17/18 13:22	1
Carbon disulfide	ND		10		ug/L			10/17/18 13:22	1
Carbon tetrachloride	ND		1.0		ug/L			10/17/18 13:22	1
Chlorobenzene	ND		1.0		ug/L			10/17/18 13:22	1
Chlorobromomethane	ND		1.0		ug/L			10/17/18 13:22	1
Chlorodibromomethane	ND		0.50		ug/L			10/17/18 13:22	1
Chloroethane	ND		2.0		ug/L			10/17/18 13:22	1
Chloroform	ND		1.0		ug/L			10/17/18 13:22	1
Chloromethane	ND		2.0		ug/L			10/17/18 13:22	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 13:22	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 13:22	1
Dichlorobromomethane	ND		0.50		ug/L			10/17/18 13:22	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/17/18 13:22	1
Ethyl ether	ND		1.0		ug/L			10/17/18 13:22	1
Ethylbenzene	ND		1.0		ug/L			10/17/18 13:22	1
Ethylene Dibromide	ND		1.0		ug/L			10/17/18 13:22	1
Hexachlorobutadiene	ND		0.40		ug/L			10/17/18 13:22	1
Isopropyl ether	ND		10		ug/L			10/17/18 13:22	1
Isopropylbenzene	ND		1.0		ug/L			10/17/18 13:22	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/17/18 13:22	1
Methylene Chloride	ND		1.0		ug/L			10/17/18 13:22	1
m-Xylene & p-Xylene	ND		2.0		ug/L			10/17/18 13:22	1
Naphthalene	ND		5.0		ug/L			10/17/18 13:22	1
n-Butylbenzene	ND		1.0		ug/L			10/17/18 13:22	1
N-Propylbenzene	ND		1.0		ug/L			10/17/18 13:22	1
o-Xylene	ND		1.0		ug/L			10/17/18 13:22	1
sec-Butylbenzene	ND		1.0		ug/L			10/17/18 13:22	1
Styrene	ND		1.0		ug/L			10/17/18 13:22	1
Tert-amyl methyl ether	ND		5.0		ug/L			10/17/18 13:22	1
Tert-butyl ethyl ether	ND		5.0		ug/L			10/17/18 13:22	1
tert-Butylbenzene	ND		1.0		ug/L			10/17/18 13:22	1
Tetrachloroethene	ND		1.0		ug/L			10/17/18 13:22	1
Tetrahydrofuran	ND	*	10		ug/L			10/17/18 13:22	1
Toluene	ND		1.0		ug/L			10/17/18 13:22	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 13:22	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 13:22	1
Trichloroethene	ND		1.0		ug/L			10/17/18 13:22	1
Trichlorofluoromethane	ND		1.0		ug/L			10/17/18 13:22	1
Vinyl chloride	ND		1.0		ug/L			10/17/18 13:22	1
Dibromomethane	ND		1.0		ug/L			10/17/18 13:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*70 - 130*		*10/17/18 13:22*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*		*10/17/18 13:22*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*10/17/18 13:22*	*1*

Client Sample ID: DUP2-20181010

Lab Sample ID: 480-143220-12

Date Collected: 10/10/18 00:00

Matrix: Water

Date Received: 10/11/18 01:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.45		0.20		ug/L		10/19/18 15:20	10/20/18 16:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*77*		*46 - 130*	*10/19/18 15:20*	*10/20/18 16:01*	*1*

Client Sample ID: DUP3-20181010

Lab Sample ID: 480-143220-13

Date Collected: 10/10/18 00:00

Matrix: Water

Date Received: 10/11/18 01:15

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			10/17/18 13:49	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/17/18 13:49	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/17/18 13:49	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/17/18 13:49	1
1,1-Dichloroethane	ND		1.0		ug/L			10/17/18 13:49	1
1,1-Dichloroethene	ND		1.0		ug/L			10/17/18 13:49	1
1,1-Dichloropropene	ND		1.0		ug/L			10/17/18 13:49	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/17/18 13:49	1
1,2,3-Trichloropropane	ND		1.0		ug/L			10/17/18 13:49	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/17/18 13:49	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/17/18 13:49	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			10/17/18 13:49	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/17/18 13:49	1
1,2-Dichloroethane	ND		1.0		ug/L			10/17/18 13:49	1
1,2-Dichloropropane	ND		1.0		ug/L			10/17/18 13:49	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/17/18 13:49	1
1,3-Dichlorobenzene	ND		1.0		ug/L			10/17/18 13:49	1
1,3-Dichloropropane	ND		1.0		ug/L			10/17/18 13:49	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/17/18 13:49	1
1,4-Dioxane	ND		50		ug/L			10/17/18 13:49	1
2,2-Dichloropropane	ND		1.0		ug/L			10/17/18 13:49	1
2-Butanone (MEK)	ND	*	10		ug/L			10/17/18 13:49	1
2-Chlorotoluene	ND		1.0		ug/L			10/17/18 13:49	1
2-Hexanone	ND		10		ug/L			10/17/18 13:49	1
4-Chlorotoluene	ND		1.0		ug/L			10/17/18 13:49	1
4-Isopropyltoluene	ND		1.0		ug/L			10/17/18 13:49	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			10/17/18 13:49	1
Acetone	ND		50		ug/L			10/17/18 13:49	1
Benzene	ND		1.0		ug/L			10/17/18 13:49	1
Bromobenzene	ND		1.0		ug/L			10/17/18 13:49	1
Bromoform	ND		1.0		ug/L			10/17/18 13:49	1
Bromomethane	ND		2.0		ug/L			10/17/18 13:49	1
Carbon disulfide	ND		10		ug/L			10/17/18 13:49	1
Carbon tetrachloride	ND		1.0		ug/L			10/17/18 13:49	1
Chlorobenzene	ND		1.0		ug/L			10/17/18 13:49	1
Chlorobromomethane	ND		1.0		ug/L			10/17/18 13:49	1
Chlorodibromomethane	ND		0.50		ug/L			10/17/18 13:49	1
Chloroethane	ND		2.0		ug/L			10/17/18 13:49	1
Chloroform	ND		1.0		ug/L			10/17/18 13:49	1

Client Sample ID: DUP3-20181010

Lab Sample ID: 480-143220-13

Date Collected: 10/10/18 00:00

Matrix: Water

Date Received: 10/11/18 01:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		2.0		ug/L			10/17/18 13:49	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 13:49	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 13:49	1
Dichlorobromomethane	ND		0.50		ug/L			10/17/18 13:49	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/17/18 13:49	1
Ethyl ether	ND		1.0		ug/L			10/17/18 13:49	1
Ethylbenzene	ND		1.0		ug/L			10/17/18 13:49	1
Ethylene Dibromide	ND		1.0		ug/L			10/17/18 13:49	1
Hexachlorobutadiene	ND		0.40		ug/L			10/17/18 13:49	1
Isopropyl ether	ND		10		ug/L			10/17/18 13:49	1
Isopropylbenzene	ND		1.0		ug/L			10/17/18 13:49	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/17/18 13:49	1
Methylene Chloride	ND		1.0		ug/L			10/17/18 13:49	1
m-Xylene & p-Xylene	ND		2.0		ug/L			10/17/18 13:49	1
Naphthalene	ND		5.0		ug/L			10/17/18 13:49	1
n-Butylbenzene	ND		1.0		ug/L			10/17/18 13:49	1
N-Propylbenzene	ND		1.0		ug/L			10/17/18 13:49	1
o-Xylene	ND		1.0		ug/L			10/17/18 13:49	1
sec-Butylbenzene	ND		1.0		ug/L			10/17/18 13:49	1
Styrene	ND		1.0		ug/L			10/17/18 13:49	1
Tert-amyl methyl ether	ND		5.0		ug/L			10/17/18 13:49	1
Tert-butyl ethyl ether	ND		5.0		ug/L			10/17/18 13:49	1
tert-Butylbenzene	ND		1.0		ug/L			10/17/18 13:49	1
Tetrachloroethene	ND		1.0		ug/L			10/17/18 13:49	1
Tetrahydrofuran	ND	*	10		ug/L			10/17/18 13:49	1
Toluene	ND		1.0		ug/L			10/17/18 13:49	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 13:49	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 13:49	1
Trichloroethene	ND		1.0		ug/L			10/17/18 13:49	1
Trichlorofluoromethane	ND		1.0		ug/L			10/17/18 13:49	1
Vinyl chloride	ND		1.0		ug/L			10/17/18 13:49	1
Dibromomethane	ND		1.0		ug/L			10/17/18 13:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*70 - 130*		*10/17/18 13:49*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*10/17/18 13:49*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*10/17/18 13:49*	*1*

Client Sample ID: TRIP BLANKS

Lab Sample ID: 480-143220-14

Date Collected: 10/10/18 00:00

Matrix: Water

Date Received: 10/11/18 01:15

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			10/17/18 07:13	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/17/18 07:13	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/17/18 07:13	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/17/18 07:13	1
1,1-Dichloroethane	ND		1.0		ug/L			10/17/18 07:13	1
1,1-Dichloroethene	ND		1.0		ug/L			10/17/18 07:13	1

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

TestAmerica Job ID: 480-143220-1

Client Sample ID: TRIP BLANKS
Date Collected: 10/10/18 00:00
Date Received: 10/11/18 01:15

Lab Sample ID: 480-143220-14
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloropropene	ND		1.0		ug/L			10/17/18 07:13	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/17/18 07:13	1
1,2,3-Trichloropropane	ND		1.0		ug/L			10/17/18 07:13	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/17/18 07:13	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/17/18 07:13	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			10/17/18 07:13	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/17/18 07:13	1
1,2-Dichloroethane	ND		1.0		ug/L			10/17/18 07:13	1
1,2-Dichloropropane	ND		1.0		ug/L			10/17/18 07:13	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/17/18 07:13	1
1,3-Dichlorobenzene	ND		1.0		ug/L			10/17/18 07:13	1
1,3-Dichloropropane	ND		1.0		ug/L			10/17/18 07:13	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/17/18 07:13	1
1,4-Dioxane	ND		50		ug/L			10/17/18 07:13	1
2,2-Dichloropropane	ND		1.0		ug/L			10/17/18 07:13	1
2-Butanone (MEK)	ND	*	10		ug/L			10/17/18 07:13	1
2-Chlorotoluene	ND		1.0		ug/L			10/17/18 07:13	1
2-Hexanone	ND		10		ug/L			10/17/18 07:13	1
4-Chlorotoluene	ND		1.0		ug/L			10/17/18 07:13	1
4-Isopropyltoluene	ND		1.0		ug/L			10/17/18 07:13	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			10/17/18 07:13	1
Acetone	ND		50		ug/L			10/17/18 07:13	1
Benzene	ND		1.0		ug/L			10/17/18 07:13	1
Bromobenzene	ND		1.0		ug/L			10/17/18 07:13	1
Bromoform	ND		1.0		ug/L			10/17/18 07:13	1
Bromomethane	ND		2.0		ug/L			10/17/18 07:13	1
Carbon disulfide	ND		10		ug/L			10/17/18 07:13	1
Carbon tetrachloride	ND		1.0		ug/L			10/17/18 07:13	1
Chlorobenzene	ND		1.0		ug/L			10/17/18 07:13	1
Chlorobromomethane	ND		1.0		ug/L			10/17/18 07:13	1
Chlorodibromomethane	ND		0.50		ug/L			10/17/18 07:13	1
Chloroethane	ND		2.0		ug/L			10/17/18 07:13	1
Chloroform	**3.8**		1.0		ug/L			10/17/18 07:13	1
Chloromethane	ND		2.0		ug/L			10/17/18 07:13	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 07:13	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 07:13	1
Dichlorobromomethane	ND		0.50		ug/L			10/17/18 07:13	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/17/18 07:13	1
Ethyl ether	ND		1.0		ug/L			10/17/18 07:13	1
Ethylbenzene	ND		1.0		ug/L			10/17/18 07:13	1
Ethylene Dibromide	ND		1.0		ug/L			10/17/18 07:13	1
Hexachlorobutadiene	ND		0.40		ug/L			10/17/18 07:13	1
Isopropyl ether	ND		10		ug/L			10/17/18 07:13	1
Isopropylbenzene	ND		1.0		ug/L			10/17/18 07:13	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/17/18 07:13	1
Methylene Chloride	ND		1.0		ug/L			10/17/18 07:13	1
m-Xylene & p-Xylene	ND		2.0		ug/L			10/17/18 07:13	1
Naphthalene	ND		5.0		ug/L			10/17/18 07:13	1
n-Butylbenzene	ND		1.0		ug/L			10/17/18 07:13	1

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

TestAmerica Job ID: 480-143220-1

Client Sample ID: TRIP BLANKS
Date Collected: 10/10/18 00:00
Date Received: 10/11/18 01:15

Lab Sample ID: 480-143220-14
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND		1.0		ug/L			10/17/18 07:13	1
o-Xylene	ND		1.0		ug/L			10/17/18 07:13	1
sec-Butylbenzene	ND		1.0		ug/L			10/17/18 07:13	1
Styrene	ND		1.0		ug/L			10/17/18 07:13	1
Tert-amyl methyl ether	ND		5.0		ug/L			10/17/18 07:13	1
Tert-butyl ethyl ether	ND		5.0		ug/L			10/17/18 07:13	1
tert-Butylbenzene	ND		1.0		ug/L			10/17/18 07:13	1
Tetrachloroethene	ND		1.0		ug/L			10/17/18 07:13	1
Tetrahydrofuran	ND	*	10		ug/L			10/17/18 07:13	1
Toluene	ND		1.0		ug/L			10/17/18 07:13	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 07:13	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 07:13	1
Trichloroethene	ND		1.0		ug/L			10/17/18 07:13	1
Trichlorofluoromethane	ND		1.0		ug/L			10/17/18 07:13	1
Vinyl chloride	ND		1.0		ug/L			10/17/18 07:13	1
Dibromomethane	ND		1.0		ug/L			10/17/18 07:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*70 - 130*		*10/17/18 07:13*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*		*10/17/18 07:13*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*10/17/18 07:13*	*1*

Surrogate Summary

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

TestAmerica Job ID: 480-143220-1

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)
480-143220-1	MW-265S-20181010	105	101	107
480-143220-2	MW-265M-20181010	99	100	104
480-143220-3	MW-265D-20181010	101	100	102
480-143220-4	MW-261S-20181010	98	98	104
480-143220-5	MW-531-20181010	103	98	104
480-143220-6	MW-552-20181010	104	95	102
480-143220-7	MW-553-20181010	101	101	100
480-143220-8	MW-562-20181010	103	94	103
480-143220-9	REW-1-20181010	101	100	103
480-143220-10	REW-4-20181010	101	96	100
480-143220-11	REW-5-20181010	101	95	101
480-143220-12	DUP2-20181010	100	99	102
480-143220-13	DUP3-20181010	101	101	102
480-143220-14	TRIP BLANKS	101	102	100
LCS 480-439826/5	Lab Control Sample	98	99	100
LCS 480-439907/5	Lab Control Sample	97	100	96
LCSD 480-439826/6	Lab Control Sample Dup	101	97	102
LCSD 480-439907/6	Lab Control Sample Dup	100	99	99
MB 480-439826/8	Method Blank	103	101	105
MB 480-439907/8	Method Blank	100	98	102

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)
480-143220-2	MW-265M-20181010	82
480-143220-4	MW-261S-20181010	81
480-143220-6	MW-552-20181010	82
480-143220-9	REW-1-20181010	82
480-143220-10	REW-4-20181010	83
480-143220-11	REW-5-20181010	81
480-143220-12	DUP2-20181010	77
LCS 200-135507/2-A	Lab Control Sample	80
MB 200-135507/1-A	Method Blank	82

Surrogate Legend

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

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

Lab Sample ID: MB 480-439826/8
Matrix: Water
Analysis Batch: 439826

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			10/17/18 00:24	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/17/18 00:24	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/17/18 00:24	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/17/18 00:24	1
1,1-Dichloroethane	ND		1.0		ug/L			10/17/18 00:24	1
1,1-Dichloroethene	ND		1.0		ug/L			10/17/18 00:24	1
1,1-Dichloropropene	ND		1.0		ug/L			10/17/18 00:24	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/17/18 00:24	1
1,2,3-Trichloropropane	ND		1.0		ug/L			10/17/18 00:24	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/17/18 00:24	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/17/18 00:24	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			10/17/18 00:24	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/17/18 00:24	1
1,2-Dichloroethane	ND		1.0		ug/L			10/17/18 00:24	1
1,2-Dichloropropane	ND		1.0		ug/L			10/17/18 00:24	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/17/18 00:24	1
1,3-Dichlorobenzene	ND		1.0		ug/L			10/17/18 00:24	1
1,3-Dichloropropane	ND		1.0		ug/L			10/17/18 00:24	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/17/18 00:24	1
1,4-Dioxane	ND		50		ug/L			10/17/18 00:24	1
2,2-Dichloropropane	ND		1.0		ug/L			10/17/18 00:24	1
2-Butanone (MEK)	ND		10		ug/L			10/17/18 00:24	1
2-Chlorotoluene	ND		1.0		ug/L			10/17/18 00:24	1
2-Hexanone	ND		10		ug/L			10/17/18 00:24	1
4-Chlorotoluene	ND		1.0		ug/L			10/17/18 00:24	1
4-Isopropyltoluene	ND		1.0		ug/L			10/17/18 00:24	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			10/17/18 00:24	1
Acetone	ND		50		ug/L			10/17/18 00:24	1
Benzene	ND		1.0		ug/L			10/17/18 00:24	1
Bromobenzene	ND		1.0		ug/L			10/17/18 00:24	1
Bromoform	ND		1.0		ug/L			10/17/18 00:24	1
Bromomethane	ND		2.0		ug/L			10/17/18 00:24	1
Carbon disulfide	ND		10		ug/L			10/17/18 00:24	1
Carbon tetrachloride	ND		1.0		ug/L			10/17/18 00:24	1
Chlorobenzene	ND		1.0		ug/L			10/17/18 00:24	1
Chlorobromomethane	ND		1.0		ug/L			10/17/18 00:24	1
Chlorodibromomethane	ND		0.50		ug/L			10/17/18 00:24	1
Chloroethane	ND		2.0		ug/L			10/17/18 00:24	1
Chloroform	ND		1.0		ug/L			10/17/18 00:24	1
Chloromethane	ND		2.0		ug/L			10/17/18 00:24	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 00:24	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 00:24	1
Dichlorobromomethane	ND		0.50		ug/L			10/17/18 00:24	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/17/18 00:24	1
Ethyl ether	ND		1.0		ug/L			10/17/18 00:24	1
Ethylbenzene	ND		1.0		ug/L			10/17/18 00:24	1
Ethylene Dibromide	ND		1.0		ug/L			10/17/18 00:24	1
Hexachlorobutadiene	ND		0.40		ug/L			10/17/18 00:24	1

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

Lab Sample ID: MB 480-439826/8
Matrix: Water
Analysis Batch: 439826

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			10/17/18 00:24	1
Isopropylbenzene	ND		1.0		ug/L			10/17/18 00:24	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/17/18 00:24	1
Methylene Chloride	ND		1.0		ug/L			10/17/18 00:24	1
m-Xylene & p-Xylene	ND		2.0		ug/L			10/17/18 00:24	1
Naphthalene	ND		5.0		ug/L			10/17/18 00:24	1
n-Butylbenzene	ND		1.0		ug/L			10/17/18 00:24	1
N-Propylbenzene	ND		1.0		ug/L			10/17/18 00:24	1
o-Xylene	ND		1.0		ug/L			10/17/18 00:24	1
sec-Butylbenzene	ND		1.0		ug/L			10/17/18 00:24	1
Styrene	ND		1.0		ug/L			10/17/18 00:24	1
Tert-amyl methyl ether	ND		5.0		ug/L			10/17/18 00:24	1
Tert-butyl ethyl ether	ND		5.0		ug/L			10/17/18 00:24	1
tert-Butylbenzene	ND		1.0		ug/L			10/17/18 00:24	1
Tetrachloroethene	ND		1.0		ug/L			10/17/18 00:24	1
Tetrahydrofuran	ND		10		ug/L			10/17/18 00:24	1
Toluene	ND		1.0		ug/L			10/17/18 00:24	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 00:24	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 00:24	1
Trichloroethene	ND		1.0		ug/L			10/17/18 00:24	1
Trichlorofluoromethane	ND		1.0		ug/L			10/17/18 00:24	1
Vinyl chloride	ND		1.0		ug/L			10/17/18 00:24	1
Dibromomethane	ND		1.0		ug/L			10/17/18 00:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*103*		*70 - 130*		*10/17/18 00:24*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*10/17/18 00:24*	*1*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*		*10/17/18 00:24*	*1*

Lab Sample ID: LCS 480-439826/5
Matrix: Water
Analysis Batch: 439826

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	26.0		ug/L		104	70 - 130
1,1,1-Trichloroethane	25.0	24.4		ug/L		98	70 - 130
1,1,2,2-Tetrachloroethane	25.0	25.2		ug/L		101	70 - 130
1,1,2-Trichloroethane	25.0	24.8		ug/L		99	70 - 130
1,1-Dichloroethane	25.0	25.5		ug/L		102	70 - 130
1,1-Dichloroethene	25.0	24.5		ug/L		98	70 - 130
1,1-Dichloropropene	25.0	26.2		ug/L		105	70 - 130
1,2,3-Trichlorobenzene	25.0	26.8		ug/L		107	70 - 130
1,2,3-Trichloropropane	25.0	27.2		ug/L		109	70 - 130
1,2,4-Trichlorobenzene	25.0	26.2		ug/L		105	70 - 130
1,2,4-Trimethylbenzene	25.0	28.7		ug/L		115	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	23.5		ug/L		94	70 - 130
1,2-Dichlorobenzene	25.0	26.4		ug/L		105	70 - 130
1,2-Dichloroethane	25.0	24.3		ug/L		97	70 - 130

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

Lab Sample ID: LCS 480-439826/5
Matrix: Water
Analysis Batch: 439826

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	28.9		ug/L		116	70 - 130
1,3-Dichlorobenzene	25.0	26.4		ug/L		105	70 - 130
1,3-Dichloropropane	25.0	25.4		ug/L		102	70 - 130
1,4-Dichlorobenzene	25.0	26.3		ug/L		105	70 - 130
1,4-Dioxane	500	551		ug/L		110	70 - 130
2,2-Dichloropropane	25.0	25.0		ug/L		100	70 - 130
2-Butanone (MEK)	125	249	*	ug/L		199	70 - 130
2-Chlorotoluene	25.0	26.2		ug/L		105	70 - 130
2-Hexanone	125	135		ug/L		108	70 - 130
4-Chlorotoluene	25.0	28.1		ug/L		112	70 - 130
4-Isopropyltoluene	25.0	28.5		ug/L		114	70 - 130
4-Methyl-2-pentanone (MIBK)	125	130		ug/L		104	70 - 130
Acetone	125	126		ug/L		101	70 - 130
Benzene	25.0	26.2		ug/L		105	70 - 130
Bromobenzene	25.0	27.4		ug/L		110	70 - 130
Bromoform	25.0	23.6		ug/L		94	70 - 130
Bromomethane	25.0	21.0		ug/L		84	70 - 130
Carbon disulfide	25.0	23.9		ug/L		96	70 - 130
Carbon tetrachloride	25.0	24.7		ug/L		99	70 - 130
Chlorobenzene	25.0	25.9		ug/L		104	70 - 130
Chlorobromomethane	25.0	24.7		ug/L		99	70 - 130
Chlorodibromomethane	25.0	24.6		ug/L		98	70 - 130
Chloroethane	25.0	22.2		ug/L		89	70 - 130
Chloroform	25.0	23.7		ug/L		95	70 - 130
Chloromethane	25.0	22.1		ug/L		88	70 - 130
cis-1,2-Dichloroethene	25.0	24.4		ug/L		98	70 - 130
cis-1,3-Dichloropropene	25.0	30.5		ug/L		122	70 - 130
Dichlorobromomethane	25.0	26.2		ug/L		105	70 - 130
Dichlorodifluoromethane	25.0	24.1		ug/L		96	70 - 130
Ethyl ether	25.0	23.8		ug/L		95	70 - 130
Ethylbenzene	25.0	25.7		ug/L		103	70 - 130
Ethylene Dibromide	25.0	26.2		ug/L		105	70 - 130
Hexachlorobutadiene	25.0	27.6		ug/L		110	70 - 130
Isopropyl ether	25.0	26.8		ug/L		107	70 - 130
Isopropylbenzene	25.0	28.6		ug/L		114	70 - 130
Methyl tert-butyl ether	25.0	25.5		ug/L		102	70 - 130
Methylene Chloride	25.0	25.9		ug/L		104	70 - 130
m-Xylene & p-Xylene	25.0	26.4		ug/L		106	70 - 130
Naphthalene	25.0	26.3		ug/L		105	70 - 130
n-Butylbenzene	25.0	27.4		ug/L		109	70 - 130
N-Propylbenzene	25.0	27.4		ug/L		109	70 - 130
o-Xylene	25.0	26.1		ug/L		105	70 - 130
sec-Butylbenzene	25.0	28.1		ug/L		112	70 - 130
Styrene	25.0	26.9		ug/L		107	70 - 130
Tert-amyl methyl ether	25.0	27.5		ug/L		110	70 - 130
Tert-butyl ethyl ether	25.0	27.0		ug/L		108	70 - 130
tert-Butylbenzene	25.0	30.5		ug/L		122	70 - 130

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

Lab Sample ID: LCS 480-439826/5
Matrix: Water
Analysis Batch: 439826

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	28.0		ug/L		112	70 - 130		
Tetrahydrofuran			50.0	68.2	*	ug/L		136	70 - 130		
Toluene			25.0	25.0		ug/L		100	70 - 130		
trans-1,2-Dichloroethene			25.0	22.7		ug/L		91	70 - 130		
trans-1,3-Dichloropropene			25.0	27.9		ug/L		112	70 - 130		
Trichloroethene			25.0	25.4		ug/L		101	70 - 130		
Trichlorofluoromethane			25.0	24.4		ug/L		98	70 - 130		
Vinyl chloride			25.0	25.2		ug/L		101	70 - 130		
Dibromomethane			25.0	25.7		ug/L		103	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*98*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 480-439826/6
Matrix: Water
Analysis Batch: 439826

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	26.6		ug/L		106	70 - 130	3	20
1,1,1-Trichloroethane			25.0	23.5		ug/L		94	70 - 130	4	20
1,1,2,2-Tetrachloroethane			25.0	24.6		ug/L		98	70 - 130	2	20
1,1,2-Trichloroethane			25.0	25.6		ug/L		102	70 - 130	3	20
1,1-Dichloroethane			25.0	24.6		ug/L		98	70 - 130	4	20
1,1-Dichloroethene			25.0	24.1		ug/L		96	70 - 130	2	20
1,1-Dichloropropene			25.0	25.7		ug/L		103	70 - 130	2	20
1,2,3-Trichlorobenzene			25.0	26.5		ug/L		106	70 - 130	1	20
1,2,3-Trichloropropane			25.0	25.9		ug/L		104	70 - 130	5	20
1,2,4-Trichlorobenzene			25.0	26.2		ug/L		105	70 - 130	0	20
1,2,4-Trimethylbenzene			25.0	27.6		ug/L		110	70 - 130	4	20
1,2-Dibromo-3-Chloropropane			25.0	22.9		ug/L		91	70 - 130	3	20
1,2-Dichlorobenzene			25.0	25.3		ug/L		101	70 - 130	4	20
1,2-Dichloroethane			25.0	23.1		ug/L		92	70 - 130	5	20
1,2-Dichloropropane			25.0	24.8		ug/L		99	70 - 130	8	20
1,3,5-Trimethylbenzene			25.0	28.1		ug/L		112	70 - 130	3	20
1,3-Dichlorobenzene			25.0	25.5		ug/L		102	70 - 130	3	20
1,3-Dichloropropane			25.0	25.5		ug/L		102	70 - 130	0	20
1,4-Dichlorobenzene			25.0	25.6		ug/L		103	70 - 130	3	20
1,4-Dioxane			500	573		ug/L		115	70 - 130	4	20
2,2-Dichloropropane			25.0	25.6		ug/L		102	70 - 130	2	20
2-Butanone (MEK)			125	228	*	ug/L		182	70 - 130	9	20
2-Chlorotoluene			25.0	25.2		ug/L		101	70 - 130	4	20
2-Hexanone			125	134		ug/L		107	70 - 130	1	20
4-Chlorotoluene			25.0	26.7		ug/L		107	70 - 130	5	20
4-Isopropyltoluene			25.0	28.0		ug/L		112	70 - 130	2	20
4-Methyl-2-pentanone (MIBK)			125	131		ug/L		104	70 - 130	1	20
Acetone			125	123		ug/L		98	70 - 130	2	20

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

Lab Sample ID: LCSD 480-439826/6
Matrix: Water
Analysis Batch: 439826

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	25.5		ug/L		102	70 - 130	3	20
Bromobenzene			25.0	26.8		ug/L		107	70 - 130	2	20
Bromoform			25.0	24.4		ug/L		98	70 - 130	3	20
Bromomethane			25.0	21.9		ug/L		88	70 - 130	4	20
Carbon disulfide			25.0	23.9		ug/L		96	70 - 130	0	20
Carbon tetrachloride			25.0	24.2		ug/L		97	70 - 130	2	20
Chlorobenzene			25.0	25.7		ug/L		103	70 - 130	1	20
Chlorobromomethane			25.0	23.1		ug/L		92	70 - 130	7	20
Chlorodibromomethane			25.0	25.2		ug/L		101	70 - 130	2	20
Chloroethane			25.0	22.4		ug/L		90	70 - 130	1	20
Chloroform			25.0	23.0		ug/L		92	70 - 130	3	20
Chloromethane			25.0	21.1		ug/L		84	70 - 130	5	20
cis-1,2-Dichloroethene			25.0	23.8		ug/L		95	70 - 130	3	20
cis-1,3-Dichloropropene			25.0	28.0		ug/L		112	70 - 130	9	20
Dichlorobromomethane			25.0	24.8		ug/L		99	70 - 130	5	20
Dichlorodifluoromethane			25.0	23.6		ug/L		94	70 - 130	2	20
Ethyl ether			25.0	22.8		ug/L		91	70 - 130	5	20
Ethylbenzene			25.0	25.4		ug/L		102	70 - 130	1	20
Ethylene Dibromide			25.0	26.2		ug/L		105	70 - 130	0	20
Hexachlorobutadiene			25.0	26.4		ug/L		105	70 - 130	5	20
Isopropyl ether			25.0	25.9		ug/L		103	70 - 130	4	20
Isopropylbenzene			25.0	27.0		ug/L		108	70 - 130	6	20
Methyl tert-butyl ether			25.0	25.4		ug/L		101	70 - 130	1	20
Methylene Chloride			25.0	26.6		ug/L		106	70 - 130	3	20
m-Xylene & p-Xylene			25.0	25.7		ug/L		103	70 - 130	3	20
Naphthalene			25.0	26.4		ug/L		106	70 - 130	0	20
n-Butylbenzene			25.0	26.8		ug/L		107	70 - 130	2	20
N-Propylbenzene			25.0	26.3		ug/L		105	70 - 130	4	20
o-Xylene			25.0	26.2		ug/L		105	70 - 130	0	20
sec-Butylbenzene			25.0	27.9		ug/L		111	70 - 130	1	20
Styrene			25.0	26.0		ug/L		104	70 - 130	3	20
Tert-amyl methyl ether			25.0	26.9		ug/L		108	70 - 130	2	20
Tert-butyl ethyl ether			25.0	26.8		ug/L		107	70 - 130	1	20
tert-Butylbenzene			25.0	28.3		ug/L		113	70 - 130	8	20
Tetrachloroethene			25.0	28.5		ug/L		114	70 - 130	2	20
Tetrahydrofuran			50.0	64.2		ug/L		128	70 - 130	6	20
Toluene			25.0	24.9		ug/L		100	70 - 130	0	20
trans-1,2-Dichloroethene			25.0	22.9		ug/L		92	70 - 130	1	20
trans-1,3-Dichloropropene			25.0	26.9		ug/L		107	70 - 130	4	20
Trichloroethene			25.0	24.3		ug/L		97	70 - 130	4	20
Trichlorofluoromethane			25.0	23.4		ug/L		94	70 - 130	4	20
Vinyl chloride			25.0	23.8		ug/L		95	70 - 130	6	20
Dibromomethane			25.0	25.3		ug/L		101	70 - 130	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*101*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: MB 480-439907/8
Matrix: Water
Analysis Batch: 439907

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			10/17/18 11:49	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/17/18 11:49	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/17/18 11:49	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/17/18 11:49	1
1,1-Dichloroethane	ND		1.0		ug/L			10/17/18 11:49	1
1,1-Dichloroethene	ND		1.0		ug/L			10/17/18 11:49	1
1,1-Dichloropropene	ND		1.0		ug/L			10/17/18 11:49	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/17/18 11:49	1
1,2,3-Trichloropropane	ND		1.0		ug/L			10/17/18 11:49	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/17/18 11:49	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/17/18 11:49	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			10/17/18 11:49	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/17/18 11:49	1
1,2-Dichloroethane	ND		1.0		ug/L			10/17/18 11:49	1
1,2-Dichloropropane	ND		1.0		ug/L			10/17/18 11:49	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/17/18 11:49	1
1,3-Dichlorobenzene	ND		1.0		ug/L			10/17/18 11:49	1
1,3-Dichloropropane	ND		1.0		ug/L			10/17/18 11:49	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/17/18 11:49	1
1,4-Dioxane	ND		50		ug/L			10/17/18 11:49	1
2,2-Dichloropropane	ND		1.0		ug/L			10/17/18 11:49	1
2-Butanone (MEK)	ND		10		ug/L			10/17/18 11:49	1
2-Chlorotoluene	ND		1.0		ug/L			10/17/18 11:49	1
2-Hexanone	ND		10		ug/L			10/17/18 11:49	1
4-Chlorotoluene	ND		1.0		ug/L			10/17/18 11:49	1
4-Isopropyltoluene	ND		1.0		ug/L			10/17/18 11:49	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			10/17/18 11:49	1
Acetone	ND		50		ug/L			10/17/18 11:49	1
Benzene	ND		1.0		ug/L			10/17/18 11:49	1
Bromobenzene	ND		1.0		ug/L			10/17/18 11:49	1
Bromoform	ND		1.0		ug/L			10/17/18 11:49	1
Bromomethane	ND		2.0		ug/L			10/17/18 11:49	1
Carbon disulfide	ND		10		ug/L			10/17/18 11:49	1
Carbon tetrachloride	ND		1.0		ug/L			10/17/18 11:49	1
Chlorobenzene	ND		1.0		ug/L			10/17/18 11:49	1
Chlorobromomethane	ND		1.0		ug/L			10/17/18 11:49	1
Chlorodibromomethane	ND		0.50		ug/L			10/17/18 11:49	1
Chloroethane	ND		2.0		ug/L			10/17/18 11:49	1
Chloroform	ND		1.0		ug/L			10/17/18 11:49	1
Chloromethane	ND		2.0		ug/L			10/17/18 11:49	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 11:49	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 11:49	1
Dichlorobromomethane	ND		0.50		ug/L			10/17/18 11:49	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/17/18 11:49	1
Ethyl ether	ND		1.0		ug/L			10/17/18 11:49	1
Ethylbenzene	ND		1.0		ug/L			10/17/18 11:49	1
Ethylene Dibromide	ND		1.0		ug/L			10/17/18 11:49	1
Hexachlorobutadiene	ND		0.40		ug/L			10/17/18 11:49	1
Isopropyl ether	ND		10		ug/L			10/17/18 11:49	1
Isopropylbenzene	ND		1.0		ug/L			10/17/18 11:49	1

