Roxie Trachtenberg

From: Julia Redden
Sent: Friday, January 29, 2021 3:01 PM
To: James Knights; Joanne Frazier
Cc: Katie Wolf
Subject: Wayland Property Owner Data Transmittal - Jan 2021
Attachments: National Development BWSC-123 Form.pdf; IESI Lab Reports_January 2021.pdf

Hi James and Joanne,

Innovative Engineering Solutions, Inc. (IESI) collected groundwater samples from monitoring wells located on National Development property at the former Raytheon Facility located at 430 Boston Post Road in Wayland, MA in January 2021. The analytical results and BWSC-123 form are attached to this email.

These results are being sent for National Development's records.

Thank you,

Julia Redden
Consultant II, Geology
Pronouns: she/her/hers

ERM
One Beacon St. | 5th Floor | Boston, MA 02108
T 508 498 5311
E julia.redden@erm.com | **W** www.erm.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

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: 366 Lowell Street
City/Town: Andover Zip Code: 01810
Telephone: (978) 474-5753 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.

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 480-179926-1
Client Project/Site: IDS Wayland

For:
Innovative Engineering Solutions, Inc
37 Pearl St
1
Braintree, Massachusetts 02184

Attn: Vicki Pariyar

Authorized for release by:
1/15/2021 10:19:17 AM

Becky Mason, Project Manager II
(413)572-4000
Becky.Mason@Eurofinset.com

Table of Contents

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

Job ID: 480-179926-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.

General Chemistry

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

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

Job ID: 480-179926-1

Job ID: 480-179926-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative
480-179926-1

Receipt
The samples were received on 1/7/2021 10:00 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.9º C.

GC/MS VOA
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-268S-20210106 (480-179926-1) and DUP-1-20210106 (480-179926-5). Elevated reporting limits (RLs) are provided.

Method 8260C: The continuing calibration verification (CCV) for 1,2-Dibromo-3-Chloropropane associated with batch 480-565523 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-268S-20210106 (480-179926-1), MW-268M-20210106 (480-179926-2), REW-6-20210106 (480-179926-3), REW-7-20210106 (480-179926-4), DUP-1-20210106 (480-179926-5) and TRIP BLANK-20210106 (480-179926-6).

Method 8260C: The RPD of the laboratory control sample (LCS) and/or laboratory control sample duplicate (LCSD) for analytical batch 480-565523 recovered outside control limits for the following analytes: 1,4-Dioxane.

Method 8260C: The laboratory control sample (LCS) and / or the laboratory control sample duplicate (LCSD) for batch 480-565523 exceeded control limits for the following analytes: 1,4-Dioxane. MCP protocol allows for 10% of the target compounds to be outside of the limits provided the recoveries are over 10%. The following samples were affected : MW-268S-20210106 (480-179926-1), MW-268M-20210106 (480-179926-2), REW-6-20210106 (480-179926-3), REW-7-20210106 (480-179926-4), DUP-1-20210106 (480-179926-5) and TRIP BLANK-20210106 (480-179926-6).

Method 8260C: The laboratory control sample (LCS) and / or the laboratory control sample duplicate (LCSD) for batch 480-565523 exceeded control limits for the following analytes: 2-Butanone and Tetrahydrofuran. Unlike the calibration standards, this is due to the coelution with Ethyl Acetate and Methacrylonitrile in the spiking solution. This does not indicate a performance issue with the spike recovery, but rather the laboratory's ability to measure the two analytes together in a combined spiking solution. Through the use of spectral analysis, the two compounds can be distinguished from one another if present in a client sample. The following samples were affected : MW-268S-20210106 (480-179926-1), MW-268M-20210106 (480-179926-2), REW-6-20210106 (480-179926-3), REW-7-20210106 (480-179926-4), DUP-1-20210106 (480-179926-5) and TRIP BLANK-20210106 (480-179926-6).

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
Methods 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-268S-20210106 (480-179926-1), MW-268M-20210106 (480-179926-2), REW-6-20210106 (480-179926-3) and REW-7-20210106 (480-179926-4).

Method 9040C: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following sample has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: REW-6-20210106 (480-179926-3).

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

MassDEP Analytical Protocol Certification Form

Laboratory Name: **TestAmerica Buffalo** Project #: **480-179926-1**

Project Location: **Wayland MA** RTN:

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

480-179926-1[1-6]

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: 1/15/21 10:18

This form has been electronically signed and approved

Detection Summary

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

Job ID: 480-179926-1

Client Sample ID: MW-268S-20210106 — Lab Sample ID: 480-179926-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	310		4.0		ug/L	4		8260C	Total/NA
Toluene	29		4.0		ug/L	4		8260C	Total/NA
Trichloroethene	10		4.0		ug/L	4		8260C	Total/NA
Vinyl chloride	25		4.0		ug/L	4		8260C	Total/NA
Iron	28		0.050		mg/L	1		6010	Total/NA
Nitrate as N	0.16		0.050		mg/L	1		353.2	Total/NA
pH	6.2	HF	0.1		SU	1		9040C	Total/NA
Temperature	22.2	HF	0.001		Degrees C	1		9040C	Total/NA
TOC Result 1	390		10		mg/L	10		9060A	Total/NA
TOC Result 2	380		10		mg/L	10		9060A	Total/NA
Total Organic Carbon - Duplicates	390		10		mg/L	10		9060A	Total/NA
Chloride	22		1.0		mg/L	1		9251	Total/NA
Alkalinity, Total	140		5.0		mg/L	1		SM 2320B	Total/NA
ortho-Phosphate	0.047		0.020		mg/L	1		SM 4500 P E	Total/NA

Client Sample ID: MW-268M-20210106 — Lab Sample ID: 480-179926-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.2		1.0		ug/L	1		8260C	Total/NA
Vinyl chloride	1.3		1.0		ug/L	1		8260C	Total/NA
Iron	27		0.050		mg/L	1		6010	Total/NA
Nitrate as N	0.16		0.050		mg/L	1		353.2	Total/NA
pH	6.8	HF	0.1		SU	1		9040C	Total/NA
Temperature	22.2	HF	0.001		Degrees C	1		9040C	Total/NA
TOC Result 1	1.9		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	2.0		1.0		mg/L	1		9060A	Total/NA
Chloride	42		1.0		mg/L	1		9251	Total/NA
Alkalinity, Total	280		5.0		mg/L	1		SM 2320B	Total/NA
ortho-Phosphate	0.021		0.020		mg/L	1		SM 4500 P E	Total/NA

Client Sample ID: REW-6-20210106 — Lab Sample ID: 480-179926-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrahydrofuran	37	*+	10		ug/L	1		8260C	Total/NA
Iron	58		0.050		mg/L	1		6010	Total/NA
Ammonia	5.5		1.0		mg/L	5		350.1	Total/NA
Nitrate as N	0.18		0.050		mg/L	1		353.2	Total/NA
Sulfate	620		100		mg/L	20		9038	Total/NA
pH	6.5	HF	0.1		SU	1		9040C	Total/NA
Temperature	20.6	HF	0.001		Degrees C	1		9040C	Total/NA
TOC Result 1	2.4		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	2.3		1.0		mg/L	1		9060A	Total/NA
Chloride	40		1.0		mg/L	1		9251	Total/NA
Alkalinity, Total	39		5.0		mg/L	1		SM 2320B	Total/NA
ortho-Phosphate	0.089		0.020		mg/L	1		SM 4500 P E	Total/NA

Client Sample ID: REW-7-20210106 — Lab Sample ID: 480-179926-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrahydrofuran	60	*+	10		ug/L	1		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: REW-7-20210106 (Continued)

Lab Sample ID: 480-179926-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	4.8		0.050		mg/L	1		6010	Total/NA
Ammonia	1.6		0.20		mg/L	1		350.1	Total/NA
pH	7.3	HF	0.1		SU	1		9040C	Total/NA
Temperature	21.9	HF	0.001		Degrees C	1		9040C	Total/NA
TOC Result 2	1.1		1.0		mg/L	1		9060A	Total/NA
Total Organic Carbon - Duplicates	1.0		1.0		mg/L	1		9060A	Total/NA
Chloride	21		1.0		mg/L	1		9251	Total/NA
Alkalinity, Total	140		5.0		mg/L	1		SM 2320B	Total/NA
ortho-Phosphate	0.097		0.020		mg/L	1		SM 4500 P E	Total/NA

Client Sample ID: DUP-1-20210106

Lab Sample ID: 480-179926-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	320		4.0		ug/L	4		8260C	Total/NA
Toluene	31		4.0		ug/L	4		8260C	Total/NA
Trichloroethene	10		4.0		ug/L	4		8260C	Total/NA
Vinyl chloride	29		4.0		ug/L	4		8260C	Total/NA

Client Sample ID: TRIP BLANK-20210106

Lab Sample ID: 480-179926-6

No Detections.

This Detection Summary does not include radiochemical test results.

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

Job ID: 480-179926-1

Client Sample ID: MW-268S-20210106
Date Collected: 01/06/21 09:40
Date Received: 01/07/21 10:00