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

Lab Sample ID: MB 480-439907/8
Matrix: Water
Analysis Batch: 439907

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			10/17/18 11:49	1
Methylene Chloride	ND		1.0		ug/L			10/17/18 11:49	1
m-Xylene & p-Xylene	ND		2.0		ug/L			10/17/18 11:49	1
Naphthalene	ND		5.0		ug/L			10/17/18 11:49	1
n-Butylbenzene	ND		1.0		ug/L			10/17/18 11:49	1
N-Propylbenzene	ND		1.0		ug/L			10/17/18 11:49	1
o-Xylene	ND		1.0		ug/L			10/17/18 11:49	1
sec-Butylbenzene	ND		1.0		ug/L			10/17/18 11:49	1
Styrene	ND		1.0		ug/L			10/17/18 11:49	1
Tert-amyl methyl ether	ND		5.0		ug/L			10/17/18 11:49	1
Tert-butyl ethyl ether	ND		5.0		ug/L			10/17/18 11:49	1
tert-Butylbenzene	ND		1.0		ug/L			10/17/18 11:49	1
Tetrachloroethene	ND		1.0		ug/L			10/17/18 11:49	1
Tetrahydrofuran	ND		10		ug/L			10/17/18 11:49	1
Toluene	ND		1.0		ug/L			10/17/18 11:49	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/17/18 11:49	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			10/17/18 11:49	1
Trichloroethene	ND		1.0		ug/L			10/17/18 11:49	1
Trichlorofluoromethane	ND		1.0		ug/L			10/17/18 11:49	1
Vinyl chloride	ND		1.0		ug/L			10/17/18 11:49	1
Dibromomethane	ND		1.0		ug/L			10/17/18 11:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*70 - 130*		*10/17/18 11:49*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 130*		*10/17/18 11:49*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*10/17/18 11:49*	*1*

Lab Sample ID: LCS 480-439907/5
Matrix: Water
Analysis Batch: 439907

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	25.0	24.9		ug/L		99	70 - 130
1,1,1-Trichloroethane	25.0	26.2		ug/L		105	70 - 130
1,1,2,2-Tetrachloroethane	25.0	25.5		ug/L		102	70 - 130
1,1,2-Trichloroethane	25.0	24.5		ug/L		98	70 - 130
1,1-Dichloroethane	25.0	26.8		ug/L		107	70 - 130
1,1-Dichloroethene	25.0	25.7		ug/L		103	70 - 130
1,1-Dichloropropene	25.0	27.9		ug/L		111	70 - 130
1,2,3-Trichlorobenzene	25.0	26.0		ug/L		104	70 - 130
1,2,3-Trichloropropane	25.0	26.0		ug/L		104	70 - 130
1,2,4-Trichlorobenzene	25.0	26.5		ug/L		106	70 - 130
1,2,4-Trimethylbenzene	25.0	28.5		ug/L		114	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	23.0		ug/L		92	70 - 130
1,2-Dichlorobenzene	25.0	26.2		ug/L		105	70 - 130
1,2-Dichloroethane	25.0	25.4		ug/L		102	70 - 130
1,2-Dichloropropane	25.0	28.2		ug/L		113	70 - 130
1,3,5-Trimethylbenzene	25.0	28.5		ug/L		114	70 - 130

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

Lab Sample ID: LCS 480-439907/5
Matrix: Water
Analysis Batch: 439907

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	26.4		ug/L		105	70 - 130
1,3-Dichloropropane	25.0	25.6		ug/L		102	70 - 130
1,4-Dichlorobenzene	25.0	26.2		ug/L		105	70 - 130
1,4-Dioxane	500	545		ug/L		109	70 - 130
2,2-Dichloropropane	25.0	27.9		ug/L		111	70 - 130
2-Butanone (MEK)	125	261	*	ug/L		208	70 - 130
2-Chlorotoluene	25.0	26.7		ug/L		107	70 - 130
2-Hexanone	125	131		ug/L		105	70 - 130
4-Chlorotoluene	25.0	28.1		ug/L		112	70 - 130
4-Isopropyltoluene	25.0	27.9		ug/L		112	70 - 130
4-Methyl-2-pentanone (MIBK)	125	126		ug/L		101	70 - 130
Acetone	125	136		ug/L		108	70 - 130
Benzene	25.0	27.7		ug/L		111	70 - 130
Bromobenzene	25.0	27.7		ug/L		111	70 - 130
Bromoform	25.0	21.9		ug/L		88	70 - 130
Bromomethane	25.0	21.8		ug/L		87	70 - 130
Carbon disulfide	25.0	24.9		ug/L		99	70 - 130
Carbon tetrachloride	25.0	26.6		ug/L		107	70 - 130
Chlorobenzene	25.0	24.9		ug/L		100	70 - 130
Chlorobromomethane	25.0	26.6		ug/L		106	70 - 130
Chlorodibromomethane	25.0	23.5		ug/L		94	70 - 130
Chloroethane	25.0	23.8		ug/L		95	70 - 130
Chloroform	25.0	25.2		ug/L		101	70 - 130
Chloromethane	25.0	23.7		ug/L		95	70 - 130
cis-1,2-Dichloroethene	25.0	26.4		ug/L		106	70 - 130
cis-1,3-Dichloropropene	25.0	31.6		ug/L		126	70 - 130
Dichlorobromomethane	25.0	27.5		ug/L		110	70 - 130
Dichlorodifluoromethane	25.0	27.5		ug/L		110	70 - 130
Ethyl ether	25.0	25.6		ug/L		102	70 - 130
Ethylbenzene	25.0	25.1		ug/L		100	70 - 130
Ethylene Dibromide	25.0	25.9		ug/L		104	70 - 130
Hexachlorobutadiene	25.0	26.7		ug/L		107	70 - 130
Isopropyl ether	25.0	29.1		ug/L		116	70 - 130
Isopropylbenzene	25.0	27.8		ug/L		111	70 - 130
Methyl tert-butyl ether	25.0	27.0		ug/L		108	70 - 130
Methylene Chloride	25.0	25.9		ug/L		104	70 - 130
m-Xylene & p-Xylene	25.0	25.4		ug/L		102	70 - 130
Naphthalene	25.0	26.0		ug/L		104	70 - 130
n-Butylbenzene	25.0	26.8		ug/L		107	70 - 130
N-Propylbenzene	25.0	27.5		ug/L		110	70 - 130
o-Xylene	25.0	25.1		ug/L		101	70 - 130
sec-Butylbenzene	25.0	28.0		ug/L		112	70 - 130
Styrene	25.0	25.7		ug/L		103	70 - 130
Tert-amyl methyl ether	25.0	29.7		ug/L		119	70 - 130
Tert-butyl ethyl ether	25.0	28.4		ug/L		114	70 - 130
tert-Butylbenzene	25.0	28.8		ug/L		115	70 - 130
Tetrachloroethene	25.0	27.2		ug/L		109	70 - 130
Tetrahydrofuran	50.0	67.8	*	ug/L		136	70 - 130

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

Lab Sample ID: LCS 480-439907/5
Matrix: Water
Analysis Batch: 439907

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	24.4		ug/L		98	70 - 130
trans-1,2-Dichloroethene	25.0	24.6		ug/L		98	70 - 130
trans-1,3-Dichloropropene	25.0	26.4		ug/L		106	70 - 130
Trichloroethene	25.0	27.1		ug/L		108	70 - 130
Trichlorofluoromethane	25.0	27.7		ug/L		111	70 - 130
Vinyl chloride	25.0	26.8		ug/L		107	70 - 130
Dibromomethane	25.0	28.0		ug/L		112	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*97*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: LCSD 480-439907/6
Matrix: Water
Analysis Batch: 439907

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	27.1		ug/L		109	70 - 130	9	20
1,1,1-Trichloroethane	25.0	26.7		ug/L		107	70 - 130	2	20
1,1,2,2-Tetrachloroethane	25.0	26.1		ug/L		104	70 - 130	2	20
1,1,2-Trichloroethane	25.0	27.4		ug/L		110	70 - 130	11	20
1,1-Dichloroethane	25.0	27.4		ug/L		110	70 - 130	3	20
1,1-Dichloroethene	25.0	26.8		ug/L		107	70 - 130	4	20
1,1-Dichloropropene	25.0	28.1		ug/L		113	70 - 130	1	20
1,2,3-Trichlorobenzene	25.0	27.0		ug/L		108	70 - 130	4	20
1,2,3-Trichloropropane	25.0	26.6		ug/L		106	70 - 130	2	20
1,2,4-Trichlorobenzene	25.0	27.3		ug/L		109	70 - 130	3	20
1,2,4-Trimethylbenzene	25.0	29.5		ug/L		118	70 - 130	4	20
1,2-Dibromo-3-Chloropropane	25.0	24.2		ug/L		97	70 - 130	5	20
1,2-Dichlorobenzene	25.0	26.8		ug/L		107	70 - 130	2	20
1,2-Dichloroethane	25.0	24.4		ug/L		97	70 - 130	4	20
1,2-Dichloropropane	25.0	27.2		ug/L		109	70 - 130	4	20
1,3,5-Trimethylbenzene	25.0	30.8		ug/L		123	70 - 130	8	20
1,3-Dichlorobenzene	25.0	26.9		ug/L		108	70 - 130	2	20
1,3-Dichloropropane	25.0	26.5		ug/L		106	70 - 130	3	20
1,4-Dichlorobenzene	25.0	26.9		ug/L		108	70 - 130	3	20
1,4-Dioxane	500	550		ug/L		110	70 - 130	1	20
2,2-Dichloropropane	25.0	28.2		ug/L		113	70 - 130	1	20
2-Butanone (MEK)	125	254	*	ug/L		203	70 - 130	3	20
2-Chlorotoluene	25.0	27.7		ug/L		111	70 - 130	4	20
2-Hexanone	125	141		ug/L		113	70 - 130	7	20
4-Chlorotoluene	25.0	28.9		ug/L		115	70 - 130	3	20
4-Isopropyltoluene	25.0	29.9		ug/L		120	70 - 130	7	20
4-Methyl-2-pentanone (MIBK)	125	136		ug/L		109	70 - 130	8	20
Acetone	125	125		ug/L		100	70 - 130	8	20
Benzene	25.0	27.5		ug/L		110	70 - 130	1	20
Bromobenzene	25.0	28.3		ug/L		113	70 - 130	2	20

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

Lab Sample ID: LCSD 480-439907/6
Matrix: Water
Analysis Batch: 439907

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	11	20
Bromomethane	25.0	23.0		ug/L		92	70 - 130	5	20
Carbon disulfide	25.0	26.7		ug/L		107	70 - 130	7	20
Carbon tetrachloride	25.0	27.3		ug/L		109	70 - 130	3	20
Chlorobenzene	25.0	26.4		ug/L		105	70 - 130	6	20
Chlorobromomethane	25.0	25.8		ug/L		103	70 - 130	3	20
Chlorodibromomethane	25.0	24.8		ug/L		99	70 - 130	5	20
Chloroethane	25.0	25.3		ug/L		101	70 - 130	6	20
Chloroform	25.0	25.0		ug/L		100	70 - 130	1	20
Chloromethane	25.0	24.3		ug/L		97	70 - 130	2	20
cis-1,2-Dichloroethene	25.0	26.3		ug/L		105	70 - 130	0	20
cis-1,3-Dichloropropene	25.0	29.9		ug/L		120	70 - 130	6	20
Dichlorobromomethane	25.0	27.7		ug/L		111	70 - 130	1	20
Dichlorodifluoromethane	25.0	29.4		ug/L		118	70 - 130	7	20
Ethyl ether	25.0	24.9		ug/L		100	70 - 130	2	20
Ethylbenzene	25.0	27.1		ug/L		108	70 - 130	8	20
Ethylene Dibromide	25.0	27.0		ug/L		108	70 - 130	4	20
Hexachlorobutadiene	25.0	29.2		ug/L		117	70 - 130	9	20
Isopropyl ether	25.0	29.1		ug/L		116	70 - 130	0	20
Isopropylbenzene	25.0	29.4		ug/L		117	70 - 130	5	20
Methyl tert-butyl ether	25.0	27.4		ug/L		109	70 - 130	1	20
Methylene Chloride	25.0	26.9		ug/L		107	70 - 130	4	20
m-Xylene & p-Xylene	25.0	28.2		ug/L		113	70 - 130	10	20
Naphthalene	25.0	27.3		ug/L		109	70 - 130	5	20
n-Butylbenzene	25.0	29.2		ug/L		117	70 - 130	9	20
N-Propylbenzene	25.0	28.6		ug/L		115	70 - 130	4	20
o-Xylene	25.0	27.8		ug/L		111	70 - 130	10	20
sec-Butylbenzene	25.0	29.1		ug/L		117	70 - 130	4	20
Styrene	25.0	27.9		ug/L		112	70 - 130	8	20
Tert-amyl methyl ether	25.0	29.6		ug/L		118	70 - 130	0	20
Tert-butyl ethyl ether	25.0	28.2		ug/L		113	70 - 130	1	20
tert-Butylbenzene	25.0	29.9		ug/L		120	70 - 130	4	20
Tetrachloroethene	25.0	30.0		ug/L		120	70 - 130	10	20
Tetrahydrofuran	50.0	69.1	*	ug/L		138	70 - 130	2	20
Toluene	25.0	26.0		ug/L		104	70 - 130	6	20
trans-1,2-Dichloroethene	25.0	25.8		ug/L		103	70 - 130	5	20
trans-1,3-Dichloropropene	25.0	27.2		ug/L		109	70 - 130	3	20
Trichloroethene	25.0	27.8		ug/L		111	70 - 130	3	20
Trichlorofluoromethane	25.0	28.4		ug/L		113	70 - 130	2	20
Vinyl chloride	25.0	28.1		ug/L		112	70 - 130	5	20
Dibromomethane	25.0	26.9		ug/L		108	70 - 130	4	20

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

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

Lab Sample ID: MB 200-135507/1-A
Matrix: Water
Analysis Batch: 135535

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 135507

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20		ug/L		10/19/18 15:20	10/20/18 11:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*82*		*46 - 130*	*10/19/18 15:20*	*10/20/18 11:13*	*1*

Lab Sample ID: LCS 200-135507/2-A
Matrix: Water
Analysis Batch: 135535

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 135507

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			8.00	7.22		ug/L		90	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*80*		*46 - 130*

Method: 6010 - Metals (ICP)

Lab Sample ID: MB 480-439229/1-A
Matrix: Water
Analysis Batch: 439626

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 439229

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050		mg/L		10/13/18 09:16	10/15/18 11:55	1

Lab Sample ID: LCS 480-439229/2-A
Matrix: Water
Analysis Batch: 439626

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 439229

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Iron			10.0	10.2		mg/L		102	80 - 120		

Lab Sample ID: LCSD 480-439229/25-A
Matrix: Water
Analysis Batch: 439626

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 439229

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron			10.0	10.2		mg/L		102	80 - 120	0	20

Lab Sample ID: MB 480-439230/1-A
Matrix: Water
Analysis Batch: 439628

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 439230

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050		mg/L		10/13/18 09:15	10/15/18 16:56	1

Method: 6010 - Metals (ICP) (Continued)

Lab Sample ID: LCS 480-439230/2-A
Matrix: Water
Analysis Batch: 439628

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 439230

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	10.5		mg/L		105	80 - 120

Lab Sample ID: LCSD 480-439230/22-A
Matrix: Water
Analysis Batch: 439628

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 439230

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	10.0	10.6		mg/L		106	80 - 120	0	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-439680/28
Matrix: Water
Analysis Batch: 439680

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			10/16/18 16:18	1
Sulfate	ND		2.0		mg/L			10/16/18 16:18	1

Lab Sample ID: MB 480-439680/4
Matrix: Water
Analysis Batch: 439680

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			10/16/18 13:03	1
Sulfate	ND		2.0		mg/L			10/16/18 13:03	1

Lab Sample ID: LCS 480-439680/27
Matrix: Water
Analysis Batch: 439680

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	51.5		mg/L		103	90 - 110
Sulfate	50.0	48.8		mg/L		98	90 - 110

Lab Sample ID: LCS 480-439680/3
Matrix: Water
Analysis Batch: 439680

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	51.4		mg/L		103	90 - 110
Sulfate	50.0	48.8		mg/L		98	90 - 110

Lab Sample ID: 480-143220-2 MS
Matrix: Water
Analysis Batch: 439680

Client Sample ID: MW-265M-20181010
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	23		250	280		mg/L		103	81 - 120

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 480-143220-2 MS
Matrix: Water
Analysis Batch: 439680

Client Sample ID: MW-265M-20181010
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	ND		250	244		mg/L		98	80 - 120

Lab Sample ID: MB 480-439811/4
Matrix: Water
Analysis Batch: 439811

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			10/16/18 19:50	1
Sulfate	ND		2.0		mg/L			10/16/18 19:50	1

Lab Sample ID: LCS 480-439811/3
Matrix: Water
Analysis Batch: 439811

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	53.7		mg/L		107	90 - 110
Sulfate	50.0	51.5		mg/L		103	90 - 110

Lab Sample ID: 480-143220-10 MS
Matrix: Water
Analysis Batch: 439811

Client Sample ID: REW-4-20181010
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	4.3		50.0	53.7		mg/L		99	81 - 120
Sulfate	14		50.0	60.0		mg/L		92	80 - 120

Lab Sample ID: 480-143220-10 MSD
Matrix: Water
Analysis Batch: 439811

Client Sample ID: REW-4-20181010
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	4.3		50.0	53.8		mg/L		99	81 - 120	0	20
Sulfate	14		50.0	60.2		mg/L		93	80 - 120	0	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-439371/1-A
Matrix: Water
Analysis Batch: 439600

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 439371

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.20		mg/L		10/15/18 01:12	10/16/18 07:22	1

Lab Sample ID: LCS 480-439371/2-A
Matrix: Water
Analysis Batch: 439600

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 439371

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	0.967		mg/L		97	90 - 110

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: 480-143220-9 MS — **Client Sample ID: REW-1-20181010**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 439600 — **Prep Batch: 439371**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	7.3		0.500	7.35	4	mg/L		10	90 - 110

Lab Sample ID: 480-143220-10 MS — **Client Sample ID: REW-4-20181010**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 439600 — **Prep Batch: 439371**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	0.21		0.500	0.660		mg/L		90	90 - 110

Lab Sample ID: MB 480-439860/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 440071 — **Prep Batch: 439860**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.20		mg/L		10/17/18 02:55	10/17/18 17:37	1

Lab Sample ID: LCS 480-439860/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 440071 — **Prep Batch: 439860**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.01		mg/L		101	90 - 110

Method: 9040C - pH

Lab Sample ID: 480-143220-2 DU — **Client Sample ID: MW-265M-20181010**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 439363

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	6.7	HF	6.8		SU		0.3	5
Temperature	16.9	HF	16.8		Degrees C		0.5	10

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

Lab Sample ID: MB 480-440885/27 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 440885

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TOC Result 1	ND		1.0		mg/L			10/20/18 09:46	1
TOC Result 2	ND		1.0		mg/L			10/20/18 09:46	1
Total Organic Carbon - Duplicates	ND		1.0		mg/L			10/20/18 09:46	1

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

Lab Sample ID: MB 480-440885/51
Matrix: Water
Analysis Batch: 440885

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			10/20/18 21:46	1
TOC Result 2	ND		1.0		mg/L			10/20/18 21:46	1
Total Organic Carbon - Duplicates	ND		1.0		mg/L			10/20/18 21:46	1

Lab Sample ID: MB 480-440885/75
Matrix: Water
Analysis Batch: 440885

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			10/21/18 09:41	1
TOC Result 2	ND		1.0		mg/L			10/21/18 09:41	1
Total Organic Carbon - Duplicates	ND		1.0		mg/L			10/21/18 09:41	1

Lab Sample ID: LCS 480-440885/28
Matrix: Water
Analysis Batch: 440885

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	56.7		mg/L		95	90 - 110
TOC Result 2	60.0	57.5		mg/L		96	90 - 110
Total Organic Carbon - Duplicates	60.0	57.1		mg/L		95	90 - 110

Lab Sample ID: LCS 480-440885/52
Matrix: Water
Analysis Batch: 440885

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	55.4		mg/L		92	90 - 110
TOC Result 2	60.0	55.7		mg/L		93	90 - 110
Total Organic Carbon - Duplicates	60.0	55.6		mg/L		93	90 - 110

Lab Sample ID: LCS 480-440885/76
Matrix: Water
Analysis Batch: 440885

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
TOC Result 1	60.0	57.5		mg/L		96	90 - 110
TOC Result 2	60.0	58.7		mg/L		98	90 - 110
Total Organic Carbon - Duplicates	60.0	58.1		mg/L		97	90 - 110

Lab Sample ID: 480-143220-4 MS
Matrix: Water
Analysis Batch: 440885

Client Sample ID: MW-261S-20181010
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
TOC Result 1	2.3		20.0	20.0		mg/L		89	54 - 131
TOC Result 2	2.2		20.0	20.2		mg/L		90	54 - 131

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

Lab Sample ID: 480-143220-4 MS
Matrix: Water
Analysis Batch: 440885

Client Sample ID: MW-261S-20181010
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Duplicates	2.2		20.0	20.1		mg/L		89	54 - 131

Lab Sample ID: 480-143220-6 MS
Matrix: Water
Analysis Batch: 440885

Client Sample ID: MW-552-20181010
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
TOC Result 1	1.6		20.0	20.4		mg/L		94	54 - 131
TOC Result 2	1.5		20.0	20.6		mg/L		96	54 - 131
Total Organic Carbon - Duplicates	1.6		20.0	20.5		mg/L		95	54 - 131

Lab Sample ID: 480-143220-8 MS
Matrix: Water
Analysis Batch: 440885

Client Sample ID: MW-562-20181010
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
TOC Result 1	11		20.0	30.4		mg/L		95	54 - 131
TOC Result 2	10		20.0	30.2		mg/L		99	54 - 131
Total Organic Carbon - Duplicates	11		20.0	30.3		mg/L		97	54 - 131

Lab Sample ID: 480-143220-5 DU
Matrix: Water
Analysis Batch: 440885

Client Sample ID: MW-531-20181010
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
TOC Result 1	1.3		1.38		mg/L		3	20
TOC Result 2	1.2		1.28		mg/L		8	20
Total Organic Carbon - Duplicates	1.3		1.33		mg/L		6	20

Lab Sample ID: 480-143220-7 DU
Matrix: Water
Analysis Batch: 440885

Client Sample ID: MW-553-20181010
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
TOC Result 1	2.6		2.44		mg/L		6	20
TOC Result 2	2.5		2.37		mg/L		6	20
Total Organic Carbon - Duplicates	2.5		2.40		mg/L		6	20

Lab Sample ID: 480-143220-9 DU
Matrix: Water
Analysis Batch: 440885

Client Sample ID: REW-1-20181010
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
TOC Result 1	3.9		3.72		mg/L		5	20
TOC Result 2	3.4		3.45		mg/L		0.4	20

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

Lab Sample ID: 480-143220-9 DU
Matrix: Water
Analysis Batch: 440885

Client Sample ID: REW-1-20181010
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon - Duplicates	3.7		3.59		mg/L		3	20

Lab Sample ID: MB 480-440914/4
Matrix: Water
Analysis Batch: 440914

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			10/20/18 19:25	1
TOC Result 2	ND		1.0		mg/L			10/20/18 19:25	1
Total Organic Carbon - Duplicates	ND		1.0		mg/L			10/20/18 19:25	1

Lab Sample ID: LCS 480-440914/5
Matrix: Water
Analysis Batch: 440914

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		102	90 - 110
Total Organic Carbon - Duplicates	60.0	60.3		mg/L		101	90 - 110

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-439462/30
Matrix: Water
Analysis Batch: 439462

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			10/14/18 17:59	1

Lab Sample ID: MB 480-439462/54
Matrix: Water
Analysis Batch: 439462

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			10/15/18 10:33	1

Lab Sample ID: LCS 480-439462/31
Matrix: Water
Analysis Batch: 439462

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total	100	94.1		mg/L		94	90 - 110

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCS 480-439462/55
Matrix: Water
Analysis Batch: 439462

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	95.9		mg/L		96	90 - 110

Lab Sample ID: 480-143220-9 MS
Matrix: Water
Analysis Batch: 439462

Client Sample ID: REW-1-20181010
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total	460		100	516	4	mg/L		51	60 - 140

Lab Sample ID: 480-143220-10 DU
Matrix: Water
Analysis Batch: 439462

Client Sample ID: REW-4-20181010
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity, Total	94		93.4		mg/L		0.9	20

Method: SM 4500 P E - Orthophosphate

Lab Sample ID: MB 480-439102/3
Matrix: Water
Analysis Batch: 439102

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			10/12/18 08:05	1

Lab Sample ID: LCS 480-439102/4
Matrix: Water
Analysis Batch: 439102

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	0.182		mg/L		91	90 - 110

Lab Sample ID: 480-143220-5 MS
Matrix: Water
Analysis Batch: 439102

Client Sample ID: MW-531-20181010
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
ortho-Phosphate	0.085		1.00	1.01		mg/L		92	49 - 138

Lab Sample ID: 480-143220-5 MSD
Matrix: Water
Analysis Batch: 439102

Client Sample ID: MW-531-20181010
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	0.085		1.00	1.03		mg/L		95	49 - 138	3	20

GC/MS VOA

Analysis Batch: 439826

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143220-1	MW-265S-20181010	Total/NA	Water	8260C	
480-143220-3	MW-265D-20181010	Total/NA	Water	8260C	
480-143220-4	MW-261S-20181010	Total/NA	Water	8260C	
480-143220-5	MW-531-20181010	Total/NA	Water	8260C	
480-143220-6	MW-552-20181010	Total/NA	Water	8260C	
480-143220-7	MW-553-20181010	Total/NA	Water	8260C	
480-143220-9	REW-1-20181010	Total/NA	Water	8260C	
480-143220-10	REW-4-20181010	Total/NA	Water	8260C	
480-143220-11	REW-5-20181010	Total/NA	Water	8260C	
480-143220-14	TRIP BLANKS	Total/NA	Water	8260C	
MB 480-439826/8	Method Blank	Total/NA	Water	8260C	
LCS 480-439826/5	Lab Control Sample	Total/NA	Water	8260C	
LCSD 480-439826/6	Lab Control Sample Dup	Total/NA	Water	8260C	

Analysis Batch: 439907

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143220-2	MW-265M-20181010	Total/NA	Water	8260C	
480-143220-8	MW-562-20181010	Total/NA	Water	8260C	
480-143220-12	DUP2-20181010	Total/NA	Water	8260C	
480-143220-13	DUP3-20181010	Total/NA	Water	8260C	
MB 480-439907/8	Method Blank	Total/NA	Water	8260C	
LCS 480-439907/5	Lab Control Sample	Total/NA	Water	8260C	
LCSD 480-439907/6	Lab Control Sample Dup	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 135507

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143220-2	MW-265M-20181010	Total/NA	Water	3535A	
480-143220-4	MW-261S-20181010	Total/NA	Water	3535A	
480-143220-6	MW-552-20181010	Total/NA	Water	3535A	
480-143220-9	REW-1-20181010	Total/NA	Water	3535A	
480-143220-10	REW-4-20181010	Total/NA	Water	3535A	
480-143220-11	REW-5-20181010	Total/NA	Water	3535A	
480-143220-12	DUP2-20181010	Total/NA	Water	3535A	
MB 200-135507/1-A	Method Blank	Total/NA	Water	3535A	
LCS 200-135507/2-A	Lab Control Sample	Total/NA	Water	3535A	

Analysis Batch: 135535

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143220-2	MW-265M-20181010	Total/NA	Water	522	135507
480-143220-4	MW-261S-20181010	Total/NA	Water	522	135507
480-143220-6	MW-552-20181010	Total/NA	Water	522	135507
480-143220-9	REW-1-20181010	Total/NA	Water	522	135507
480-143220-10	REW-4-20181010	Total/NA	Water	522	135507
480-143220-11	REW-5-20181010	Total/NA	Water	522	135507
480-143220-12	DUP2-20181010	Total/NA	Water	522	135507
MB 200-135507/1-A	Method Blank	Total/NA	Water	522	135507
LCS 200-135507/2-A	Lab Control Sample	Total/NA	Water	522	135507

Metals

Prep Batch: 439229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143220-2	MW-265M-20181010	Total/NA	Water	3005A	
480-143220-4	MW-261S-20181010	Total/NA	Water	3005A	
480-143220-5	MW-531-20181010	Total/NA	Water	3005A	
480-143220-6	MW-552-20181010	Total/NA	Water	3005A	
480-143220-7	MW-553-20181010	Total/NA	Water	3005A	
480-143220-8	MW-562-20181010	Total/NA	Water	3005A	
480-143220-9	REW-1-20181010	Total/NA	Water	3005A	
MB 480-439229/1-A	Method Blank	Total/NA	Water	3005A	
LCS 480-439229/2-A	Lab Control Sample	Total/NA	Water	3005A	
LCSD 480-439229/25-A	Lab Control Sample Dup	Total/NA	Water	3005A	

Prep Batch: 439230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143220-10	REW-4-20181010	Total/NA	Water	3005A	
480-143220-11	REW-5-20181010	Total/NA	Water	3005A	
MB 480-439230/1-A	Method Blank	Total/NA	Water	3005A	
LCS 480-439230/2-A	Lab Control Sample	Total/NA	Water	3005A	
LCSD 480-439230/22-A	Lab Control Sample Dup	Total/NA	Water	3005A	

Analysis Batch: 439626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143220-2	MW-265M-20181010	Total/NA	Water	6010	439229
480-143220-4	MW-261S-20181010	Total/NA	Water	6010	439229
480-143220-5	MW-531-20181010	Total/NA	Water	6010	439229
480-143220-6	MW-552-20181010	Total/NA	Water	6010	439229
480-143220-7	MW-553-20181010	Total/NA	Water	6010	439229
480-143220-8	MW-562-20181010	Total/NA	Water	6010	439229
480-143220-9	REW-1-20181010	Total/NA	Water	6010	439229
MB 480-439229/1-A	Method Blank	Total/NA	Water	6010	439229
LCS 480-439229/2-A	Lab Control Sample	Total/NA	Water	6010	439229
LCSD 480-439229/25-A	Lab Control Sample Dup	Total/NA	Water	6010	439229

Analysis Batch: 439628

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143220-10	REW-4-20181010	Total/NA	Water	6010	439230
480-143220-11	REW-5-20181010	Total/NA	Water	6010	439230
MB 480-439230/1-A	Method Blank	Total/NA	Water	6010	439230
LCS 480-439230/2-A	Lab Control Sample	Total/NA	Water	6010	439230
LCSD 480-439230/22-A	Lab Control Sample Dup	Total/NA	Water	6010	439230

General Chemistry

Analysis Batch: 439013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143220-5	MW-531-20181010	Total/NA	Water	353.2	
480-143220-6	MW-552-20181010	Total/NA	Water	353.2	
480-143220-9	REW-1-20181010	Total/NA	Water	353.2	
480-143220-10	REW-4-20181010	Total/NA	Water	353.2	
480-143220-11	REW-5-20181010	Total/NA	Water	353.2	

General Chemistry (Continued)

Analysis Batch: 439102

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143220-2	MW-265M-20181010	Total/NA	Water	SM 4500 P E	
480-143220-4	MW-261S-20181010	Total/NA	Water	SM 4500 P E	
480-143220-5	MW-531-20181010	Total/NA	Water	SM 4500 P E	
480-143220-6	MW-552-20181010	Total/NA	Water	SM 4500 P E	
480-143220-7	MW-553-20181010	Total/NA	Water	SM 4500 P E	
480-143220-8	MW-562-20181010	Total/NA	Water	SM 4500 P E	
480-143220-9	REW-1-20181010	Total/NA	Water	SM 4500 P E	
480-143220-10	REW-4-20181010	Total/NA	Water	SM 4500 P E	
480-143220-11	REW-5-20181010	Total/NA	Water	SM 4500 P E	
MB 480-439102/3	Method Blank	Total/NA	Water	SM 4500 P E	
LCS 480-439102/4	Lab Control Sample	Total/NA	Water	SM 4500 P E	
480-143220-5 MS	MW-531-20181010	Total/NA	Water	SM 4500 P E	
480-143220-5 MSD	MW-531-20181010	Total/NA	Water	SM 4500 P E	

Analysis Batch: 439363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143220-2	MW-265M-20181010	Total/NA	Water	9040C	
480-143220-4	MW-261S-20181010	Total/NA	Water	9040C	
480-143220-5	MW-531-20181010	Total/NA	Water	9040C	
480-143220-6	MW-552-20181010	Total/NA	Water	9040C	
480-143220-7	MW-553-20181010	Total/NA	Water	9040C	
480-143220-8	MW-562-20181010	Total/NA	Water	9040C	
480-143220-9	REW-1-20181010	Total/NA	Water	9040C	
480-143220-10	REW-4-20181010	Total/NA	Water	9040C	
480-143220-11	REW-5-20181010	Total/NA	Water	9040C	
LCS 480-439363/1	Lab Control Sample	Total/NA	Water	9040C	
480-143220-2 DU	MW-265M-20181010	Total/NA	Water	9040C	

Prep Batch: 439371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143220-2	MW-265M-20181010	Total/NA	Water	Distill/Ammonia	
480-143220-4	MW-261S-20181010	Total/NA	Water	Distill/Ammonia	
480-143220-5	MW-531-20181010	Total/NA	Water	Distill/Ammonia	
480-143220-6	MW-552-20181010	Total/NA	Water	Distill/Ammonia	
480-143220-7	MW-553-20181010	Total/NA	Water	Distill/Ammonia	
480-143220-9	REW-1-20181010	Total/NA	Water	Distill/Ammonia	
480-143220-10	REW-4-20181010	Total/NA	Water	Distill/Ammonia	
480-143220-11	REW-5-20181010	Total/NA	Water	Distill/Ammonia	
MB 480-439371/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 480-439371/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	
480-143220-9 MS	REW-1-20181010	Total/NA	Water	Distill/Ammonia	
480-143220-10 MS	REW-4-20181010	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 439462

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143220-2	MW-265M-20181010	Total/NA	Water	SM 2320B	
480-143220-4	MW-261S-20181010	Total/NA	Water	SM 2320B	
480-143220-5	MW-531-20181010	Total/NA	Water	SM 2320B	
480-143220-6	MW-552-20181010	Total/NA	Water	SM 2320B	
480-143220-7	MW-553-20181010	Total/NA	Water	SM 2320B	
480-143220-8	MW-562-20181010	Total/NA	Water	SM 2320B	

General Chemistry (Continued)

Analysis Batch: 439462 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143220-9	REW-1-20181010	Total/NA	Water	SM 2320B	
480-143220-10	REW-4-20181010	Total/NA	Water	SM 2320B	
480-143220-11	REW-5-20181010	Total/NA	Water	SM 2320B	
MB 480-439462/30	Method Blank	Total/NA	Water	SM 2320B	
MB 480-439462/54	Method Blank	Total/NA	Water	SM 2320B	
LCS 480-439462/31	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 480-439462/55	Lab Control Sample	Total/NA	Water	SM 2320B	
480-143220-9 MS	REW-1-20181010	Total/NA	Water	SM 2320B	
480-143220-10 DU	REW-4-20181010	Total/NA	Water	SM 2320B	

Analysis Batch: 439600

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143220-2	MW-265M-20181010	Total/NA	Water	350.1	439371
480-143220-4	MW-261S-20181010	Total/NA	Water	350.1	439371
480-143220-5	MW-531-20181010	Total/NA	Water	350.1	439371
480-143220-6	MW-552-20181010	Total/NA	Water	350.1	439371
480-143220-7	MW-553-20181010	Total/NA	Water	350.1	439371
480-143220-9	REW-1-20181010	Total/NA	Water	350.1	439371
480-143220-10	REW-4-20181010	Total/NA	Water	350.1	439371
480-143220-11	REW-5-20181010	Total/NA	Water	350.1	439371
MB 480-439371/1-A	Method Blank	Total/NA	Water	350.1	439371
LCS 480-439371/2-A	Lab Control Sample	Total/NA	Water	350.1	439371
480-143220-9 MS	REW-1-20181010	Total/NA	Water	350.1	439371
480-143220-10 MS	REW-4-20181010	Total/NA	Water	350.1	439371

Analysis Batch: 439680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143220-2	MW-265M-20181010	Total/NA	Water	300.0	
480-143220-4	MW-261S-20181010	Total/NA	Water	300.0	
MB 480-439680/28	Method Blank	Total/NA	Water	300.0	
MB 480-439680/4	Method Blank	Total/NA	Water	300.0	
LCS 480-439680/27	Lab Control Sample	Total/NA	Water	300.0	
LCS 480-439680/3	Lab Control Sample	Total/NA	Water	300.0	
480-143220-2 MS	MW-265M-20181010	Total/NA	Water	300.0	