Lab Sample ID: 480-179926-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		4.0		ug/L			01/08/21 12:18	4
1,1,1-Trichloroethane	ND		4.0		ug/L			01/08/21 12:18	4
1,1,2,2-Tetrachloroethane	ND		2.0		ug/L			01/08/21 12:18	4
1,1,2-Trichloroethane	ND		4.0		ug/L			01/08/21 12:18	4
1,1-Dichloroethane	ND		4.0		ug/L			01/08/21 12:18	4
1,1-Dichloroethene	ND		4.0		ug/L			01/08/21 12:18	4
1,1-Dichloropropene	ND		4.0		ug/L			01/08/21 12:18	4
1,2,3-Trichlorobenzene	ND		4.0		ug/L			01/08/21 12:18	4
1,2,3-Trichloropropane	ND		4.0		ug/L			01/08/21 12:18	4
1,2,4-Trichlorobenzene	ND		4.0		ug/L			01/08/21 12:18	4
1,2,4-Trimethylbenzene	ND		4.0		ug/L			01/08/21 12:18	4
1,2-Dibromo-3-Chloropropane	ND		20		ug/L			01/08/21 12:18	4
1,2-Dichlorobenzene	ND		4.0		ug/L			01/08/21 12:18	4
1,2-Dichloroethane	ND		4.0		ug/L			01/08/21 12:18	4
1,2-Dichloropropane	ND		4.0		ug/L			01/08/21 12:18	4
1,3,5-Trimethylbenzene	ND		4.0		ug/L			01/08/21 12:18	4
1,3-Dichlorobenzene	ND		4.0		ug/L			01/08/21 12:18	4
1,3-Dichloropropane	ND		4.0		ug/L			01/08/21 12:18	4
1,4-Dichlorobenzene	ND		4.0		ug/L			01/08/21 12:18	4
1,4-Dioxane	ND	*+ *1	200		ug/L			01/08/21 12:18	4
2,2-Dichloropropane	ND		4.0		ug/L			01/08/21 12:18	4
2-Butanone (MEK)	ND	*+	40		ug/L			01/08/21 12:18	4
2-Chlorotoluene	ND		4.0		ug/L			01/08/21 12:18	4
2-Hexanone	ND		40		ug/L			01/08/21 12:18	4
4-Chlorotoluene	ND		4.0		ug/L			01/08/21 12:18	4
4-Isopropyltoluene	ND		4.0		ug/L			01/08/21 12:18	4
4-Methyl-2-pentanone (MIBK)	ND		40		ug/L			01/08/21 12:18	4
Acetone	ND		200		ug/L			01/08/21 12:18	4
Benzene	ND		4.0		ug/L			01/08/21 12:18	4
Bromobenzene	ND		4.0		ug/L			01/08/21 12:18	4
Bromoform	ND		4.0		ug/L			01/08/21 12:18	4
Bromomethane	ND		8.0		ug/L			01/08/21 12:18	4
Carbon disulfide	ND		40		ug/L			01/08/21 12:18	4
Carbon tetrachloride	ND		4.0		ug/L			01/08/21 12:18	4
Chlorobenzene	ND		4.0		ug/L			01/08/21 12:18	4
Chlorobromomethane	ND		4.0		ug/L			01/08/21 12:18	4
Chlorodibromomethane	ND		2.0		ug/L			01/08/21 12:18	4
Chloroethane	ND		8.0		ug/L			01/08/21 12:18	4
Chloroform	ND		4.0		ug/L			01/08/21 12:18	4
Chloromethane	ND		8.0		ug/L			01/08/21 12:18	4
cis-1,2-Dichloroethene	**310**		4.0		ug/L			01/08/21 12:18	4
cis-1,3-Dichloropropene	ND		1.6		ug/L			01/08/21 12:18	4
Dichlorobromomethane	ND		2.0		ug/L			01/08/21 12:18	4
Dichlorodifluoromethane	ND		4.0		ug/L			01/08/21 12:18	4
Ethyl ether	ND		4.0		ug/L			01/08/21 12:18	4
Ethylbenzene	ND		4.0		ug/L			01/08/21 12:18	4
Ethylene Dibromide	ND		4.0		ug/L			01/08/21 12:18	4
Hexachlorobutadiene	ND		1.6		ug/L			01/08/21 12:18	4
Isopropyl ether	ND		40		ug/L			01/08/21 12:18	4

Client Sample ID: MW-268S-20210106
Date Collected: 01/06/21 09:40
Date Received: 01/07/21 10:00

Lab Sample ID: 480-179926-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		4.0		ug/L			01/08/21 12:18	4
Methyl tert-butyl ether	ND		4.0		ug/L			01/08/21 12:18	4
Methylene Chloride	ND		4.0		ug/L			01/08/21 12:18	4
m-Xylene & p-Xylene	ND		8.0		ug/L			01/08/21 12:18	4
Naphthalene	ND		20		ug/L			01/08/21 12:18	4
n-Butylbenzene	ND		4.0		ug/L			01/08/21 12:18	4
N-Propylbenzene	ND		4.0		ug/L			01/08/21 12:18	4
o-Xylene	ND		4.0		ug/L			01/08/21 12:18	4
sec-Butylbenzene	ND		4.0		ug/L			01/08/21 12:18	4
Styrene	ND		4.0		ug/L			01/08/21 12:18	4
Tert-amyl methyl ether	ND		20		ug/L			01/08/21 12:18	4
Tert-butyl ethyl ether	ND		20		ug/L			01/08/21 12:18	4
tert-Butylbenzene	ND		4.0		ug/L			01/08/21 12:18	4
Tetrachloroethene	ND		4.0		ug/L			01/08/21 12:18	4
Tetrahydrofuran	ND	*+	40		ug/L			01/08/21 12:18	4
Toluene	**29**		4.0		ug/L			01/08/21 12:18	4
trans-1,2-Dichloroethene	ND		4.0		ug/L			01/08/21 12:18	4
trans-1,3-Dichloropropene	ND		1.6		ug/L			01/08/21 12:18	4
Trichloroethene	**10**		4.0		ug/L			01/08/21 12:18	4
Trichlorofluoromethane	ND		4.0		ug/L			01/08/21 12:18	4
Vinyl chloride	**25**		4.0		ug/L			01/08/21 12:18	4
Dibromomethane	ND		4.0		ug/L			01/08/21 12:18	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*70 - 130*		*01/08/21 12:18*	*4*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 130*		*01/08/21 12:18*	*4*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*		*01/08/21 12:18*	*4*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**28**		0.050		mg/L		01/08/21 10:10	01/08/21 17:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND	F1	0.20		mg/L		01/11/21 06:30	01/11/21 08:34	1
Nitrate as N	**0.16**		0.050		mg/L			01/07/21 19:25	1
Sulfate	ND		5.0		mg/L			01/08/21 03:18	1
TOC Result 1	**390**		10		mg/L			01/12/21 22:00	10
TOC Result 2	**380**		10		mg/L			01/12/21 22:00	10
Total Organic Carbon - Duplicates	**390**		10		mg/L			01/12/21 22:00	10
Chloride	**22**		1.0		mg/L			01/08/21 01:32	1
Alkalinity, Total	**140**		5.0		mg/L			01/11/21 20:51	1
ortho-Phosphate	**0.047**		0.020		mg/L			01/07/21 15:55	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**6.2**	**HF**	0.1		SU			01/12/21 14:28	1
Temperature	**22.2**	**HF**	0.001		Degrees C			01/12/21 14:28	1

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

Job ID: 480-179926-1

Client Sample ID: MW-268M-20210106
Date Collected: 01/06/21 10:40
Date Received: 01/07/21 10:00

Lab Sample ID: 480-179926-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			01/08/21 12:43	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/08/21 12:43	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			01/08/21 12:43	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/08/21 12:43	1
1,1-Dichloroethane	ND		1.0		ug/L			01/08/21 12:43	1
1,1-Dichloroethene	ND		1.0		ug/L			01/08/21 12:43	1
1,1-Dichloropropene	ND		1.0		ug/L			01/08/21 12:43	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/08/21 12:43	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/08/21 12:43	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/08/21 12:43	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/08/21 12:43	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/08/21 12:43	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/08/21 12:43	1
1,2-Dichloroethane	ND		1.0		ug/L			01/08/21 12:43	1
1,2-Dichloropropane	ND		1.0		ug/L			01/08/21 12:43	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/08/21 12:43	1
1,3-Dichlorobenzene	ND		1.0		ug/L			01/08/21 12:43	1
1,3-Dichloropropane	ND		1.0		ug/L			01/08/21 12:43	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/08/21 12:43	1
1,4-Dioxane	ND	*+ *1	50		ug/L			01/08/21 12:43	1
2,2-Dichloropropane	ND		1.0		ug/L			01/08/21 12:43	1
2-Butanone (MEK)	ND	*+	10		ug/L			01/08/21 12:43	1
2-Chlorotoluene	ND		1.0		ug/L			01/08/21 12:43	1
2-Hexanone	ND		10		ug/L			01/08/21 12:43	1
4-Chlorotoluene	ND		1.0		ug/L			01/08/21 12:43	1
4-Isopropyltoluene	ND		1.0		ug/L			01/08/21 12:43	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			01/08/21 12:43	1
Acetone	ND		50		ug/L			01/08/21 12:43	1
Benzene	ND		1.0		ug/L			01/08/21 12:43	1
Bromobenzene	ND		1.0		ug/L			01/08/21 12:43	1
Bromoform	ND		1.0		ug/L			01/08/21 12:43	1
Bromomethane	ND		2.0		ug/L			01/08/21 12:43	1
Carbon disulfide	ND		10		ug/L			01/08/21 12:43	1
Carbon tetrachloride	ND		1.0		ug/L			01/08/21 12:43	1
Chlorobenzene	ND		1.0		ug/L			01/08/21 12:43	1
Chlorobromomethane	ND		1.0		ug/L			01/08/21 12:43	1
Chlorodibromomethane	ND		0.50		ug/L			01/08/21 12:43	1
Chloroethane	ND		2.0		ug/L			01/08/21 12:43	1
Chloroform	ND		1.0		ug/L			01/08/21 12:43	1
Chloromethane	ND		2.0		ug/L			01/08/21 12:43	1
cis-1,2-Dichloroethene	**1.2**		1.0		ug/L			01/08/21 12:43	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			01/08/21 12:43	1
Dichlorobromomethane	ND		0.50		ug/L			01/08/21 12:43	1
Dichlorodifluoromethane	ND		1.0		ug/L			01/08/21 12:43	1
Ethyl ether	ND		1.0		ug/L			01/08/21 12:43	1
Ethylbenzene	ND		1.0		ug/L			01/08/21 12:43	1
Ethylene Dibromide	ND		1.0		ug/L			01/08/21 12:43	1
Hexachlorobutadiene	ND		0.40		ug/L			01/08/21 12:43	1
Isopropyl ether	ND		10		ug/L			01/08/21 12:43	1

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

Job ID: 480-179926-1

Client Sample ID: MW-268M-20210106
Date Collected: 01/06/21 10:40
Date Received: 01/07/21 10:00