Analysis Batch: 439811

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143220-5	MW-531-20181010	Total/NA	Water	300.0	
480-143220-6	MW-552-20181010	Total/NA	Water	300.0	
480-143220-7	MW-553-20181010	Total/NA	Water	300.0	
480-143220-8	MW-562-20181010	Total/NA	Water	300.0	
480-143220-9	REW-1-20181010	Total/NA	Water	300.0	
480-143220-10	REW-4-20181010	Total/NA	Water	300.0	
480-143220-11	REW-5-20181010	Total/NA	Water	300.0	
MB 480-439811/4	Method Blank	Total/NA	Water	300.0	
LCS 480-439811/3	Lab Control Sample	Total/NA	Water	300.0	
480-143220-10 MS	REW-4-20181010	Total/NA	Water	300.0	
480-143220-10 MSD	REW-4-20181010	Total/NA	Water	300.0	

General Chemistry (Continued)

Prep Batch: 439860

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143220-8	MW-562-20181010	Total/NA	Water	Distill/Ammonia	
MB 480-439860/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 480-439860/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 440071

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143220-8	MW-562-20181010	Total/NA	Water	350.1	439860
MB 480-439860/1-A	Method Blank	Total/NA	Water	350.1	439860
LCS 480-439860/2-A	Lab Control Sample	Total/NA	Water	350.1	439860

Analysis Batch: 440885

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143220-4	MW-261S-20181010	Total/NA	Water	9060A	
480-143220-5	MW-531-20181010	Total/NA	Water	9060A	
480-143220-6	MW-552-20181010	Total/NA	Water	9060A	
480-143220-7	MW-553-20181010	Total/NA	Water	9060A	
480-143220-8	MW-562-20181010	Total/NA	Water	9060A	
480-143220-9	REW-1-20181010	Total/NA	Water	9060A	
480-143220-10	REW-4-20181010	Total/NA	Water	9060A	
MB 480-440885/27	Method Blank	Total/NA	Water	9060A	
MB 480-440885/51	Method Blank	Total/NA	Water	9060A	
MB 480-440885/75	Method Blank	Total/NA	Water	9060A	
LCS 480-440885/28	Lab Control Sample	Total/NA	Water	9060A	
LCS 480-440885/52	Lab Control Sample	Total/NA	Water	9060A	
LCS 480-440885/76	Lab Control Sample	Total/NA	Water	9060A	
480-143220-4 MS	MW-261S-20181010	Total/NA	Water	9060A	
480-143220-6 MS	MW-552-20181010	Total/NA	Water	9060A	
480-143220-8 MS	MW-562-20181010	Total/NA	Water	9060A	
480-143220-5 DU	MW-531-20181010	Total/NA	Water	9060A	
480-143220-7 DU	MW-553-20181010	Total/NA	Water	9060A	
480-143220-9 DU	REW-1-20181010	Total/NA	Water	9060A	

Analysis Batch: 440914

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143220-2	MW-265M-20181010	Total/NA	Water	9060A	
480-143220-11	REW-5-20181010	Total/NA	Water	9060A	
MB 480-440914/4	Method Blank	Total/NA	Water	9060A	
LCS 480-440914/5	Lab Control Sample	Total/NA	Water	9060A	

Analysis Batch: 441012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143220-2	MW-265M-20181010	Total/NA	Water	353.2	
480-143220-4	MW-261S-20181010	Total/NA	Water	353.2	
480-143220-7	MW-553-20181010	Total/NA	Water	353.2	
480-143220-8	MW-562-20181010	Total/NA	Water	353.2	

Client Sample ID: MW-265S-20181010

Lab Sample ID: 480-143220-1

Date Collected: 10/10/18 13:10

Matrix: Water

Date Received: 10/11/18 01:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	439826	10/17/18 01:27	KMN	TAL BUF

Client Sample ID: MW-265M-20181010

Lab Sample ID: 480-143220-2

Date Collected: 10/10/18 13:45

Matrix: Water

Date Received: 10/11/18 01:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	439907	10/17/18 12:29	NMC	TAL BUF
Total/NA	Prep	3535A			135507	10/19/18 15:20	MJW	TAL BUR
Total/NA	Analysis	522		1	135535	10/20/18 14:34	K1P	TAL BUR
Total/NA	Prep	3005A			439229	10/13/18 09:16	KMP	TAL BUF
Total/NA	Analysis	6010		1	439626	10/15/18 13:52	EMB	TAL BUF
Total/NA	Analysis	300.0		5	439680	10/16/18 18:53	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			439371	10/15/18 01:12	MLS	TAL BUF
Total/NA	Analysis	350.1		1	439600	10/16/18 07:24	CLT	TAL BUF
Total/NA	Analysis	353.2		1	441012	10/11/18 11:18	JJP	TAL BUF
Total/NA	Analysis	9040C		1	439363	10/14/18 12:56	KEB	TAL BUF
Total/NA	Analysis	9060A		1	440914	10/21/18 04:50	MRF	TAL BUF
Total/NA	Analysis	SM 2320B		1	439462	10/15/18 09:48	KEB	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	439102	10/12/18 08:05	KEB	TAL BUF

Client Sample ID: MW-265D-20181010

Lab Sample ID: 480-143220-3

Date Collected: 10/10/18 14:25

Matrix: Water

Date Received: 10/11/18 01:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	439826	10/17/18 02:20	KMN	TAL BUF

Client Sample ID: MW-261S-20181010

Lab Sample ID: 480-143220-4

Date Collected: 10/10/18 08:50

Matrix: Water

Date Received: 10/11/18 01:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	439826	10/17/18 02:47	KMN	TAL BUF
Total/NA	Prep	3535A			135507	10/19/18 15:20	MJW	TAL BUR
Total/NA	Analysis	522		1	135535	10/20/18 14:49	K1P	TAL BUR
Total/NA	Prep	3005A			439229	10/13/18 09:16	KMP	TAL BUF
Total/NA	Analysis	6010		1	439626	10/15/18 13:56	EMB	TAL BUF
Total/NA	Analysis	300.0		2	439680	10/16/18 15:29	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			439371	10/15/18 01:12	MLS	TAL BUF
Total/NA	Analysis	350.1		1	439600	10/16/18 07:25	CLT	TAL BUF
Total/NA	Analysis	353.2		1	441012	10/11/18 11:18	JJP	TAL BUF

Lab Chronicle

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

TestAmerica Job ID: 480-143220-1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9040C		1	439363	10/14/18 13:01	KEB	TAL BUF
Total/NA	Analysis	9060A		1	440885	10/20/18 22:45	MRF	TAL BUF
Total/NA	Analysis	SM 2320B		1	439462	10/15/18 09:53	KEB	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	439102	10/12/18 08:05	KEB	TAL BUF

Client Sample ID: MW-531-20181010 — **Lab Sample ID: 480-143220-5**
Date Collected: 10/10/18 09:30 — **Matrix: Water**
Date Received: 10/11/18 01:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	439826	10/17/18 03:13	KMN	TAL BUF
Total/NA	Prep	3005A			439229	10/13/18 09:16	KMP	TAL BUF
Total/NA	Analysis	6010		1	439626	10/15/18 14:11	EMB	TAL BUF
Total/NA	Analysis	300.0		1	439811	10/16/18 19:58	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			439371	10/15/18 01:12	MLS	TAL BUF
Total/NA	Analysis	350.1		1	439600	10/16/18 07:36	CLT	TAL BUF
Total/NA	Analysis	353.2		1	439013	10/11/18 20:07	DCB	TAL BUF
Total/NA	Analysis	9040C		1	439363	10/14/18 13:03	KEB	TAL BUF
Total/NA	Analysis	9060A		1	440885	10/20/18 23:45	MRF	TAL BUF
Total/NA	Analysis	SM 2320B		1	439462	10/15/18 09:58	KEB	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	439102	10/12/18 08:05	KEB	TAL BUF

Client Sample ID: MW-552-20181010 — **Lab Sample ID: 480-143220-6**
Date Collected: 10/10/18 08:10 — **Matrix: Water**
Date Received: 10/11/18 01:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	439826	10/17/18 03:41	KMN	TAL BUF
Total/NA	Prep	3535A			135507	10/19/18 15:20	MJW	TAL BUR
Total/NA	Analysis	522		1	135535	10/20/18 15:03	K1P	TAL BUR
Total/NA	Prep	3005A			439229	10/13/18 09:16	KMP	TAL BUF
Total/NA	Analysis	6010		1	439626	10/15/18 14:15	EMB	TAL BUF
Total/NA	Analysis	300.0		1	439811	10/16/18 20:06	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			439371	10/15/18 01:12	MLS	TAL BUF
Total/NA	Analysis	350.1		1	439600	10/16/18 07:26	CLT	TAL BUF
Total/NA	Analysis	353.2		1	439013	10/11/18 20:08	DCB	TAL BUF
Total/NA	Analysis	9040C		1	439363	10/14/18 13:06	KEB	TAL BUF
Total/NA	Analysis	9060A		1	440885	10/21/18 03:44	MRF	TAL BUF
Total/NA	Analysis	SM 2320B		1	439462	10/15/18 10:03	KEB	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	439102	10/12/18 08:05	KEB	TAL BUF

Client Sample ID: MW-553-20181010

Lab Sample ID: 480-143220-7

Date Collected: 10/10/18 07:20

Matrix: Water

Date Received: 10/11/18 01:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	439826	10/17/18 04:07	KMN	TAL BUF
Total/NA	Prep	3005A			439229	10/13/18 09:16	KMP	TAL BUF
Total/NA	Analysis	6010		1	439626	10/15/18 14:19	EMB	TAL BUF
Total/NA	Analysis	300.0		5	439811	10/16/18 20:14	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			439371	10/15/18 01:12	MLS	TAL BUF
Total/NA	Analysis	350.1		1	439600	10/16/18 07:27	CLT	TAL BUF
Total/NA	Analysis	353.2		1	441012	10/11/18 11:18	JJP	TAL BUF
Total/NA	Analysis	9040C		1	439363	10/14/18 13:09	KEB	TAL BUF
Total/NA	Analysis	9060A		1	440885	10/21/18 04:43	MRF	TAL BUF
Total/NA	Analysis	SM 2320B		1	439462	10/15/18 10:10	KEB	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	439102	10/12/18 08:05	KEB	TAL BUF

Client Sample ID: MW-562-20181010

Lab Sample ID: 480-143220-8

Date Collected: 10/10/18 10:15

Matrix: Water

Date Received: 10/11/18 01:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	439907	10/17/18 12:56	NMC	TAL BUF
Total/NA	Prep	3005A			439229	10/13/18 09:16	KMP	TAL BUF
Total/NA	Analysis	6010		1	439626	10/15/18 14:22	EMB	TAL BUF
Total/NA	Analysis	300.0		1	439811	10/16/18 20:22	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			439860	10/17/18 02:55	SMH	TAL BUF
Total/NA	Analysis	350.1		5	440071	10/17/18 17:40	A1A	TAL BUF
Total/NA	Analysis	353.2		1	441012	10/11/18 11:18	JJP	TAL BUF
Total/NA	Analysis	9040C		1	439363	10/14/18 13:11	KEB	TAL BUF
Total/NA	Analysis	9060A		1	440885	10/21/18 10:42	MRF	TAL BUF
Total/NA	Analysis	SM 2320B		1	439462	10/15/18 10:16	KEB	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	439102	10/12/18 08:05	KEB	TAL BUF

Client Sample ID: REW-1-20181010

Lab Sample ID: 480-143220-9

Date Collected: 10/10/18 11:05

Matrix: Water

Date Received: 10/11/18 01:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	439826	10/17/18 05:00	KMN	TAL BUF
Total/NA	Prep	3535A			135507	10/19/18 15:20	MJW	TAL BUR
Total/NA	Analysis	522		1	135535	10/20/18 15:18	K1P	TAL BUR
Total/NA	Prep	3005A			439229	10/13/18 09:16	KMP	TAL BUF
Total/NA	Analysis	6010		1	439626	10/15/18 14:26	EMB	TAL BUF
Total/NA	Analysis	300.0		2	439811	10/16/18 20:31	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			439371	10/15/18 01:12	MLS	TAL BUF
Total/NA	Analysis	350.1		5	439600	10/16/18 07:45	CLT	TAL BUF

Lab Chronicle

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

TestAmerica Job ID: 480-143220-1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	353.2		1	439013	10/11/18 23:28	DCB	TAL BUF
Total/NA	Analysis	9040C		1	439363	10/14/18 13:14	KEB	TAL BUF
Total/NA	Analysis	9060A		1	440885	10/21/18 11:42	MRF	TAL BUF
Total/NA	Analysis	SM 2320B		1	439462	10/15/18 10:44	KEB	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	439102	10/12/18 08:05	KEB	TAL BUF

Client Sample ID: REW-4-20181010

Date Collected: 10/10/18 11:45
Date Received: 10/11/18 01:15

Lab Sample ID: 480-143220-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	439826	10/17/18 05:27	KMN	TAL BUF
Total/NA	Prep	3535A			135507	10/19/18 15:20	MJW	TAL BUR
Total/NA	Analysis	522		1	135535	10/20/18 15:32	K1P	TAL BUR
Total/NA	Prep	3005A			439230	10/13/18 09:15	KMP	TAL BUF
Total/NA	Analysis	6010		1	439628	10/15/18 17:15	EMB	TAL BUF
Total/NA	Analysis	300.0		1	439811	10/16/18 20:39	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			439371	10/15/18 01:12	MLS	TAL BUF
Total/NA	Analysis	350.1		1	439600	10/16/18 07:33	CLT	TAL BUF
Total/NA	Analysis	353.2		1	439013	10/11/18 20:17	DCB	TAL BUF
Total/NA	Analysis	9040C		1	439363	10/14/18 13:16	KEB	TAL BUF
Total/NA	Analysis	9060A		1	440885	10/21/18 12:41	MRF	TAL BUF
Total/NA	Analysis	SM 2320B		1	439462	10/15/18 10:56	KEB	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	439102	10/12/18 08:05	KEB	TAL BUF

Client Sample ID: REW-5-20181010

Date Collected: 10/10/18 12:30
Date Received: 10/11/18 01:15

Lab Sample ID: 480-143220-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	439826	10/17/18 05:53	KMN	TAL BUF
Total/NA	Prep	3535A			135507	10/19/18 15:20	MJW	TAL BUR
Total/NA	Analysis	522		1	135535	10/20/18 15:46	K1P	TAL BUR
Total/NA	Prep	3005A			439230	10/13/18 09:15	KMP	TAL BUF
Total/NA	Analysis	6010		1	439628	10/15/18 17:18	EMB	TAL BUF
Total/NA	Analysis	300.0		2	439811	10/16/18 21:19	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			439371	10/15/18 01:12	MLS	TAL BUF
Total/NA	Analysis	350.1		1	439600	10/16/18 07:34	CLT	TAL BUF
Total/NA	Analysis	353.2		1	439013	10/11/18 20:19	DCB	TAL BUF
Total/NA	Analysis	9040C		1	439363	10/14/18 13:19	KEB	TAL BUF
Total/NA	Analysis	9060A		1	440914	10/21/18 05:17	MRF	TAL BUF
Total/NA	Analysis	SM 2320B		1	439462	10/15/18 11:06	KEB	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	439102	10/12/18 08:05	KEB	TAL BUF

Lab Chronicle

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

TestAmerica Job ID: 480-143220-1

Client Sample ID: DUP2-20181010

Lab Sample ID: 480-143220-12

Date Collected: 10/10/18 00:00

Matrix: Water

Date Received: 10/11/18 01:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	439907	10/17/18 13:22	NMC	TAL BUF
Total/NA	Prep	3535A			135507	10/19/18 15:20	MJW	TAL BUR
Total/NA	Analysis	522		1	135535	10/20/18 16:01	K1P	TAL BUR

Client Sample ID: DUP3-20181010

Lab Sample ID: 480-143220-13

Date Collected: 10/10/18 00:00

Matrix: Water

Date Received: 10/11/18 01:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	439907	10/17/18 13:49	NMC	TAL BUF

Client Sample ID: TRIP BLANKS

Lab Sample ID: 480-143220-14

Date Collected: 10/10/18 00:00

Matrix: Water

Date Received: 10/11/18 01:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	439826	10/17/18 07:13	KMN	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

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

TestAmerica Job ID: 480-143220-1

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	07-06-19
California	State Program	9	2931	04-01-19
Connecticut	State Program	1	PH-0568	09-30-20
Florida	NELAP	4	E87672	06-30-19
Georgia	State Program	4	10026 (NY)	03-31-19
Georgia	State Program	4	956	03-31-19
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	06-30-19
Maine	State Program	1	NY00044	12-04-18 *
Maryland	State Program	3	294	03-31-19
Massachusetts	State Program	1	M-NY044	06-30-19
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	06-30-19
New York	NELAP	2	10026	03-31-19
North Dakota	State Program	8	R-176	03-31-19
Oklahoma	State Program	6	9421	08-31-19
Oregon	NELAP	10	NY200003	06-09-19
Pennsylvania	NELAP	3	68-00281	07-31-19
Rhode Island	State Program	1	LAO00328	12-30-18
Tennessee	State Program	4	TN02970	03-31-19
Texas	NELAP	6	T104704412-15-6	07-31-19
USDA	Federal		P330-11-00386	02-06-21
Virginia	NELAP	3	460185	09-14-19
Washington	State Program	10	C784	02-10-19
Wisconsin	State Program	5	998310390	08-31-19

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
Maine	State Program	1	VT00008	04-17-19
Minnesota	NELAP	5	050-999-436	12-31-18
New Hampshire	NELAP	1	2006	12-18-18
New Jersey	NELAP	2	VT972	06-30-19
New York	NELAP	2	10391	04-01-19
Pennsylvania	NELAP	3	68-00489	04-30-19
Rhode Island	State Program	1	LAO00298	12-30-18
US Fish & Wildlife	Federal		LE-058448-0	07-31-19
USDA	Federal		P330-11-00093	07-24-20
Vermont	State Program	1	VT-4000	12-31-18

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

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

TestAmerica Job ID: 480-143220-1

Laboratory: TestAmerica Burlington (Continued)

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
Virginia	NELAP	3	460209	12-14-18

Method Summary

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

TestAmerica Job ID: 480-143220-1

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: 480-143220-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-143220-1	MW-265S-20181010	Water	10/10/18 13:10	10/11/18 01:15
480-143220-2	MW-265M-20181010	Water	10/10/18 13:45	10/11/18 01:15
480-143220-3	MW-265D-20181010	Water	10/10/18 14:25	10/11/18 01:15
480-143220-4	MW-261S-20181010	Water	10/10/18 08:50	10/11/18 01:15
480-143220-5	MW-531-20181010	Water	10/10/18 09:30	10/11/18 01:15
480-143220-6	MW-552-20181010	Water	10/10/18 08:10	10/11/18 01:15
480-143220-7	MW-553-20181010	Water	10/10/18 07:20	10/11/18 01:15
480-143220-8	MW-562-20181010	Water	10/10/18 10:15	10/11/18 01:15
480-143220-9	REW-1-20181010	Water	10/10/18 11:05	10/11/18 01:15
480-143220-10	REW-4-20181010	Water	10/10/18 11:45	10/11/18 01:15
480-143220-11	REW-5-20181010	Water	10/10/18 12:30	10/11/18 01:15
480-143220-12	DUP2-20181010	Water	10/10/18 00:00	10/11/18 01:15
480-143220-13	DUP3-20181010	Water	10/10/18 00:00	10/11/18 01:15
480-143220-14	TRIP BLANKS	Water	10/10/18 00:00	10/11/18 01:15

Login Sample Receipt Checklist

Client: Innovative Engineering Solutions, Inc

Job Number: 480-143220-1

Login Number: 143220

List Source: TestAmerica Buffalo

List Number: 1

Creator: Mason, Becky C

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	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	True	

Login Sample Receipt Checklist

Client: Innovative Engineering Solutions, Inc

Job Number: 480-143220-1

Login Number: 143220
List Number: 2
Creator: Johnson, Eleanor E

List Source: TestAmerica Burlington
List Creation: 10/11/18 03:07 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	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	0.8ºC
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 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	

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

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

Chain of Custody P[illegible]

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

480-143220 COC

COC No: 41105
Page: 1 of 2

Client Information:	Sample Collector's Name (Please Print Neatly): Dany Forbes	Lab PM:	Lab CO[illegible]
Client Contact: Vick Parker	Sample Collector's Phone: 508-404-3196	E-Mail:	
Company: Innovative Engineering Solutions Inc.			Job #:
Address: 25 Spring St	Due Date Requested: 10/17/18		
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: V.parker@IEIsolutions.com	PO #: RA-008		
Client's Project Name/Number: Raytheon Wayland RA-008	WO #:		
Sample Collection Site Name & Location: Wayland MA	PWS ID #:		

Analysis Requested

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

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

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

Sample Identification	Sample Collection Date (MM/DD/YY)	Sample Collection Time (24 Hour Clock)	Sample Type: C=Comp G=Grab	Matrix Type **	8260 MCP	5035 Dioxane	9060A TOC	6010 MCP Total Iron	350.1 NH3	2320B Alkalinity 300.0 Cl-/9040C pH	4500-P-E Ortho PO4 353.2 NO3								Total Number of Containers (enter total for each line)	Special Instructions & Notes:
Preservation Codes =>					A	A	A	D	S	N	N	N							↓	
MW-365S - 20181010	10/10/18	1310	G	W	X														3	GW-3
MW-365M - 20181010	10/10/18	1345	G	W	X	X	X	X	X	X	X	X							11	REQUIREMENTS
MW-365D - 20181010	10/10/18	1425	G	W	X														3	
MW-261S - 20181010	10/10/18	0850	G	W	X	X	X	X	X	X	X	X							11	
MW-551 - 20181010	10/10/18	0930	G	W	X		X	X	X	X	X	X							10	
MW-552 - 20181010	10/10/18	0810	G	W	X	X	X	X	X	X	X	X							11	
MW-553 - 20181010	10/10/18	0720	G	W	X		X	X	X	X	X	X							10	
MW-562 - 20181010	10/10/18	1015	G	W	X		X	X	X	X	X	X							10	
REW-1 - 20181010	10/10/18	1105	G	W	X	X	X	X	X	X	X	X							11	
REW-4 - 20181010	10/10/18	1145	G	W	X	X	X	X	X	X	X	X							11	

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

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

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

► NOTE!! ALL SAMPLES MUST BE TRANSPORTED IN A COOLER, ON ICE !! ◄

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	10/10/18 1500	IEI	To TestAmerica Lock Box		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 10/11/18 0115	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 1.2, 1.7°C #3

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

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information:
Client Contact: Vicki Pabinger
Company: Innovative Engineering Solutions Inc
Address: 25 Spring St
City: Walpole
State and Zip: MA 02081
Client's Phone: 508-668-0033
Client's Contact Email: vpabinger@IESonline.com
Client's Project Name/Number: Raytheon Wayland RA008
Sample Collection Site Name & Location: Wayland MA

Sample Collector's Name (Please Print Neatly): Doug Foster
Sample Collector's Phone: 508-404-3196
Lab PM:
E-Mail:
Lab COC Barcode Label
COC No: 41106
Page: 2 of 2
Job #:
Due Date Requested: 10/12/18
Turnaround Time (TAT) Requested (business days): 5 days
Quote # or Project #:
PO #: RA-008
WO #:
PWS ID #:

Analysis Requested

Sample Identification	Sample Collection Date (MM/DD/YY)	Sample Collection Time (24 Hour Clock)	Sample Type: C=Comp G=Grab	Matrix Type **	8260 MCP	522 Dioxane	9060A TOC	6010B MCP Total Inorg	350.1 NH3	2320B Alkalinity	300.0-353 SO4+Cl	4500-P-E Ortho PO4	353.2 NO3								Total Number of Containers (enter total for each line)	Special Instructions & Notes:
Preservation Codes =>					A	A	A	D	H2SO4	N	N	N									↓	
RTW-5 - 20181010	10/10/18	1230	G	W	X	X	X	X	X	X	X	X									11	SW-3
Dup2 - 20181010	10/10/18	—	G	W	X	X															4	As requested
Dup3 - 20181010	10/10/18	—	G	W	X																3	
Trip Blanks	—	—	—	W	X																2	

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

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

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

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

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

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

▶ NOTE!! ALL SAMPLES MUST BE TRANSPORTED IN A COOLER, ON ICE !! ◀

	Date/Time	Company		Date/Time	Company
Relinquished by:	10/10/18 1500	IESS	Received by: To TestAmerica Locker Box		
Relinquished by:			Received by:	10/11/18 0115	TAB
Relinquished by:			Received by:		

Custody Seals Intact: ☐ Yes ☐ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 1.2, 1.7 °C #3

WI-QA-010 rev 8

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

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

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

Chain of Custody Record

480-143220 Chain of Custody

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

COC No: 41105
Page: 1 of 2
Job #:

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

Sample Collector's Name (Please Print Neatly): Dave Jones
Sample Collector's Phone: 508-404-3196
Lab PM:
E-Mail:
Due Date Requested: 10/17/18
Turnaround Time (TAT) Requested (business days): 5 days
Quote # or Project #:
PO #: RA-008
WO #:
PWS ID #:

Sample Identification	Sample Collection Date (MM/DD/YY)	Sample Collection Time (24 Hour Clock)	Sample Type: C=Comp G=Grab	Matrix Type **	Total Number of Containers (enter total for each line)
MW-365I - 20181010	10/10/18	1310	G	W	3
MW-365M - 20181010	10/10/18	1345	G	W	11
MW-365D - 20181010	10/10/18	1425	G	W	3
MW-261I - 20181010	10/10/18	0850	G	W	11
MW-561 - 20181010	10/10/18	0930	G	W	10
MW-552 - 20181010	10/10/18	0810	G	W	11
MW-553 - 20181010	10/10/18	0720	G	W	10
MW-362 - 20181010	10/10/18	1015	G	W	10
REW-1 - 20181010	10/10/18	1105	G	W	11
REW-4 - 20181010	10/10/18	1145	G	W	11

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

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

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

Special Instructions & Notes:
GW-3 Requirements
T+4-5x2 - Drums 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

▶ NOTE!! ALL SAMPLES MUST BE TRANSPORTED IN A COOLER, ON ICE !! ◀

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

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	10/10/18 1500	IEI	To Test America Lock Box		
Relinquished by:	Date/Time:	Company	Received by:	10/11/18 1029	TA Bvl
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks:

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

WI-QA-010 rev 8

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

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

Sample Collector's Name (Please Print Neatly): Doug Foster
Sample Collector's Phone: 508-404-3196
Lab PM:
E-Mail:
Lab COC Barcode Label

COC No: 41106
Page: 2 of 2
Job #:

Due Date Requested: 10/12/18
Turnaround Time (TAT) Requested (business days): 5 days
Quote # or Project #:
PO #: RA-008
WO #:
PWS ID #:

Analysis Requested

Sample Identification	Sample Collection Date (MM/DD/YY)	Sample Collection Time (24 Hour Clock)	Sample Type: C=Comp G=Grab	Matrix Type **	8260 MCP	522 Dioxane	9060A TOC	6010C MCP Total Iron	350.1 NH3	8260B All Ketones	300.0-28D Sulfate	4500-P-E Ortho PO4	Total Number of Containers (enter total for each line)	Special Instructions & Notes:
RW-5 - 20181010	10/10/18	1230	G	W	X	X	X	X	X	X	X	X	11	CW-3
Dup2 - 20181010	10/10/18	—	G	W	X	X							4	Acetoketones
Dup3 - 20181010	10/10/18	—	G	W	X								3	
Trip Blanks	—	—	—	W	X								2	522 - 14 - Dioxane To Burlington

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

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

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

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

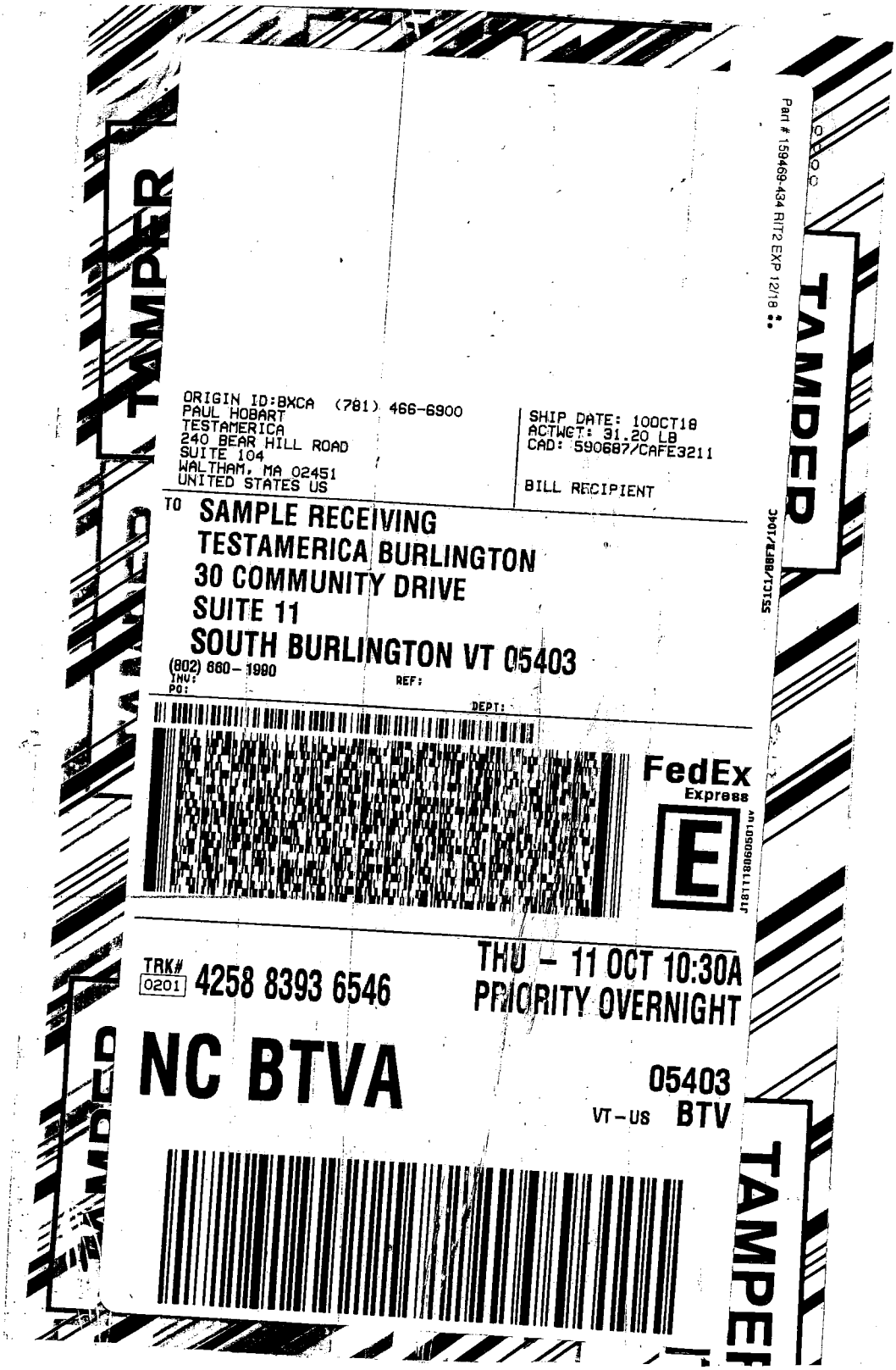
Sample Disposal Requirements (A fee may be assessed if samples are retained longer than 1 month):
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

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

► **NOTE!! ALL SAMPLES MUST BE TRANSPORTED IN A COOLER, ON ICE !!** ◄

	Date/Time:	Company		Date/Time:	Company
Relinquished by:	10/10/18 1500	IESE	Received by: To Test America lock Box		
Relinquished by:			Received by:	10/11/18 1029	TA Bur
Relinquished by:			Received by:		

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


TAMPER
TAMPER
Part # 159469-434 RIT2 EXP 12/18
ORIGIN ID:BXCA (781) 466-6900
PAUL HOBART
TESTAMERICA
240 BEAR HILL ROAD
SUITE 104
WALTHAM, MA 02451
UNITED STATES US
SHIP DATE: 10OCT18
ACTWGT: 31.20 LB
CAD: 590687/CAFE3211
BILL RECIPIENT
TO SAMPLE RECEIVING
TESTAMERICA BURLINGTON
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403
(802) 660-1990
INV:
PO:
REF:
DEPT:
FedEx
Express
TRK# 0201 4258 8393 6546
THU - 11 OCT 10:30A
PRIORITY OVERNIGHT
NC BTVA
05403
VT-US BTV
TAMPER

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: 480-143195-1
Client Project/Site: IDS Wayland

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

Attn: Vicki Pariyar

Authorized for release by:
10/24/2018 10:37:16 AM

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

Table of Contents

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.

GC/MS Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
F1	MS and/or MSD Recovery is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
H	Sample was prepped or analyzed beyond the specified holding time
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	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)

Job ID: 480-143195-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-143195-1

Receipt
The samples were received on 10/10/2018 1:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.9º C.

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

Method 8260C: Due to the dilutions required, per question G on the MassDEP Analytical Protocol Certification Form, the CAM reporting limits specified in this CAM protocol could not be achieved for some or all samples/analytes.

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-439252 recovered outside the MCP control limit criteria for the following analyte: Trichlorofluoromethane. 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 : MW-267S-20181009 (480-143195-1), MW-268S-20181009 (480-143195-3), MW-268M-20181009 (480-143195-4), MW-268D-20181009 (480-143195-5), REW-6-20181009 (480-143195-6), REW-7-20181009 (480-143195-7), REW-8-20181009 (480-143195-8), REW-11-20181009 (480-143195-9), DUP1-20181009 (480-143195-10), TRIP BLANKS (480-143195-11) and REW-920181009 (480-143195-12).

Method 8260C: The laboratory control sample (LCS) and the laboratory control sample duplicate (LCSD) for batch 480-439252 exceeded control limits for the following analyte: 2-Butanone. Unlike the calibration standards, this is due to the coelution with Ethyl Acetate in the spiking solution. This does not indicate a performance issue with the spike recovery, but rather the laboratory's ability to measure the two analytes together in a combined spiking solution. Through the use of spectral analysis, the two compounds can be distinguished from one another if present in a client sample. The following samples were affected : MW-267S-20181009 (480-143195-1), MW-268S-20181009 (480-143195-3), MW-268M-20181009 (480-143195-4), MW-268D-20181009 (480-143195-5), REW-6-20181009 (480-143195-6), REW-7-20181009 (480-143195-7), REW-8-20181009 (480-143195-8), REW-11-20181009 (480-143195-9), DUP1-20181009 (480-143195-10), TRIP BLANKS (480-143195-11) and REW-920181009 (480-143195-12).

Method 8260C: The following volatiles samples were diluted due to foaming at the time of purging during the original sample analysis: MW-267S-20181009 (480-143195-1) and MW-268D-20181009 (480-143195-5). Elevated reporting limits (RLs) are provided.

Method 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-268S-20181009 (480-143195-3) and MW-268M-20181009 (480-143195-4). Elevated reporting limits (RLs) are provided.

Method 8260C: The following samples were diluted due to the abundance of non-target analytes: REW-6-20181009 (480-143195-6), REW-11-20181009 (480-143195-9) and DUP1-20181009 (480-143195-10). Elevated reporting limits (RLs) are provided.

Method 8260C: The following sample were collected in properly preserved vials for analysis of volatile organic compounds (VOCs). However, the pH was outside the required criteria when verified by the laboratory, and corrective action was not possible: MW-267S-20181009 (480-143195-1), REW-11-20181009 (480-143195-9) and DUP1-20181009 (480-143195-10). The sample was analyzed within 7 days per EPA recommendation.

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-439285 recovered outside the MCP control limit criteria for the following analytes: Bromomethane and Dichlorodifluoromethane. 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 sample was affected: MW-267M-20181009 (480-143195-2).

Method 8260C: The laboratory control sample (LCS) and/or the laboratory control sample duplicate (LCSD) for batch 480-439285 exceeded control limits for the following analyte: 2-Butanone and Tetrahydrofuran. Unlike the calibration standards, this is due to the

Job ID: 480-143195-1 (Continued)

Laboratory: TestAmerica Buffalo (Continued)

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. The following sample was affected: MW-267M-20181009 (480-143195-2).

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

GC/MS Semi VOA
Method 522: Surrogate 1,4-Dioxane-d8 (Surr) recovery for the following sample was outside control limits: MW-267S-20181009 (480-143195-1). Evidence of matrix interference is present; therefore, re-extraction and re-analysis was not performed.

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

HPLC/IC
Method 300.0: The following samples were diluted due to the nature of the sample matrix: MW-267S-20181009 (480-143195-1), REW-6-20181009 (480-143195-6) and REW-11-20181009 (480-143195-9). Elevated reporting limits (RLs) are provided.

Method 300.0: The following sample was reported with elevated reporting limits for all analytes: MW-268M-20181009 (480-143195-4). The sample was analyzed at a dilution based on screening results.

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

Metals
Method 6010: At the request of the client, an abbreviated 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 353.2: the inter-parameter relationship between Nitrate-Nitrite and Nitrite does not meet acceptable criteria. This has been confirmed for both analytes.MW-267S-20181009 (480-143195-1)

Method SM 4500 P E: Due to laboratory error we did not run the following samples within hold time: MW-268S-20181009 (480-143195-3) and MW-268M-20181009 (480-143195-4).

Method 353.2: Due to laboratory error we did not run the following samples within hold time: MW-268S-20181009 (480-143195-3) and MW-268M-20181009 (480-143195-4).

Method 9040C: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following samples has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: MW-267S-20181009 (480-143195-1), MW-268S-20181009 (480-143195-3), MW-268M-20181009 (480-143195-4), REW-6-20181009 (480-143195-6), REW-7-20181009 (480-143195-7), REW-8-20181009 (480-143195-8), REW-11-20181009 (480-143195-9) and REW-920181009 (480-143195-12).

Method SM 2320B: The following samples were received with headspace in the sample container. This sample container was received with headspace. MW-267S-20181009 (480-143195-1), MW-268S-20181009 (480-143195-3), MW-268M-20181009 (480-143195-4), REW-6-20181009 (480-143195-6), REW-7-20181009 (480-143195-7), REW-8-20181009 (480-143195-8), REW-11-20181009 (480-143195-9) and REW-920181009 (480-143195-12).

Method 9060A: The method blank for preparation batch <PrepBatch> contained organic carbon above the reporting limit (RL). None of the samples associated with this method blank contained the target compound; therefore, re-extraction and/or re-analysis of samples were not performed.

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

Job ID: 480-143195-1 (Continued)

Laboratory: TestAmerica Buffalo (Continued)

Organic Prep

Method 3535A: The reference method requires samples to be preserved to a pH of <2. The following samples were received with insufficient preservation at a pH of 4-5: MW-267S-20181009 (480-143195-1), REW-6-20181009 (480-143195-6), REW-11-20181009 (480-143195-9) and DUP1-20181009 (480-143195-10). The sample(s) was preserved to the appropriate pH in the laboratory using 1.5mL of HCl. Samples 480-143195-9 and 480-143195-10 required 3.0mL of HCl.

Method 3535A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 200-135288.

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

MassDEP Analytical Protocol Certification Form

Laboratory Name: **TestAmerica Buffalo** Project #: **480-143195-1**

Project Location: **Wayland MA** RTN:

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

480-143195-1[1-12]

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

CAM Protocols (check all that apply below):

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

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

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

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

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

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

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

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

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

Signature: Becky Mason Position: Project Manager

Printed Name: Becky Mason Date: 10/24/18 10:31

This form has been electronically signed and approved

Detection Summary

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

TestAmerica Job ID: 480-143195-1

Client Sample ID: MW-267S-20181009 — Lab Sample ID: 480-143195-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	390	*	200		ug/L	20		8260C	Total/NA
cis-1,2-Dichloroethene	23		20		ug/L	20		8260C	Total/NA
Toluene	91		20		ug/L	20		8260C	Total/NA
1,4-Dioxane	0.42		0.20		ug/L	1		522	Total/NA
Iron	670		0.25		mg/L	5		6010	Total/NA
Chloride	25		5.0		mg/L	10		300.0	Total/NA
Ammonia	0.49	F1	0.20		mg/L	1		350.1	Total/NA
TOC Result 1	1500		20		mg/L	20		9060A	Total/NA
TOC Result 2	1500		20		mg/L	20		9060A	Total/NA
Total Organic Carbon - Duplicates	1500		20		mg/L	20		9060A	Total/NA
Alkalinity, Total	790		5.0		mg/L	1		SM 2320B	Total/NA
ortho-Phosphate	0.098		0.020		mg/L	1		SM 4500 P E	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	5.3	HF	0.1		SU	1		9040C	Total/NA
Temperature	17.5	HF	0.001		Degrees C	1		9040C	Total/NA

Client Sample ID: MW-267M-20181009 — Lab Sample ID: 480-143195-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	4.1		0.20		ug/L	1		522	Total/NA

Client Sample ID: MW-268S-20181009 — Lab Sample ID: 480-143195-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	82		4.0		ug/L	4		8260C	Total/NA
Trichloroethene	230		4.0		ug/L	4		8260C	Total/NA
1,4-Dioxane	16		0.20		ug/L	1		522	Total/NA
Iron	1.1		0.050		mg/L	1		6010	Total/NA
Chloride	19		0.50		mg/L	1		300.0	Total/NA
Sulfate	19		2.0		mg/L	1		300.0	Total/NA
Ammonia	0.21		0.20		mg/L	1		350.1	Total/NA
TOC Result 1	16	^	1.0		mg/L	1		9060A	Total/NA
TOC Result 2	17		1.0		mg/L	1		9060A	Total/NA
Total Organic Carbon - Duplicates	16		1.0		mg/L	1		9060A	Total/NA
Alkalinity, Total	100		5.0		mg/L	1		SM 2320B	Total/NA
ortho-Phosphate	0.10	H	0.020		mg/L	1		SM 4500 P E	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	8.5	HF	0.1		SU	1		9040C	Total/NA
Temperature	17.9	HF	0.001		Degrees C	1		9040C	Total/NA

Client Sample ID: MW-268M-20181009 — Lab Sample ID: 480-143195-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	26		2.0		ug/L	2		8260C	Total/NA
Toluene	3.2		2.0		ug/L	2		8260C	Total/NA
Vinyl chloride	64		2.0		ug/L	2		8260C	Total/NA
1,4-Dioxane	7.8		0.20		ug/L	1		522	Total/NA
Iron	57		0.050		mg/L	1		6010	Total/NA
Chloride	34		1.0		mg/L	2		300.0	Total/NA
Nitrate as N	0.088	H	0.050		mg/L	1		353.2	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-268M-20181009 (Continued) — Lab Sample ID: 480-143195-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
TOC Result 1	2.5		1.0		mg/L	1		9060A	Total/NA
TOC Result 2	2.6		1.0		mg/L	1		9060A	Total/NA
Total Organic Carbon - Duplicates	2.5		1.0		mg/L	1		9060A	Total/NA
Alkalinity, Total	370		5.0		mg/L	1		SM 2320B	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	6.9	HF	0.1		SU	1		9040C	Total/NA
Temperature	18.1	HF	0.001		Degrees C	1		9040C	Total/NA

Client Sample ID: MW-268D-20181009 — Lab Sample ID: 480-143195-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	2.9		2.0		ug/L	2		8260C	Total/NA
Toluene	2.2		2.0		ug/L	2		8260C	Total/NA

Client Sample ID: REW-6-20181009 — Lab Sample ID: 480-143195-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	440	*	200		ug/L	20		8260C	Total/NA
1,4-Dioxane	2.4		0.20		ug/L	1		522	Total/NA
Iron	140		0.050		mg/L	1		6010	Total/NA
Chloride	33		5.0		mg/L	10		300.0	Total/NA
Ammonia	0.32		0.20		mg/L	1		350.1	Total/NA
Nitrate as N	0.060		0.050		mg/L	1		353.2	Total/NA
TOC Result 1	860		20		mg/L	20		9060A	Total/NA
TOC Result 2	850		20		mg/L	20		9060A	Total/NA
Total Organic Carbon - Duplicates	850		20		mg/L	20		9060A	Total/NA
Alkalinity, Total	780		5.0		mg/L	1		SM 2320B	Total/NA
ortho-Phosphate	0.050		0.020		mg/L	1		SM 4500 P E	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	5.8	HF	0.1		SU	1		9040C	Total/NA
Temperature	17.7	HF	0.001		Degrees C	1		9040C	Total/NA

Client Sample ID: REW-7-20181009 — Lab Sample ID: 480-143195-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	4.3		0.050		mg/L	1		6010	Total/NA
Chloride	8.4		0.50		mg/L	1		300.0	Total/NA
Sulfate	34		2.0		mg/L	1		300.0	Total/NA
Ammonia	1.8		0.20		mg/L	1		350.1	Total/NA
Alkalinity, Total	54		5.0		mg/L	1		SM 2320B	Total/NA
ortho-Phosphate	0.13		0.020		mg/L	1		SM 4500 P E	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	6.8	HF	0.1		SU	1		9040C	Total/NA
Temperature	17.3	HF	0.001		Degrees C	1		9040C	Total/NA

Client Sample ID: REW-8-20181009 — Lab Sample ID: 480-143195-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	44		5.0		ug/L	1		8260C	Total/NA
Iron	3.6		0.050		mg/L	1		6010	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

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

TestAmerica Job ID: 480-143195-1

Client Sample ID: REW-8-20181009 (Continued) — Lab Sample ID: 480-143195-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.8		0.50		mg/L	1		300.0	Total/NA
Sulfate	16		2.0		mg/L	1		300.0	Total/NA
Ammonia	1.4		0.20		mg/L	1		350.1	Total/NA
TOC Result 2	1.2	^	1.0		mg/L	1		9060A	Total/NA
Total Organic Carbon - Duplicates	1.0	^	1.0		mg/L	1		9060A	Total/NA
Alkalinity, Total	72		5.0		mg/L	1		SM 2320B	Total/NA
ortho-Phosphate	0.25		0.020		mg/L	1		SM 4500 P E	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	6.7	HF	0.1		SU	1		9040C	Total/NA
Temperature	17.1	HF	0.001		Degrees C	1		9040C	Total/NA

Client Sample ID: REW-11-20181009 — Lab Sample ID: 480-143195-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	500	*	200		ug/L	20		8260C	Total/NA
1,4-Dioxane	1.8		0.20		ug/L	1		522	Total/NA
Iron	250		0.050		mg/L	1		6010	Total/NA
Chloride	38		10		mg/L	20		300.0	Total/NA
Ammonia	0.58		0.20		mg/L	1		350.1	Total/NA
Nitrate as N	0.050		0.050		mg/L	1		353.2	Total/NA
TOC Result 1	5100		100		mg/L	100		9060A	Total/NA
TOC Result 2	5100		100		mg/L	100		9060A	Total/NA
Total Organic Carbon - Duplicates	5100		100		mg/L	100		9060A	Total/NA
Alkalinity, Total	1200		5.0		mg/L	1		SM 2320B	Total/NA
ortho-Phosphate	0.24		0.020		mg/L	1		SM 4500 P E	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	5.7	HF	0.1		SU	1		9040C	Total/NA
Temperature	17.3	HF	0.001		Degrees C	1		9040C	Total/NA

Client Sample ID: DUP1-20181009 — Lab Sample ID: 480-143195-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	440	*	200		ug/L	20		8260C	Total/NA
1,4-Dioxane	1.1		0.20		ug/L	1		522	Total/NA

Client Sample ID: TRIP BLANKS — Lab Sample ID: 480-143195-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	3.6		1.0		ug/L	1		8260C	Total/NA

Client Sample ID: REW-920181009 — Lab Sample ID: 480-143195-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	3.0		0.050		mg/L	1		6010	Total/NA
Chloride	14		0.50		mg/L	1		300.0	Total/NA
Sulfate	51		2.0		mg/L	1		300.0	Total/NA
Ammonia	1.1		0.20		mg/L	1		350.1	Total/NA
TOC Result 1	1.3		1.0		mg/L	1		9060A	Total/NA
TOC Result 2	1.7		1.0		mg/L	1		9060A	Total/NA
Total Organic Carbon - Duplicates	1.5		1.0		mg/L	1		9060A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: REW-920181009 (Continued)

Lab Sample ID: 480-143195-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity, Total	55		5.0		mg/L	1		SM 2320B	Total/NA
ortho-Phosphate	0.22		0.020		mg/L	1		SM 4500 P E	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	6.8	HF	0.1		SU	1		9040C	Total/NA
Temperature	17.5	HF	0.001		Degrees C	1		9040C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-267S-20181009
Date Collected: 10/09/18 12:10
Date Received: 10/10/18 01:00

Lab Sample ID: 480-143195-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		20		ug/L			10/13/18 00:33	20
1,1,1-Trichloroethane	ND		20		ug/L			10/13/18 00:33	20
1,1,2,2-Tetrachloroethane	ND		10		ug/L			10/13/18 00:33	20
1,1,2-Trichloroethane	ND		20		ug/L			10/13/18 00:33	20
1,1-Dichloroethane	ND		20		ug/L			10/13/18 00:33	20
1,1-Dichloroethene	ND		20		ug/L			10/13/18 00:33	20
1,1-Dichloropropene	ND		20		ug/L			10/13/18 00:33	20
1,2,3-Trichlorobenzene	ND		20		ug/L			10/13/18 00:33	20
1,2,3-Trichloropropane	ND		20		ug/L			10/13/18 00:33	20
1,2,4-Trichlorobenzene	ND		20		ug/L			10/13/18 00:33	20
1,2,4-Trimethylbenzene	ND		20		ug/L			10/13/18 00:33	20
1,2-Dibromo-3-Chloropropane	ND		100		ug/L			10/13/18 00:33	20
1,2-Dichlorobenzene	ND		20		ug/L			10/13/18 00:33	20
1,2-Dichloroethane	ND		20		ug/L			10/13/18 00:33	20
1,2-Dichloropropane	ND		20		ug/L			10/13/18 00:33	20
1,3,5-Trimethylbenzene	ND		20		ug/L			10/13/18 00:33	20
1,3-Dichlorobenzene	ND		20		ug/L			10/13/18 00:33	20
1,3-Dichloropropane	ND		20		ug/L			10/13/18 00:33	20
1,4-Dichlorobenzene	ND		20		ug/L			10/13/18 00:33	20
1,4-Dioxane	ND		1000		ug/L			10/13/18 00:33	20
2,2-Dichloropropane	ND		20		ug/L			10/13/18 00:33	20
2-Butanone (MEK)	**390**	*	200		ug/L			10/13/18 00:33	20
2-Chlorotoluene	ND		20		ug/L			10/13/18 00:33	20
2-Hexanone	ND		200		ug/L			10/13/18 00:33	20
4-Chlorotoluene	ND		20		ug/L			10/13/18 00:33	20
4-Isopropyltoluene	ND		20		ug/L			10/13/18 00:33	20
4-Methyl-2-pentanone (MIBK)	ND		200		ug/L			10/13/18 00:33	20
Acetone	ND		1000		ug/L			10/13/18 00:33	20
Benzene	ND		20		ug/L			10/13/18 00:33	20
Bromobenzene	ND		20		ug/L			10/13/18 00:33	20
Bromoform	ND		20		ug/L			10/13/18 00:33	20
Bromomethane	ND		40		ug/L			10/13/18 00:33	20
Carbon disulfide	ND		200		ug/L			10/13/18 00:33	20
Carbon tetrachloride	ND		20		ug/L			10/13/18 00:33	20
Chlorobenzene	ND		20		ug/L			10/13/18 00:33	20
Chlorobromomethane	ND		20		ug/L			10/13/18 00:33	20
Chlorodibromomethane	ND		10		ug/L			10/13/18 00:33	20
Chloroethane	ND		40		ug/L			10/13/18 00:33	20
Chloroform	ND		20		ug/L			10/13/18 00:33	20
Chloromethane	ND		40		ug/L			10/13/18 00:33	20
cis-1,2-Dichloroethene	**23**		20		ug/L			10/13/18 00:33	20
cis-1,3-Dichloropropene	ND		8.0		ug/L			10/13/18 00:33	20
Dichlorobromomethane	ND		10		ug/L			10/13/18 00:33	20
Dichlorodifluoromethane	ND		20		ug/L			10/13/18 00:33	20
Ethyl ether	ND		20		ug/L			10/13/18 00:33	20
Ethylbenzene	ND		20		ug/L			10/13/18 00:33	20
Ethylene Dibromide	ND		20		ug/L			10/13/18 00:33	20
Hexachlorobutadiene	ND		8.0		ug/L			10/13/18 00:33	20
Isopropyl ether	ND		200		ug/L			10/13/18 00:33	20

Client Sample ID: MW-267S-20181009
Date Collected: 10/09/18 12:10
Date Received: 10/10/18 01:00

Lab Sample ID: 480-143195-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		20		ug/L			10/13/18 00:33	20
Methyl tert-butyl ether	ND		20		ug/L			10/13/18 00:33	20
Methylene Chloride	ND		20		ug/L			10/13/18 00:33	20
m-Xylene & p-Xylene	ND		40		ug/L			10/13/18 00:33	20
Naphthalene	ND		100		ug/L			10/13/18 00:33	20
n-Butylbenzene	ND		20		ug/L			10/13/18 00:33	20
N-Propylbenzene	ND		20		ug/L			10/13/18 00:33	20
o-Xylene	ND		20		ug/L			10/13/18 00:33	20
sec-Butylbenzene	ND		20		ug/L			10/13/18 00:33	20
Styrene	ND		20		ug/L			10/13/18 00:33	20
Tert-amyl methyl ether	ND		100		ug/L			10/13/18 00:33	20
Tert-butyl ethyl ether	ND		100		ug/L			10/13/18 00:33	20
tert-Butylbenzene	ND		20		ug/L			10/13/18 00:33	20
Tetrachloroethene	ND		20		ug/L			10/13/18 00:33	20
Tetrahydrofuran	ND		200		ug/L			10/13/18 00:33	20
Toluene	**91**		20		ug/L			10/13/18 00:33	20
trans-1,2-Dichloroethene	ND		20		ug/L			10/13/18 00:33	20
trans-1,3-Dichloropropene	ND		8.0		ug/L			10/13/18 00:33	20
Trichloroethene	ND		20		ug/L			10/13/18 00:33	20
Trichlorofluoromethane	ND		20		ug/L			10/13/18 00:33	20
Vinyl chloride	ND		20		ug/L			10/13/18 00:33	20
Dibromomethane	ND		20		ug/L			10/13/18 00:33	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*70 - 130*		*10/13/18 00:33*	*20*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*		*10/13/18 00:33*	*20*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*10/13/18 00:33*	*20*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.42**		0.20		ug/L		10/16/18 11:30	10/17/18 14:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*10*	*X*	*46 - 130*	*10/16/18 11:30*	*10/17/18 14:51*	*1*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**670**		0.25		mg/L		10/13/18 09:16	10/15/18 12:14	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**25**		5.0		mg/L			10/16/18 00:11	10
Sulfate	ND		20		mg/L			10/16/18 00:11	10
Ammonia	**0.49**	**F1**	0.20		mg/L		10/15/18 01:08	10/16/18 06:58	1
Nitrate as N	ND		0.050		mg/L			10/11/18 10:24	1
TOC Result 1	**1500**		20		mg/L			10/20/18 23:11	20
TOC Result 2	**1500**		20		mg/L			10/20/18 23:11	20
Total Organic Carbon - Duplicates	**1500**		20		mg/L			10/20/18 23:11	20
Alkalinity, Total	**790**		5.0		mg/L			10/14/18 15:55	1
ortho-Phosphate	**0.098**		0.020		mg/L			10/11/18 10:00	1

Client Sample ID: MW-267S-20181009

Lab Sample ID: 480-143195-1

Date Collected: 10/09/18 12:10

Matrix: Water

Date Received: 10/10/18 01:00

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	5.3	HF	0.1		SU			10/14/18 13:24	1
Temperature	17.5	HF	0.001		Degrees C			10/14/18 13:24	1

Client Sample ID: MW-267M-20181009

Lab Sample ID: 480-143195-2

Date Collected: 10/09/18 12:55

Matrix: Water

Date Received: 10/10/18 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			10/13/18 19:22	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/13/18 19:22	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/13/18 19:22	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/13/18 19:22	1
1,1-Dichloroethane	ND		1.0		ug/L			10/13/18 19:22	1
1,1-Dichloroethene	ND		1.0		ug/L			10/13/18 19:22	1
1,1-Dichloropropene	ND		1.0		ug/L			10/13/18 19:22	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/13/18 19:22	1
1,2,3-Trichloropropane	ND		1.0		ug/L			10/13/18 19:22	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/13/18 19:22	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/13/18 19:22	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			10/13/18 19:22	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/13/18 19:22	1
1,2-Dichloroethane	ND		1.0		ug/L			10/13/18 19:22	1
1,2-Dichloropropane	ND		1.0		ug/L			10/13/18 19:22	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/13/18 19:22	1
1,3-Dichlorobenzene	ND		1.0		ug/L			10/13/18 19:22	1
1,3-Dichloropropane	ND		1.0		ug/L			10/13/18 19:22	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/13/18 19:22	1
1,4-Dioxane	ND		50		ug/L			10/13/18 19:22	1
2,2-Dichloropropane	ND		1.0		ug/L			10/13/18 19:22	1
2-Butanone (MEK)	ND	*	10		ug/L			10/13/18 19:22	1
2-Chlorotoluene	ND		1.0		ug/L			10/13/18 19:22	1
2-Hexanone	ND		10		ug/L			10/13/18 19:22	1
4-Chlorotoluene	ND		1.0		ug/L			10/13/18 19:22	1
4-Isopropyltoluene	ND		1.0		ug/L			10/13/18 19:22	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			10/13/18 19:22	1
Acetone	ND		50		ug/L			10/13/18 19:22	1
Benzene	ND		1.0		ug/L			10/13/18 19:22	1
Bromobenzene	ND		1.0		ug/L			10/13/18 19:22	1
Bromoform	ND		1.0		ug/L			10/13/18 19:22	1
Bromomethane	ND		2.0		ug/L			10/13/18 19:22	1
Carbon disulfide	ND		10		ug/L			10/13/18 19:22	1
Carbon tetrachloride	ND		1.0		ug/L			10/13/18 19:22	1
Chlorobenzene	ND		1.0		ug/L			10/13/18 19:22	1
Chlorobromomethane	ND		1.0		ug/L			10/13/18 19:22	1
Chlorodibromomethane	ND		0.50		ug/L			10/13/18 19:22	1
Chloroethane	ND		2.0		ug/L			10/13/18 19:22	1
Chloroform	ND		1.0		ug/L			10/13/18 19:22	1
Chloromethane	ND		2.0		ug/L			10/13/18 19:22	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			10/13/18 19:22	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			10/13/18 19:22	1

Client Sample ID: MW-267M-20181009 — **Lab Sample ID: 480-143195-2**
Date Collected: 10/09/18 12:55 — **Matrix: Water**
Date Received: 10/10/18 01:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorobromomethane	ND		0.50		ug/L			10/13/18 19:22	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/13/18 19:22	1
Ethyl ether	ND		1.0		ug/L			10/13/18 19:22	1
Ethylbenzene	ND		1.0		ug/L			10/13/18 19:22	1
Ethylene Dibromide	ND		1.0		ug/L			10/13/18 19:22	1
Hexachlorobutadiene	ND		0.40		ug/L			10/13/18 19:22	1
Isopropyl ether	ND		10		ug/L			10/13/18 19:22	1
Isopropylbenzene	ND		1.0		ug/L			10/13/18 19:22	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/13/18 19:22	1
Methylene Chloride	ND		1.0		ug/L			10/13/18 19:22	1
m-Xylene & p-Xylene	ND		2.0		ug/L			10/13/18 19:22	1
Naphthalene	ND		5.0		ug/L			10/13/18 19:22	1
n-Butylbenzene	ND		1.0		ug/L			10/13/18 19:22	1
N-Propylbenzene	ND		1.0		ug/L			10/13/18 19:22	1
o-Xylene	ND		1.0		ug/L			10/13/18 19:22	1
sec-Butylbenzene	ND		1.0		ug/L			10/13/18 19:22	1
Styrene	ND		1.0		ug/L			10/13/18 19:22	1
Tert-amyl methyl ether	ND		5.0		ug/L			10/13/18 19:22	1
Tert-butyl ethyl ether	ND		5.0		ug/L			10/13/18 19:22	1
tert-Butylbenzene	ND		1.0		ug/L			10/13/18 19:22	1
Tetrachloroethene	ND		1.0		ug/L			10/13/18 19:22	1
Tetrahydrofuran	ND	*	10		ug/L			10/13/18 19:22	1
Toluene	ND		1.0		ug/L			10/13/18 19:22	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/13/18 19:22	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			10/13/18 19:22	1
Trichloroethene	ND		1.0		ug/L			10/13/18 19:22	1
Trichlorofluoromethane	ND		1.0		ug/L			10/13/18 19:22	1
Vinyl chloride	ND		1.0		ug/L			10/13/18 19:22	1
Dibromomethane	ND		1.0		ug/L			10/13/18 19:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*70 - 130*		*10/13/18 19:22*	*1*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*		*10/13/18 19:22*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*10/13/18 19:22*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**4.1**		0.20		ug/L		10/16/18 11:30	10/17/18 15:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*100*		*46 - 130*	*10/16/18 11:30*	*10/17/18 15:04*	*1*

Client Sample ID: MW-268S-20181009 — **Lab Sample ID: 480-143195-3**
Date Collected: 10/09/18 08:35 — **Matrix: Water**
Date Received: 10/10/18 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		4.0		ug/L			10/13/18 01:26	4
1,1,1-Trichloroethane	ND		4.0		ug/L			10/13/18 01:26	4

Client Sample ID: MW-268S-20181009
Date Collected: 10/09/18 08:35
Date Received: 10/10/18 01:00

Lab Sample ID: 480-143195-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		2.0		ug/L			10/13/18 01:26	4
1,1,2-Trichloroethane	ND		4.0		ug/L			10/13/18 01:26	4
1,1-Dichloroethane	ND		4.0		ug/L			10/13/18 01:26	4
1,1-Dichloroethene	ND		4.0		ug/L			10/13/18 01:26	4
1,1-Dichloropropene	ND		4.0		ug/L			10/13/18 01:26	4
1,2,3-Trichlorobenzene	ND		4.0		ug/L			10/13/18 01:26	4
1,2,3-Trichloropropane	ND		4.0		ug/L			10/13/18 01:26	4
1,2,4-Trichlorobenzene	ND		4.0		ug/L			10/13/18 01:26	4
1,2,4-Trimethylbenzene	ND		4.0		ug/L			10/13/18 01:26	4
1,2-Dibromo-3-Chloropropane	ND		20		ug/L			10/13/18 01:26	4
1,2-Dichlorobenzene	ND		4.0		ug/L			10/13/18 01:26	4
1,2-Dichloroethane	ND		4.0		ug/L			10/13/18 01:26	4
1,2-Dichloropropane	ND		4.0		ug/L			10/13/18 01:26	4
1,3,5-Trimethylbenzene	ND		4.0		ug/L			10/13/18 01:26	4
1,3-Dichlorobenzene	ND		4.0		ug/L			10/13/18 01:26	4
1,3-Dichloropropane	ND		4.0		ug/L			10/13/18 01:26	4
1,4-Dichlorobenzene	ND		4.0		ug/L			10/13/18 01:26	4
1,4-Dioxane	ND		200		ug/L			10/13/18 01:26	4
2,2-Dichloropropane	ND		4.0		ug/L			10/13/18 01:26	4
2-Butanone (MEK)	ND	*	40		ug/L			10/13/18 01:26	4
2-Chlorotoluene	ND		4.0		ug/L			10/13/18 01:26	4
2-Hexanone	ND		40		ug/L			10/13/18 01:26	4
4-Chlorotoluene	ND		4.0		ug/L			10/13/18 01:26	4
4-Isopropyltoluene	ND		4.0		ug/L			10/13/18 01:26	4
4-Methyl-2-pentanone (MIBK)	ND		40		ug/L			10/13/18 01:26	4
Acetone	ND		200		ug/L			10/13/18 01:26	4
Benzene	ND		4.0		ug/L			10/13/18 01:26	4
Bromobenzene	ND		4.0		ug/L			10/13/18 01:26	4
Bromoform	ND		4.0		ug/L			10/13/18 01:26	4
Bromomethane	ND		8.0		ug/L			10/13/18 01:26	4
Carbon disulfide	ND		40		ug/L			10/13/18 01:26	4
Carbon tetrachloride	ND		4.0		ug/L			10/13/18 01:26	4
Chlorobenzene	ND		4.0		ug/L			10/13/18 01:26	4
Chlorobromomethane	ND		4.0		ug/L			10/13/18 01:26	4
Chlorodibromomethane	ND		2.0		ug/L			10/13/18 01:26	4
Chloroethane	ND		8.0		ug/L			10/13/18 01:26	4
Chloroform	ND		4.0		ug/L			10/13/18 01:26	4
Chloromethane	ND		8.0		ug/L			10/13/18 01:26	4
cis-1,2-Dichloroethene	**82**		4.0		ug/L			10/13/18 01:26	4
cis-1,3-Dichloropropene	ND		1.6		ug/L			10/13/18 01:26	4
Dichlorobromomethane	ND		2.0		ug/L			10/13/18 01:26	4
Dichlorodifluoromethane	ND		4.0		ug/L			10/13/18 01:26	4
Ethyl ether	ND		4.0		ug/L			10/13/18 01:26	4
Ethylbenzene	ND		4.0		ug/L			10/13/18 01:26	4
Ethylene Dibromide	ND		4.0		ug/L			10/13/18 01:26	4
Hexachlorobutadiene	ND		1.6		ug/L			10/13/18 01:26	4
Isopropyl ether	ND		40		ug/L			10/13/18 01:26	4
Isopropylbenzene	ND		4.0		ug/L			10/13/18 01:26	4
Methyl tert-butyl ether	ND		4.0		ug/L			10/13/18 01:26	4

Client Sample ID: MW-268S-20181009
Date Collected: 10/09/18 08:35
Date Received: 10/10/18 01:00

Lab Sample ID: 480-143195-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		4.0		ug/L			10/13/18 01:26	4
m-Xylene & p-Xylene	ND		8.0		ug/L			10/13/18 01:26	4
Naphthalene	ND		20		ug/L			10/13/18 01:26	4
n-Butylbenzene	ND		4.0		ug/L			10/13/18 01:26	4
N-Propylbenzene	ND		4.0		ug/L			10/13/18 01:26	4
o-Xylene	ND		4.0		ug/L			10/13/18 01:26	4
sec-Butylbenzene	ND		4.0		ug/L			10/13/18 01:26	4
Styrene	ND		4.0		ug/L			10/13/18 01:26	4
Tert-amyl methyl ether	ND		20		ug/L			10/13/18 01:26	4
Tert-butyl ethyl ether	ND		20		ug/L			10/13/18 01:26	4
tert-Butylbenzene	ND		4.0		ug/L			10/13/18 01:26	4
Tetrachloroethene	ND		4.0		ug/L			10/13/18 01:26	4
Tetrahydrofuran	ND		40		ug/L			10/13/18 01:26	4
Toluene	ND		4.0		ug/L			10/13/18 01:26	4
trans-1,2-Dichloroethene	ND		4.0		ug/L			10/13/18 01:26	4
trans-1,3-Dichloropropene	ND		1.6		ug/L			10/13/18 01:26	4
Trichloroethene	**230**		4.0		ug/L			10/13/18 01:26	4
Trichlorofluoromethane	ND		4.0		ug/L			10/13/18 01:26	4
Vinyl chloride	ND		4.0		ug/L			10/13/18 01:26	4
Dibromomethane	ND		4.0		ug/L			10/13/18 01:26	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*70 - 130*		*10/13/18 01:26*	*4*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 130*		*10/13/18 01:26*	*4*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*10/13/18 01:26*	*4*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**16**		0.20		ug/L		10/16/18 11:30	10/17/18 15:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*81*		*46 - 130*	*10/16/18 11:30*	*10/17/18 15:17*	*1*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**1.1**		0.050		mg/L		10/13/18 09:16	10/15/18 12:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**19**		0.50		mg/L			10/16/18 18:37	1
Sulfate	**19**		2.0		mg/L			10/16/18 18:37	1
Ammonia	**0.21**		0.20		mg/L		10/15/18 01:08	10/16/18 07:00	1
Nitrate as N	ND	H	0.050		mg/L			10/11/18 18:38	1
TOC Result 1	**16**	**^**	1.0		mg/L			10/19/18 01:34	1
TOC Result 2	**17**		1.0		mg/L			10/19/18 01:34	1
Total Organic Carbon - Duplicates	**16**		1.0		mg/L			10/19/18 01:34	1
Alkalinity, Total	**100**		5.0		mg/L			10/14/18 16:09	1
ortho-Phosphate	**0.10**	**H**	0.020		mg/L			10/11/18 10:00	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.5**	**HF**	0.1		SU			10/14/18 13:27	1

Client Sample ID: MW-268S-20181009 — **Lab Sample ID: 480-143195-3**
Date Collected: 10/09/18 08:35 — **Matrix: Water**
Date Received: 10/10/18 01:00

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Temperature	17.9	HF	0.001		Degrees C			10/14/18 13:27	1

Client Sample ID: MW-268M-20181009 — **Lab Sample ID: 480-143195-4**
Date Collected: 10/09/18 09:15 — **Matrix: Water**
Date Received: 10/10/18 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		2.0		ug/L			10/13/18 01:52	2
1,1,1-Trichloroethane	ND		2.0		ug/L			10/13/18 01:52	2
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			10/13/18 01:52	2
1,1,2-Trichloroethane	ND		2.0		ug/L			10/13/18 01:52	2
1,1-Dichloroethane	ND		2.0		ug/L			10/13/18 01:52	2
1,1-Dichloroethene	ND		2.0		ug/L			10/13/18 01:52	2
1,1-Dichloropropene	ND		2.0		ug/L			10/13/18 01:52	2
1,2,3-Trichlorobenzene	ND		2.0		ug/L			10/13/18 01:52	2
1,2,3-Trichloropropane	ND		2.0		ug/L			10/13/18 01:52	2
1,2,4-Trichlorobenzene	ND		2.0		ug/L			10/13/18 01:52	2
1,2,4-Trimethylbenzene	ND		2.0		ug/L			10/13/18 01:52	2
1,2-Dibromo-3-Chloropropane	ND		10		ug/L			10/13/18 01:52	2
1,2-Dichlorobenzene	ND		2.0		ug/L			10/13/18 01:52	2
1,2-Dichloroethane	ND		2.0		ug/L			10/13/18 01:52	2
1,2-Dichloropropane	ND		2.0		ug/L			10/13/18 01:52	2
1,3,5-Trimethylbenzene	ND		2.0		ug/L			10/13/18 01:52	2
1,3-Dichlorobenzene	ND		2.0		ug/L			10/13/18 01:52	2
1,3-Dichloropropane	ND		2.0		ug/L			10/13/18 01:52	2
1,4-Dichlorobenzene	ND		2.0		ug/L			10/13/18 01:52	2
1,4-Dioxane	ND		100		ug/L			10/13/18 01:52	2
2,2-Dichloropropane	ND		2.0		ug/L			10/13/18 01:52	2
2-Butanone (MEK)	ND	*	20		ug/L			10/13/18 01:52	2
2-Chlorotoluene	ND		2.0		ug/L			10/13/18 01:52	2
2-Hexanone	ND		20		ug/L			10/13/18 01:52	2
4-Chlorotoluene	ND		2.0		ug/L			10/13/18 01:52	2
4-Isopropyltoluene	ND		2.0		ug/L			10/13/18 01:52	2
4-Methyl-2-pentanone (MIBK)	ND		20		ug/L			10/13/18 01:52	2
Acetone	ND		100		ug/L			10/13/18 01:52	2
Benzene	ND		2.0		ug/L			10/13/18 01:52	2
Bromobenzene	ND		2.0		ug/L			10/13/18 01:52	2
Bromoform	ND		2.0		ug/L			10/13/18 01:52	2
Bromomethane	ND		4.0		ug/L			10/13/18 01:52	2
Carbon disulfide	ND		20		ug/L			10/13/18 01:52	2
Carbon tetrachloride	ND		2.0		ug/L			10/13/18 01:52	2
Chlorobenzene	ND		2.0		ug/L			10/13/18 01:52	2
Chlorobromomethane	ND		2.0		ug/L			10/13/18 01:52	2
Chlorodibromomethane	ND		1.0		ug/L			10/13/18 01:52	2
Chloroethane	ND		4.0		ug/L			10/13/18 01:52	2
Chloroform	ND		2.0		ug/L			10/13/18 01:52	2
Chloromethane	ND		4.0		ug/L			10/13/18 01:52	2
cis-1,2-Dichloroethene	26		2.0		ug/L			10/13/18 01:52	2
cis-1,3-Dichloropropene	ND		0.80		ug/L			10/13/18 01:52	2