Lab Sample ID: 480-179926-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			01/08/21 12:43	1
Methyl tert-butyl ether	ND		1.0		ug/L			01/08/21 12:43	1
Methylene Chloride	ND		1.0		ug/L			01/08/21 12:43	1
m-Xylene & p-Xylene	ND		2.0		ug/L			01/08/21 12:43	1
Naphthalene	ND		5.0		ug/L			01/08/21 12:43	1
n-Butylbenzene	ND		1.0		ug/L			01/08/21 12:43	1
N-Propylbenzene	ND		1.0		ug/L			01/08/21 12:43	1
o-Xylene	ND		1.0		ug/L			01/08/21 12:43	1
sec-Butylbenzene	ND		1.0		ug/L			01/08/21 12:43	1
Styrene	ND		1.0		ug/L			01/08/21 12:43	1
Tert-amyl methyl ether	ND		5.0		ug/L			01/08/21 12:43	1
Tert-butyl ethyl ether	ND		5.0		ug/L			01/08/21 12:43	1
tert-Butylbenzene	ND		1.0		ug/L			01/08/21 12:43	1
Tetrachloroethene	ND		1.0		ug/L			01/08/21 12:43	1
Tetrahydrofuran	ND	*+	10		ug/L			01/08/21 12:43	1
Toluene	ND		1.0		ug/L			01/08/21 12:43	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/08/21 12:43	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			01/08/21 12:43	1
Trichloroethene	ND		1.0		ug/L			01/08/21 12:43	1
Trichlorofluoromethane	ND		1.0		ug/L			01/08/21 12:43	1
Vinyl chloride	**1.3**		1.0		ug/L			01/08/21 12:43	1
Dibromomethane	ND		1.0		ug/L			01/08/21 12:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*103*		*70 - 130*		*01/08/21 12:43*	*1*
1,2-Dichloroethane-d4 (Surr)	*110*		*70 - 130*		*01/08/21 12:43*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*01/08/21 12:43*	*1*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**27**		0.050		mg/L		01/08/21 10:10	01/08/21 17:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.20		mg/L		01/11/21 06:30	01/11/21 09:06	1
Nitrate as N	**0.16**		0.050		mg/L			01/07/21 19:27	1
Sulfate	ND		5.0		mg/L			01/08/21 03:18	1
TOC Result 1	**1.9**		1.0		mg/L			01/12/21 22:46	1
TOC Result 2	**2.1**		1.0		mg/L			01/12/21 22:46	1
Total Organic Carbon - Duplicates	**2.0**		1.0		mg/L			01/12/21 22:46	1
Chloride	**42**		1.0		mg/L			01/08/21 01:09	1
Alkalinity, Total	**280**		5.0		mg/L			01/11/21 20:08	1
ortho-Phosphate	**0.021**		0.020		mg/L			01/07/21 15:55	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**6.8**	**HF**	0.1		SU			01/12/21 14:26	1
Temperature	**22.2**	**HF**	0.001		Degrees C			01/12/21 14:26	1

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

Job ID: 480-179926-1

Client Sample ID: REW-6-20210106
Date Collected: 01/06/21 09:40
Date Received: 01/07/21 10:00

Lab Sample ID: 480-179926-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			01/08/21 13:08	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/08/21 13:08	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			01/08/21 13:08	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/08/21 13:08	1
1,1-Dichloroethane	ND		1.0		ug/L			01/08/21 13:08	1
1,1-Dichloroethene	ND		1.0		ug/L			01/08/21 13:08	1
1,1-Dichloropropene	ND		1.0		ug/L			01/08/21 13:08	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/08/21 13:08	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/08/21 13:08	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/08/21 13:08	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/08/21 13:08	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/08/21 13:08	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/08/21 13:08	1
1,2-Dichloroethane	ND		1.0		ug/L			01/08/21 13:08	1
1,2-Dichloropropane	ND		1.0		ug/L			01/08/21 13:08	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/08/21 13:08	1
1,3-Dichlorobenzene	ND		1.0		ug/L			01/08/21 13:08	1
1,3-Dichloropropane	ND		1.0		ug/L			01/08/21 13:08	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/08/21 13:08	1
1,4-Dioxane	ND	*+ *1	50		ug/L			01/08/21 13:08	1
2,2-Dichloropropane	ND		1.0		ug/L			01/08/21 13:08	1
2-Butanone (MEK)	ND	*+	10		ug/L			01/08/21 13:08	1
2-Chlorotoluene	ND		1.0		ug/L			01/08/21 13:08	1
2-Hexanone	ND		10		ug/L			01/08/21 13:08	1
4-Chlorotoluene	ND		1.0		ug/L			01/08/21 13:08	1
4-Isopropyltoluene	ND		1.0		ug/L			01/08/21 13:08	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			01/08/21 13:08	1
Acetone	ND		50		ug/L			01/08/21 13:08	1
Benzene	ND		1.0		ug/L			01/08/21 13:08	1
Bromobenzene	ND		1.0		ug/L			01/08/21 13:08	1
Bromoform	ND		1.0		ug/L			01/08/21 13:08	1
Bromomethane	ND		2.0		ug/L			01/08/21 13:08	1
Carbon disulfide	ND		10		ug/L			01/08/21 13:08	1
Carbon tetrachloride	ND		1.0		ug/L			01/08/21 13:08	1
Chlorobenzene	ND		1.0		ug/L			01/08/21 13:08	1
Chlorobromomethane	ND		1.0		ug/L			01/08/21 13:08	1
Chlorodibromomethane	ND		0.50		ug/L			01/08/21 13:08	1
Chloroethane	ND		2.0		ug/L			01/08/21 13:08	1
Chloroform	ND		1.0		ug/L			01/08/21 13:08	1
Chloromethane	ND		2.0		ug/L			01/08/21 13:08	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			01/08/21 13:08	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			01/08/21 13:08	1
Dichlorobromomethane	ND		0.50		ug/L			01/08/21 13:08	1
Dichlorodifluoromethane	ND		1.0		ug/L			01/08/21 13:08	1
Ethyl ether	ND		1.0		ug/L			01/08/21 13:08	1
Ethylbenzene	ND		1.0		ug/L			01/08/21 13:08	1
Ethylene Dibromide	ND		1.0		ug/L			01/08/21 13:08	1
Hexachlorobutadiene	ND		0.40		ug/L			01/08/21 13:08	1
Isopropyl ether	ND		10		ug/L			01/08/21 13:08	1

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

Job ID: 480-179926-1

Client Sample ID: REW-6-20210106
Date Collected: 01/06/21 09:40
Date Received: 01/07/21 10:00

Lab Sample ID: 480-179926-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			01/08/21 13:08	1
Methyl tert-butyl ether	ND		1.0		ug/L			01/08/21 13:08	1
Methylene Chloride	ND		1.0		ug/L			01/08/21 13:08	1
m-Xylene & p-Xylene	ND		2.0		ug/L			01/08/21 13:08	1
Naphthalene	ND		5.0		ug/L			01/08/21 13:08	1
n-Butylbenzene	ND		1.0		ug/L			01/08/21 13:08	1
N-Propylbenzene	ND		1.0		ug/L			01/08/21 13:08	1
o-Xylene	ND		1.0		ug/L			01/08/21 13:08	1
sec-Butylbenzene	ND		1.0		ug/L			01/08/21 13:08	1
Styrene	ND		1.0		ug/L			01/08/21 13:08	1
Tert-amyl methyl ether	ND		5.0		ug/L			01/08/21 13:08	1
Tert-butyl ethyl ether	ND		5.0		ug/L			01/08/21 13:08	1
tert-Butylbenzene	ND		1.0		ug/L			01/08/21 13:08	1
Tetrachloroethene	ND		1.0		ug/L			01/08/21 13:08	1
Tetrahydrofuran	**37**	***+**	10		ug/L			01/08/21 13:08	1
Toluene	ND		1.0		ug/L			01/08/21 13:08	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/08/21 13:08	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			01/08/21 13:08	1
Trichloroethene	ND		1.0		ug/L			01/08/21 13:08	1
Trichlorofluoromethane	ND		1.0		ug/L			01/08/21 13:08	1
Vinyl chloride	ND		1.0		ug/L			01/08/21 13:08	1
Dibromomethane	ND		1.0		ug/L			01/08/21 13:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*70 - 130*		*01/08/21 13:08*	*1*
1,2-Dichloroethane-d4 (Surr)	*112*		*70 - 130*		*01/08/21 13:08*	*1*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*		*01/08/21 13:08*	*1*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**58**		0.050		mg/L		01/08/21 10:10	01/08/21 17:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	**5.5**		1.0		mg/L		01/11/21 06:30	01/11/21 08:47	5
Nitrate as N	**0.18**		0.050		mg/L			01/07/21 19:28	1
Sulfate	**620**		100		mg/L			01/08/21 03:46	20
TOC Result 1	**2.4**		1.0		mg/L			01/12/21 00:22	1
TOC Result 2	**2.3**		1.0		mg/L			01/12/21 00:22	1
Total Organic Carbon - Duplicates	**2.3**		1.0		mg/L			01/12/21 00:22	1
Chloride	**40**		1.0		mg/L			01/08/21 01:10	1
Alkalinity, Total	**39**		5.0		mg/L			01/11/21 20:23	1
ortho-Phosphate	**0.089**		0.020		mg/L			01/07/21 15:55	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**6.5**	**HF**	0.1		SU			01/14/21 16:12	1
Temperature	**20.6**	**HF**	0.001		Degrees C			01/14/21 16:12	1

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

Job ID: 480-179926-1

Client Sample ID: REW-7-20210106
Date Collected: 01/06/21 12:20
Date Received: 01/07/21 10:00

Lab Sample ID: 480-179926-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			01/08/21 13:32	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/08/21 13:32	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			01/08/21 13:32	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/08/21 13:32	1
1,1-Dichloroethane	ND		1.0		ug/L			01/08/21 13:32	1
1,1-Dichloroethene	ND		1.0		ug/L			01/08/21 13:32	1
1,1-Dichloropropene	ND		1.0		ug/L			01/08/21 13:32	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/08/21 13:32	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/08/21 13:32	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/08/21 13:32	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/08/21 13:32	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/08/21 13:32	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/08/21 13:32	1
1,2-Dichloroethane	ND		1.0		ug/L			01/08/21 13:32	1
1,2-Dichloropropane	ND		1.0		ug/L			01/08/21 13:32	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/08/21 13:32	1
1,3-Dichlorobenzene	ND		1.0		ug/L			01/08/21 13:32	1
1,3-Dichloropropane	ND		1.0		ug/L			01/08/21 13:32	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/08/21 13:32	1
1,4-Dioxane	ND	*+ *1	50		ug/L			01/08/21 13:32	1
2,2-Dichloropropane	ND		1.0		ug/L			01/08/21 13:32	1
2-Butanone (MEK)	ND	*+	10		ug/L			01/08/21 13:32	1
2-Chlorotoluene	ND		1.0		ug/L			01/08/21 13:32	1
2-Hexanone	ND		10		ug/L			01/08/21 13:32	1
4-Chlorotoluene	ND		1.0		ug/L			01/08/21 13:32	1
4-Isopropyltoluene	ND		1.0		ug/L			01/08/21 13:32	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			01/08/21 13:32	1
Acetone	ND		50		ug/L			01/08/21 13:32	1
Benzene	ND		1.0		ug/L			01/08/21 13:32	1
Bromobenzene	ND		1.0		ug/L			01/08/21 13:32	1
Bromoform	ND		1.0		ug/L			01/08/21 13:32	1
Bromomethane	ND		2.0		ug/L			01/08/21 13:32	1
Carbon disulfide	ND		10		ug/L			01/08/21 13:32	1
Carbon tetrachloride	ND		1.0		ug/L			01/08/21 13:32	1
Chlorobenzene	ND		1.0		ug/L			01/08/21 13:32	1
Chlorobromomethane	ND		1.0		ug/L			01/08/21 13:32	1
Chlorodibromomethane	ND		0.50		ug/L			01/08/21 13:32	1
Chloroethane	ND		2.0		ug/L			01/08/21 13:32	1
Chloroform	ND		1.0		ug/L			01/08/21 13:32	1
Chloromethane	ND		2.0		ug/L			01/08/21 13:32	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			01/08/21 13:32	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			01/08/21 13:32	1
Dichlorobromomethane	ND		0.50		ug/L			01/08/21 13:32	1
Dichlorodifluoromethane	ND		1.0		ug/L			01/08/21 13:32	1
Ethyl ether	ND		1.0		ug/L			01/08/21 13:32	1
Ethylbenzene	ND		1.0		ug/L			01/08/21 13:32	1
Ethylene Dibromide	ND		1.0		ug/L			01/08/21 13:32	1
Hexachlorobutadiene	ND		0.40		ug/L			01/08/21 13:32	1
Isopropyl ether	ND		10		ug/L			01/08/21 13:32	1

Client Sample ID: REW-7-20210106
Date Collected: 01/06/21 12:20
Date Received: 01/07/21 10:00

Lab Sample ID: 480-179926-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			01/08/21 13:32	1
Methyl tert-butyl ether	ND		1.0		ug/L			01/08/21 13:32	1
Methylene Chloride	ND		1.0		ug/L			01/08/21 13:32	1
m-Xylene & p-Xylene	ND		2.0		ug/L			01/08/21 13:32	1
Naphthalene	ND		5.0		ug/L			01/08/21 13:32	1
n-Butylbenzene	ND		1.0		ug/L			01/08/21 13:32	1
N-Propylbenzene	ND		1.0		ug/L			01/08/21 13:32	1
o-Xylene	ND		1.0		ug/L			01/08/21 13:32	1
sec-Butylbenzene	ND		1.0		ug/L			01/08/21 13:32	1
Styrene	ND		1.0		ug/L			01/08/21 13:32	1
Tert-amyl methyl ether	ND		5.0		ug/L			01/08/21 13:32	1
Tert-butyl ethyl ether	ND		5.0		ug/L			01/08/21 13:32	1
tert-Butylbenzene	ND		1.0		ug/L			01/08/21 13:32	1
Tetrachloroethene	ND		1.0		ug/L			01/08/21 13:32	1
Tetrahydrofuran	**60**	***+**	10		ug/L			01/08/21 13:32	1
Toluene	ND		1.0		ug/L			01/08/21 13:32	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/08/21 13:32	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			01/08/21 13:32	1
Trichloroethene	ND		1.0		ug/L			01/08/21 13:32	1
Trichlorofluoromethane	ND		1.0		ug/L			01/08/21 13:32	1
Vinyl chloride	ND		1.0		ug/L			01/08/21 13:32	1
Dibromomethane	ND		1.0		ug/L			01/08/21 13:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*70 - 130*		*01/08/21 13:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*111*		*70 - 130*		*01/08/21 13:32*	*1*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*01/08/21 13:32*	*1*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**4.8**		0.050		mg/L		01/08/21 10:10	01/08/21 17:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	**1.6**		0.20		mg/L		01/11/21 06:30	01/11/21 10:02	1
Nitrate as N	ND		0.050		mg/L			01/07/21 19:29	1
Sulfate	ND		5.0		mg/L			01/08/21 03:19	1
TOC Result 1	ND		1.0		mg/L			01/12/21 00:50	1
TOC Result 2	**1.1**		1.0		mg/L			01/12/21 00:50	1
Total Organic Carbon - Duplicates	**1.0**		1.0		mg/L			01/12/21 00:50	1
Chloride	**21**		1.0		mg/L			01/08/21 01:10	1
Alkalinity, Total	**140**		5.0		mg/L			01/11/21 20:42	1
ortho-Phosphate	**0.097**		0.020		mg/L			01/07/21 15:55	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**7.3**	**HF**	0.1		SU			01/12/21 14:20	1
Temperature	**21.9**	**HF**	0.001		Degrees C			01/12/21 14:20	1

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

Job ID: 480-179926-1

Client Sample ID: DUP-1-20210106
Date Collected: 01/06/21 00:00
Date Received: 01/07/21 10:00

Lab Sample ID: 480-179926-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		4.0		ug/L			01/08/21 13:57	4
1,1,1-Trichloroethane	ND		4.0		ug/L			01/08/21 13:57	4
1,1,2,2-Tetrachloroethane	ND		2.0		ug/L			01/08/21 13:57	4
1,1,2-Trichloroethane	ND		4.0		ug/L			01/08/21 13:57	4
1,1-Dichloroethane	ND		4.0		ug/L			01/08/21 13:57	4
1,1-Dichloroethene	ND		4.0		ug/L			01/08/21 13:57	4
1,1-Dichloropropene	ND		4.0		ug/L			01/08/21 13:57	4
1,2,3-Trichlorobenzene	ND		4.0		ug/L			01/08/21 13:57	4
1,2,3-Trichloropropane	ND		4.0		ug/L			01/08/21 13:57	4
1,2,4-Trichlorobenzene	ND		4.0		ug/L			01/08/21 13:57	4
1,2,4-Trimethylbenzene	ND		4.0		ug/L			01/08/21 13:57	4
1,2-Dibromo-3-Chloropropane	ND		20		ug/L			01/08/21 13:57	4
1,2-Dichlorobenzene	ND		4.0		ug/L			01/08/21 13:57	4
1,2-Dichloroethane	ND		4.0		ug/L			01/08/21 13:57	4
1,2-Dichloropropane	ND		4.0		ug/L			01/08/21 13:57	4
1,3,5-Trimethylbenzene	ND		4.0		ug/L			01/08/21 13:57	4
1,3-Dichlorobenzene	ND		4.0		ug/L			01/08/21 13:57	4
1,3-Dichloropropane	ND		4.0		ug/L			01/08/21 13:57	4
1,4-Dichlorobenzene	ND		4.0		ug/L			01/08/21 13:57	4
1,4-Dioxane	ND	*+ *1	200		ug/L			01/08/21 13:57	4
2,2-Dichloropropane	ND		4.0		ug/L			01/08/21 13:57	4
2-Butanone (MEK)	ND	*+	40		ug/L			01/08/21 13:57	4
2-Chlorotoluene	ND		4.0		ug/L			01/08/21 13:57	4
2-Hexanone	ND		40		ug/L			01/08/21 13:57	4
4-Chlorotoluene	ND		4.0		ug/L			01/08/21 13:57	4
4-Isopropyltoluene	ND		4.0		ug/L			01/08/21 13:57	4
4-Methyl-2-pentanone (MIBK)	ND		40		ug/L			01/08/21 13:57	4
Acetone	ND		200		ug/L			01/08/21 13:57	4
Benzene	ND		4.0		ug/L			01/08/21 13:57	4
Bromobenzene	ND		4.0		ug/L			01/08/21 13:57	4
Bromoform	ND		4.0		ug/L			01/08/21 13:57	4
Bromomethane	ND		8.0		ug/L			01/08/21 13:57	4
Carbon disulfide	ND		40		ug/L			01/08/21 13:57	4
Carbon tetrachloride	ND		4.0		ug/L			01/08/21 13:57	4
Chlorobenzene	ND		4.0		ug/L			01/08/21 13:57	4
Chlorobromomethane	ND		4.0		ug/L			01/08/21 13:57	4
Chlorodibromomethane	ND		2.0		ug/L			01/08/21 13:57	4
Chloroethane	ND		8.0		ug/L			01/08/21 13:57	4
Chloroform	ND		4.0		ug/L			01/08/21 13:57	4
Chloromethane	ND		8.0		ug/L			01/08/21 13:57	4
cis-1,2-Dichloroethene	**320**		4.0		ug/L			01/08/21 13:57	4
cis-1,3-Dichloropropene	ND		1.6		ug/L			01/08/21 13:57	4
Dichlorobromomethane	ND		2.0		ug/L			01/08/21 13:57	4
Dichlorodifluoromethane	ND		4.0		ug/L			01/08/21 13:57	4
Ethyl ether	ND		4.0		ug/L			01/08/21 13:57	4
Ethylbenzene	ND		4.0		ug/L			01/08/21 13:57	4
Ethylene Dibromide	ND		4.0		ug/L			01/08/21 13:57	4
Hexachlorobutadiene	ND		1.6		ug/L			01/08/21 13:57	4
Isopropyl ether	ND		40		ug/L			01/08/21 13:57	4

Client Sample ID: DUP-1-20210106

Lab Sample ID: 480-179926-5

Date Collected: 01/06/21 00:00

Matrix: Water

Date Received: 01/07/21 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		4.0		ug/L			01/08/21 13:57	4
Methyl tert-butyl ether	ND		4.0		ug/L			01/08/21 13:57	4
Methylene Chloride	ND		4.0		ug/L			01/08/21 13:57	4
m-Xylene & p-Xylene	ND		8.0		ug/L			01/08/21 13:57	4
Naphthalene	ND		20		ug/L			01/08/21 13:57	4
n-Butylbenzene	ND		4.0		ug/L			01/08/21 13:57	4
N-Propylbenzene	ND		4.0		ug/L			01/08/21 13:57	4
o-Xylene	ND		4.0		ug/L			01/08/21 13:57	4
sec-Butylbenzene	ND		4.0		ug/L			01/08/21 13:57	4
Styrene	ND		4.0		ug/L			01/08/21 13:57	4
Tert-amyl methyl ether	ND		20		ug/L			01/08/21 13:57	4
Tert-butyl ethyl ether	ND		20		ug/L			01/08/21 13:57	4
tert-Butylbenzene	ND		4.0		ug/L			01/08/21 13:57	4
Tetrachloroethene	ND		4.0		ug/L			01/08/21 13:57	4
Tetrahydrofuran	ND	*+	40		ug/L			01/08/21 13:57	4
Toluene	**31**		4.0		ug/L			01/08/21 13:57	4
trans-1,2-Dichloroethene	ND		4.0		ug/L			01/08/21 13:57	4
trans-1,3-Dichloropropene	ND		1.6		ug/L			01/08/21 13:57	4
Trichloroethene	**10**		4.0		ug/L			01/08/21 13:57	4
Trichlorofluoromethane	ND		4.0		ug/L			01/08/21 13:57	4
Vinyl chloride	**29**		4.0		ug/L			01/08/21 13:57	4
Dibromomethane	ND		4.0		ug/L			01/08/21 13:57	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*70 - 130*		*01/08/21 13:57*	*4*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 130*		*01/08/21 13:57*	*4*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*		*01/08/21 13:57*	*4*