Client Sample ID: MW-268M-20181009
Date Collected: 10/09/18 09:15
Date Received: 10/10/18 01:00

Lab Sample ID: 480-143195-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorobromomethane	ND		1.0		ug/L			10/13/18 01:52	2
Dichlorodifluoromethane	ND		2.0		ug/L			10/13/18 01:52	2
Ethyl ether	ND		2.0		ug/L			10/13/18 01:52	2
Ethylbenzene	ND		2.0		ug/L			10/13/18 01:52	2
Ethylene Dibromide	ND		2.0		ug/L			10/13/18 01:52	2
Hexachlorobutadiene	ND		0.80		ug/L			10/13/18 01:52	2
Isopropyl ether	ND		20		ug/L			10/13/18 01:52	2
Isopropylbenzene	ND		2.0		ug/L			10/13/18 01:52	2
Methyl tert-butyl ether	ND		2.0		ug/L			10/13/18 01:52	2
Methylene Chloride	ND		2.0		ug/L			10/13/18 01:52	2
m-Xylene & p-Xylene	ND		4.0		ug/L			10/13/18 01:52	2
Naphthalene	ND		10		ug/L			10/13/18 01:52	2
n-Butylbenzene	ND		2.0		ug/L			10/13/18 01:52	2
N-Propylbenzene	ND		2.0		ug/L			10/13/18 01:52	2
o-Xylene	ND		2.0		ug/L			10/13/18 01:52	2
sec-Butylbenzene	ND		2.0		ug/L			10/13/18 01:52	2
Styrene	ND		2.0		ug/L			10/13/18 01:52	2
Tert-amyl methyl ether	ND		10		ug/L			10/13/18 01:52	2
Tert-butyl ethyl ether	ND		10		ug/L			10/13/18 01:52	2
tert-Butylbenzene	ND		2.0		ug/L			10/13/18 01:52	2
Tetrachloroethene	ND		2.0		ug/L			10/13/18 01:52	2
Tetrahydrofuran	ND		20		ug/L			10/13/18 01:52	2
Toluene	**3.2**		2.0		ug/L			10/13/18 01:52	2
trans-1,2-Dichloroethene	ND		2.0		ug/L			10/13/18 01:52	2
trans-1,3-Dichloropropene	ND		0.80		ug/L			10/13/18 01:52	2
Trichloroethene	ND		2.0		ug/L			10/13/18 01:52	2
Trichlorofluoromethane	ND		2.0		ug/L			10/13/18 01:52	2
Vinyl chloride	**64**		2.0		ug/L			10/13/18 01:52	2
Dibromomethane	ND		2.0		ug/L			10/13/18 01:52	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*70 - 130*		*10/13/18 01:52*	*2*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 130*		*10/13/18 01:52*	*2*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*10/13/18 01:52*	*2*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**7.8**		0.20		ug/L		10/16/18 11:30	10/17/18 15:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*69*		*46 - 130*	*10/16/18 11:30*	*10/17/18 15:31*	*1*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**57**		0.050		mg/L		10/13/18 09:16	10/15/18 12:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**34**		1.0		mg/L			10/16/18 18:45	2
Sulfate	ND		4.0		mg/L			10/16/18 18:45	2
Ammonia	ND		0.20		mg/L		10/15/18 01:08	10/16/18 07:01	1

Client Sample ID: MW-268M-20181009

Lab Sample ID: 480-143195-4

Date Collected: 10/09/18 09:15

Matrix: Water

Date Received: 10/10/18 01:00

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.088**	**H**	0.050		mg/L			10/11/18 22:38	1
TOC Result 1	**2.5**		1.0		mg/L			10/20/18 23:39	1
TOC Result 2	**2.6**		1.0		mg/L			10/20/18 23:39	1
Total Organic Carbon - Duplicates	**2.5**		1.0		mg/L			10/20/18 23:39	1
Alkalinity, Total	**370**		5.0		mg/L			10/14/18 16:21	1
ortho-Phosphate	ND	H	0.020		mg/L			10/11/18 10:00	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**6.9**	**HF**	0.1		SU			10/14/18 13:29	1
Temperature	**18.1**	**HF**	0.001		Degrees C			10/14/18 13:29	1

Client Sample ID: MW-268D-20181009

Lab Sample ID: 480-143195-5

Date Collected: 10/09/18 10:00

Matrix: Water

Date Received: 10/10/18 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		2.0		ug/L			10/13/18 02:19	2
1,1,1-Trichloroethane	ND		2.0		ug/L			10/13/18 02:19	2
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			10/13/18 02:19	2
1,1,2-Trichloroethane	ND		2.0		ug/L			10/13/18 02:19	2
1,1-Dichloroethane	ND		2.0		ug/L			10/13/18 02:19	2
1,1-Dichloroethene	ND		2.0		ug/L			10/13/18 02:19	2
1,1-Dichloropropene	ND		2.0		ug/L			10/13/18 02:19	2
1,2,3-Trichlorobenzene	ND		2.0		ug/L			10/13/18 02:19	2
1,2,3-Trichloropropane	ND		2.0		ug/L			10/13/18 02:19	2
1,2,4-Trichlorobenzene	ND		2.0		ug/L			10/13/18 02:19	2
1,2,4-Trimethylbenzene	ND		2.0		ug/L			10/13/18 02:19	2
1,2-Dibromo-3-Chloropropane	ND		10		ug/L			10/13/18 02:19	2
1,2-Dichlorobenzene	ND		2.0		ug/L			10/13/18 02:19	2
1,2-Dichloroethane	ND		2.0		ug/L			10/13/18 02:19	2
1,2-Dichloropropane	ND		2.0		ug/L			10/13/18 02:19	2
1,3,5-Trimethylbenzene	ND		2.0		ug/L			10/13/18 02:19	2
1,3-Dichlorobenzene	ND		2.0		ug/L			10/13/18 02:19	2
1,3-Dichloropropane	ND		2.0		ug/L			10/13/18 02:19	2
1,4-Dichlorobenzene	ND		2.0		ug/L			10/13/18 02:19	2
1,4-Dioxane	ND		100		ug/L			10/13/18 02:19	2
2,2-Dichloropropane	ND		2.0		ug/L			10/13/18 02:19	2
2-Butanone (MEK)	ND	*	20		ug/L			10/13/18 02:19	2
2-Chlorotoluene	ND		2.0		ug/L			10/13/18 02:19	2
2-Hexanone	ND		20		ug/L			10/13/18 02:19	2
4-Chlorotoluene	ND		2.0		ug/L			10/13/18 02:19	2
4-Isopropyltoluene	ND		2.0		ug/L			10/13/18 02:19	2
4-Methyl-2-pentanone (MIBK)	ND		20		ug/L			10/13/18 02:19	2
Acetone	ND		100		ug/L			10/13/18 02:19	2
Benzene	ND		2.0		ug/L			10/13/18 02:19	2
Bromobenzene	ND		2.0		ug/L			10/13/18 02:19	2
Bromoform	ND		2.0		ug/L			10/13/18 02:19	2
Bromomethane	ND		4.0		ug/L			10/13/18 02:19	2
Carbon disulfide	ND		20		ug/L			10/13/18 02:19	2

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

TestAmerica Job ID: 480-143195-1

Client Sample ID: MW-268D-20181009
Date Collected: 10/09/18 10:00
Date Received: 10/10/18 01:00

Lab Sample ID: 480-143195-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		2.0		ug/L			10/13/18 02:19	2
Chlorobenzene	ND		2.0		ug/L			10/13/18 02:19	2
Chlorobromomethane	ND		2.0		ug/L			10/13/18 02:19	2
Chlorodibromomethane	ND		1.0		ug/L			10/13/18 02:19	2
Chloroethane	ND		4.0		ug/L			10/13/18 02:19	2
Chloroform	ND		2.0		ug/L			10/13/18 02:19	2
Chloromethane	ND		4.0		ug/L			10/13/18 02:19	2
cis-1,2-Dichloroethene	**2.9**		2.0		ug/L			10/13/18 02:19	2
cis-1,3-Dichloropropene	ND		0.80		ug/L			10/13/18 02:19	2
Dichlorobromomethane	ND		1.0		ug/L			10/13/18 02:19	2
Dichlorodifluoromethane	ND		2.0		ug/L			10/13/18 02:19	2
Ethyl ether	ND		2.0		ug/L			10/13/18 02:19	2
Ethylbenzene	ND		2.0		ug/L			10/13/18 02:19	2
Ethylene Dibromide	ND		2.0		ug/L			10/13/18 02:19	2
Hexachlorobutadiene	ND		0.80		ug/L			10/13/18 02:19	2
Isopropyl ether	ND		20		ug/L			10/13/18 02:19	2
Isopropylbenzene	ND		2.0		ug/L			10/13/18 02:19	2
Methyl tert-butyl ether	ND		2.0		ug/L			10/13/18 02:19	2
Methylene Chloride	ND		2.0		ug/L			10/13/18 02:19	2
m-Xylene & p-Xylene	ND		4.0		ug/L			10/13/18 02:19	2
Naphthalene	ND		10		ug/L			10/13/18 02:19	2
n-Butylbenzene	ND		2.0		ug/L			10/13/18 02:19	2
N-Propylbenzene	ND		2.0		ug/L			10/13/18 02:19	2
o-Xylene	ND		2.0		ug/L			10/13/18 02:19	2
sec-Butylbenzene	ND		2.0		ug/L			10/13/18 02:19	2
Styrene	ND		2.0		ug/L			10/13/18 02:19	2
Tert-amyl methyl ether	ND		10		ug/L			10/13/18 02:19	2
Tert-butyl ethyl ether	ND		10		ug/L			10/13/18 02:19	2
tert-Butylbenzene	ND		2.0		ug/L			10/13/18 02:19	2
Tetrachloroethene	ND		2.0		ug/L			10/13/18 02:19	2
Tetrahydrofuran	ND		20		ug/L			10/13/18 02:19	2
Toluene	**2.2**		2.0		ug/L			10/13/18 02:19	2
trans-1,2-Dichloroethene	ND		2.0		ug/L			10/13/18 02:19	2
trans-1,3-Dichloropropene	ND		0.80		ug/L			10/13/18 02:19	2
Trichloroethene	ND		2.0		ug/L			10/13/18 02:19	2
Trichlorofluoromethane	ND		2.0		ug/L			10/13/18 02:19	2
Vinyl chloride	ND		2.0		ug/L			10/13/18 02:19	2
Dibromomethane	ND		2.0		ug/L			10/13/18 02:19	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*103*		*70 - 130*		*10/13/18 02:19*	*2*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*		*10/13/18 02:19*	*2*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*10/13/18 02:19*	*2*

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

TestAmerica Job ID: 480-143195-1

Client Sample ID: REW-6-20181009
Date Collected: 10/09/18 11:25
Date Received: 10/10/18 01:00

Lab Sample ID: 480-143195-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		20		ug/L			10/13/18 02:46	20
1,1,1-Trichloroethane	ND		20		ug/L			10/13/18 02:46	20
1,1,2,2-Tetrachloroethane	ND		10		ug/L			10/13/18 02:46	20
1,1,2-Trichloroethane	ND		20		ug/L			10/13/18 02:46	20
1,1-Dichloroethane	ND		20		ug/L			10/13/18 02:46	20
1,1-Dichloroethene	ND		20		ug/L			10/13/18 02:46	20
1,1-Dichloropropene	ND		20		ug/L			10/13/18 02:46	20
1,2,3-Trichlorobenzene	ND		20		ug/L			10/13/18 02:46	20
1,2,3-Trichloropropane	ND		20		ug/L			10/13/18 02:46	20
1,2,4-Trichlorobenzene	ND		20		ug/L			10/13/18 02:46	20
1,2,4-Trimethylbenzene	ND		20		ug/L			10/13/18 02:46	20
1,2-Dibromo-3-Chloropropane	ND		100		ug/L			10/13/18 02:46	20
1,2-Dichlorobenzene	ND		20		ug/L			10/13/18 02:46	20
1,2-Dichloroethane	ND		20		ug/L			10/13/18 02:46	20
1,2-Dichloropropane	ND		20		ug/L			10/13/18 02:46	20
1,3,5-Trimethylbenzene	ND		20		ug/L			10/13/18 02:46	20
1,3-Dichlorobenzene	ND		20		ug/L			10/13/18 02:46	20
1,3-Dichloropropane	ND		20		ug/L			10/13/18 02:46	20
1,4-Dichlorobenzene	ND		20		ug/L			10/13/18 02:46	20
1,4-Dioxane	ND		1000		ug/L			10/13/18 02:46	20
2,2-Dichloropropane	ND		20		ug/L			10/13/18 02:46	20
2-Butanone (MEK)	**440**	*	200		ug/L			10/13/18 02:46	20
2-Chlorotoluene	ND		20		ug/L			10/13/18 02:46	20
2-Hexanone	ND		200		ug/L			10/13/18 02:46	20
4-Chlorotoluene	ND		20		ug/L			10/13/18 02:46	20
4-Isopropyltoluene	ND		20		ug/L			10/13/18 02:46	20
4-Methyl-2-pentanone (MIBK)	ND		200		ug/L			10/13/18 02:46	20
Acetone	ND		1000		ug/L			10/13/18 02:46	20
Benzene	ND		20		ug/L			10/13/18 02:46	20
Bromobenzene	ND		20		ug/L			10/13/18 02:46	20
Bromoform	ND		20		ug/L			10/13/18 02:46	20
Bromomethane	ND		40		ug/L			10/13/18 02:46	20
Carbon disulfide	ND		200		ug/L			10/13/18 02:46	20
Carbon tetrachloride	ND		20		ug/L			10/13/18 02:46	20
Chlorobenzene	ND		20		ug/L			10/13/18 02:46	20
Chlorobromomethane	ND		20		ug/L			10/13/18 02:46	20
Chlorodibromomethane	ND		10		ug/L			10/13/18 02:46	20
Chloroethane	ND		40		ug/L			10/13/18 02:46	20
Chloroform	ND		20		ug/L			10/13/18 02:46	20
Chloromethane	ND		40		ug/L			10/13/18 02:46	20
cis-1,2-Dichloroethene	ND		20		ug/L			10/13/18 02:46	20
cis-1,3-Dichloropropene	ND		8.0		ug/L			10/13/18 02:46	20
Dichlorobromomethane	ND		10		ug/L			10/13/18 02:46	20
Dichlorodifluoromethane	ND		20		ug/L			10/13/18 02:46	20
Ethyl ether	ND		20		ug/L			10/13/18 02:46	20
Ethylbenzene	ND		20		ug/L			10/13/18 02:46	20
Ethylene Dibromide	ND		20		ug/L			10/13/18 02:46	20
Hexachlorobutadiene	ND		8.0		ug/L			10/13/18 02:46	20
Isopropyl ether	ND		200		ug/L			10/13/18 02:46	20

Client Sample ID: REW-6-20181009
Date Collected: 10/09/18 11:25
Date Received: 10/10/18 01:00

Lab Sample ID: 480-143195-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		20		ug/L			10/13/18 02:46	20
Methyl tert-butyl ether	ND		20		ug/L			10/13/18 02:46	20
Methylene Chloride	ND		20		ug/L			10/13/18 02:46	20
m-Xylene & p-Xylene	ND		40		ug/L			10/13/18 02:46	20
Naphthalene	ND		100		ug/L			10/13/18 02:46	20
n-Butylbenzene	ND		20		ug/L			10/13/18 02:46	20
N-Propylbenzene	ND		20		ug/L			10/13/18 02:46	20
o-Xylene	ND		20		ug/L			10/13/18 02:46	20
sec-Butylbenzene	ND		20		ug/L			10/13/18 02:46	20
Styrene	ND		20		ug/L			10/13/18 02:46	20
Tert-amyl methyl ether	ND		100		ug/L			10/13/18 02:46	20
Tert-butyl ethyl ether	ND		100		ug/L			10/13/18 02:46	20
tert-Butylbenzene	ND		20		ug/L			10/13/18 02:46	20
Tetrachloroethene	ND		20		ug/L			10/13/18 02:46	20
Tetrahydrofuran	ND		200		ug/L			10/13/18 02:46	20
Toluene	ND		20		ug/L			10/13/18 02:46	20
trans-1,2-Dichloroethene	ND		20		ug/L			10/13/18 02:46	20
trans-1,3-Dichloropropene	ND		8.0		ug/L			10/13/18 02:46	20
Trichloroethene	ND		20		ug/L			10/13/18 02:46	20
Trichlorofluoromethane	ND		20		ug/L			10/13/18 02:46	20
Vinyl chloride	ND		20		ug/L			10/13/18 02:46	20
Dibromomethane	ND		20		ug/L			10/13/18 02:46	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*70 - 130*		*10/13/18 02:46*	*20*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*		*10/13/18 02:46*	*20*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*10/13/18 02:46*	*20*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**2.4**		0.20		ug/L		10/16/18 11:30	10/17/18 15:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*76*		*46 - 130*	*10/16/18 11:30*	*10/17/18 15:44*	*1*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**140**		0.050		mg/L		10/13/18 09:16	10/15/18 12:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**33**		5.0		mg/L			10/16/18 00:19	10
Sulfate	ND		20		mg/L			10/16/18 00:19	10
Ammonia	**0.32**		0.20		mg/L		10/15/18 01:08	10/16/18 07:01	1
Nitrate as N	**0.060**		0.050		mg/L			10/11/18 10:27	1
TOC Result 1	**860**		20		mg/L			10/21/18 02:56	20
TOC Result 2	**850**		20		mg/L			10/21/18 02:56	20
Total Organic Carbon - Duplicates	**850**		20		mg/L			10/21/18 02:56	20
Alkalinity, Total	**780**		5.0		mg/L			10/14/18 16:30	1
ortho-Phosphate	**0.050**		0.020		mg/L			10/11/18 10:00	1

Client Sample ID: REW-6-20181009

Lab Sample ID: 480-143195-6

Date Collected: 10/09/18 11:25

Matrix: Water

Date Received: 10/10/18 01:00

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	5.8	HF	0.1		SU			10/14/18 13:32	1
Temperature	17.7	HF	0.001		Degrees C			10/14/18 13:32	1

Client Sample ID: REW-7-20181009

Lab Sample ID: 480-143195-7

Date Collected: 10/09/18 13:30

Matrix: Water

Date Received: 10/10/18 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			10/13/18 03:12	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/13/18 03:12	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/13/18 03:12	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/13/18 03:12	1
1,1-Dichloroethane	ND		1.0		ug/L			10/13/18 03:12	1
1,1-Dichloroethene	ND		1.0		ug/L			10/13/18 03:12	1
1,1-Dichloropropene	ND		1.0		ug/L			10/13/18 03:12	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/13/18 03:12	1
1,2,3-Trichloropropane	ND		1.0		ug/L			10/13/18 03:12	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/13/18 03:12	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/13/18 03:12	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			10/13/18 03:12	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/13/18 03:12	1
1,2-Dichloroethane	ND		1.0		ug/L			10/13/18 03:12	1
1,2-Dichloropropane	ND		1.0		ug/L			10/13/18 03:12	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/13/18 03:12	1
1,3-Dichlorobenzene	ND		1.0		ug/L			10/13/18 03:12	1
1,3-Dichloropropane	ND		1.0		ug/L			10/13/18 03:12	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/13/18 03:12	1
1,4-Dioxane	ND		50		ug/L			10/13/18 03:12	1
2,2-Dichloropropane	ND		1.0		ug/L			10/13/18 03:12	1
2-Butanone (MEK)	ND	*	10		ug/L			10/13/18 03:12	1
2-Chlorotoluene	ND		1.0		ug/L			10/13/18 03:12	1
2-Hexanone	ND		10		ug/L			10/13/18 03:12	1
4-Chlorotoluene	ND		1.0		ug/L			10/13/18 03:12	1
4-Isopropyltoluene	ND		1.0		ug/L			10/13/18 03:12	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			10/13/18 03:12	1
Acetone	ND		50		ug/L			10/13/18 03:12	1
Benzene	ND		1.0		ug/L			10/13/18 03:12	1
Bromobenzene	ND		1.0		ug/L			10/13/18 03:12	1
Bromoform	ND		1.0		ug/L			10/13/18 03:12	1
Bromomethane	ND		2.0		ug/L			10/13/18 03:12	1
Carbon disulfide	ND		10		ug/L			10/13/18 03:12	1
Carbon tetrachloride	ND		1.0		ug/L			10/13/18 03:12	1
Chlorobenzene	ND		1.0		ug/L			10/13/18 03:12	1
Chlorobromomethane	ND		1.0		ug/L			10/13/18 03:12	1
Chlorodibromomethane	ND		0.50		ug/L			10/13/18 03:12	1
Chloroethane	ND		2.0		ug/L			10/13/18 03:12	1
Chloroform	ND		1.0		ug/L			10/13/18 03:12	1
Chloromethane	ND		2.0		ug/L			10/13/18 03:12	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			10/13/18 03:12	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			10/13/18 03:12	1

Client Sample ID: REW-7-20181009
Date Collected: 10/09/18 13:30
Date Received: 10/10/18 01:00

Lab Sample ID: 480-143195-7
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorobromomethane	ND		0.50		ug/L			10/13/18 03:12	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/13/18 03:12	1
Ethyl ether	ND		1.0		ug/L			10/13/18 03:12	1
Ethylbenzene	ND		1.0		ug/L			10/13/18 03:12	1
Ethylene Dibromide	ND		1.0		ug/L			10/13/18 03:12	1
Hexachlorobutadiene	ND		0.40		ug/L			10/13/18 03:12	1
Isopropyl ether	ND		10		ug/L			10/13/18 03:12	1
Isopropylbenzene	ND		1.0		ug/L			10/13/18 03:12	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/13/18 03:12	1
Methylene Chloride	ND		1.0		ug/L			10/13/18 03:12	1
m-Xylene & p-Xylene	ND		2.0		ug/L			10/13/18 03:12	1
Naphthalene	ND		5.0		ug/L			10/13/18 03:12	1
n-Butylbenzene	ND		1.0		ug/L			10/13/18 03:12	1
N-Propylbenzene	ND		1.0		ug/L			10/13/18 03:12	1
o-Xylene	ND		1.0		ug/L			10/13/18 03:12	1
sec-Butylbenzene	ND		1.0		ug/L			10/13/18 03:12	1
Styrene	ND		1.0		ug/L			10/13/18 03:12	1
Tert-amyl methyl ether	ND		5.0		ug/L			10/13/18 03:12	1
Tert-butyl ethyl ether	ND		5.0		ug/L			10/13/18 03:12	1
tert-Butylbenzene	ND		1.0		ug/L			10/13/18 03:12	1
Tetrachloroethene	ND		1.0		ug/L			10/13/18 03:12	1
Tetrahydrofuran	ND		10		ug/L			10/13/18 03:12	1
Toluene	ND		1.0		ug/L			10/13/18 03:12	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/13/18 03:12	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			10/13/18 03:12	1
Trichloroethene	ND		1.0		ug/L			10/13/18 03:12	1
Trichlorofluoromethane	ND		1.0		ug/L			10/13/18 03:12	1
Vinyl chloride	ND		1.0		ug/L			10/13/18 03:12	1
Dibromomethane	ND		1.0		ug/L			10/13/18 03:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*70 - 130*		*10/13/18 03:12*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*10/13/18 03:12*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*10/13/18 03:12*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20		ug/L		10/16/18 11:30	10/18/18 07:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*105*		*46 - 130*	*10/16/18 11:30*	*10/18/18 07:59*	*1*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**4.3**		0.050		mg/L		10/13/18 09:16	10/15/18 12:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8.4**		0.50		mg/L			10/16/18 00:27	1
Sulfate	**34**		2.0		mg/L			10/16/18 00:27	1
Ammonia	**1.8**		0.20		mg/L		10/15/18 01:08	10/16/18 07:02	1

Client Sample ID: REW-7-20181009

Lab Sample ID: 480-143195-7

Date Collected: 10/09/18 13:30

Matrix: Water

Date Received: 10/10/18 01:00

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.050		mg/L			10/11/18 10:02	1
TOC Result 1	ND		1.0		mg/L			10/21/18 03:25	1
TOC Result 2	ND		1.0		mg/L			10/21/18 03:25	1
Total Organic Carbon - Duplicates	ND		1.0		mg/L			10/21/18 03:25	1
Alkalinity, Total	**54**		5.0		mg/L			10/14/18 16:34	1
ortho-Phosphate	**0.13**		0.020		mg/L			10/11/18 10:00	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**6.8**	**HF**	0.1		SU			10/14/18 13:34	1
Temperature	**17.3**	**HF**	0.001		Degrees C			10/14/18 13:34	1

Client Sample ID: REW-8-20181009

Lab Sample ID: 480-143195-8

Date Collected: 10/09/18 14:10

Matrix: Water

Date Received: 10/10/18 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			10/13/18 03:39	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/13/18 03:39	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/13/18 03:39	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/13/18 03:39	1
1,1-Dichloroethane	ND		1.0		ug/L			10/13/18 03:39	1
1,1-Dichloroethene	ND		1.0		ug/L			10/13/18 03:39	1
1,1-Dichloropropene	ND		1.0		ug/L			10/13/18 03:39	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/13/18 03:39	1
1,2,3-Trichloropropane	ND		1.0		ug/L			10/13/18 03:39	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/13/18 03:39	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/13/18 03:39	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			10/13/18 03:39	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/13/18 03:39	1
1,2-Dichloroethane	ND		1.0		ug/L			10/13/18 03:39	1
1,2-Dichloropropane	ND		1.0		ug/L			10/13/18 03:39	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/13/18 03:39	1
1,3-Dichlorobenzene	ND		1.0		ug/L			10/13/18 03:39	1
1,3-Dichloropropane	ND		1.0		ug/L			10/13/18 03:39	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/13/18 03:39	1
1,4-Dioxane	ND		50		ug/L			10/13/18 03:39	1
2,2-Dichloropropane	ND		1.0		ug/L			10/13/18 03:39	1
2-Butanone (MEK)	ND	*	10		ug/L			10/13/18 03:39	1
2-Chlorotoluene	ND		1.0		ug/L			10/13/18 03:39	1
2-Hexanone	ND		10		ug/L			10/13/18 03:39	1
4-Chlorotoluene	ND		1.0		ug/L			10/13/18 03:39	1
4-Isopropyltoluene	ND		1.0		ug/L			10/13/18 03:39	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			10/13/18 03:39	1
Acetone	ND		50		ug/L			10/13/18 03:39	1
Benzene	ND		1.0		ug/L			10/13/18 03:39	1
Bromobenzene	ND		1.0		ug/L			10/13/18 03:39	1
Bromoform	ND		1.0		ug/L			10/13/18 03:39	1
Bromomethane	ND		2.0		ug/L			10/13/18 03:39	1
Carbon disulfide	ND		10		ug/L			10/13/18 03:39	1

Client Sample ID: REW-8-20181009
Date Collected: 10/09/18 14:10
Date Received: 10/10/18 01:00

Lab Sample ID: 480-143195-8
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		1.0		ug/L			10/13/18 03:39	1
Chlorobenzene	ND		1.0		ug/L			10/13/18 03:39	1
Chlorobromomethane	ND		1.0		ug/L			10/13/18 03:39	1
Chlorodibromomethane	ND		0.50		ug/L			10/13/18 03:39	1
Chloroethane	ND		2.0		ug/L			10/13/18 03:39	1
Chloroform	ND		1.0		ug/L			10/13/18 03:39	1
Chloromethane	ND		2.0		ug/L			10/13/18 03:39	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			10/13/18 03:39	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			10/13/18 03:39	1
Dichlorobromomethane	ND		0.50		ug/L			10/13/18 03:39	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/13/18 03:39	1
Ethyl ether	ND		1.0		ug/L			10/13/18 03:39	1
Ethylbenzene	ND		1.0		ug/L			10/13/18 03:39	1
Ethylene Dibromide	ND		1.0		ug/L			10/13/18 03:39	1
Hexachlorobutadiene	ND		0.40		ug/L			10/13/18 03:39	1
Isopropyl ether	ND		10		ug/L			10/13/18 03:39	1
Isopropylbenzene	ND		1.0		ug/L			10/13/18 03:39	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/13/18 03:39	1
Methylene Chloride	ND		1.0		ug/L			10/13/18 03:39	1
m-Xylene & p-Xylene	ND		2.0		ug/L			10/13/18 03:39	1
Naphthalene	**44**		5.0		ug/L			10/13/18 03:39	1
n-Butylbenzene	ND		1.0		ug/L			10/13/18 03:39	1
N-Propylbenzene	ND		1.0		ug/L			10/13/18 03:39	1
o-Xylene	ND		1.0		ug/L			10/13/18 03:39	1
sec-Butylbenzene	ND		1.0		ug/L			10/13/18 03:39	1
Styrene	ND		1.0		ug/L			10/13/18 03:39	1
Tert-amyl methyl ether	ND		5.0		ug/L			10/13/18 03:39	1
Tert-butyl ethyl ether	ND		5.0		ug/L			10/13/18 03:39	1
tert-Butylbenzene	ND		1.0		ug/L			10/13/18 03:39	1
Tetrachloroethene	ND		1.0		ug/L			10/13/18 03:39	1
Tetrahydrofuran	ND		10		ug/L			10/13/18 03:39	1
Toluene	ND		1.0		ug/L			10/13/18 03:39	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/13/18 03:39	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			10/13/18 03:39	1
Trichloroethene	ND		1.0		ug/L			10/13/18 03:39	1
Trichlorofluoromethane	ND		1.0		ug/L			10/13/18 03:39	1
Vinyl chloride	ND		1.0		ug/L			10/13/18 03:39	1
Dibromomethane	ND		1.0		ug/L			10/13/18 03:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*70 - 130*		*10/13/18 03:39*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*		*10/13/18 03:39*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*10/13/18 03:39*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20		ug/L		10/16/18 11:30	10/17/18 16:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*106*		*46 - 130*	*10/16/18 11:30*	*10/17/18 16:23*	*1*

Client Sample ID: REW-8-20181009

Lab Sample ID: 480-143195-8

Date Collected: 10/09/18 14:10

Matrix: Water

Date Received: 10/10/18 01:00

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	3.6		0.050		mg/L		10/13/18 09:16	10/15/18 13:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.8		0.50		mg/L			10/16/18 00:35	1
Sulfate	16		2.0		mg/L			10/16/18 00:35	1
Ammonia	1.4		0.20		mg/L		10/15/18 01:08	10/16/18 07:03	1
Nitrate as N	ND		0.050		mg/L			10/11/18 10:03	1
TOC Result 1	ND	^	1.0		mg/L			10/19/18 06:46	1
TOC Result 2	1.2	^	1.0		mg/L			10/19/18 06:46	1
Total Organic Carbon - Duplicates	1.0	^	1.0		mg/L			10/19/18 06:46	1
Alkalinity, Total	72		5.0		mg/L			10/14/18 16:51	1
ortho-Phosphate	0.25		0.020		mg/L			10/11/18 10:00	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.7	HF	0.1		SU			10/14/18 13:37	1
Temperature	17.1	HF	0.001		Degrees C			10/14/18 13:37	1

Client Sample ID: REW-11-20181009

Lab Sample ID: 480-143195-9

Date Collected: 10/09/18 10:35

Matrix: Water

Date Received: 10/10/18 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		20		ug/L			10/13/18 04:06	20
1,1,1-Trichloroethane	ND		20		ug/L			10/13/18 04:06	20
1,1,2,2-Tetrachloroethane	ND		10		ug/L			10/13/18 04:06	20
1,1,2-Trichloroethane	ND		20		ug/L			10/13/18 04:06	20
1,1-Dichloroethane	ND		20		ug/L			10/13/18 04:06	20
1,1-Dichloroethene	ND		20		ug/L			10/13/18 04:06	20
1,1-Dichloropropene	ND		20		ug/L			10/13/18 04:06	20
1,2,3-Trichlorobenzene	ND		20		ug/L			10/13/18 04:06	20
1,2,3-Trichloropropane	ND		20		ug/L			10/13/18 04:06	20
1,2,4-Trichlorobenzene	ND		20		ug/L			10/13/18 04:06	20
1,2,4-Trimethylbenzene	ND		20		ug/L			10/13/18 04:06	20
1,2-Dibromo-3-Chloropropane	ND		100		ug/L			10/13/18 04:06	20
1,2-Dichlorobenzene	ND		20		ug/L			10/13/18 04:06	20
1,2-Dichloroethane	ND		20		ug/L			10/13/18 04:06	20
1,2-Dichloropropane	ND		20		ug/L			10/13/18 04:06	20
1,3,5-Trimethylbenzene	ND		20		ug/L			10/13/18 04:06	20
1,3-Dichlorobenzene	ND		20		ug/L			10/13/18 04:06	20
1,3-Dichloropropane	ND		20		ug/L			10/13/18 04:06	20
1,4-Dichlorobenzene	ND		20		ug/L			10/13/18 04:06	20
1,4-Dioxane	ND		1000		ug/L			10/13/18 04:06	20
2,2-Dichloropropane	ND		20		ug/L			10/13/18 04:06	20
2-Butanone (MEK)	500	*	200		ug/L			10/13/18 04:06	20
2-Chlorotoluene	ND		20		ug/L			10/13/18 04:06	20
2-Hexanone	ND		200		ug/L			10/13/18 04:06	20
4-Chlorotoluene	ND		20		ug/L			10/13/18 04:06	20
4-Isopropyltoluene	ND		20		ug/L			10/13/18 04:06	20
4-Methyl-2-pentanone (MIBK)	ND		200		ug/L			10/13/18 04:06	20

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

TestAmerica Job ID: 480-143195-1

Client Sample ID: REW-11-20181009
Date Collected: 10/09/18 10:35
Date Received: 10/10/18 01:00

Lab Sample ID: 480-143195-9
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		1000		ug/L			10/13/18 04:06	20
Benzene	ND		20		ug/L			10/13/18 04:06	20
Bromobenzene	ND		20		ug/L			10/13/18 04:06	20
Bromoform	ND		20		ug/L			10/13/18 04:06	20
Bromomethane	ND		40		ug/L			10/13/18 04:06	20
Carbon disulfide	ND		200		ug/L			10/13/18 04:06	20
Carbon tetrachloride	ND		20		ug/L			10/13/18 04:06	20
Chlorobenzene	ND		20		ug/L			10/13/18 04:06	20
Chlorobromomethane	ND		20		ug/L			10/13/18 04:06	20
Chlorodibromomethane	ND		10		ug/L			10/13/18 04:06	20
Chloroethane	ND		40		ug/L			10/13/18 04:06	20
Chloroform	ND		20		ug/L			10/13/18 04:06	20
Chloromethane	ND		40		ug/L			10/13/18 04:06	20
cis-1,2-Dichloroethene	ND		20		ug/L			10/13/18 04:06	20
cis-1,3-Dichloropropene	ND		8.0		ug/L			10/13/18 04:06	20
Dichlorobromomethane	ND		10		ug/L			10/13/18 04:06	20
Dichlorodifluoromethane	ND		20		ug/L			10/13/18 04:06	20
Ethyl ether	ND		20		ug/L			10/13/18 04:06	20
Ethylbenzene	ND		20		ug/L			10/13/18 04:06	20
Ethylene Dibromide	ND		20		ug/L			10/13/18 04:06	20
Hexachlorobutadiene	ND		8.0		ug/L			10/13/18 04:06	20
Isopropyl ether	ND		200		ug/L			10/13/18 04:06	20
Isopropylbenzene	ND		20		ug/L			10/13/18 04:06	20
Methyl tert-butyl ether	ND		20		ug/L			10/13/18 04:06	20
Methylene Chloride	ND		20		ug/L			10/13/18 04:06	20
m-Xylene & p-Xylene	ND		40		ug/L			10/13/18 04:06	20
Naphthalene	ND		100		ug/L			10/13/18 04:06	20
n-Butylbenzene	ND		20		ug/L			10/13/18 04:06	20
N-Propylbenzene	ND		20		ug/L			10/13/18 04:06	20
o-Xylene	ND		20		ug/L			10/13/18 04:06	20
sec-Butylbenzene	ND		20		ug/L			10/13/18 04:06	20
Styrene	ND		20		ug/L			10/13/18 04:06	20
Tert-amyl methyl ether	ND		100		ug/L			10/13/18 04:06	20
Tert-butyl ethyl ether	ND		100		ug/L			10/13/18 04:06	20
tert-Butylbenzene	ND		20		ug/L			10/13/18 04:06	20
Tetrachloroethene	ND		20		ug/L			10/13/18 04:06	20
Tetrahydrofuran	ND		200		ug/L			10/13/18 04:06	20
Toluene	ND		20		ug/L			10/13/18 04:06	20
trans-1,2-Dichloroethene	ND		20		ug/L			10/13/18 04:06	20
trans-1,3-Dichloropropene	ND		8.0		ug/L			10/13/18 04:06	20
Trichloroethene	ND		20		ug/L			10/13/18 04:06	20
Trichlorofluoromethane	ND		20		ug/L			10/13/18 04:06	20
Vinyl chloride	ND		20		ug/L			10/13/18 04:06	20
Dibromomethane	ND		20		ug/L			10/13/18 04:06	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*70 - 130*		*10/13/18 04:06*	*20*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*		*10/13/18 04:06*	*20*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*		*10/13/18 04:06*	*20*