Client Sample ID: TRIP BLANK-20210106

Lab Sample ID: 480-179926-6

Date Collected: 01/06/21 00:00

Matrix: Water

Date Received: 01/07/21 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			01/08/21 14:22	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/08/21 14:22	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			01/08/21 14:22	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/08/21 14:22	1
1,1-Dichloroethane	ND		1.0		ug/L			01/08/21 14:22	1
1,1-Dichloroethene	ND		1.0		ug/L			01/08/21 14:22	1
1,1-Dichloropropene	ND		1.0		ug/L			01/08/21 14:22	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/08/21 14:22	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/08/21 14:22	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/08/21 14:22	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/08/21 14:22	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/08/21 14:22	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/08/21 14:22	1
1,2-Dichloroethane	ND		1.0		ug/L			01/08/21 14:22	1
1,2-Dichloropropane	ND		1.0		ug/L			01/08/21 14:22	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/08/21 14:22	1

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

Job ID: 480-179926-1

Client Sample ID: TRIP BLANK-20210106
Date Collected: 01/06/21 00:00
Date Received: 01/07/21 10:00

Lab Sample ID: 480-179926-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0		ug/L			01/08/21 14:22	1
1,3-Dichloropropane	ND		1.0		ug/L			01/08/21 14:22	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/08/21 14:22	1
1,4-Dioxane	ND	*+ *1	50		ug/L			01/08/21 14:22	1
2,2-Dichloropropane	ND		1.0		ug/L			01/08/21 14:22	1
2-Butanone (MEK)	ND	*+	10		ug/L			01/08/21 14:22	1
2-Chlorotoluene	ND		1.0		ug/L			01/08/21 14:22	1
2-Hexanone	ND		10		ug/L			01/08/21 14:22	1
4-Chlorotoluene	ND		1.0		ug/L			01/08/21 14:22	1
4-Isopropyltoluene	ND		1.0		ug/L			01/08/21 14:22	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			01/08/21 14:22	1
Acetone	ND		50		ug/L			01/08/21 14:22	1
Benzene	ND		1.0		ug/L			01/08/21 14:22	1
Bromobenzene	ND		1.0		ug/L			01/08/21 14:22	1
Bromoform	ND		1.0		ug/L			01/08/21 14:22	1
Bromomethane	ND		2.0		ug/L			01/08/21 14:22	1
Carbon disulfide	ND		10		ug/L			01/08/21 14:22	1
Carbon tetrachloride	ND		1.0		ug/L			01/08/21 14:22	1
Chlorobenzene	ND		1.0		ug/L			01/08/21 14:22	1
Chlorobromomethane	ND		1.0		ug/L			01/08/21 14:22	1
Chlorodibromomethane	ND		0.50		ug/L			01/08/21 14:22	1
Chloroethane	ND		2.0		ug/L			01/08/21 14:22	1
Chloroform	ND		1.0		ug/L			01/08/21 14:22	1
Chloromethane	ND		2.0		ug/L			01/08/21 14:22	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			01/08/21 14:22	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			01/08/21 14:22	1
Dichlorobromomethane	ND		0.50		ug/L			01/08/21 14:22	1
Dichlorodifluoromethane	ND		1.0		ug/L			01/08/21 14:22	1
Ethyl ether	ND		1.0		ug/L			01/08/21 14:22	1
Ethylbenzene	ND		1.0		ug/L			01/08/21 14:22	1
Ethylene Dibromide	ND		1.0		ug/L			01/08/21 14:22	1
Hexachlorobutadiene	ND		0.40		ug/L			01/08/21 14:22	1
Isopropyl ether	ND		10		ug/L			01/08/21 14:22	1
Isopropylbenzene	ND		1.0		ug/L			01/08/21 14:22	1
Methyl tert-butyl ether	ND		1.0		ug/L			01/08/21 14:22	1
Methylene Chloride	ND		1.0		ug/L			01/08/21 14:22	1
m-Xylene & p-Xylene	ND		2.0		ug/L			01/08/21 14:22	1
Naphthalene	ND		5.0		ug/L			01/08/21 14:22	1
n-Butylbenzene	ND		1.0		ug/L			01/08/21 14:22	1
N-Propylbenzene	ND		1.0		ug/L			01/08/21 14:22	1
o-Xylene	ND		1.0		ug/L			01/08/21 14:22	1
sec-Butylbenzene	ND		1.0		ug/L			01/08/21 14:22	1
Styrene	ND		1.0		ug/L			01/08/21 14:22	1
Tert-amyl methyl ether	ND		5.0		ug/L			01/08/21 14:22	1
Tert-butyl ethyl ether	ND		5.0		ug/L			01/08/21 14:22	1
tert-Butylbenzene	ND		1.0		ug/L			01/08/21 14:22	1
Tetrachloroethene	ND		1.0		ug/L			01/08/21 14:22	1
Tetrahydrofuran	ND	*+	10		ug/L			01/08/21 14:22	1
Toluene	ND		1.0		ug/L			01/08/21 14:22	1

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

Job ID: 480-179926-1

Client Sample ID: TRIP BLANK-20210106
Date Collected: 01/06/21 00:00
Date Received: 01/07/21 10:00

Lab Sample ID: 480-179926-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/08/21 14:22	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			01/08/21 14:22	1
Trichloroethene	ND		1.0		ug/L			01/08/21 14:22	1
Trichlorofluoromethane	ND		1.0		ug/L			01/08/21 14:22	1
Vinyl chloride	ND		1.0		ug/L			01/08/21 14:22	1
Dibromomethane	ND		1.0		ug/L			01/08/21 14:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*70 - 130*		*01/08/21 14:22*	*1*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 130*		*01/08/21 14:22*	*1*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*		*01/08/21 14:22*	*1*

Surrogate Summary

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

Job ID: 480-179926-1

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)
480-179926-1	MW-268S-20210106	96	106	88
480-179926-2	MW-268M-20210106	103	110	101
480-179926-3	REW-6-20210106	101	112	99
480-179926-4	REW-7-20210106	99	111	97
480-179926-5	DUP-1-20210106	102	109	96
480-179926-6	TRIP BLANK-20210106	96	108	87
LCS 480-565523/5	Lab Control Sample	99	107	92
LCSD 480-565523/6	Lab Control Sample Dup	97	106	91
MB 480-565523/8	Method Blank	99	106	91

Surrogate Legend

TOL = Toluene-d8 (Surr)

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

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

Lab Sample ID: MB 480-565523/8
Matrix: Water
Analysis Batch: 565523

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			01/08/21 11:40	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/08/21 11:40	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			01/08/21 11:40	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/08/21 11:40	1
1,1-Dichloroethane	ND		1.0		ug/L			01/08/21 11:40	1
1,1-Dichloroethene	ND		1.0		ug/L			01/08/21 11:40	1
1,1-Dichloropropene	ND		1.0		ug/L			01/08/21 11:40	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/08/21 11:40	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/08/21 11:40	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/08/21 11:40	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/08/21 11:40	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/08/21 11:40	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/08/21 11:40	1
1,2-Dichloroethane	ND		1.0		ug/L			01/08/21 11:40	1
1,2-Dichloropropane	ND		1.0		ug/L			01/08/21 11:40	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/08/21 11:40	1
1,3-Dichlorobenzene	ND		1.0		ug/L			01/08/21 11:40	1
1,3-Dichloropropane	ND		1.0		ug/L			01/08/21 11:40	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/08/21 11:40	1
1,4-Dioxane	ND		50		ug/L			01/08/21 11:40	1
2,2-Dichloropropane	ND		1.0		ug/L			01/08/21 11:40	1
2-Butanone (MEK)	ND		10		ug/L			01/08/21 11:40	1
2-Chlorotoluene	ND		1.0		ug/L			01/08/21 11:40	1
2-Hexanone	ND		10		ug/L			01/08/21 11:40	1
4-Chlorotoluene	ND		1.0		ug/L			01/08/21 11:40	1
4-Isopropyltoluene	ND		1.0		ug/L			01/08/21 11:40	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			01/08/21 11:40	1
Acetone	ND		50		ug/L			01/08/21 11:40	1
Benzene	ND		1.0		ug/L			01/08/21 11:40	1
Bromobenzene	ND		1.0		ug/L			01/08/21 11:40	1
Bromoform	ND		1.0		ug/L			01/08/21 11:40	1
Bromomethane	ND		2.0		ug/L			01/08/21 11:40	1
Carbon disulfide	ND		10		ug/L			01/08/21 11:40	1
Carbon tetrachloride	ND		1.0		ug/L			01/08/21 11:40	1
Chlorobenzene	ND		1.0		ug/L			01/08/21 11:40	1
Chlorobromomethane	ND		1.0		ug/L			01/08/21 11:40	1
Chlorodibromomethane	ND		0.50		ug/L			01/08/21 11:40	1
Chloroethane	ND		2.0		ug/L			01/08/21 11:40	1
Chloroform	ND		1.0		ug/L			01/08/21 11:40	1
Chloromethane	ND		2.0		ug/L			01/08/21 11:40	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			01/08/21 11:40	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			01/08/21 11:40	1
Dichlorobromomethane	ND		0.50		ug/L			01/08/21 11:40	1
Dichlorodifluoromethane	ND		1.0		ug/L			01/08/21 11:40	1
Ethyl ether	ND		1.0		ug/L			01/08/21 11:40	1
Ethylbenzene	ND		1.0		ug/L			01/08/21 11:40	1
Ethylene Dibromide	ND		1.0		ug/L			01/08/21 11:40	1
Hexachlorobutadiene	ND		0.40		ug/L			01/08/21 11:40	1

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

Lab Sample ID: MB 480-565523/8
Matrix: Water
Analysis Batch: 565523

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropyl ether	ND		10		ug/L			01/08/21 11:40	1
Isopropylbenzene	ND		1.0		ug/L			01/08/21 11:40	1
Methyl tert-butyl ether	ND		1.0		ug/L			01/08/21 11:40	1
Methylene Chloride	ND		1.0		ug/L			01/08/21 11:40	1
m-Xylene & p-Xylene	ND		2.0		ug/L			01/08/21 11:40	1
Naphthalene	ND		5.0		ug/L			01/08/21 11:40	1
n-Butylbenzene	ND		1.0		ug/L			01/08/21 11:40	1
N-Propylbenzene	ND		1.0		ug/L			01/08/21 11:40	1
o-Xylene	ND		1.0		ug/L			01/08/21 11:40	1
sec-Butylbenzene	ND		1.0		ug/L			01/08/21 11:40	1
Styrene	ND		1.0		ug/L			01/08/21 11:40	1
Tert-amyl methyl ether	ND		5.0		ug/L			01/08/21 11:40	1
Tert-butyl ethyl ether	ND		5.0		ug/L			01/08/21 11:40	1
tert-Butylbenzene	ND		1.0		ug/L			01/08/21 11:40	1
Tetrachloroethene	ND		1.0		ug/L			01/08/21 11:40	1
Tetrahydrofuran	ND		10		ug/L			01/08/21 11:40	1
Toluene	ND		1.0		ug/L			01/08/21 11:40	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/08/21 11:40	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			01/08/21 11:40	1
Trichloroethene	ND		1.0		ug/L			01/08/21 11:40	1
Trichlorofluoromethane	ND		1.0		ug/L			01/08/21 11:40	1
Vinyl chloride	ND		1.0		ug/L			01/08/21 11:40	1
Dibromomethane	ND		1.0		ug/L			01/08/21 11:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*70 - 130*		*01/08/21 11:40*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 130*		*01/08/21 11:40*	*1*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*		*01/08/21 11:40*	*1*