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

TestAmerica Job ID: 480-143195-1

Client Sample ID: REW-11-20181009

Lab Sample ID: 480-143195-9

Date Collected: 10/09/18 10:35

Matrix: Water

Date Received: 10/10/18 01:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	1.8		0.20		ug/L		10/16/18 11:30	10/17/18 16:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*44*	*X*	*46 - 130*	*10/16/18 11:30*	*10/17/18 16:36*	*1*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	250		0.050		mg/L		10/13/18 09:16	10/15/18 13:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	38		10		mg/L			10/16/18 00:43	20
Sulfate	ND		40		mg/L			10/16/18 00:43	20
Ammonia	0.58		0.20		mg/L		10/15/18 01:08	10/16/18 07:04	1
Nitrate as N	0.050		0.050		mg/L			10/11/18 10:26	1
TOC Result 1	5100		100		mg/L			10/23/18 00:59	100
TOC Result 2	5100		100		mg/L			10/23/18 00:59	100
Total Organic Carbon - Duplicates	5100		100		mg/L			10/23/18 00:59	100
Alkalinity, Total	1200		5.0		mg/L			10/14/18 17:03	1
ortho-Phosphate	0.24		0.020		mg/L			10/11/18 10:00	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	5.7	HF	0.1		SU			10/14/18 13:40	1
Temperature	17.3	HF	0.001		Degrees C			10/14/18 13:40	1

Client Sample ID: DUP1-20181009

Lab Sample ID: 480-143195-10

Date Collected: 10/09/18 00:00

Matrix: Water

Date Received: 10/10/18 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		20		ug/L			10/13/18 04:33	20
1,1,1-Trichloroethane	ND		20		ug/L			10/13/18 04:33	20
1,1,2,2-Tetrachloroethane	ND		10		ug/L			10/13/18 04:33	20
1,1,2-Trichloroethane	ND		20		ug/L			10/13/18 04:33	20
1,1-Dichloroethane	ND		20		ug/L			10/13/18 04:33	20
1,1-Dichloroethene	ND		20		ug/L			10/13/18 04:33	20
1,1-Dichloropropene	ND		20		ug/L			10/13/18 04:33	20
1,2,3-Trichlorobenzene	ND		20		ug/L			10/13/18 04:33	20
1,2,3-Trichloropropane	ND		20		ug/L			10/13/18 04:33	20
1,2,4-Trichlorobenzene	ND		20		ug/L			10/13/18 04:33	20
1,2,4-Trimethylbenzene	ND		20		ug/L			10/13/18 04:33	20
1,2-Dibromo-3-Chloropropane	ND		100		ug/L			10/13/18 04:33	20
1,2-Dichlorobenzene	ND		20		ug/L			10/13/18 04:33	20
1,2-Dichloroethane	ND		20		ug/L			10/13/18 04:33	20
1,2-Dichloropropane	ND		20		ug/L			10/13/18 04:33	20
1,3,5-Trimethylbenzene	ND		20		ug/L			10/13/18 04:33	20
1,3-Dichlorobenzene	ND		20		ug/L			10/13/18 04:33	20
1,3-Dichloropropane	ND		20		ug/L			10/13/18 04:33	20
1,4-Dichlorobenzene	ND		20		ug/L			10/13/18 04:33	20
1,4-Dioxane	ND		1000		ug/L			10/13/18 04:33	20

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

TestAmerica Job ID: 480-143195-1

Client Sample ID: DUP1-20181009
Date Collected: 10/09/18 00:00
Date Received: 10/10/18 01:00

Lab Sample ID: 480-143195-10
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,2-Dichloropropane	ND		20		ug/L			10/13/18 04:33	20
2-Butanone (MEK)	**440**	*	200		ug/L			10/13/18 04:33	20
2-Chlorotoluene	ND		20		ug/L			10/13/18 04:33	20
2-Hexanone	ND		200		ug/L			10/13/18 04:33	20
4-Chlorotoluene	ND		20		ug/L			10/13/18 04:33	20
4-Isopropyltoluene	ND		20		ug/L			10/13/18 04:33	20
4-Methyl-2-pentanone (MIBK)	ND		200		ug/L			10/13/18 04:33	20
Acetone	ND		1000		ug/L			10/13/18 04:33	20
Benzene	ND		20		ug/L			10/13/18 04:33	20
Bromobenzene	ND		20		ug/L			10/13/18 04:33	20
Bromoform	ND		20		ug/L			10/13/18 04:33	20
Bromomethane	ND		40		ug/L			10/13/18 04:33	20
Carbon disulfide	ND		200		ug/L			10/13/18 04:33	20
Carbon tetrachloride	ND		20		ug/L			10/13/18 04:33	20
Chlorobenzene	ND		20		ug/L			10/13/18 04:33	20
Chlorobromomethane	ND		20		ug/L			10/13/18 04:33	20
Chlorodibromomethane	ND		10		ug/L			10/13/18 04:33	20
Chloroethane	ND		40		ug/L			10/13/18 04:33	20
Chloroform	ND		20		ug/L			10/13/18 04:33	20
Chloromethane	ND		40		ug/L			10/13/18 04:33	20
cis-1,2-Dichloroethene	ND		20		ug/L			10/13/18 04:33	20
cis-1,3-Dichloropropene	ND		8.0		ug/L			10/13/18 04:33	20
Dichlorobromomethane	ND		10		ug/L			10/13/18 04:33	20
Dichlorodifluoromethane	ND		20		ug/L			10/13/18 04:33	20
Ethyl ether	ND		20		ug/L			10/13/18 04:33	20
Ethylbenzene	ND		20		ug/L			10/13/18 04:33	20
Ethylene Dibromide	ND		20		ug/L			10/13/18 04:33	20
Hexachlorobutadiene	ND		8.0		ug/L			10/13/18 04:33	20
Isopropyl ether	ND		200		ug/L			10/13/18 04:33	20
Isopropylbenzene	ND		20		ug/L			10/13/18 04:33	20
Methyl tert-butyl ether	ND		20		ug/L			10/13/18 04:33	20
Methylene Chloride	ND		20		ug/L			10/13/18 04:33	20
m-Xylene & p-Xylene	ND		40		ug/L			10/13/18 04:33	20
Naphthalene	ND		100		ug/L			10/13/18 04:33	20
n-Butylbenzene	ND		20		ug/L			10/13/18 04:33	20
N-Propylbenzene	ND		20		ug/L			10/13/18 04:33	20
o-Xylene	ND		20		ug/L			10/13/18 04:33	20
sec-Butylbenzene	ND		20		ug/L			10/13/18 04:33	20
Styrene	ND		20		ug/L			10/13/18 04:33	20
Tert-amyl methyl ether	ND		100		ug/L			10/13/18 04:33	20
Tert-butyl ethyl ether	ND		100		ug/L			10/13/18 04:33	20
tert-Butylbenzene	ND		20		ug/L			10/13/18 04:33	20
Tetrachloroethene	ND		20		ug/L			10/13/18 04:33	20
Tetrahydrofuran	ND		200		ug/L			10/13/18 04:33	20
Toluene	ND		20		ug/L			10/13/18 04:33	20
trans-1,2-Dichloroethene	ND		20		ug/L			10/13/18 04:33	20
trans-1,3-Dichloropropene	ND		8.0		ug/L			10/13/18 04:33	20
Trichloroethene	ND		20		ug/L			10/13/18 04:33	20
Trichlorofluoromethane	ND		20		ug/L			10/13/18 04:33	20

Client Sample ID: DUP1-20181009

Lab Sample ID: 480-143195-10

Date Collected: 10/09/18 00:00

Matrix: Water

Date Received: 10/10/18 01:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		20		ug/L			10/13/18 04:33	20
Dibromomethane	ND		20		ug/L			10/13/18 04:33	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*70 - 130*		*10/13/18 04:33*	*20*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*		*10/13/18 04:33*	*20*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*10/13/18 04:33*	*20*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**1.1**		0.20		ug/L		10/16/18 11:30	10/17/18 16:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*27*	*X*	*46 - 130*	*10/16/18 11:30*	*10/17/18 16:50*	*1*

Client Sample ID: TRIP BLANKS

Lab Sample ID: 480-143195-11

Date Collected: 10/09/18 00:00

Matrix: Water

Date Received: 10/10/18 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			10/13/18 04:59	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/13/18 04:59	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/13/18 04:59	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/13/18 04:59	1
1,1-Dichloroethane	ND		1.0		ug/L			10/13/18 04:59	1
1,1-Dichloroethene	ND		1.0		ug/L			10/13/18 04:59	1
1,1-Dichloropropene	ND		1.0		ug/L			10/13/18 04:59	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/13/18 04:59	1
1,2,3-Trichloropropane	ND		1.0		ug/L			10/13/18 04:59	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/13/18 04:59	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/13/18 04:59	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			10/13/18 04:59	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/13/18 04:59	1
1,2-Dichloroethane	ND		1.0		ug/L			10/13/18 04:59	1
1,2-Dichloropropane	ND		1.0		ug/L			10/13/18 04:59	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/13/18 04:59	1
1,3-Dichlorobenzene	ND		1.0		ug/L			10/13/18 04:59	1
1,3-Dichloropropane	ND		1.0		ug/L			10/13/18 04:59	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/13/18 04:59	1
1,4-Dioxane	ND		50		ug/L			10/13/18 04:59	1
2,2-Dichloropropane	ND		1.0		ug/L			10/13/18 04:59	1
2-Butanone (MEK)	ND	*	10		ug/L			10/13/18 04:59	1
2-Chlorotoluene	ND		1.0		ug/L			10/13/18 04:59	1
2-Hexanone	ND		10		ug/L			10/13/18 04:59	1
4-Chlorotoluene	ND		1.0		ug/L			10/13/18 04:59	1
4-Isopropyltoluene	ND		1.0		ug/L			10/13/18 04:59	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			10/13/18 04:59	1
Acetone	ND		50		ug/L			10/13/18 04:59	1
Benzene	ND		1.0		ug/L			10/13/18 04:59	1

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

TestAmerica Job ID: 480-143195-1

Client Sample ID: TRIP BLANKS
Date Collected: 10/09/18 00:00
Date Received: 10/10/18 01:00

Lab Sample ID: 480-143195-11
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromobenzene	ND		1.0		ug/L			10/13/18 04:59	1
Bromoform	ND		1.0		ug/L			10/13/18 04:59	1
Bromomethane	ND		2.0		ug/L			10/13/18 04:59	1
Carbon disulfide	ND		10		ug/L			10/13/18 04:59	1
Carbon tetrachloride	ND		1.0		ug/L			10/13/18 04:59	1
Chlorobenzene	ND		1.0		ug/L			10/13/18 04:59	1
Chlorobromomethane	ND		1.0		ug/L			10/13/18 04:59	1
Chlorodibromomethane	ND		0.50		ug/L			10/13/18 04:59	1
Chloroethane	ND		2.0		ug/L			10/13/18 04:59	1
Chloroform	**3.6**		1.0		ug/L			10/13/18 04:59	1
Chloromethane	ND		2.0		ug/L			10/13/18 04:59	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			10/13/18 04:59	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			10/13/18 04:59	1
Dichlorobromomethane	ND		0.50		ug/L			10/13/18 04:59	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/13/18 04:59	1
Ethyl ether	ND		1.0		ug/L			10/13/18 04:59	1
Ethylbenzene	ND		1.0		ug/L			10/13/18 04:59	1
Ethylene Dibromide	ND		1.0		ug/L			10/13/18 04:59	1
Hexachlorobutadiene	ND		0.40		ug/L			10/13/18 04:59	1
Isopropyl ether	ND		10		ug/L			10/13/18 04:59	1
Isopropylbenzene	ND		1.0		ug/L			10/13/18 04:59	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/13/18 04:59	1
Methylene Chloride	ND		1.0		ug/L			10/13/18 04:59	1
m-Xylene & p-Xylene	ND		2.0		ug/L			10/13/18 04:59	1
Naphthalene	ND		5.0		ug/L			10/13/18 04:59	1
n-Butylbenzene	ND		1.0		ug/L			10/13/18 04:59	1
N-Propylbenzene	ND		1.0		ug/L			10/13/18 04:59	1
o-Xylene	ND		1.0		ug/L			10/13/18 04:59	1
sec-Butylbenzene	ND		1.0		ug/L			10/13/18 04:59	1
Styrene	ND		1.0		ug/L			10/13/18 04:59	1
Tert-amyl methyl ether	ND		5.0		ug/L			10/13/18 04:59	1
Tert-butyl ethyl ether	ND		5.0		ug/L			10/13/18 04:59	1
tert-Butylbenzene	ND		1.0		ug/L			10/13/18 04:59	1
Tetrachloroethene	ND		1.0		ug/L			10/13/18 04:59	1
Tetrahydrofuran	ND		10		ug/L			10/13/18 04:59	1
Toluene	ND		1.0		ug/L			10/13/18 04:59	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/13/18 04:59	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			10/13/18 04:59	1
Trichloroethene	ND		1.0		ug/L			10/13/18 04:59	1
Trichlorofluoromethane	ND		1.0		ug/L			10/13/18 04:59	1
Vinyl chloride	ND		1.0		ug/L			10/13/18 04:59	1
Dibromomethane	ND		1.0		ug/L			10/13/18 04:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*70 - 130*		*10/13/18 04:59*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*10/13/18 04:59*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*10/13/18 04:59*	*1*

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

TestAmerica Job ID: 480-143195-1

Client Sample ID: REW-920181009
Date Collected: 10/09/18 14:50
Date Received: 10/10/18 01:00

Lab Sample ID: 480-143195-12
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			10/13/18 05:26	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/13/18 05:26	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/13/18 05:26	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/13/18 05:26	1
1,1-Dichloroethane	ND		1.0		ug/L			10/13/18 05:26	1
1,1-Dichloroethene	ND		1.0		ug/L			10/13/18 05:26	1
1,1-Dichloropropene	ND		1.0		ug/L			10/13/18 05:26	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/13/18 05:26	1
1,2,3-Trichloropropane	ND		1.0		ug/L			10/13/18 05:26	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/13/18 05:26	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/13/18 05:26	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			10/13/18 05:26	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/13/18 05:26	1
1,2-Dichloroethane	ND		1.0		ug/L			10/13/18 05:26	1
1,2-Dichloropropane	ND		1.0		ug/L			10/13/18 05:26	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/13/18 05:26	1
1,3-Dichlorobenzene	ND		1.0		ug/L			10/13/18 05:26	1
1,3-Dichloropropane	ND		1.0		ug/L			10/13/18 05:26	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/13/18 05:26	1
1,4-Dioxane	ND		50		ug/L			10/13/18 05:26	1
2,2-Dichloropropane	ND		1.0		ug/L			10/13/18 05:26	1
2-Butanone (MEK)	ND	*	10		ug/L			10/13/18 05:26	1
2-Chlorotoluene	ND		1.0		ug/L			10/13/18 05:26	1
2-Hexanone	ND		10		ug/L			10/13/18 05:26	1
4-Chlorotoluene	ND		1.0		ug/L			10/13/18 05:26	1
4-Isopropyltoluene	ND		1.0		ug/L			10/13/18 05:26	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			10/13/18 05:26	1
Acetone	ND		50		ug/L			10/13/18 05:26	1
Benzene	ND		1.0		ug/L			10/13/18 05:26	1
Bromobenzene	ND		1.0		ug/L			10/13/18 05:26	1
Bromoform	ND		1.0		ug/L			10/13/18 05:26	1
Bromomethane	ND		2.0		ug/L			10/13/18 05:26	1
Carbon disulfide	ND		10		ug/L			10/13/18 05:26	1
Carbon tetrachloride	ND		1.0		ug/L			10/13/18 05:26	1
Chlorobenzene	ND		1.0		ug/L			10/13/18 05:26	1
Chlorobromomethane	ND		1.0		ug/L			10/13/18 05:26	1
Chlorodibromomethane	ND		0.50		ug/L			10/13/18 05:26	1
Chloroethane	ND		2.0		ug/L			10/13/18 05:26	1
Chloroform	ND		1.0		ug/L			10/13/18 05:26	1
Chloromethane	ND		2.0		ug/L			10/13/18 05:26	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			10/13/18 05:26	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			10/13/18 05:26	1
Dichlorobromomethane	ND		0.50		ug/L			10/13/18 05:26	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/13/18 05:26	1
Ethyl ether	ND		1.0		ug/L			10/13/18 05:26	1
Ethylbenzene	ND		1.0		ug/L			10/13/18 05:26	1
Ethylene Dibromide	ND		1.0		ug/L			10/13/18 05:26	1
Hexachlorobutadiene	ND		0.40		ug/L			10/13/18 05:26	1
Isopropyl ether	ND		10		ug/L			10/13/18 05:26	1

Client Sample ID: REW-920181009
Date Collected: 10/09/18 14:50
Date Received: 10/10/18 01:00

Lab Sample ID: 480-143195-12
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			10/13/18 05:26	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/13/18 05:26	1
Methylene Chloride	ND		1.0		ug/L			10/13/18 05:26	1
m-Xylene & p-Xylene	ND		2.0		ug/L			10/13/18 05:26	1
Naphthalene	ND		5.0		ug/L			10/13/18 05:26	1
n-Butylbenzene	ND		1.0		ug/L			10/13/18 05:26	1
N-Propylbenzene	ND		1.0		ug/L			10/13/18 05:26	1
o-Xylene	ND		1.0		ug/L			10/13/18 05:26	1
sec-Butylbenzene	ND		1.0		ug/L			10/13/18 05:26	1
Styrene	ND		1.0		ug/L			10/13/18 05:26	1
Tert-amyl methyl ether	ND		5.0		ug/L			10/13/18 05:26	1
Tert-butyl ethyl ether	ND		5.0		ug/L			10/13/18 05:26	1
tert-Butylbenzene	ND		1.0		ug/L			10/13/18 05:26	1
Tetrachloroethene	ND		1.0		ug/L			10/13/18 05:26	1
Tetrahydrofuran	ND		10		ug/L			10/13/18 05:26	1
Toluene	ND		1.0		ug/L			10/13/18 05:26	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/13/18 05:26	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			10/13/18 05:26	1
Trichloroethene	ND		1.0		ug/L			10/13/18 05:26	1
Trichlorofluoromethane	ND		1.0		ug/L			10/13/18 05:26	1
Vinyl chloride	ND		1.0		ug/L			10/13/18 05:26	1
Dibromomethane	ND		1.0		ug/L			10/13/18 05:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*70 - 130*		*10/13/18 05:26*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 130*		*10/13/18 05:26*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*10/13/18 05:26*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20		ug/L		10/16/18 11:30	10/17/18 17:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*120*		*46 - 130*	*10/16/18 11:30*	*10/17/18 17:03*	*1*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**3.0**		0.050		mg/L		10/13/18 09:16	10/15/18 13:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**14**		0.50		mg/L			10/16/18 00:52	1
Sulfate	**51**		2.0		mg/L			10/16/18 00:52	1
Ammonia	**1.1**		0.20		mg/L		10/15/18 01:08	10/16/18 07:05	1
Nitrate as N	ND		0.050		mg/L			10/11/18 10:08	1
TOC Result 1	**1.3**		1.0		mg/L			10/21/18 04:21	1
TOC Result 2	**1.7**		1.0		mg/L			10/21/18 04:21	1
Total Organic Carbon - Duplicates	**1.5**		1.0		mg/L			10/21/18 04:21	1
Alkalinity, Total	**55**		5.0		mg/L			10/14/18 17:08	1
ortho-Phosphate	**0.22**		0.020		mg/L			10/11/18 10:00	1

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

TestAmerica Job ID: 480-143195-1

Client Sample ID: REW-920181009
Date Collected: 10/09/18 14:50
Date Received: 10/10/18 01:00

Lab Sample ID: 480-143195-12
Matrix: Water

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.8	HF	0.1		SU			10/14/18 13:42	1
Temperature	17.5	HF	0.001		Degrees C			10/14/18 13:42	1

Surrogate Summary

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

TestAmerica Job ID: 480-143195-1

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)
480-143195-1	MW-267S-20181009	100	99	102
480-143195-2	MW-267M-20181009	101	97	100
480-143195-3	MW-268S-20181009	100	106	100
480-143195-4	MW-268M-20181009	101	98	100
480-143195-5	MW-268D-20181009	103	99	100
480-143195-6	REW-6-20181009	100	104	100
480-143195-7	REW-7-20181009	101	101	98
480-143195-8	REW-8-20181009	99	104	98
480-143195-9	REW-11-20181009	104	103	99
480-143195-10	DUP1-20181009	104	99	101
480-143195-11	TRIP BLANKS	102	101	98
480-143195-12	REW-920181009	102	96	100
LCS 480-439252/5	Lab Control Sample	101	103	103
LCS 480-439285/5	Lab Control Sample	96	102	96
LCSD 480-439252/6	Lab Control Sample Dup	97	97	99
LCSD 480-439285/6	Lab Control Sample Dup	98	103	100
MB 480-439252/8	Method Blank	102	92	101
MB 480-439285/8	Method Blank	98	99	99

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)
480-143195-1	MW-267S-20181009	10 X
480-143195-2	MW-267M-20181009	100
480-143195-3	MW-268S-20181009	81
480-143195-4	MW-268M-20181009	69
480-143195-6	REW-6-20181009	76
480-143195-7	REW-7-20181009	105
480-143195-8	REW-8-20181009	106
480-143195-9	REW-11-20181009	44 X
480-143195-10	DUP1-20181009	27 X
480-143195-12	REW-920181009	120
LCS 200-135288/2-A	Lab Control Sample	94
LCSD 200-135288/3-A	Lab Control Sample Dup	106
MB 200-135288/1-A	Method Blank	91

Surrogate Legend

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

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

TestAmerica Job ID: 480-143195-1

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

Lab Sample ID: MB 480-439252/8
Matrix: Water
Analysis Batch: 439252

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			10/12/18 23:52	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/12/18 23:52	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/12/18 23:52	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/12/18 23:52	1
1,1-Dichloroethane	ND		1.0		ug/L			10/12/18 23:52	1
1,1-Dichloroethene	ND		1.0		ug/L			10/12/18 23:52	1
1,1-Dichloropropene	ND		1.0		ug/L			10/12/18 23:52	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/12/18 23:52	1
1,2,3-Trichloropropane	ND		1.0		ug/L			10/12/18 23:52	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/12/18 23:52	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/12/18 23:52	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			10/12/18 23:52	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/12/18 23:52	1
1,2-Dichloroethane	ND		1.0		ug/L			10/12/18 23:52	1
1,2-Dichloropropane	ND		1.0		ug/L			10/12/18 23:52	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/12/18 23:52	1
1,3-Dichlorobenzene	ND		1.0		ug/L			10/12/18 23:52	1
1,3-Dichloropropane	ND		1.0		ug/L			10/12/18 23:52	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/12/18 23:52	1
1,4-Dioxane	ND		50		ug/L			10/12/18 23:52	1
2,2-Dichloropropane	ND		1.0		ug/L			10/12/18 23:52	1
2-Butanone (MEK)	ND		10		ug/L			10/12/18 23:52	1
2-Chlorotoluene	ND		1.0		ug/L			10/12/18 23:52	1
2-Hexanone	ND		10		ug/L			10/12/18 23:52	1
4-Chlorotoluene	ND		1.0		ug/L			10/12/18 23:52	1
4-Isopropyltoluene	ND		1.0		ug/L			10/12/18 23:52	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			10/12/18 23:52	1
Acetone	ND		50		ug/L			10/12/18 23:52	1
Benzene	ND		1.0		ug/L			10/12/18 23:52	1
Bromobenzene	ND		1.0		ug/L			10/12/18 23:52	1
Bromoform	ND		1.0		ug/L			10/12/18 23:52	1
Bromomethane	ND		2.0		ug/L			10/12/18 23:52	1
Carbon disulfide	ND		10		ug/L			10/12/18 23:52	1
Carbon tetrachloride	ND		1.0		ug/L			10/12/18 23:52	1
Chlorobenzene	ND		1.0		ug/L			10/12/18 23:52	1
Chlorobromomethane	ND		1.0		ug/L			10/12/18 23:52	1
Chlorodibromomethane	ND		0.50		ug/L			10/12/18 23:52	1
Chloroethane	ND		2.0		ug/L			10/12/18 23:52	1
Chloroform	ND		1.0		ug/L			10/12/18 23:52	1
Chloromethane	ND		2.0		ug/L			10/12/18 23:52	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			10/12/18 23:52	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			10/12/18 23:52	1
Dichlorobromomethane	ND		0.50		ug/L			10/12/18 23:52	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/12/18 23:52	1
Ethyl ether	ND		1.0		ug/L			10/12/18 23:52	1
Ethylbenzene	ND		1.0		ug/L			10/12/18 23:52	1
Ethylene Dibromide	ND		1.0		ug/L			10/12/18 23:52	1
Hexachlorobutadiene	ND		0.40		ug/L			10/12/18 23:52	1

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

Lab Sample ID: MB 480-439252/8
Matrix: Water
Analysis Batch: 439252

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			10/12/18 23:52	1
Isopropylbenzene	ND		1.0		ug/L			10/12/18 23:52	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/12/18 23:52	1
Methylene Chloride	ND		1.0		ug/L			10/12/18 23:52	1
m-Xylene & p-Xylene	ND		2.0		ug/L			10/12/18 23:52	1
Naphthalene	ND		5.0		ug/L			10/12/18 23:52	1
n-Butylbenzene	ND		1.0		ug/L			10/12/18 23:52	1
N-Propylbenzene	ND		1.0		ug/L			10/12/18 23:52	1
o-Xylene	ND		1.0		ug/L			10/12/18 23:52	1
sec-Butylbenzene	ND		1.0		ug/L			10/12/18 23:52	1
Styrene	ND		1.0		ug/L			10/12/18 23:52	1
Tert-amyl methyl ether	ND		5.0		ug/L			10/12/18 23:52	1
Tert-butyl ethyl ether	ND		5.0		ug/L			10/12/18 23:52	1
tert-Butylbenzene	ND		1.0		ug/L			10/12/18 23:52	1
Tetrachloroethene	ND		1.0		ug/L			10/12/18 23:52	1
Tetrahydrofuran	ND		10		ug/L			10/12/18 23:52	1
Toluene	ND		1.0		ug/L			10/12/18 23:52	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/12/18 23:52	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			10/12/18 23:52	1
Trichloroethene	ND		1.0		ug/L			10/12/18 23:52	1
Trichlorofluoromethane	ND		1.0		ug/L			10/12/18 23:52	1
Vinyl chloride	ND		1.0		ug/L			10/12/18 23:52	1
Dibromomethane	ND		1.0		ug/L			10/12/18 23:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*70 - 130*		*10/12/18 23:52*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 130*		*10/12/18 23:52*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*10/12/18 23:52*	*1*

Lab Sample ID: LCS 480-439252/5
Matrix: Water
Analysis Batch: 439252

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	25.9		ug/L		104	70 - 130
1,1,1-Trichloroethane	25.0	24.8		ug/L		99	70 - 130
1,1,2,2-Tetrachloroethane	25.0	24.0		ug/L		96	70 - 130
1,1,2-Trichloroethane	25.0	24.5		ug/L		98	70 - 130
1,1-Dichloroethane	25.0	26.2		ug/L		105	70 - 130
1,1-Dichloroethene	25.0	25.7		ug/L		103	70 - 130
1,1-Dichloropropene	25.0	26.6		ug/L		107	70 - 130
1,2,3-Trichlorobenzene	25.0	24.9		ug/L		100	70 - 130
1,2,3-Trichloropropane	25.0	24.7		ug/L		99	70 - 130
1,2,4-Trichlorobenzene	25.0	24.9		ug/L		100	70 - 130
1,2,4-Trimethylbenzene	25.0	27.3		ug/L		109	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	23.7		ug/L		95	70 - 130
1,2-Dichlorobenzene	25.0	24.8		ug/L		99	70 - 130
1,2-Dichloroethane	25.0	23.4		ug/L		94	70 - 130

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

Lab Sample ID: LCS 480-439252/5
Matrix: Water
Analysis Batch: 439252

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	25.1		ug/L		101	70 - 130
1,3,5-Trimethylbenzene	25.0	27.8		ug/L		111	70 - 130
1,3-Dichlorobenzene	25.0	24.9		ug/L		100	70 - 130
1,3-Dichloropropane	25.0	25.7		ug/L		103	70 - 130
1,4-Dichlorobenzene	25.0	24.7		ug/L		99	70 - 130
1,4-Dioxane	500	591		ug/L		118	70 - 130
2,2-Dichloropropane	25.0	26.2		ug/L		105	70 - 130
2-Butanone (MEK)	125	249	*	ug/L		199	70 - 130
2-Chlorotoluene	25.0	25.2		ug/L		101	70 - 130
2-Hexanone	125	139		ug/L		111	70 - 130
4-Chlorotoluene	25.0	25.9		ug/L		103	70 - 130
4-Isopropyltoluene	25.0	27.2		ug/L		109	70 - 130
4-Methyl-2-pentanone (MIBK)	125	132		ug/L		105	70 - 130
Acetone	125	153		ug/L		122	70 - 130
Benzene	25.0	25.7		ug/L		103	70 - 130
Bromobenzene	25.0	26.1		ug/L		105	70 - 130
Bromoform	25.0	22.0		ug/L		88	70 - 130
Bromomethane	25.0	23.1		ug/L		93	70 - 130
Carbon disulfide	25.0	25.5		ug/L		102	70 - 130
Carbon tetrachloride	25.0	25.8		ug/L		103	70 - 130
Chlorobenzene	25.0	25.3		ug/L		101	70 - 130
Chlorobromomethane	25.0	24.8		ug/L		99	70 - 130
Chlorodibromomethane	25.0	23.1		ug/L		93	70 - 130
Chloroethane	25.0	24.3		ug/L		97	70 - 130
Chloroform	25.0	23.5		ug/L		94	70 - 130
Chloromethane	25.0	24.1		ug/L		96	70 - 130
cis-1,2-Dichloroethene	25.0	24.6		ug/L		98	70 - 130
cis-1,3-Dichloropropene	25.0	27.7		ug/L		111	70 - 130
Dichlorobromomethane	25.0	25.7		ug/L		103	70 - 130
Dichlorodifluoromethane	25.0	27.4		ug/L		110	70 - 130
Ethyl ether	25.0	24.0		ug/L		96	70 - 130
Ethylbenzene	25.0	25.9		ug/L		104	70 - 130
Ethylene Dibromide	25.0	25.6		ug/L		102	70 - 130
Hexachlorobutadiene	25.0	27.1		ug/L		109	70 - 130
Isopropyl ether	25.0	27.2		ug/L		109	70 - 130
Isopropylbenzene	25.0	27.6		ug/L		111	70 - 130
Methyl tert-butyl ether	25.0	25.3		ug/L		101	70 - 130
Methylene Chloride	25.0	27.2		ug/L		109	70 - 130
m-Xylene & p-Xylene	25.0	26.2		ug/L		105	70 - 130
Naphthalene	25.0	25.6		ug/L		102	70 - 130
n-Butylbenzene	25.0	26.2		ug/L		105	70 - 130
N-Propylbenzene	25.0	26.4		ug/L		105	70 - 130
o-Xylene	25.0	26.6		ug/L		106	70 - 130
sec-Butylbenzene	25.0	27.3		ug/L		109	70 - 130
Styrene	25.0	26.2		ug/L		105	70 - 130
Tert-amyl methyl ether	25.0	27.7		ug/L		111	70 - 130
Tert-butyl ethyl ether	25.0	27.1		ug/L		109	70 - 130
tert-Butylbenzene	25.0	27.7		ug/L		111	70 - 130

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

Lab Sample ID: LCS 480-439252/5
Matrix: Water
Analysis Batch: 439252

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	28.7		ug/L		115	70 - 130		
Tetrahydrofuran			50.0	63.1		ug/L		126	70 - 130		
Toluene			25.0	24.9		ug/L		100	70 - 130		
trans-1,2-Dichloroethene			25.0	24.7		ug/L		99	70 - 130		
trans-1,3-Dichloropropene			25.0	25.5		ug/L		102	70 - 130		
Trichloroethene			25.0	25.7		ug/L		103	70 - 130		
Trichlorofluoromethane			25.0	26.7		ug/L		107	70 - 130		
Vinyl chloride			25.0	26.7		ug/L		107	70 - 130		
Dibromomethane			25.0	25.3		ug/L		101	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*101*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 480-439252/6
Matrix: Water
Analysis Batch: 439252

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane			25.0	24.4		ug/L		98	70 - 130	6	20
1,1,1-Trichloroethane			25.0	22.9		ug/L		92	70 - 130	8	20
1,1,2,2-Tetrachloroethane			25.0	23.7		ug/L		95	70 - 130	1	20
1,1,2-Trichloroethane			25.0	24.0		ug/L		96	70 - 130	2	20
1,1-Dichloroethane			25.0	23.8		ug/L		95	70 - 130	10	20
1,1-Dichloroethene			25.0	24.0		ug/L		96	70 - 130	7	20
1,1-Dichloropropene			25.0	25.2		ug/L		101	70 - 130	6	20
1,2,3-Trichlorobenzene			25.0	24.0		ug/L		96	70 - 130	4	20
1,2,3-Trichloropropane			25.0	24.6		ug/L		98	70 - 130	0	20
1,2,4-Trichlorobenzene			25.0	24.0		ug/L		96	70 - 130	4	20
1,2,4-Trimethylbenzene			25.0	26.2		ug/L		105	70 - 130	4	20
1,2-Dibromo-3-Chloropropane			25.0	20.5		ug/L		82	70 - 130	14	20
1,2-Dichlorobenzene			25.0	24.0		ug/L		96	70 - 130	3	20
1,2-Dichloroethane			25.0	22.7		ug/L		91	70 - 130	3	20
1,2-Dichloropropane			25.0	24.7		ug/L		99	70 - 130	2	20
1,3,5-Trimethylbenzene			25.0	26.5		ug/L		106	70 - 130	5	20
1,3-Dichlorobenzene			25.0	24.2		ug/L		97	70 - 130	3	20
1,3-Dichloropropane			25.0	25.2		ug/L		101	70 - 130	2	20
1,4-Dichlorobenzene			25.0	24.4		ug/L		98	70 - 130	1	20
1,4-Dioxane			500	539		ug/L		108	70 - 130	9	20
2,2-Dichloropropane			25.0	24.2		ug/L		97	70 - 130	8	20
2-Butanone (MEK)			125	241	*	ug/L		193	70 - 130	3	20
2-Chlorotoluene			25.0	24.3		ug/L		97	70 - 130	4	20
2-Hexanone			125	137		ug/L		109	70 - 130	2	20
4-Chlorotoluene			25.0	26.4		ug/L		106	70 - 130	2	20
4-Isopropyltoluene			25.0	26.3		ug/L		105	70 - 130	3	20
4-Methyl-2-pentanone (MIBK)			125	125		ug/L		100	70 - 130	5	20
Acetone			125	140		ug/L		112	70 - 130	9	20