Lab Sample ID: LCS 480-565523/5
Matrix: Water
Analysis Batch: 565523

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	26.9		ug/L		108	70 - 130
1,1,1-Trichloroethane	25.0	27.1		ug/L		108	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	25.9		ug/L		104	70 - 130
1,1-Dichloroethene	25.0	23.4		ug/L		94	70 - 130
1,1-Dichloropropene	25.0	25.4		ug/L		102	70 - 130
1,2,3-Trichlorobenzene	25.0	25.9		ug/L		104	70 - 130
1,2,3-Trichloropropane	25.0	26.5		ug/L		106	70 - 130
1,2,4-Trichlorobenzene	25.0	26.3		ug/L		105	70 - 130
1,2,4-Trimethylbenzene	25.0	27.0		ug/L		108	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	28.9		ug/L		115	70 - 130
1,2-Dichlorobenzene	25.0	25.3		ug/L		101	70 - 130
1,2-Dichloroethane	25.0	26.3		ug/L		105	70 - 130

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

Lab Sample ID: LCS 480-565523/5
Matrix: Water
Analysis Batch: 565523

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	23.8		ug/L		95	70 - 130
1,3,5-Trimethylbenzene	25.0	26.9		ug/L		108	70 - 130
1,3-Dichlorobenzene	25.0	26.0		ug/L		104	70 - 130
1,3-Dichloropropane	25.0	24.9		ug/L		99	70 - 130
1,4-Dichlorobenzene	25.0	25.3		ug/L		101	70 - 130
1,4-Dioxane	500	501		ug/L		100	70 - 130
2,2-Dichloropropane	25.0	26.5		ug/L		106	70 - 130
2-Butanone (MEK)	125	220	*+	ug/L		176	70 - 130
2-Chlorotoluene	25.0	27.4		ug/L		110	70 - 130
2-Hexanone	125	137		ug/L		110	70 - 130
4-Chlorotoluene	25.0	27.2		ug/L		109	70 - 130
4-Isopropyltoluene	25.0	27.8		ug/L		111	70 - 130
4-Methyl-2-pentanone (MIBK)	125	135		ug/L		108	70 - 130
Acetone	125	133		ug/L		107	70 - 130
Benzene	25.0	22.9		ug/L		92	70 - 130
Bromobenzene	25.0	25.7		ug/L		103	70 - 130
Bromoform	25.0	26.2		ug/L		105	70 - 130
Bromomethane	25.0	21.5		ug/L		86	70 - 130
Carbon disulfide	25.0	22.3		ug/L		89	70 - 130
Carbon tetrachloride	25.0	27.5		ug/L		110	70 - 130
Chlorobenzene	25.0	25.2		ug/L		101	70 - 130
Chlorobromomethane	25.0	21.7		ug/L		87	70 - 130
Chlorodibromomethane	25.0	26.3		ug/L		105	70 - 130
Chloroethane	25.0	20.1		ug/L		81	70 - 130
Chloroform	25.0	24.1		ug/L		97	70 - 130
Chloromethane	25.0	24.8		ug/L		99	70 - 130
cis-1,2-Dichloroethene	25.0	22.7		ug/L		91	70 - 130
cis-1,3-Dichloropropene	25.0	24.6		ug/L		98	70 - 130
Dichlorobromomethane	25.0	25.1		ug/L		100	70 - 130
Dichlorodifluoromethane	25.0	24.1		ug/L		97	70 - 130
Ethyl ether	25.0	23.1		ug/L		92	70 - 130
Ethylbenzene	25.0	25.7		ug/L		103	70 - 130
Ethylene Dibromide	25.0	25.3		ug/L		101	70 - 130
Hexachlorobutadiene	25.0	27.7		ug/L		111	70 - 130
Isopropyl ether	25.0	27.1		ug/L		108	70 - 130
Isopropylbenzene	25.0	27.0		ug/L		108	70 - 130
Methyl tert-butyl ether	25.0	23.8		ug/L		95	70 - 130
Methylene Chloride	25.0	23.1		ug/L		92	70 - 130
m-Xylene & p-Xylene	25.0	25.3		ug/L		101	70 - 130
Naphthalene	25.0	25.8		ug/L		103	70 - 130
n-Butylbenzene	25.0	27.9		ug/L		112	70 - 130
N-Propylbenzene	25.0	26.9		ug/L		108	70 - 130
o-Xylene	25.0	25.9		ug/L		104	70 - 130
sec-Butylbenzene	25.0	27.0		ug/L		108	70 - 130
Styrene	25.0	26.3		ug/L		105	70 - 130
Tert-amyl methyl ether	25.0	25.0		ug/L		100	70 - 130
Tert-butyl ethyl ether	25.0	25.3		ug/L		101	70 - 130
tert-Butylbenzene	25.0	27.0		ug/L		108	70 - 130
Tetrachloroethene	25.0	26.7		ug/L		107	70 - 130

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

Lab Sample ID: LCS 480-565523/5
Matrix: Water
Analysis Batch: 565523

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Tetrahydrofuran			50.0	64.2		ug/L		128	70 - 130		
Toluene			25.0	24.8		ug/L		99	70 - 130		
trans-1,2-Dichloroethene			25.0	24.1		ug/L		96	70 - 130		
trans-1,3-Dichloropropene			25.0	26.6		ug/L		106	70 - 130		
Trichloroethene			25.0	24.5		ug/L		98	70 - 130		
Trichlorofluoromethane			25.0	26.1		ug/L		105	70 - 130		
Vinyl chloride			25.0	22.9		ug/L		92	70 - 130		
Dibromomethane			25.0	23.9		ug/L		96	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*99*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 130*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*

Lab Sample ID: LCSD 480-565523/6
Matrix: Water
Analysis Batch: 565523

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	28.3		ug/L		113	70 - 130	5	20
1,1,1-Trichloroethane			25.0	27.8		ug/L		111	70 - 130	2	20
1,1,2,2-Tetrachloroethane			25.0	26.9		ug/L		107	70 - 130	8	20
1,1,2-Trichloroethane			25.0	25.5		ug/L		102	70 - 130	2	20
1,1-Dichloroethane			25.0	26.3		ug/L		105	70 - 130	1	20
1,1-Dichloroethene			25.0	23.7		ug/L		95	70 - 130	1	20
1,1-Dichloropropene			25.0	25.7		ug/L		103	70 - 130	1	20
1,2,3-Trichlorobenzene			25.0	28.0		ug/L		112	70 - 130	8	20
1,2,3-Trichloropropane			25.0	28.5		ug/L		114	70 - 130	7	20
1,2,4-Trichlorobenzene			25.0	27.5		ug/L		110	70 - 130	5	20
1,2,4-Trimethylbenzene			25.0	28.4		ug/L		114	70 - 130	5	20
1,2-Dibromo-3-Chloropropane			25.0	31.1		ug/L		124	70 - 130	7	20
1,2-Dichlorobenzene			25.0	26.6		ug/L		106	70 - 130	5	20
1,2-Dichloroethane			25.0	27.4		ug/L		109	70 - 130	4	20
1,2-Dichloropropane			25.0	24.9		ug/L		99	70 - 130	4	20
1,3,5-Trimethylbenzene			25.0	27.8		ug/L		111	70 - 130	3	20
1,3-Dichlorobenzene			25.0	27.6		ug/L		110	70 - 130	6	20
1,3-Dichloropropane			25.0	25.9		ug/L		104	70 - 130	4	20
1,4-Dichlorobenzene			25.0	27.0		ug/L		108	70 - 130	6	20
1,4-Dioxane			500	658	*+ *1	ug/L		132	70 - 130	27	20
2,2-Dichloropropane			25.0	27.4		ug/L		110	70 - 130	4	20
2-Butanone (MEK)			125	231	*+	ug/L		184	70 - 130	5	20
2-Chlorotoluene			25.0	28.3		ug/L		113	70 - 130	3	20
2-Hexanone			125	144		ug/L		115	70 - 130	5	20
4-Chlorotoluene			25.0	28.3		ug/L		113	70 - 130	4	20
4-Isopropyltoluene			25.0	28.8		ug/L		115	70 - 130	3	20
4-Methyl-2-pentanone (MIBK)			125	140		ug/L		112	70 - 130	4	20
Acetone			125	135		ug/L		108	70 - 130	2	20
Benzene			25.0	23.4		ug/L		94	70 - 130	2	20