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

Lab Sample ID: LCSD 480-439252/6
Matrix: Water
Analysis Batch: 439252

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			25.0	24.4		ug/L		98	70 - 130	5	20
Bromobenzene			25.0	26.1		ug/L		104	70 - 130	0	20
Bromoform			25.0	20.5		ug/L		82	70 - 130	7	20
Bromomethane			25.0	20.2		ug/L		81	70 - 130	14	20
Carbon disulfide			25.0	22.6		ug/L		91	70 - 130	12	20
Carbon tetrachloride			25.0	23.5		ug/L		94	70 - 130	9	20
Chlorobenzene			25.0	24.5		ug/L		98	70 - 130	3	20
Chlorobromomethane			25.0	22.8		ug/L		91	70 - 130	9	20
Chlorodibromomethane			25.0	23.0		ug/L		92	70 - 130	1	20
Chloroethane			25.0	21.5		ug/L		86	70 - 130	12	20
Chloroform			25.0	22.1		ug/L		88	70 - 130	6	20
Chloromethane			25.0	21.7		ug/L		87	70 - 130	10	20
cis-1,2-Dichloroethene			25.0	23.3		ug/L		93	70 - 130	5	20
cis-1,3-Dichloropropene			25.0	27.3		ug/L		109	70 - 130	1	20
Dichlorobromomethane			25.0	25.2		ug/L		101	70 - 130	2	20
Dichlorodifluoromethane			25.0	25.0		ug/L		100	70 - 130	9	20
Ethyl ether			25.0	22.0		ug/L		88	70 - 130	9	20
Ethylbenzene			25.0	24.4		ug/L		98	70 - 130	6	20
Ethylene Dibromide			25.0	25.3		ug/L		101	70 - 130	1	20
Hexachlorobutadiene			25.0	25.1		ug/L		100	70 - 130	8	20
Isopropyl ether			25.0	25.6		ug/L		102	70 - 130	6	20
Isopropylbenzene			25.0	25.7		ug/L		103	70 - 130	7	20
Methyl tert-butyl ether			25.0	23.6		ug/L		94	70 - 130	7	20
Methylene Chloride			25.0	24.8		ug/L		99	70 - 130	9	20
m-Xylene & p-Xylene			25.0	25.5		ug/L		102	70 - 130	3	20
Naphthalene			25.0	24.1		ug/L		96	70 - 130	6	20
n-Butylbenzene			25.0	25.4		ug/L		102	70 - 130	3	20
N-Propylbenzene			25.0	25.2		ug/L		101	70 - 130	5	20
o-Xylene			25.0	24.8		ug/L		99	70 - 130	7	20
sec-Butylbenzene			25.0	25.9		ug/L		103	70 - 130	5	20
Styrene			25.0	25.4		ug/L		101	70 - 130	3	20
Tert-amyl methyl ether			25.0	26.1		ug/L		104	70 - 130	6	20
Tert-butyl ethyl ether			25.0	25.5		ug/L		102	70 - 130	6	20
tert-Butylbenzene			25.0	27.3		ug/L		109	70 - 130	2	20
Tetrachloroethene			25.0	28.9		ug/L		115	70 - 130	0	20
Tetrahydrofuran			50.0	63.4		ug/L		127	70 - 130	0	20
Toluene			25.0	23.6		ug/L		94	70 - 130	5	20
trans-1,2-Dichloroethene			25.0	22.5		ug/L		90	70 - 130	9	20
trans-1,3-Dichloropropene			25.0	26.3		ug/L		105	70 - 130	3	20
Trichloroethene			25.0	24.5		ug/L		98	70 - 130	5	20
Trichlorofluoromethane			25.0	23.7		ug/L		95	70 - 130	12	20
Vinyl chloride			25.0	24.0		ug/L		96	70 - 130	11	20
Dibromomethane			25.0	24.1		ug/L		97	70 - 130	5	20

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

Lab Sample ID: MB 480-439285/8
Matrix: Water
Analysis Batch: 439285

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			10/13/18 14:42	1
1,1,1-Trichloroethane	ND		1.0		ug/L			10/13/18 14:42	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/13/18 14:42	1
1,1,2-Trichloroethane	ND		1.0		ug/L			10/13/18 14:42	1
1,1-Dichloroethane	ND		1.0		ug/L			10/13/18 14:42	1
1,1-Dichloroethene	ND		1.0		ug/L			10/13/18 14:42	1
1,1-Dichloropropene	ND		1.0		ug/L			10/13/18 14:42	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/13/18 14:42	1
1,2,3-Trichloropropane	ND		1.0		ug/L			10/13/18 14:42	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/13/18 14:42	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			10/13/18 14:42	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			10/13/18 14:42	1
1,2-Dichlorobenzene	ND		1.0		ug/L			10/13/18 14:42	1
1,2-Dichloroethane	ND		1.0		ug/L			10/13/18 14:42	1
1,2-Dichloropropane	ND		1.0		ug/L			10/13/18 14:42	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			10/13/18 14:42	1
1,3-Dichlorobenzene	ND		1.0		ug/L			10/13/18 14:42	1
1,3-Dichloropropane	ND		1.0		ug/L			10/13/18 14:42	1
1,4-Dichlorobenzene	ND		1.0		ug/L			10/13/18 14:42	1
1,4-Dioxane	ND		50		ug/L			10/13/18 14:42	1
2,2-Dichloropropane	ND		1.0		ug/L			10/13/18 14:42	1
2-Butanone (MEK)	ND		10		ug/L			10/13/18 14:42	1
2-Chlorotoluene	ND		1.0		ug/L			10/13/18 14:42	1
2-Hexanone	ND		10		ug/L			10/13/18 14:42	1
4-Chlorotoluene	ND		1.0		ug/L			10/13/18 14:42	1
4-Isopropyltoluene	ND		1.0		ug/L			10/13/18 14:42	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			10/13/18 14:42	1
Acetone	ND		50		ug/L			10/13/18 14:42	1
Benzene	ND		1.0		ug/L			10/13/18 14:42	1
Bromobenzene	ND		1.0		ug/L			10/13/18 14:42	1
Bromoform	ND		1.0		ug/L			10/13/18 14:42	1
Bromomethane	ND		2.0		ug/L			10/13/18 14:42	1
Carbon disulfide	ND		10		ug/L			10/13/18 14:42	1
Carbon tetrachloride	ND		1.0		ug/L			10/13/18 14:42	1
Chlorobenzene	ND		1.0		ug/L			10/13/18 14:42	1
Chlorobromomethane	ND		1.0		ug/L			10/13/18 14:42	1
Chlorodibromomethane	ND		0.50		ug/L			10/13/18 14:42	1
Chloroethane	ND		2.0		ug/L			10/13/18 14:42	1
Chloroform	ND		1.0		ug/L			10/13/18 14:42	1
Chloromethane	ND		2.0		ug/L			10/13/18 14:42	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			10/13/18 14:42	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			10/13/18 14:42	1
Dichlorobromomethane	ND		0.50		ug/L			10/13/18 14:42	1
Dichlorodifluoromethane	ND		1.0		ug/L			10/13/18 14:42	1
Ethyl ether	ND		1.0		ug/L			10/13/18 14:42	1
Ethylbenzene	ND		1.0		ug/L			10/13/18 14:42	1
Ethylene Dibromide	ND		1.0		ug/L			10/13/18 14:42	1
Hexachlorobutadiene	ND		0.40		ug/L			10/13/18 14:42	1
Isopropyl ether	ND		10		ug/L			10/13/18 14:42	1
Isopropylbenzene	ND		1.0		ug/L			10/13/18 14:42	1

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

Lab Sample ID: MB 480-439285/8
Matrix: Water
Analysis Batch: 439285

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			10/13/18 14:42	1
Methylene Chloride	ND		1.0		ug/L			10/13/18 14:42	1
m-Xylene & p-Xylene	ND		2.0		ug/L			10/13/18 14:42	1
Naphthalene	ND		5.0		ug/L			10/13/18 14:42	1
n-Butylbenzene	ND		1.0		ug/L			10/13/18 14:42	1
N-Propylbenzene	ND		1.0		ug/L			10/13/18 14:42	1
o-Xylene	ND		1.0		ug/L			10/13/18 14:42	1
sec-Butylbenzene	ND		1.0		ug/L			10/13/18 14:42	1
Styrene	ND		1.0		ug/L			10/13/18 14:42	1
Tert-amyl methyl ether	ND		5.0		ug/L			10/13/18 14:42	1
Tert-butyl ethyl ether	ND		5.0		ug/L			10/13/18 14:42	1
tert-Butylbenzene	ND		1.0		ug/L			10/13/18 14:42	1
Tetrachloroethene	ND		1.0		ug/L			10/13/18 14:42	1
Tetrahydrofuran	ND		10		ug/L			10/13/18 14:42	1
Toluene	ND		1.0		ug/L			10/13/18 14:42	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/13/18 14:42	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			10/13/18 14:42	1
Trichloroethene	ND		1.0		ug/L			10/13/18 14:42	1
Trichlorofluoromethane	ND		1.0		ug/L			10/13/18 14:42	1
Vinyl chloride	ND		1.0		ug/L			10/13/18 14:42	1
Dibromomethane	ND		1.0		ug/L			10/13/18 14:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*70 - 130*		*10/13/18 14:42*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*		*10/13/18 14:42*	*1*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*		*10/13/18 14:42*	*1*

Lab Sample ID: LCS 480-439285/5
Matrix: Water
Analysis Batch: 439285

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	25.0	24.6		ug/L		99	70 - 130
1,1,1-Trichloroethane	25.0	24.9		ug/L		100	70 - 130
1,1,2,2-Tetrachloroethane	25.0	24.4		ug/L		98	70 - 130
1,1,2-Trichloroethane	25.0	22.9		ug/L		92	70 - 130
1,1-Dichloroethane	25.0	25.6		ug/L		102	70 - 130
1,1-Dichloroethene	25.0	25.0		ug/L		100	70 - 130
1,1-Dichloropropene	25.0	26.3		ug/L		105	70 - 130
1,2,3-Trichlorobenzene	25.0	24.9		ug/L		100	70 - 130
1,2,3-Trichloropropane	25.0	25.2		ug/L		101	70 - 130
1,2,4-Trichlorobenzene	25.0	24.3		ug/L		97	70 - 130
1,2,4-Trimethylbenzene	25.0	27.0		ug/L		108	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	21.7		ug/L		87	70 - 130
1,2-Dichlorobenzene	25.0	24.6		ug/L		98	70 - 130
1,2-Dichloroethane	25.0	23.5		ug/L		94	70 - 130
1,2-Dichloropropane	25.0	25.0		ug/L		100	70 - 130
1,3,5-Trimethylbenzene	25.0	27.7		ug/L		111	70 - 130

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

Lab Sample ID: LCS 480-439285/5
Matrix: Water
Analysis Batch: 439285

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	24.9		ug/L		100	70 - 130
1,3-Dichloropropane	25.0	24.3		ug/L		97	70 - 130
1,4-Dichlorobenzene	25.0	24.7		ug/L		99	70 - 130
1,4-Dioxane	500	520		ug/L		104	70 - 130
2,2-Dichloropropane	25.0	25.1		ug/L		100	70 - 130
2-Butanone (MEK)	125	245	*	ug/L		196	70 - 130
2-Chlorotoluene	25.0	24.9		ug/L		100	70 - 130
2-Hexanone	125	127		ug/L		101	70 - 130
4-Chlorotoluene	25.0	25.9		ug/L		104	70 - 130
4-Isopropyltoluene	25.0	26.6		ug/L		106	70 - 130
4-Methyl-2-pentanone (MIBK)	125	121		ug/L		97	70 - 130
Acetone	125	144		ug/L		115	70 - 130
Benzene	25.0	25.1		ug/L		100	70 - 130
Bromobenzene	25.0	25.9		ug/L		104	70 - 130
Bromoform	25.0	22.2		ug/L		89	70 - 130
Bromomethane	25.0	22.2		ug/L		89	70 - 130
Carbon disulfide	25.0	23.9		ug/L		95	70 - 130
Carbon tetrachloride	25.0	25.3		ug/L		101	70 - 130
Chlorobenzene	25.0	23.2		ug/L		93	70 - 130
Chlorobromomethane	25.0	23.8		ug/L		95	70 - 130
Chlorodibromomethane	25.0	23.0		ug/L		92	70 - 130
Chloroethane	25.0	23.4		ug/L		94	70 - 130
Chloroform	25.0	23.6		ug/L		94	70 - 130
Chloromethane	25.0	23.4		ug/L		94	70 - 130
cis-1,2-Dichloroethene	25.0	23.4		ug/L		94	70 - 130
cis-1,3-Dichloropropene	25.0	28.4		ug/L		113	70 - 130
Dichlorobromomethane	25.0	25.5		ug/L		102	70 - 130
Dichlorodifluoromethane	25.0	24.5		ug/L		98	70 - 130
Ethyl ether	25.0	22.3		ug/L		89	70 - 130
Ethylbenzene	25.0	23.9		ug/L		96	70 - 130
Ethylene Dibromide	25.0	23.4		ug/L		94	70 - 130
Hexachlorobutadiene	25.0	26.1		ug/L		105	70 - 130
Isopropyl ether	25.0	27.3		ug/L		109	70 - 130
Isopropylbenzene	25.0	27.4		ug/L		109	70 - 130
Methyl tert-butyl ether	25.0	24.2		ug/L		97	70 - 130
Methylene Chloride	25.0	24.5		ug/L		98	70 - 130
m-Xylene & p-Xylene	25.0	24.1		ug/L		96	70 - 130
Naphthalene	25.0	24.4		ug/L		98	70 - 130
n-Butylbenzene	25.0	25.8		ug/L		103	70 - 130
N-Propylbenzene	25.0	25.8		ug/L		103	70 - 130
o-Xylene	25.0	24.4		ug/L		98	70 - 130
sec-Butylbenzene	25.0	26.7		ug/L		107	70 - 130
Styrene	25.0	24.2		ug/L		97	70 - 130
Tert-amyl methyl ether	25.0	26.1		ug/L		104	70 - 130
Tert-butyl ethyl ether	25.0	26.6		ug/L		106	70 - 130
tert-Butylbenzene	25.0	27.2		ug/L		109	70 - 130
Tetrachloroethene	25.0	27.6		ug/L		110	70 - 130
Tetrahydrofuran	50.0	64.5		ug/L		129	70 - 130

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

Lab Sample ID: LCS 480-439285/5
Matrix: Water
Analysis Batch: 439285

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	23.0		ug/L		92	70 - 130
trans-1,2-Dichloroethene	25.0	22.8		ug/L		91	70 - 130
trans-1,3-Dichloropropene	25.0	25.3		ug/L		101	70 - 130
Trichloroethene	25.0	24.8		ug/L		99	70 - 130
Trichlorofluoromethane	25.0	26.3		ug/L		105	70 - 130
Vinyl chloride	25.0	25.2		ug/L		101	70 - 130
Dibromomethane	25.0	24.4		ug/L		97	70 - 130

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

Lab Sample ID: LCSD 480-439285/6
Matrix: Water
Analysis Batch: 439285

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	25.0	24.9		ug/L		100	70 - 130	1	20
1,1,1-Trichloroethane	25.0	25.2		ug/L		101	70 - 130	1	20
1,1,2,2-Tetrachloroethane	25.0	24.0		ug/L		96	70 - 130	1	20
1,1,2-Trichloroethane	25.0	24.4		ug/L		97	70 - 130	6	20
1,1-Dichloroethane	25.0	26.0		ug/L		104	70 - 130	1	20
1,1-Dichloroethene	25.0	25.1		ug/L		101	70 - 130	0	20
1,1-Dichloropropene	25.0	27.0		ug/L		108	70 - 130	3	20
1,2,3-Trichlorobenzene	25.0	25.0		ug/L		100	70 - 130	1	20
1,2,3-Trichloropropane	25.0	24.2		ug/L		97	70 - 130	4	20
1,2,4-Trichlorobenzene	25.0	25.6		ug/L		102	70 - 130	5	20
1,2,4-Trimethylbenzene	25.0	27.6		ug/L		111	70 - 130	2	20
1,2-Dibromo-3-Chloropropane	25.0	23.8		ug/L		95	70 - 130	9	20
1,2-Dichlorobenzene	25.0	25.0		ug/L		100	70 - 130	2	20
1,2-Dichloroethane	25.0	22.9		ug/L		91	70 - 130	3	20
1,2-Dichloropropane	25.0	25.6		ug/L		102	70 - 130	3	20
1,3,5-Trimethylbenzene	25.0	28.0		ug/L		112	70 - 130	1	20
1,3-Dichlorobenzene	25.0	25.7		ug/L		103	70 - 130	3	20
1,3-Dichloropropane	25.0	24.7		ug/L		99	70 - 130	2	20
1,4-Dichlorobenzene	25.0	25.4		ug/L		102	70 - 130	3	20
1,4-Dioxane	500	546		ug/L		109	70 - 130	5	20
2,2-Dichloropropane	25.0	25.5		ug/L		102	70 - 130	2	20
2-Butanone (MEK)	125	245	*	ug/L		196	70 - 130	0	20
2-Chlorotoluene	25.0	25.7		ug/L		103	70 - 130	3	20
2-Hexanone	125	133		ug/L		106	70 - 130	5	20
4-Chlorotoluene	25.0	27.0		ug/L		108	70 - 130	4	20
4-Isopropyltoluene	25.0	27.8		ug/L		111	70 - 130	4	20
4-Methyl-2-pentanone (MIBK)	125	125		ug/L		100	70 - 130	3	20
Acetone	125	144		ug/L		115	70 - 130	0	20
Benzene	25.0	25.7		ug/L		103	70 - 130	3	20
Bromobenzene	25.0	25.8		ug/L		103	70 - 130	0	20

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

Lab Sample ID: LCSD 480-439285/6
Matrix: Water
Analysis Batch: 439285

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	23.6		ug/L		94	70 - 130	6	20
Bromomethane	25.0	22.5		ug/L		90	70 - 130	1	20
Carbon disulfide	25.0	24.6		ug/L		99	70 - 130	3	20
Carbon tetrachloride	25.0	25.9		ug/L		104	70 - 130	2	20
Chlorobenzene	25.0	24.4		ug/L		97	70 - 130	5	20
Chlorobromomethane	25.0	23.9		ug/L		95	70 - 130	0	20
Chlorodibromomethane	25.0	23.5		ug/L		94	70 - 130	2	20
Chloroethane	25.0	23.8		ug/L		95	70 - 130	1	20
Chloroform	25.0	24.1		ug/L		96	70 - 130	2	20
Chloromethane	25.0	23.3		ug/L		93	70 - 130	1	20
cis-1,2-Dichloroethene	25.0	25.0		ug/L		100	70 - 130	7	20
cis-1,3-Dichloropropene	25.0	27.9		ug/L		111	70 - 130	2	20
Dichlorobromomethane	25.0	25.9		ug/L		104	70 - 130	1	20
Dichlorodifluoromethane	25.0	26.0		ug/L		104	70 - 130	6	20
Ethyl ether	25.0	23.0		ug/L		92	70 - 130	3	20
Ethylbenzene	25.0	25.3		ug/L		101	70 - 130	6	20
Ethylene Dibromide	25.0	25.5		ug/L		102	70 - 130	8	20
Hexachlorobutadiene	25.0	27.8		ug/L		111	70 - 130	6	20
Isopropyl ether	25.0	27.8		ug/L		111	70 - 130	2	20
Isopropylbenzene	25.0	27.7		ug/L		111	70 - 130	1	20
Methyl tert-butyl ether	25.0	25.1		ug/L		101	70 - 130	4	20
Methylene Chloride	25.0	25.3		ug/L		101	70 - 130	3	20
m-Xylene & p-Xylene	25.0	25.6		ug/L		102	70 - 130	6	20
Naphthalene	25.0	24.9		ug/L		100	70 - 130	2	20
n-Butylbenzene	25.0	26.6		ug/L		106	70 - 130	3	20
N-Propylbenzene	25.0	27.1		ug/L		109	70 - 130	5	20
o-Xylene	25.0	25.2		ug/L		101	70 - 130	3	20
sec-Butylbenzene	25.0	27.5		ug/L		110	70 - 130	3	20
Styrene	25.0	25.0		ug/L		100	70 - 130	3	20
Tert-amyl methyl ether	25.0	28.2		ug/L		113	70 - 130	8	20
Tert-butyl ethyl ether	25.0	27.4		ug/L		110	70 - 130	3	20
tert-Butylbenzene	25.0	28.2		ug/L		113	70 - 130	3	20
Tetrachloroethene	25.0	29.2		ug/L		117	70 - 130	6	20
Tetrahydrofuran	50.0	65.5	*	ug/L		131	70 - 130	1	20
Toluene	25.0	23.9		ug/L		96	70 - 130	4	20
trans-1,2-Dichloroethene	25.0	23.9		ug/L		95	70 - 130	5	20
trans-1,3-Dichloropropene	25.0	26.5		ug/L		106	70 - 130	5	20
Trichloroethene	25.0	25.8		ug/L		103	70 - 130	4	20
Trichlorofluoromethane	25.0	27.0		ug/L		108	70 - 130	3	20
Vinyl chloride	25.0	26.2		ug/L		105	70 - 130	4	20
Dibromomethane	25.0	24.8		ug/L		99	70 - 130	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*98*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*

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

Lab Sample ID: MB 200-135288/1-A
Matrix: Water
Analysis Batch: 135347

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 135288

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20		ug/L		10/16/18 11:30	10/17/18 13:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*91*		*46 - 130*	*10/16/18 11:30*	*10/17/18 13:45*	*1*

Lab Sample ID: LCS 200-135288/2-A
Matrix: Water
Analysis Batch: 135347

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 135288

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	2.00	2.09		ug/L		105	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*94*		*46 - 130*

Lab Sample ID: LCSD 200-135288/3-A
Matrix: Water
Analysis Batch: 135347

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 135288

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane	2.00	2.40		ug/L		120	70 - 130	14	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*106*		*46 - 130*

Method: 6010 - Metals (ICP)

Lab Sample ID: MB 480-439229/1-A
Matrix: Water
Analysis Batch: 439626

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 439229

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050		mg/L		10/13/18 09:16	10/15/18 11:55	1

Lab Sample ID: LCS 480-439229/2-A
Matrix: Water
Analysis Batch: 439626

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 439229

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	10.2		mg/L		102	80 - 120

Lab Sample ID: LCSD 480-439229/25-A
Matrix: Water
Analysis Batch: 439626

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 439229

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	10.0	10.2		mg/L		102	80 - 120	0	20

Method: 6010 - Metals (ICP) (Continued)

Lab Sample ID: 480-143195-1 MS — **Client Sample ID: MW-267S-20181009**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 439626 — **Prep Batch: 439229**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	670		10.0	623	4	mg/L		-455	75 - 125

Lab Sample ID: 480-143195-1 MSD — **Client Sample ID: MW-267S-20181009**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 439626 — **Prep Batch: 439229**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	670		10.0	635	4	mg/L		-333	75 - 125	2	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-439547/28 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 439547

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50		mg/L			10/16/18 00:03	1
Sulfate	ND		2.0		mg/L			10/16/18 00:03	1

Lab Sample ID: LCS 480-439547/27 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 439547

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	52.1		mg/L		104	90 - 110
Sulfate	50.0	48.1		mg/L		96	90 - 110

Lab Sample ID: 480-143195-12 MS — **Client Sample ID: REW-920181009**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 439547

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	14		50.0	64.6		mg/L		101	81 - 120
Sulfate	51		50.0	92.8		mg/L		84	80 - 120

Lab Sample ID: 480-143195-12 MSD — **Client Sample ID: REW-920181009**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 439547

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	14		50.0	65.2		mg/L		102	81 - 120	1	20
Sulfate	51		50.0	97.6		mg/L		93	80 - 120	5	20

Lab Sample ID: MB 480-439680/28 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 439680

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50		mg/L			10/16/18 16:18	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 480-439680/28
Matrix: Water
Analysis Batch: 439680

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		2.0		mg/L			10/16/18 16:18	1

Lab Sample ID: LCS 480-439680/27
Matrix: Water
Analysis Batch: 439680

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	51.5		mg/L		103	90 - 110
Sulfate	50.0	48.8		mg/L		98	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-439370/1-A
Matrix: Water
Analysis Batch: 439591

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 439370

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.20		mg/L		10/15/18 01:08	10/16/18 06:48	1

Lab Sample ID: LCS 480-439370/2-A
Matrix: Water
Analysis Batch: 439591

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 439370

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	0.973		mg/L		97	90 - 110

Lab Sample ID: 480-143195-1 MS
Matrix: Water
Analysis Batch: 439591

Client Sample ID: MW-267S-20181009
Prep Type: Total/NA
Prep Batch: 439370

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	0.49	F1	0.500	0.779	F1	mg/L		57	90 - 110

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

Lab Sample ID: MB 480-440673/4
Matrix: Water
Analysis Batch: 440673

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			10/18/18 21:50	1
TOC Result 2	ND		1.0		mg/L			10/18/18 21:50	1
Total Organic Carbon - Duplicates	ND		1.0		mg/L			10/18/18 21:50	1

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

Lab Sample ID: LCS 480-440673/5
Matrix: Water
Analysis Batch: 440673

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	59.5		mg/L		99	90 - 110
Total Organic Carbon - Duplicates	60.0	59.0		mg/L		98	90 - 110

Lab Sample ID: MB 480-440914/4
Matrix: Water
Analysis Batch: 440914

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			10/20/18 19:25	1
TOC Result 2	ND		1.0		mg/L			10/20/18 19:25	1
Total Organic Carbon - Duplicates	ND		1.0		mg/L			10/20/18 19:25	1

Lab Sample ID: LCS 480-440914/5
Matrix: Water
Analysis Batch: 440914

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		102	90 - 110
Total Organic Carbon - Duplicates	60.0	60.3		mg/L		101	90 - 110

Lab Sample ID: MB 480-441230/4
Matrix: Water
Analysis Batch: 441230

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			10/22/18 21:42	1
TOC Result 2	ND		1.0		mg/L			10/22/18 21:42	1
Total Organic Carbon - Duplicates	ND		1.0		mg/L			10/22/18 21:42	1

Lab Sample ID: LCS 480-441230/5
Matrix: Water
Analysis Batch: 441230

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	60.3		mg/L		100	90 - 110
TOC Result 2	60.0	61.4		mg/L		102	90 - 110
Total Organic Carbon - Duplicates	60.0	60.8		mg/L		101	90 - 110

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-439462/7
Matrix: Water
Analysis Batch: 439462

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			10/14/18 15:39	1

Lab Sample ID: LCS 480-439462/8
Matrix: Water
Analysis Batch: 439462

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Alkalinity, Total			100	94.2		mg/L		94	90 - 110		

Lab Sample ID: 480-143195-1 MS
Matrix: Water
Analysis Batch: 439462

Client Sample ID: MW-267S-20181009
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Alkalinity, Total	790		100	800	4	mg/L		10	60 - 140		

Lab Sample ID: 480-143195-3 DU
Matrix: Water
Analysis Batch: 439462

Client Sample ID: MW-268S-20181009
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Alkalinity, Total	100			103		mg/L				2	20

Method: SM 4500 P E - Orthophosphate

Lab Sample ID: MB 480-438931/3
Matrix: Water
Analysis Batch: 438931

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			10/11/18 10:00	1

Lab Sample ID: LCS 480-438931/4
Matrix: Water
Analysis Batch: 438931

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	0.180		mg/L		90	90 - 110		

Lab Sample ID: 480-143195-3 MS
Matrix: Water
Analysis Batch: 438931

Client Sample ID: MW-268S-20181009
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
ortho-Phosphate	0.10	H	1.00	1.06		mg/L		96	49 - 138		

Method: SM 4500 P E - Orthophosphate (Continued)

Lab Sample ID: 480-143195-3 MSD
Matrix: Water
Analysis Batch: 438931

Client Sample ID: MW-268S-20181009
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	0.10	H	1.00	1.08		mg/L		98	49 - 138	2	20

GC/MS VOA

Analysis Batch: 439252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143195-1	MW-267S-20181009	Total/NA	Water	8260C	
480-143195-3	MW-268S-20181009	Total/NA	Water	8260C	
480-143195-4	MW-268M-20181009	Total/NA	Water	8260C	
480-143195-5	MW-268D-20181009	Total/NA	Water	8260C	
480-143195-6	REW-6-20181009	Total/NA	Water	8260C	
480-143195-7	REW-7-20181009	Total/NA	Water	8260C	
480-143195-8	REW-8-20181009	Total/NA	Water	8260C	
480-143195-9	REW-11-20181009	Total/NA	Water	8260C	
480-143195-10	DUP1-20181009	Total/NA	Water	8260C	
480-143195-11	TRIP BLANKS	Total/NA	Water	8260C	
480-143195-12	REW-920181009	Total/NA	Water	8260C	
MB 480-439252/8	Method Blank	Total/NA	Water	8260C	
LCS 480-439252/5	Lab Control Sample	Total/NA	Water	8260C	
LCSD 480-439252/6	Lab Control Sample Dup	Total/NA	Water	8260C	

Analysis Batch: 439285

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143195-2	MW-267M-20181009	Total/NA	Water	8260C	
MB 480-439285/8	Method Blank	Total/NA	Water	8260C	
LCS 480-439285/5	Lab Control Sample	Total/NA	Water	8260C	
LCSD 480-439285/6	Lab Control Sample Dup	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 135288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143195-1	MW-267S-20181009	Total/NA	Water	3535A	
480-143195-2	MW-267M-20181009	Total/NA	Water	3535A	
480-143195-3	MW-268S-20181009	Total/NA	Water	3535A	
480-143195-4	MW-268M-20181009	Total/NA	Water	3535A	
480-143195-6	REW-6-20181009	Total/NA	Water	3535A	
480-143195-7	REW-7-20181009	Total/NA	Water	3535A	
480-143195-8	REW-8-20181009	Total/NA	Water	3535A	
480-143195-9	REW-11-20181009	Total/NA	Water	3535A	
480-143195-10	DUP1-20181009	Total/NA	Water	3535A	
480-143195-12	REW-920181009	Total/NA	Water	3535A	
MB 200-135288/1-A	Method Blank	Total/NA	Water	3535A	
LCS 200-135288/2-A	Lab Control Sample	Total/NA	Water	3535A	
LCSD 200-135288/3-A	Lab Control Sample Dup	Total/NA	Water	3535A	

Analysis Batch: 135347

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143195-1	MW-267S-20181009	Total/NA	Water	522	135288
480-143195-2	MW-267M-20181009	Total/NA	Water	522	135288
480-143195-3	MW-268S-20181009	Total/NA	Water	522	135288
480-143195-4	MW-268M-20181009	Total/NA	Water	522	135288
480-143195-6	REW-6-20181009	Total/NA	Water	522	135288
480-143195-8	REW-8-20181009	Total/NA	Water	522	135288
480-143195-9	REW-11-20181009	Total/NA	Water	522	135288
480-143195-10	DUP1-20181009	Total/NA	Water	522	135288

GC/MS Semi VOA (Continued)

Analysis Batch: 135347 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143195-12	REW-920181009	Total/NA	Water	522	135288
MB 200-135288/1-A	Method Blank	Total/NA	Water	522	135288
LCS 200-135288/2-A	Lab Control Sample	Total/NA	Water	522	135288
LCSD 200-135288/3-A	Lab Control Sample Dup	Total/NA	Water	522	135288

Analysis Batch: 135405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143195-7	REW-7-20181009	Total/NA	Water	522	135288

Metals

Prep Batch: 439229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143195-1	MW-267S-20181009	Total/NA	Water	3005A	
480-143195-3	MW-268S-20181009	Total/NA	Water	3005A	
480-143195-4	MW-268M-20181009	Total/NA	Water	3005A	
480-143195-6	REW-6-20181009	Total/NA	Water	3005A	
480-143195-7	REW-7-20181009	Total/NA	Water	3005A	
480-143195-8	REW-8-20181009	Total/NA	Water	3005A	
480-143195-9	REW-11-20181009	Total/NA	Water	3005A	
480-143195-12	REW-920181009	Total/NA	Water	3005A	
MB 480-439229/1-A	Method Blank	Total/NA	Water	3005A	
LCS 480-439229/2-A	Lab Control Sample	Total/NA	Water	3005A	
LCSD 480-439229/25-A	Lab Control Sample Dup	Total/NA	Water	3005A	
480-143195-1 MS	MW-267S-20181009	Total/NA	Water	3005A	
480-143195-1 MSD	MW-267S-20181009	Total/NA	Water	3005A	

Analysis Batch: 439626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143195-1	MW-267S-20181009	Total/NA	Water	6010	439229
480-143195-3	MW-268S-20181009	Total/NA	Water	6010	439229
480-143195-4	MW-268M-20181009	Total/NA	Water	6010	439229
480-143195-6	REW-6-20181009	Total/NA	Water	6010	439229
480-143195-7	REW-7-20181009	Total/NA	Water	6010	439229
480-143195-8	REW-8-20181009	Total/NA	Water	6010	439229
480-143195-9	REW-11-20181009	Total/NA	Water	6010	439229
480-143195-12	REW-920181009	Total/NA	Water	6010	439229
MB 480-439229/1-A	Method Blank	Total/NA	Water	6010	439229
LCS 480-439229/2-A	Lab Control Sample	Total/NA	Water	6010	439229
LCSD 480-439229/25-A	Lab Control Sample Dup	Total/NA	Water	6010	439229
480-143195-1 MS	MW-267S-20181009	Total/NA	Water	6010	439229
480-143195-1 MSD	MW-267S-20181009	Total/NA	Water	6010	439229

General Chemistry

Analysis Batch: 438888

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143195-1	MW-267S-20181009	Total/NA	Water	353.2	
480-143195-6	REW-6-20181009	Total/NA	Water	353.2	
480-143195-7	REW-7-20181009	Total/NA	Water	353.2	

General Chemistry (Continued)

Analysis Batch: 438888 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143195-8	REW-8-20181009	Total/NA	Water	353.2	
480-143195-9	REW-11-20181009	Total/NA	Water	353.2	
480-143195-12	REW-920181009	Total/NA	Water	353.2	

Analysis Batch: 438931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143195-1	MW-267S-20181009	Total/NA	Water	SM 4500 P E	
480-143195-3	MW-268S-20181009	Total/NA	Water	SM 4500 P E	
480-143195-4	MW-268M-20181009	Total/NA	Water	SM 4500 P E	
480-143195-6	REW-6-20181009	Total/NA	Water	SM 4500 P E	
480-143195-7	REW-7-20181009	Total/NA	Water	SM 4500 P E	
480-143195-8	REW-8-20181009	Total/NA	Water	SM 4500 P E	
480-143195-9	REW-11-20181009	Total/NA	Water	SM 4500 P E	
480-143195-12	REW-920181009	Total/NA	Water	SM 4500 P E	
MB 480-438931/3	Method Blank	Total/NA	Water	SM 4500 P E	
LCS 480-438931/4	Lab Control Sample	Total/NA	Water	SM 4500 P E	
480-143195-3 MS	MW-268S-20181009	Total/NA	Water	SM 4500 P E	
480-143195-3 MSD	MW-268S-20181009	Total/NA	Water	SM 4500 P E	

Analysis Batch: 439013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143195-3	MW-268S-20181009	Total/NA	Water	353.2	
480-143195-4	MW-268M-20181009	Total/NA	Water	353.2	

Analysis Batch: 439363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143195-1	MW-267S-20181009	Total/NA	Water	9040C	
480-143195-3	MW-268S-20181009	Total/NA	Water	9040C	
480-143195-4	MW-268M-20181009	Total/NA	Water	9040C	
480-143195-6	REW-6-20181009	Total/NA	Water	9040C	
480-143195-7	REW-7-20181009	Total/NA	Water	9040C	
480-143195-8	REW-8-20181009	Total/NA	Water	9040C	
480-143195-9	REW-11-20181009	Total/NA	Water	9040C	
480-143195-12	REW-920181009	Total/NA	Water	9040C	
LCS 480-439363/1	Lab Control Sample	Total/NA	Water	9040C	

Prep Batch: 439370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143195-1	MW-267S-20181009	Total/NA	Water	Distill/Ammonia	
480-143195-3	MW-268S-20181009	Total/NA	Water	Distill/Ammonia	
480-143195-4	MW-268M-20181009	Total/NA	Water	Distill/Ammonia	
480-143195-6	REW-6-20181009	Total/NA	Water	Distill/Ammonia	
480-143195-7	REW-7-20181009	Total/NA	Water	Distill/Ammonia	
480-143195-8	REW-8-20181009	Total/NA	Water	Distill/Ammonia	
480-143195-9	REW-11-20181009	Total/NA	Water	Distill/Ammonia	
480-143195-12	REW-920181009	Total/NA	Water	Distill/Ammonia	
MB 480-439370/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 480-439370/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	
480-143195-1 MS	MW-267S-20181009	Total/NA	Water	Distill/Ammonia	