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

Lab Sample ID: LCSD 480-565523/6
Matrix: Water
Analysis Batch: 565523

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
Bromobenzene	25.0	26.6		ug/L		107	70 - 130	4	20
Bromoform	25.0	28.4		ug/L		113	70 - 130	8	20
Bromomethane	25.0	21.9		ug/L		87	70 - 130	1	20
Carbon disulfide	25.0	22.4		ug/L		90	70 - 130	0	20
Carbon tetrachloride	25.0	27.9		ug/L		112	70 - 130	2	20
Chlorobenzene	25.0	26.0		ug/L		104	70 - 130	3	20
Chlorobromomethane	25.0	23.4		ug/L		93	70 - 130	7	20
Chlorodibromomethane	25.0	27.7		ug/L		111	70 - 130	5	20
Chloroethane	25.0	20.6		ug/L		83	70 - 130	2	20
Chloroform	25.0	24.7		ug/L		99	70 - 130	2	20
Chloromethane	25.0	25.0		ug/L		100	70 - 130	1	20
cis-1,2-Dichloroethene	25.0	23.8		ug/L		95	70 - 130	4	20
cis-1,3-Dichloropropene	25.0	25.7		ug/L		103	70 - 130	5	20
Dichlorobromomethane	25.0	25.9		ug/L		104	70 - 130	3	20
Dichlorodifluoromethane	25.0	24.2		ug/L		97	70 - 130	0	20
Ethyl ether	25.0	24.2		ug/L		97	70 - 130	5	20
Ethylbenzene	25.0	26.2		ug/L		105	70 - 130	2	20
Ethylene Dibromide	25.0	26.4		ug/L		106	70 - 130	4	20
Hexachlorobutadiene	25.0	28.7		ug/L		115	70 - 130	3	20
Isopropyl ether	25.0	28.1		ug/L		112	70 - 130	4	20
Isopropylbenzene	25.0	28.2		ug/L		113	70 - 130	4	20
Methyl tert-butyl ether	25.0	25.3		ug/L		101	70 - 130	6	20
Methylene Chloride	25.0	23.7		ug/L		95	70 - 130	2	20
m-Xylene & p-Xylene	25.0	25.9		ug/L		104	70 - 130	2	20
Naphthalene	25.0	27.7		ug/L		111	70 - 130	7	20
n-Butylbenzene	25.0	28.6		ug/L		114	70 - 130	3	20
N-Propylbenzene	25.0	27.8		ug/L		111	70 - 130	3	20
o-Xylene	25.0	26.4		ug/L		106	70 - 130	2	20
sec-Butylbenzene	25.0	28.1		ug/L		112	70 - 130	4	20
Styrene	25.0	27.0		ug/L		108	70 - 130	2	20
Tert-amyl methyl ether	25.0	26.3		ug/L		105	70 - 130	5	20
Tert-butyl ethyl ether	25.0	26.5		ug/L		106	70 - 130	5	20
tert-Butylbenzene	25.0	28.0		ug/L		112	70 - 130	4	20
Tetrachloroethene	25.0	27.1		ug/L		108	70 - 130	2	20
Tetrahydrofuran	50.0	66.9	*+	ug/L		134	70 - 130	4	20
Toluene	25.0	25.8		ug/L		103	70 - 130	4	20
trans-1,2-Dichloroethene	25.0	24.2		ug/L		97	70 - 130	0	20
trans-1,3-Dichloropropene	25.0	27.9		ug/L		112	70 - 130	5	20
Trichloroethene	25.0	25.3		ug/L		101	70 - 130	3	20
Trichlorofluoromethane	25.0	26.7		ug/L		107	70 - 130	2	20
Vinyl chloride	25.0	23.1		ug/L		92	70 - 130	1	20
Dibromomethane	25.0	24.8		ug/L		99	70 - 130	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*97*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 130*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*

Method: 6010 - Metals (ICP)

Lab Sample ID: MB 480-565478/1-A
Matrix: Water
Analysis Batch: 565725

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 565478

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050		mg/L		01/08/21 10:10	01/08/21 16:29	1

Lab Sample ID: LCS 480-565478/2-A
Matrix: Water
Analysis Batch: 565725

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 565478

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	9.81		mg/L		98	80 - 120

Lab Sample ID: LCSD 480-565478/3-A
Matrix: Water
Analysis Batch: 565725

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 565478

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	10.0	9.68		mg/L		97	80 - 120	1	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-565548/1-B
Matrix: Water
Analysis Batch: 565696

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 565694

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		4.0		mg/L		01/11/21 06:30	01/11/21 08:39	1

Lab Sample ID: 480-179926-1 MS
Matrix: Water
Analysis Batch: 565696

Client Sample ID: MW-268S-20210106
Prep Type: Total/NA
Prep Batch: 565694

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	ND	F1	0.200	0.300	F1	mg/L		150	90 - 110

Lab Sample ID: 480-179926-2 MS
Matrix: Water
Analysis Batch: 565696

Client Sample ID: MW-268M-20210106
Prep Type: Total/NA
Prep Batch: 565694

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	ND		0.200	0.301		mg/L		100	90 - 110

Lab Sample ID: 480-179926-2 DU
Matrix: Water
Analysis Batch: 565696

Client Sample ID: MW-268M-20210106
Prep Type: Total/NA
Prep Batch: 565694

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Ammonia	ND		ND		mg/L		NC	20

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: MB 480-565696/17
Matrix: Water
Analysis Batch: 565696

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.20		mg/L			01/11/21 08:28	1

Lab Sample ID: MB 480-565696/45
Matrix: Water
Analysis Batch: 565696

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.20		mg/L			01/11/21 09:44	1

Lab Sample ID: LCS 480-565696/18
Matrix: Water
Analysis Batch: 565696

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.05		mg/L		105	90 - 110

Lab Sample ID: LCS 480-565696/46
Matrix: Water
Analysis Batch: 565696

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	0.995		mg/L		100	90 - 110

Method: 9038 - Sulfate, Turbidimetric

Lab Sample ID: MB 480-565508/53
Matrix: Water
Analysis Batch: 565508

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		5.0		mg/L			01/08/21 03:06	1

Lab Sample ID: MB 480-565508/87
Matrix: Water
Analysis Batch: 565508

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		5.0		mg/L			01/08/21 03:24	1

Lab Sample ID: LCS 480-565508/54
Matrix: Water
Analysis Batch: 565508

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	30.0	30.9		mg/L		103	90 - 110

Method: 9038 - Sulfate, Turbidimetric (Continued)

Lab Sample ID: LCS 480-565508/88
Matrix: Water
Analysis Batch: 565508

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	30.0	31.1		mg/L		104	90 - 110

Method: 9040C - pH

Lab Sample ID: 480-179926-3 DU
Matrix: Water
Analysis Batch: 566179

Client Sample ID: REW-6-20210106
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	6.5	HF	6.5		SU		0.8	5
Temperature	20.6	HF	20.8		Degrees C		1	10

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

Lab Sample ID: MB 480-565835/4
Matrix: Water
Analysis Batch: 565835

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TOC Result 1	ND		1.0		mg/L			01/11/21 20:36	1
TOC Result 2	ND		1.0		mg/L			01/11/21 20:36	1
Total Organic Carbon - Duplicates	ND		1.0		mg/L			01/11/21 20:36	1

Lab Sample ID: LCS 480-565835/5
Matrix: Water
Analysis Batch: 565835

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	61.8		mg/L		103	90 - 110
TOC Result 2	60.0	61.5		mg/L		103	90 - 110
Total Organic Carbon - Duplicates	60.0	61.7		mg/L		103	90 - 110

Lab Sample ID: MB 480-566005/4
Matrix: Water
Analysis Batch: 566005

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TOC Result 1	ND		1.0		mg/L			01/12/21 19:44	1
TOC Result 2	ND		1.0		mg/L			01/12/21 19:44	1
Total Organic Carbon - Duplicates	ND		1.0		mg/L			01/12/21 19:44	1

Lab Sample ID: LCS 480-566005/5
Matrix: Water
Analysis Batch: 566005

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	61.6		mg/L		103	90 - 110
TOC Result 2	60.0	60.4		mg/L		101	90 - 110
Total Organic Carbon - Duplicates	60.0	61.0		mg/L		102	90 - 110

Method: 9251 - Chloride

Lab Sample ID: MB 480-565506/102
Matrix: Water
Analysis Batch: 565506

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0		mg/L			01/08/21 01:18	1

Lab Sample ID: MB 480-565506/113
Matrix: Water
Analysis Batch: 565506

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0		mg/L			01/08/21 01:21	1

Lab Sample ID: MB 480-565506/80
Matrix: Water
Analysis Batch: 565506

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0		mg/L			01/08/21 01:05	1

Lab Sample ID: MB 480-565506/92
Matrix: Water
Analysis Batch: 565506

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0		mg/L			01/08/21 01:09	1

Lab Sample ID: LCS 480-565506/101
Matrix: Water
Analysis Batch: 565506

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			25.0	26.9		mg/L		108	90 - 110		

Lab Sample ID: LCS 480-565506/112
Matrix: Water
Analysis Batch: 565506

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			25.0	27.1		mg/L		109	90 - 110		

Lab Sample ID: LCS 480-565506/79
Matrix: Water
Analysis Batch: 565506

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			25.0	27.1		mg/L		108	90 - 110		

Lab Sample ID: LCS 480-565506/91
Matrix: Water
Analysis Batch: 565506

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			25.0	27.0		mg/L		108	90 - 110		

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-565817/27
Matrix: Water
Analysis Batch: 565817

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	ND		5.0		mg/L			01/11/21 18:39	1

Lab Sample ID: LCS 480-565817/29
Matrix: Water
Analysis Batch: 565817

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	95.8		mg/L		96	90 - 110		

Method: SM 4500 P E - Orthophosphate

Lab Sample ID: MB 480-565491/3
Matrix: Water
Analysis Batch: 565491

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
ortho-Phosphate	ND		0.020		mg/L			01/07/21 15:55	1

Lab Sample ID: LCS 480-565491/4
Matrix: Water
Analysis Batch: 565491

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

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

Lab Sample ID: 480-179926-4 MS
Matrix: Water
Analysis Batch: 565491

Client Sample ID: REW-7-20210106
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
ortho-Phosphate	0.097		1.00	1.17		mg/L		108	49 - 138		

Lab Sample ID: 480-179926-1 DU
Matrix: Water
Analysis Batch: 565491

Client Sample ID: MW-268S-20210106
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
ortho-Phosphate	0.047			0.0447		mg/L				6	20

Lab Sample ID: 480-179926-2 DU
Matrix: Water
Analysis Batch: 565491

Client Sample ID: MW-268M-20210106
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
ortho-Phosphate	0.021			0.0242		mg/L				12	20

Method: SM 4500 P E - Orthophosphate (Continued)

Lab Sample ID: 480-179926-3 DU
Matrix: Water
Analysis Batch: 565491

Client Sample ID: REW-6-20210106
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
ortho-Phosphate	0.089			0.0872		mg/L				2	20

Lab Sample ID: 480-179926-4 DU
Matrix: Water
Analysis Batch: 565491

Client Sample ID: REW-7-20210106
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
ortho-Phosphate	0.097			0.101		mg/L				4	20

GC/MS VOA

Analysis Batch: 565523

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-179926-1	MW-268S-20210106	Total/NA	Water	8260C	
480-179926-2	MW-268M-20210106	Total/NA	Water	8260C	
480-179926-3	REW-6-20210106	Total/NA	Water	8260C	
480-179926-4	REW-7-20210106	Total/NA	Water	8260C	
480-179926-5	DUP-1-20210106	Total/NA	Water	8260C	
480-179926-6	TRIP BLANK-20210106	Total/NA	Water	8260C	
MB 480-565523/8	Method Blank	Total/NA	Water	8260C	
LCS 480-565523/5	Lab Control Sample	Total/NA	Water	8260C	
LCSD 480-565523/6	Lab Control Sample Dup	Total/NA	Water	8260C	