General Chemistry (Continued)

Analysis Batch: 439462

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143195-1	MW-267S-20181009	Total/NA	Water	SM 2320B	
480-143195-3	MW-268S-20181009	Total/NA	Water	SM 2320B	
480-143195-4	MW-268M-20181009	Total/NA	Water	SM 2320B	
480-143195-6	REW-6-20181009	Total/NA	Water	SM 2320B	
480-143195-7	REW-7-20181009	Total/NA	Water	SM 2320B	
480-143195-8	REW-8-20181009	Total/NA	Water	SM 2320B	
480-143195-9	REW-11-20181009	Total/NA	Water	SM 2320B	
480-143195-12	REW-920181009	Total/NA	Water	SM 2320B	
MB 480-439462/7	Method Blank	Total/NA	Water	SM 2320B	
LCS 480-439462/8	Lab Control Sample	Total/NA	Water	SM 2320B	
480-143195-1 MS	MW-267S-20181009	Total/NA	Water	SM 2320B	
480-143195-3 DU	MW-268S-20181009	Total/NA	Water	SM 2320B	

Analysis Batch: 439547

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143195-1	MW-267S-20181009	Total/NA	Water	300.0	
480-143195-6	REW-6-20181009	Total/NA	Water	300.0	
480-143195-7	REW-7-20181009	Total/NA	Water	300.0	
480-143195-8	REW-8-20181009	Total/NA	Water	300.0	
480-143195-9	REW-11-20181009	Total/NA	Water	300.0	
480-143195-12	REW-920181009	Total/NA	Water	300.0	
MB 480-439547/28	Method Blank	Total/NA	Water	300.0	
LCS 480-439547/27	Lab Control Sample	Total/NA	Water	300.0	
480-143195-12 MS	REW-920181009	Total/NA	Water	300.0	
480-143195-12 MSD	REW-920181009	Total/NA	Water	300.0	

Analysis Batch: 439591

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143195-1	MW-267S-20181009	Total/NA	Water	350.1	439370
480-143195-3	MW-268S-20181009	Total/NA	Water	350.1	439370
480-143195-4	MW-268M-20181009	Total/NA	Water	350.1	439370
480-143195-6	REW-6-20181009	Total/NA	Water	350.1	439370
480-143195-7	REW-7-20181009	Total/NA	Water	350.1	439370
480-143195-8	REW-8-20181009	Total/NA	Water	350.1	439370
480-143195-9	REW-11-20181009	Total/NA	Water	350.1	439370
480-143195-12	REW-920181009	Total/NA	Water	350.1	439370
MB 480-439370/1-A	Method Blank	Total/NA	Water	350.1	439370
LCS 480-439370/2-A	Lab Control Sample	Total/NA	Water	350.1	439370
480-143195-1 MS	MW-267S-20181009	Total/NA	Water	350.1	439370

Analysis Batch: 439680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143195-3	MW-268S-20181009	Total/NA	Water	300.0	
480-143195-4	MW-268M-20181009	Total/NA	Water	300.0	
MB 480-439680/28	Method Blank	Total/NA	Water	300.0	
LCS 480-439680/27	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 440673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143195-3	MW-268S-20181009	Total/NA	Water	9060A	
480-143195-8	REW-8-20181009	Total/NA	Water	9060A	

General Chemistry (Continued)

Analysis Batch: 440673 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-440673/4	Method Blank	Total/NA	Water	9060A	
LCS 480-440673/5	Lab Control Sample	Total/NA	Water	9060A	

Analysis Batch: 440914

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143195-1	MW-267S-20181009	Total/NA	Water	9060A	
480-143195-4	MW-268M-20181009	Total/NA	Water	9060A	
480-143195-6	REW-6-20181009	Total/NA	Water	9060A	
480-143195-7	REW-7-20181009	Total/NA	Water	9060A	
480-143195-12	REW-920181009	Total/NA	Water	9060A	
MB 480-440914/4	Method Blank	Total/NA	Water	9060A	
LCS 480-440914/5	Lab Control Sample	Total/NA	Water	9060A	

Analysis Batch: 441230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-143195-9	REW-11-20181009	Total/NA	Water	9060A	
MB 480-441230/4	Method Blank	Total/NA	Water	9060A	
LCS 480-441230/5	Lab Control Sample	Total/NA	Water	9060A	

Client Sample ID: MW-267S-20181009

Lab Sample ID: 480-143195-1

Date Collected: 10/09/18 12:10

Matrix: Water

Date Received: 10/10/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		20	439252	10/13/18 00:33	AEM	TAL BUF
Total/NA	Prep	3535A			135288	10/16/18 11:30	MJW	TAL BUR
Total/NA	Analysis	522		1	135347	10/17/18 14:51	A1B	TAL BUR
Total/NA	Prep	3005A			439229	10/13/18 09:16	KMP	TAL BUF
Total/NA	Analysis	6010		5	439626	10/15/18 12:14	EMB	TAL BUF
Total/NA	Analysis	300.0		10	439547	10/16/18 00:11	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			439370	10/15/18 01:08	MLS	TAL BUF
Total/NA	Analysis	350.1		1	439591	10/16/18 06:58	CLT	TAL BUF
Total/NA	Analysis	353.2		1	438888	10/11/18 10:24	CLT	TAL BUF
Total/NA	Analysis	9040C		1	439363	10/14/18 13:24	KEB	TAL BUF
Total/NA	Analysis	9060A		20	440914	10/20/18 23:11	MRF	TAL BUF
Total/NA	Analysis	SM 2320B		1	439462	10/14/18 15:55	KEB	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	438931	10/11/18 10:00	KEB	TAL BUF

Client Sample ID: MW-267M-20181009

Lab Sample ID: 480-143195-2

Date Collected: 10/09/18 12:55

Matrix: Water

Date Received: 10/10/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	439285	10/13/18 19:22	AEM	TAL BUF
Total/NA	Prep	3535A			135288	10/16/18 11:30	MJW	TAL BUR
Total/NA	Analysis	522		1	135347	10/17/18 15:04	A1B	TAL BUR

Client Sample ID: MW-268S-20181009

Lab Sample ID: 480-143195-3

Date Collected: 10/09/18 08:35

Matrix: Water

Date Received: 10/10/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		4	439252	10/13/18 01:26	AEM	TAL BUF
Total/NA	Prep	3535A			135288	10/16/18 11:30	MJW	TAL BUR
Total/NA	Analysis	522		1	135347	10/17/18 15:17	A1B	TAL BUR
Total/NA	Prep	3005A			439229	10/13/18 09:16	KMP	TAL BUF
Total/NA	Analysis	6010		1	439626	10/15/18 12:41	EMB	TAL BUF
Total/NA	Analysis	300.0		1	439680	10/16/18 18:37	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			439370	10/15/18 01:08	MLS	TAL BUF
Total/NA	Analysis	350.1		1	439591	10/16/18 07:00	CLT	TAL BUF
Total/NA	Analysis	353.2		1	439013	10/11/18 18:38	DCB	TAL BUF
Total/NA	Analysis	9040C		1	439363	10/14/18 13:27	KEB	TAL BUF
Total/NA	Analysis	9060A		1	440673	10/19/18 01:34	SMH	TAL BUF
Total/NA	Analysis	SM 2320B		1	439462	10/14/18 16:09	KEB	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	438931	10/11/18 10:00	KEB	TAL BUF

Client Sample ID: MW-268M-20181009

Lab Sample ID: 480-143195-4

Date Collected: 10/09/18 09:15

Matrix: Water

Date Received: 10/10/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		2	439252	10/13/18 01:52	AEM	TAL BUF
Total/NA	Prep	3535A			135288	10/16/18 11:30	MJW	TAL BUR
Total/NA	Analysis	522		1	135347	10/17/18 15:31	A1B	TAL BUR
Total/NA	Prep	3005A			439229	10/13/18 09:16	KMP	TAL BUF
Total/NA	Analysis	6010		1	439626	10/15/18 12:44	EMB	TAL BUF
Total/NA	Analysis	300.0		2	439680	10/16/18 18:45	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			439370	10/15/18 01:08	MLS	TAL BUF
Total/NA	Analysis	350.1		1	439591	10/16/18 07:01	CLT	TAL BUF
Total/NA	Analysis	353.2		1	439013	10/11/18 22:38	DCB	TAL BUF
Total/NA	Analysis	9040C		1	439363	10/14/18 13:29	KEB	TAL BUF
Total/NA	Analysis	9060A		1	440914	10/20/18 23:39	MRF	TAL BUF
Total/NA	Analysis	SM 2320B		1	439462	10/14/18 16:21	KEB	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	438931	10/11/18 10:00	KEB	TAL BUF

Client Sample ID: MW-268D-20181009

Lab Sample ID: 480-143195-5

Date Collected: 10/09/18 10:00

Matrix: Water

Date Received: 10/10/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		2	439252	10/13/18 02:19	AEM	TAL BUF

Client Sample ID: REW-6-20181009

Lab Sample ID: 480-143195-6

Date Collected: 10/09/18 11:25

Matrix: Water

Date Received: 10/10/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		20	439252	10/13/18 02:46	AEM	TAL BUF
Total/NA	Prep	3535A			135288	10/16/18 11:30	MJW	TAL BUR
Total/NA	Analysis	522		1	135347	10/17/18 15:44	A1B	TAL BUR
Total/NA	Prep	3005A			439229	10/13/18 09:16	KMP	TAL BUF
Total/NA	Analysis	6010		1	439626	10/15/18 12:48	EMB	TAL BUF
Total/NA	Analysis	300.0		10	439547	10/16/18 00:19	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			439370	10/15/18 01:08	MLS	TAL BUF
Total/NA	Analysis	350.1		1	439591	10/16/18 07:01	CLT	TAL BUF
Total/NA	Analysis	353.2		1	438888	10/11/18 10:27	CLT	TAL BUF
Total/NA	Analysis	9040C		1	439363	10/14/18 13:32	KEB	TAL BUF
Total/NA	Analysis	9060A		20	440914	10/21/18 02:56	MRF	TAL BUF
Total/NA	Analysis	SM 2320B		1	439462	10/14/18 16:30	KEB	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	438931	10/11/18 10:00	KEB	TAL BUF

Client Sample ID: REW-7-20181009

Lab Sample ID: 480-143195-7

Date Collected: 10/09/18 13:30

Matrix: Water

Date Received: 10/10/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	439252	10/13/18 03:12	AEM	TAL BUF
Total/NA	Prep	3535A			135288	10/16/18 11:30	MJW	TAL BUR
Total/NA	Analysis	522		1	135405	10/18/18 07:59	TPB	TAL BUR
Total/NA	Prep	3005A			439229	10/13/18 09:16	KMP	TAL BUF
Total/NA	Analysis	6010		1	439626	10/15/18 12:52	EMB	TAL BUF
Total/NA	Analysis	300.0		1	439547	10/16/18 00:27	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			439370	10/15/18 01:08	MLS	TAL BUF
Total/NA	Analysis	350.1		1	439591	10/16/18 07:02	CLT	TAL BUF
Total/NA	Analysis	353.2		1	438888	10/11/18 10:02	CLT	TAL BUF
Total/NA	Analysis	9040C		1	439363	10/14/18 13:34	KEB	TAL BUF
Total/NA	Analysis	9060A		1	440914	10/21/18 03:25	MRF	TAL BUF
Total/NA	Analysis	SM 2320B		1	439462	10/14/18 16:34	KEB	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	438931	10/11/18 10:00	KEB	TAL BUF

Client Sample ID: REW-8-20181009

Lab Sample ID: 480-143195-8

Date Collected: 10/09/18 14:10

Matrix: Water

Date Received: 10/10/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	439252	10/13/18 03:39	AEM	TAL BUF
Total/NA	Prep	3535A			135288	10/16/18 11:30	MJW	TAL BUR
Total/NA	Analysis	522		1	135347	10/17/18 16:23	A1B	TAL BUR
Total/NA	Prep	3005A			439229	10/13/18 09:16	KMP	TAL BUF
Total/NA	Analysis	6010		1	439626	10/15/18 13:03	EMB	TAL BUF
Total/NA	Analysis	300.0		1	439547	10/16/18 00:35	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			439370	10/15/18 01:08	MLS	TAL BUF
Total/NA	Analysis	350.1		1	439591	10/16/18 07:03	CLT	TAL BUF
Total/NA	Analysis	353.2		1	438888	10/11/18 10:03	CLT	TAL BUF
Total/NA	Analysis	9040C		1	439363	10/14/18 13:37	KEB	TAL BUF
Total/NA	Analysis	9060A		1	440673	10/19/18 06:46	SMH	TAL BUF
Total/NA	Analysis	SM 2320B		1	439462	10/14/18 16:51	KEB	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	438931	10/11/18 10:00	KEB	TAL BUF

Client Sample ID: REW-11-20181009

Lab Sample ID: 480-143195-9

Date Collected: 10/09/18 10:35

Matrix: Water

Date Received: 10/10/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		20	439252	10/13/18 04:06	AEM	TAL BUF
Total/NA	Prep	3535A			135288	10/16/18 11:30	MJW	TAL BUR
Total/NA	Analysis	522		1	135347	10/17/18 16:36	A1B	TAL BUR
Total/NA	Prep	3005A			439229	10/13/18 09:16	KMP	TAL BUF

Client Sample ID: REW-11-20181009

Lab Sample ID: 480-143195-9

Date Collected: 10/09/18 10:35

Matrix: Water

Date Received: 10/10/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6010		1	439626	10/15/18 13:07	EMB	TAL BUF
Total/NA	Analysis	300.0		20	439547	10/16/18 00:43	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			439370	10/15/18 01:08	MLS	TAL BUF
Total/NA	Analysis	350.1		1	439591	10/16/18 07:04	CLT	TAL BUF
Total/NA	Analysis	353.2		1	438888	10/11/18 10:26	CLT	TAL BUF
Total/NA	Analysis	9040C		1	439363	10/14/18 13:40	KEB	TAL BUF
Total/NA	Analysis	9060A		100	441230	10/23/18 00:59	SMH	TAL BUF
Total/NA	Analysis	SM 2320B		1	439462	10/14/18 17:03	KEB	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	438931	10/11/18 10:00	KEB	TAL BUF

Client Sample ID: DUP1-20181009

Lab Sample ID: 480-143195-10

Date Collected: 10/09/18 00:00

Matrix: Water

Date Received: 10/10/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		20	439252	10/13/18 04:33	AEM	TAL BUF
Total/NA	Prep	3535A			135288	10/16/18 11:30	MJW	TAL BUR
Total/NA	Analysis	522		1	135347	10/17/18 16:50	A1B	TAL BUR

Client Sample ID: TRIP BLANKS

Lab Sample ID: 480-143195-11

Date Collected: 10/09/18 00:00

Matrix: Water

Date Received: 10/10/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	439252	10/13/18 04:59	AEM	TAL BUF

Client Sample ID: REW-920181009

Lab Sample ID: 480-143195-12

Date Collected: 10/09/18 14:50

Matrix: Water

Date Received: 10/10/18 01:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	439252	10/13/18 05:26	AEM	TAL BUF
Total/NA	Prep	3535A			135288	10/16/18 11:30	MJW	TAL BUR
Total/NA	Analysis	522		1	135347	10/17/18 17:03	A1B	TAL BUR
Total/NA	Prep	3005A			439229	10/13/18 09:16	KMP	TAL BUF
Total/NA	Analysis	6010		1	439626	10/15/18 13:26	EMB	TAL BUF
Total/NA	Analysis	300.0		1	439547	10/16/18 00:52	DMR	TAL BUF
Total/NA	Prep	Distill/Ammonia			439370	10/15/18 01:08	MLS	TAL BUF
Total/NA	Analysis	350.1		1	439591	10/16/18 07:05	CLT	TAL BUF
Total/NA	Analysis	353.2		1	438888	10/11/18 10:08	CLT	TAL BUF
Total/NA	Analysis	9040C		1	439363	10/14/18 13:42	KEB	TAL BUF
Total/NA	Analysis	9060A		1	440914	10/21/18 04:21	MRF	TAL BUF

Lab Chronicle

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

TestAmerica Job ID: 480-143195-1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2320B		1	439462	10/14/18 17:08	KEB	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	438931	10/11/18 10:00	KEB	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

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

TestAmerica Job ID: 480-143195-1

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	07-06-19
California	State Program	9	2931	04-01-19
Connecticut	State Program	1	PH-0568	09-30-20
Florida	NELAP	4	E87672	06-30-19
Georgia	State Program	4	10026 (NY)	03-31-19
Georgia	State Program	4	956	03-31-19
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	06-30-19
Maine	State Program	1	NY00044	12-04-18 *
Maryland	State Program	3	294	03-31-19
Massachusetts	State Program	1	M-NY044	06-30-19
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	06-30-19
New York	NELAP	2	10026	03-31-19
North Dakota	State Program	8	R-176	03-31-19
Oklahoma	State Program	6	9421	08-31-19
Oregon	NELAP	10	NY200003	06-09-19
Pennsylvania	NELAP	3	68-00281	07-31-19
Rhode Island	State Program	1	LAO00328	12-30-18
Tennessee	State Program	4	TN02970	03-31-19
Texas	NELAP	6	T104704412-15-6	07-31-19
USDA	Federal		P330-11-00386	02-06-21
Virginia	NELAP	3	460185	09-14-19
Washington	State Program	10	C784	02-10-19
Wisconsin	State Program	5	998310390	08-31-19

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
Maine	State Program	1	VT00008	04-17-19
Minnesota	NELAP	5	050-999-436	12-31-18
New Hampshire	NELAP	1	2006	12-18-18
New Jersey	NELAP	2	VT972	06-30-19
New York	NELAP	2	10391	04-01-19
Pennsylvania	NELAP	3	68-00489	04-30-19
Rhode Island	State Program	1	LAO00298	12-30-18
US Fish & Wildlife	Federal		LE-058448-0	07-31-19
USDA	Federal		P330-11-00093	07-24-20
Vermont	State Program	1	VT-4000	12-31-18

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

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

TestAmerica Job ID: 480-143195-1

Laboratory: TestAmerica Burlington (Continued)

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
Virginia	NELAP	3	460209	12-14-18

Method Summary

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

TestAmerica Job ID: 480-143195-1

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: 480-143195-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-143195-1	MW-267S-20181009	Water	10/09/18 12:10	10/10/18 01:00
480-143195-2	MW-267M-20181009	Water	10/09/18 12:55	10/10/18 01:00
480-143195-3	MW-268S-20181009	Water	10/09/18 08:35	10/10/18 01:00
480-143195-4	MW-268M-20181009	Water	10/09/18 09:15	10/10/18 01:00
480-143195-5	MW-268D-20181009	Water	10/09/18 10:00	10/10/18 01:00
480-143195-6	REW-6-20181009	Water	10/09/18 11:25	10/10/18 01:00
480-143195-7	REW-7-20181009	Water	10/09/18 13:30	10/10/18 01:00
480-143195-8	REW-8-20181009	Water	10/09/18 14:10	10/10/18 01:00
480-143195-9	REW-11-20181009	Water	10/09/18 10:35	10/10/18 01:00
480-143195-10	DUP1-20181009	Water	10/09/18 00:00	10/10/18 01:00
480-143195-11	TRIP BLANKS	Water	10/09/18 00:00	10/10/18 01:00
480-143195-12	REW-920181009	Water	10/09/18 14:50	10/10/18 01:00

Login Sample Receipt Checklist

Client: Innovative Engineering Solutions, Inc

Job Number: 480-143195-1

Login Number: 143195

List Source: TestAmerica Buffalo

List Number: 1

Creator: Mason, Becky C

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	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	True	

Login Sample Receipt Checklist

Client: Innovative Engineering Solutions, Inc

Job Number: 480-143195-1

Login Number: 143195
List Number: 2
Creator: Johnson, Eleanor E

List Source: TestAmerica Burlington
List Creation: 10/11/18 09:53 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	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	0.1ºC, 0.4ºC
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 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	

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

480-143195 COC

COC No: 41107
Page: 1 of 2

Client Information:

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

Sample Collector's Name (Please Print Neatly): Dave Jones
Sample Collector's Phone: 508-404-3196
Lab PM:
E-Mail:
Lab COC #:

Due Date Requested: 10/16/18
Turnaround Time (TAT) Requested (business days): 5 days
Quote # or Project #:
PO #: RA-008
WO #:
PWS ID #:

Job #:

Analysis Requested

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

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

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

Sample Identification	Sample Collection Date (MM/DD/YY)	Sample Collection Time (24 Hour Clock)	Sample Type: C=Comp G=Grab	Matrix Type **	6010 msp	537 Biozone	9060A TOC	6010 msp Total Iron	350.1 NH3	8330B Alkalinity	350.1-SM 4500C pH	4500C pH 353.2 NO3							Total Number of Containers (enter total for each line)	Special Instructions & Notes:
Preservation Codes =>					A	A	A	D	S	N	N	N							↓	
MW-267S-20181009	10/9/18	1210	G	W	X	X	X	X	X	X	X	X							11	GW-3
MW-267M-20181009	10/9/18	1255	G	W	X	X													4	Requirements
MW-268S-20181009	10/9/18	0833	G	W	X	X	X	X	X	X	X	X							11	
MW-268M-20181009	10/9/18	0915	G	W	X	X	X	X	X	X	X	X							11	
MW-268D-20181009	10/9/18	1000	G	W	X														3	
REW-6-20181009	10/9/18	1125	G	W	X	X	X	X	X	X	X	X							11	
REW-7-20181009	10/9/18	1330	G	W	X	X	X	X	X	X	X	X							11	
REW-8-20181009	10/9/18	1410	G	W	X	X	X	X	X	X	X	X							11	
REW-11-20181009	10/9/18	1035	G	W	X	X	X	X	X	X	X	X							11	
Dup1-20181009	10/9/18	—	G	W	X	X													4	

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

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

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

▶ NOTE!! ALL SAMPLES MUST BE TRANSPORTED IN A COOLER, ON ICE !! ◀

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	1525	IESI		10/9/18 1525	
	10/9/18 1615			10/10/18 0900	

Custody Seals Intact: ☐ Yes ☐ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 1.9°C #3

WI-QA-010 rev 8

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

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information:	
Client Contact:	Vicki Puniyar
Company:	Innovative Engineering Solutions Inc
Address:	23 Spring St
City:	Walpole
State and Zip:	MA 02081
Client's Phone:	508-[illegible] 668-8033
Client's Contact Email:	v.puniyar@iesinc.com
Client's Project Name/Number:	Raytheon Wayland RA-008
Sample Collection Site Name & Location:	Wayland MA
Sample Collector's Name (Please Print Neatly):	Dan Sao
Sample Collector's Phone:	508-404-3186
Due Date Requested:	10/16/18
Turnaround Time (TAT) Requested (business days):	5 days
Quote # or Project #:	
PO #:	RA-008
WO #:	
PWS ID #:	
Lab PM:	
E-Mail:	
Lab COC Barcode Label	
COC No:	41108
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 **	8260 MCP	522 Dioxane	9010? TOC	6010 MCP Total Iron	350.1 NH3	300.0_28D SO4, Cl, 9040 pH	4500P-E Ortho PO4, 353.2 NO3	2320B Alkalinity	Total Number of Containers (enter total for each line)	Special Instructions & Notes:
			Preservation Codes =>		A	A	A	D	S	N	N	N		
Trip Blanks	—	—	—	W	X								3	GW-3
Temperature Blank	—	—	—	W									1	Requirements
REW-9-20181009	10/9/18	1450	G	W	X	X	X	X	X	X	X	X		

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

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

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

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

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

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

▶ **NOTE!! ALL SAMPLES MUST BE TRANSPORTED IN A COOLER, ON ICE !!** ◀

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	10/9/18 1525	IESI	[signature]	10/9/18 15:04	TA
[signature]	10/9/18 16:15	TA	[signature]	10/10/18 0100	TAB

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 1.9°C #3

WI-QA-010 rev 8

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

360325-Boston

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

360325-Boston

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

480-143195 Chain of Custody

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

COC No: 41107
Page: 1 of 2
Job #:

Client Information:

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

Sample Collector's Name (Please Print Neatly): Dave Sousa
Sample Collector's Phone: 508-404-3196
Lab PM:
E-Mail:

Due Date Requested: 10/16/18
Turnaround Time (TAT) Requested (business days): 5 days
Quote # or Project #:
PO #: RA-008
WO #:
PWS ID #:

Sample Identification	Sample Collection Date (MM/DD/YY)	Sample Collection Time (24 Hour Clock)	Sample Type: C=Comp G=Grab	Matrix Type **	8260 MSD	522 Dioxane	8260A TOC	1010 mod Total Iron	350.1 NH3	8260B All Analytes	350.0-38D Sulfide	9040C pH	4500 P-E Ortho PO4	Total Number of Containers (enter total for each line)
MW-267S-20181009	10/9/18	1210	G	W	X	X	X	X	X	X	X	X		11
MW-267M-20181009	10/9/18	1255	G	W	X	X								4
MW-268S-20181009	10/9/18	0833	G	W	X	X	X	X	X	X	X	X		11
MW-268M-20181009	10/9/18	0915	G	W	X	X	X	X	X	X	X	X		11
MW-268D-20181009	10/9/18	1000	G	W	X									3
REW-6-20181009	10/9/18	1125	G	W	X	X	X	X	X	X	X	X		11
REW-7-20181009	10/9/18	1330	G	W	X	X	X	X	X	X	X	X		11
REW-8-20181009	10/9/18	1410	G	W	X	X	X	X	X	X	X	X		11
REW-11-20181009	10/9/18	1035	G	W	X	X	X	X	X	X	X	X		11
Dup1-20181009	10/9/18	—	G	W	X	X								4

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

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

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

Special Instructions & Notes:

GW-3 Requirements

522 - 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 !! ◀

	Date/Time:	Company		Date/Time:	Company
Relinquished by:	1525	IESI	Received by:	10/9/18 1525	TA
Relinquished by:	10/9/18 1615	TA	Received by:	10/10/18 1020	TA Burl
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

360325-Boston

360325-Boston

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information:

Client Contact:	Vicki Pauliyar
Company:	Innovative Engineering Solutions Inc
Address:	23 Spring St
City:	Walpole
State and Zip:	MA 02081
Client's Phone:	508-668-2033
Client's Contact Email:	vpaulinar@iesinc.com
Client's Project Name/Number:	Raytheon Wayland RA-008
Sample Collection Site Name & Location:	Wayland MA
Sample Collector's Name (Please Print Neatly):	Dan Sorb
Sample Collector's Phone:	508-404-3186
Due Date Requested:	10/16/18
Turnaround Time (TAT) Requested (business days):	5 days
Quote # or Project #:	
PO #:	RA-008
WO #:	
PWS ID #:	
Lab PM:	
E-Mail:	
Lab COC Barcode Label	
COC No:	41108
Page:	2 of 2
Job #:	

Analysis Requested: 8260 MCP; 522 Dioxane; 9060A TOC; 6010 MCP Total Iron; 350.1 NH3; 300.0_28D SO4, Cl, NO3, 9040 pH; 4500P_E Ortho PO4, 353.2 NO3; 2320B Alkalinity

Sample Identification	Sample Collection Date (MM/DD/YY)	Sample Collection Time (24 Hour Clock)	Sample Type: C=Comp G=Grab	Matrix Type **	8260 MCP	522 Dioxane	9060A TOC	6010 MCP Total Iron	350.1 NH3	300.0_28D SO4, Cl, 9040 pH	4500P_E Ortho PO4, 353.2 NO3	2320B Alkalinity	Total Number of Containers (enter total for each line)	Special Instructions & Notes:
										N	N	N		
Trip Blanks	—	—	—	W	X								3	GW-3
Temperature Blank	—	—	—	W									1	Requirements
REW-9-20181009	10/9/18	1450	G	W	X	X	X	X	X	X	X	X		

522 - 1-4 Dioxane to Burlington

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.

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 ar...
☐ Return To Client ☒ Disposal By Lab ☐ Archive For ________ Months

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

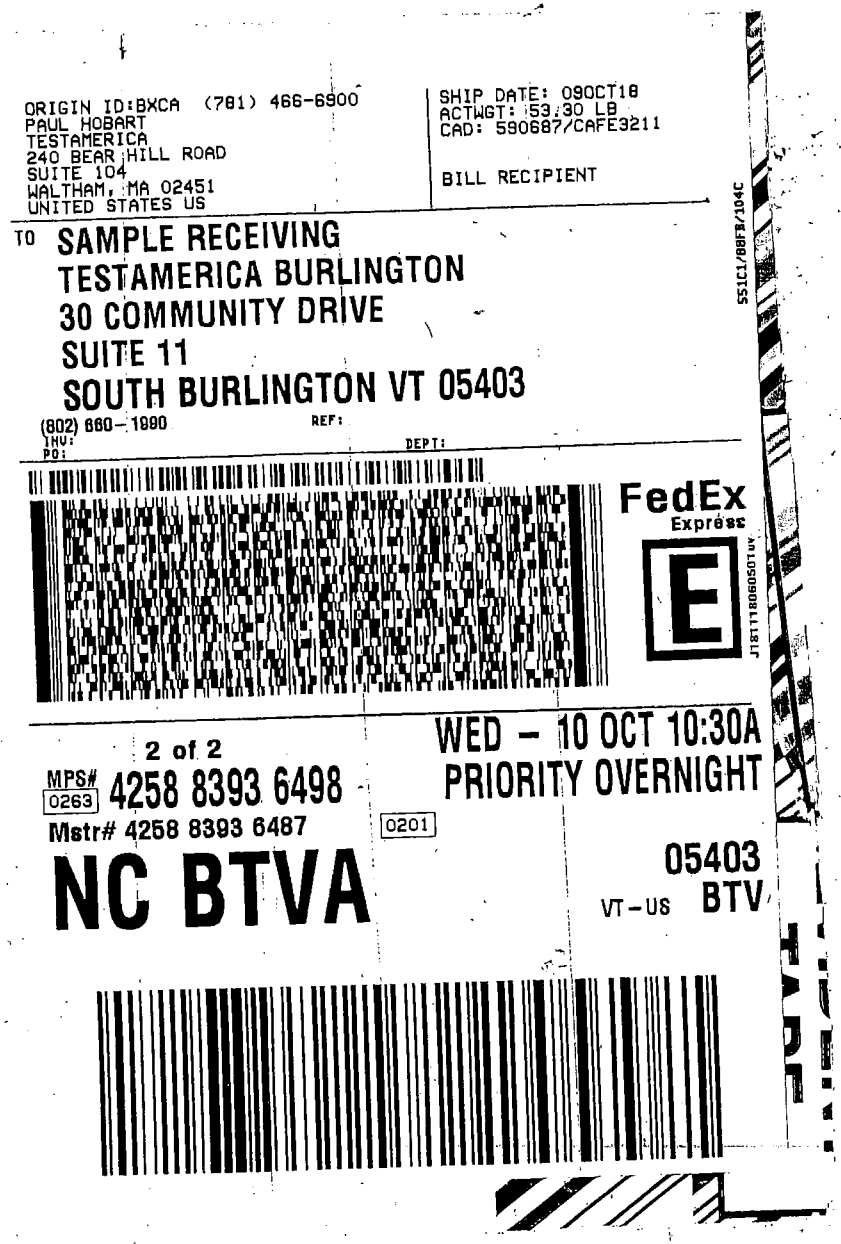
▶ **NOTE!! ALL SAMPLES MUST BE TRANSPORTED IN A COOLER, ON ICE !!** ◀

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	10/9/18 1525	IESI	[signature]	10/9/18 1514	TA
[signature]	10/9/18 16:15	TA	[signature]	10/10/18 1020	TA Bur

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

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: 09OCT18
ACTWGT: 53.30 LB
CAD: 590687/CAFE3211

BILL RECIPIENT

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

FedEx Express

2 of 2
MPS# 0263 4258 8393 6498
Mstr# 4258 8393 6487

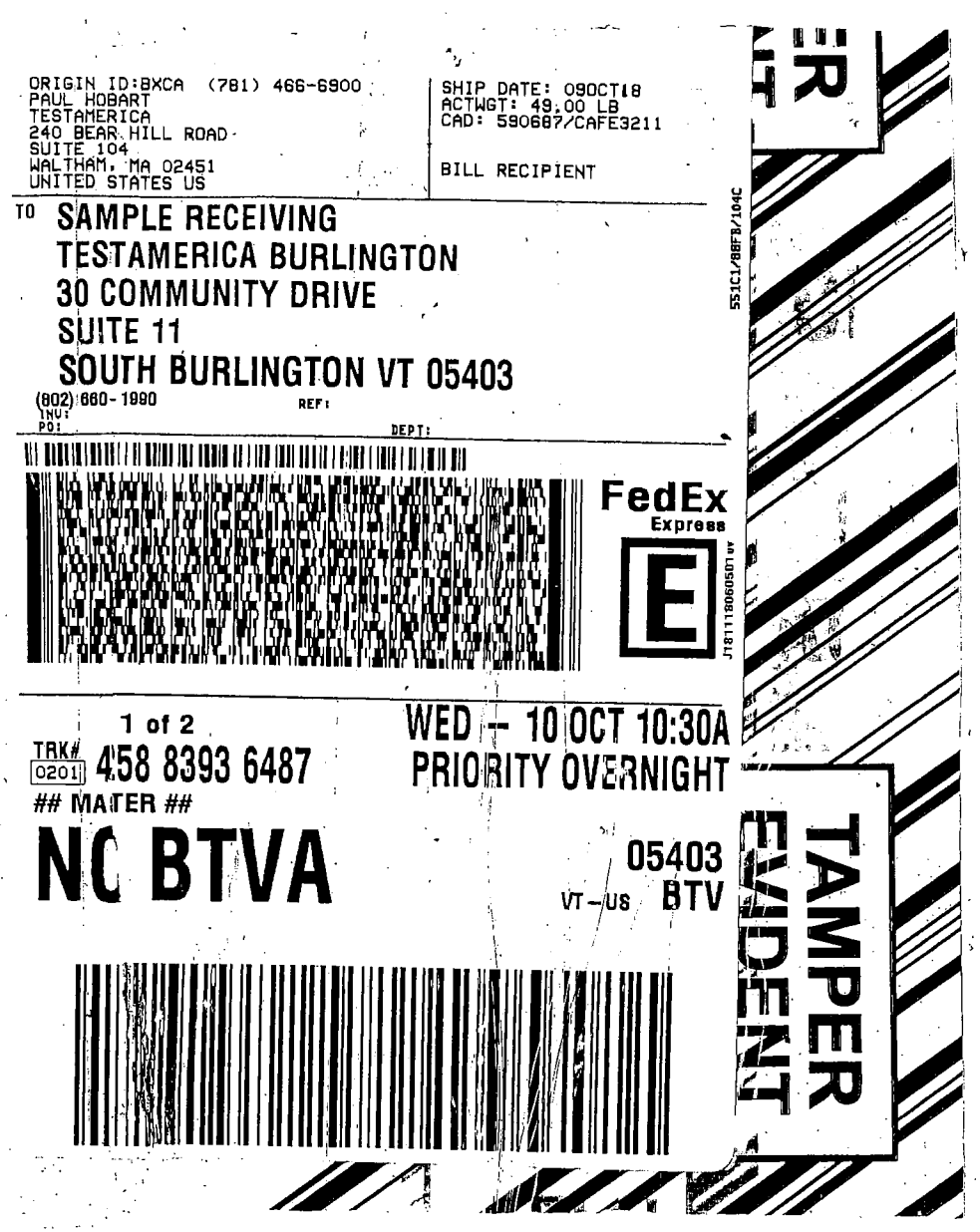
0201

WED - 10 OCT 10:30A
PRIORITY OVERNIGHT

NC BTVA

05403
VT-US BTV

TAPE



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

SHIP DATE: 09OCT18
ACTWGT: 49.00 LB
CAD: 590687/CAFE3211

BILL RECIPIENT

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

FedEx Express

1 of 2
TRK# 0201 458 8393 6487
MATER

WED - 10 OCT 10:30A
PRIORITY OVERNIGHT

NC BTVA

05403
VT-US BTV

TAMPER EVIDENT