Metals

Prep Batch: 565478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-179926-1	MW-268S-20210106	Total/NA	Water	3005A	
480-179926-2	MW-268M-20210106	Total/NA	Water	3005A	
480-179926-3	REW-6-20210106	Total/NA	Water	3005A	
480-179926-4	REW-7-20210106	Total/NA	Water	3005A	
MB 480-565478/1-A	Method Blank	Total/NA	Water	3005A	
LCS 480-565478/2-A	Lab Control Sample	Total/NA	Water	3005A	
LCSD 480-565478/3-A	Lab Control Sample Dup	Total/NA	Water	3005A	

Analysis Batch: 565725

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-179926-1	MW-268S-20210106	Total/NA	Water	6010	565478
480-179926-2	MW-268M-20210106	Total/NA	Water	6010	565478
480-179926-3	REW-6-20210106	Total/NA	Water	6010	565478
480-179926-4	REW-7-20210106	Total/NA	Water	6010	565478
MB 480-565478/1-A	Method Blank	Total/NA	Water	6010	565478
LCS 480-565478/2-A	Lab Control Sample	Total/NA	Water	6010	565478
LCSD 480-565478/3-A	Lab Control Sample Dup	Total/NA	Water	6010	565478

General Chemistry

Analysis Batch: 565491

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-179926-1	MW-268S-20210106	Total/NA	Water	SM 4500 P E	
480-179926-2	MW-268M-20210106	Total/NA	Water	SM 4500 P E	
480-179926-3	REW-6-20210106	Total/NA	Water	SM 4500 P E	
480-179926-4	REW-7-20210106	Total/NA	Water	SM 4500 P E	
MB 480-565491/3	Method Blank	Total/NA	Water	SM 4500 P E	
LCS 480-565491/4	Lab Control Sample	Total/NA	Water	SM 4500 P E	
480-179926-4 MS	REW-7-20210106	Total/NA	Water	SM 4500 P E	
480-179926-1 DU	MW-268S-20210106	Total/NA	Water	SM 4500 P E	
480-179926-2 DU	MW-268M-20210106	Total/NA	Water	SM 4500 P E	
480-179926-3 DU	REW-6-20210106	Total/NA	Water	SM 4500 P E	
480-179926-4 DU	REW-7-20210106	Total/NA	Water	SM 4500 P E	

Analysis Batch: 565500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-179926-1	MW-268S-20210106	Total/NA	Water	353.2	
480-179926-2	MW-268M-20210106	Total/NA	Water	353.2	

General Chemistry (Continued)

Analysis Batch: 565500 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-179926-3	REW-6-20210106	Total/NA	Water	353.2	
480-179926-4	REW-7-20210106	Total/NA	Water	353.2	

Analysis Batch: 565506

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-179926-1	MW-268S-20210106	Total/NA	Water	9251	
480-179926-2	MW-268M-20210106	Total/NA	Water	9251	
480-179926-3	REW-6-20210106	Total/NA	Water	9251	
480-179926-4	REW-7-20210106	Total/NA	Water	9251	
MB 480-565506/102	Method Blank	Total/NA	Water	9251	
MB 480-565506/113	Method Blank	Total/NA	Water	9251	
MB 480-565506/80	Method Blank	Total/NA	Water	9251	
MB 480-565506/92	Method Blank	Total/NA	Water	9251	
LCS 480-565506/101	Lab Control Sample	Total/NA	Water	9251	
LCS 480-565506/112	Lab Control Sample	Total/NA	Water	9251	
LCS 480-565506/79	Lab Control Sample	Total/NA	Water	9251	
LCS 480-565506/91	Lab Control Sample	Total/NA	Water	9251	

Analysis Batch: 565508

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-179926-1	MW-268S-20210106	Total/NA	Water	9038	
480-179926-2	MW-268M-20210106	Total/NA	Water	9038	
480-179926-3	REW-6-20210106	Total/NA	Water	9038	
480-179926-4	REW-7-20210106	Total/NA	Water	9038	
MB 480-565508/53	Method Blank	Total/NA	Water	9038	
MB 480-565508/87	Method Blank	Total/NA	Water	9038	
LCS 480-565508/54	Lab Control Sample	Total/NA	Water	9038	
LCS 480-565508/88	Lab Control Sample	Total/NA	Water	9038	

Leach Batch: 565548

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-565548/1-B	Method Blank	Total/NA	Water	D3987-85	

Prep Batch: 565694

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-179926-1	MW-268S-20210106	Total/NA	Water	Distill/Ammonia	
480-179926-2	MW-268M-20210106	Total/NA	Water	Distill/Ammonia	
480-179926-3	REW-6-20210106	Total/NA	Water	Distill/Ammonia	
MB 480-565548/1-B	Method Blank	Total/NA	Water	Distill/Ammonia	565548
480-179926-1 MS	MW-268S-20210106	Total/NA	Water	Distill/Ammonia	
480-179926-2 MS	MW-268M-20210106	Total/NA	Water	Distill/Ammonia	
480-179926-2 DU	MW-268M-20210106	Total/NA	Water	Distill/Ammonia	

Prep Batch: 565695

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-179926-4	REW-7-20210106	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 565696

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-179926-1	MW-268S-20210106	Total/NA	Water	350.1	565694
480-179926-2	MW-268M-20210106	Total/NA	Water	350.1	565694

General Chemistry (Continued)

Analysis Batch: 565696 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-179926-3	REW-6-20210106	Total/NA	Water	350.1	565694
480-179926-4	REW-7-20210106	Total/NA	Water	350.1	565695
MB 480-565548/1-B	Method Blank	Total/NA	Water	350.1	565694
MB 480-565696/17	Method Blank	Total/NA	Water	350.1	
MB 480-565696/45	Method Blank	Total/NA	Water	350.1	
LCS 480-565696/18	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-565696/46	Lab Control Sample	Total/NA	Water	350.1	
480-179926-1 MS	MW-268S-20210106	Total/NA	Water	350.1	565694
480-179926-2 MS	MW-268M-20210106	Total/NA	Water	350.1	565694
480-179926-2 DU	MW-268M-20210106	Total/NA	Water	350.1	565694

Analysis Batch: 565817

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-179926-1	MW-268S-20210106	Total/NA	Water	SM 2320B	
480-179926-2	MW-268M-20210106	Total/NA	Water	SM 2320B	
480-179926-3	REW-6-20210106	Total/NA	Water	SM 2320B	
480-179926-4	REW-7-20210106	Total/NA	Water	SM 2320B	
MB 480-565817/27	Method Blank	Total/NA	Water	SM 2320B	
LCS 480-565817/29	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 565835

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-179926-3	REW-6-20210106	Total/NA	Water	9060A	
480-179926-4	REW-7-20210106	Total/NA	Water	9060A	
MB 480-565835/4	Method Blank	Total/NA	Water	9060A	
LCS 480-565835/5	Lab Control Sample	Total/NA	Water	9060A	

Analysis Batch: 565914

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-179926-1	MW-268S-20210106	Total/NA	Water	9040C	
480-179926-2	MW-268M-20210106	Total/NA	Water	9040C	
480-179926-4	REW-7-20210106	Total/NA	Water	9040C	
LCS 480-565914/1	Lab Control Sample	Total/NA	Water	9040C	
LCS 480-565914/23	Lab Control Sample	Total/NA	Water	9040C	

Analysis Batch: 566005

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-179926-1	MW-268S-20210106	Total/NA	Water	9060A	
480-179926-2	MW-268M-20210106	Total/NA	Water	9060A	
MB 480-566005/4	Method Blank	Total/NA	Water	9060A	
LCS 480-566005/5	Lab Control Sample	Total/NA	Water	9060A	

Analysis Batch: 566179

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-179926-3	REW-6-20210106	Total/NA	Water	9040C	
LCS 480-566179/1	Lab Control Sample	Total/NA	Water	9040C	
480-179926-3 DU	REW-6-20210106	Total/NA	Water	9040C	

Lab Chronicle

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

Job ID: 480-179926-1

Client Sample ID: MW-268S-20210106

Lab Sample ID: 480-179926-1

Date Collected: 01/06/21 09:40
Matrix: Water
Date Received: 01/07/21 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		4	565523	01/08/21 12:18	CRL	TAL BUF
Total/NA	Prep	3005A			565478	01/08/21 10:10	ADM	TAL BUF
Total/NA	Analysis	6010		1	565725	01/08/21 17:42	LMH	TAL BUF
Total/NA	Prep	Distill/Ammonia			565694	01/11/21 06:30	CLT	TAL BUF
Total/NA	Analysis	350.1		1	565696	01/11/21 08:34	CLT	TAL BUF
Total/NA	Analysis	353.2		1	565500	01/07/21 19:25	ALT	TAL BUF
Total/NA	Analysis	9038		1	565508	01/08/21 03:18	SRW	TAL BUF
Total/NA	Analysis	9040C		1	565914	01/12/21 14:28	KEB	TAL BUF
Total/NA	Analysis	9060A		10	566005	01/12/21 22:00	CLA	TAL BUF
Total/NA	Analysis	9251		1	565506	01/08/21 01:32	SRW	TAL BUF
Total/NA	Analysis	SM 2320B		1	565817	01/11/21 20:51	KEB	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	565491	01/07/21 15:55	CSS	TAL BUF

Client Sample ID: MW-268M-20210106

Lab Sample ID: 480-179926-2

Date Collected: 01/06/21 10:40
Matrix: Water
Date Received: 01/07/21 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	565523	01/08/21 12:43	CRL	TAL BUF
Total/NA	Prep	3005A			565478	01/08/21 10:10	ADM	TAL BUF
Total/NA	Analysis	6010		1	565725	01/08/21 17:46	LMH	TAL BUF
Total/NA	Prep	Distill/Ammonia			565694	01/11/21 06:30	CLT	TAL BUF
Total/NA	Analysis	350.1		1	565696	01/11/21 09:06	CLT	TAL BUF
Total/NA	Analysis	353.2		1	565500	01/07/21 19:27	ALT	TAL BUF
Total/NA	Analysis	9038		1	565508	01/08/21 03:18	SRW	TAL BUF
Total/NA	Analysis	9040C		1	565914	01/12/21 14:26	KEB	TAL BUF
Total/NA	Analysis	9060A		1	566005	01/12/21 22:46	CLA	TAL BUF
Total/NA	Analysis	9251		1	565506	01/08/21 01:09	SRW	TAL BUF
Total/NA	Analysis	SM 2320B		1	565817	01/11/21 20:08	KEB	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	565491	01/07/21 15:55	CSS	TAL BUF

Client Sample ID: REW-6-20210106

Lab Sample ID: 480-179926-3

Date Collected: 01/06/21 09:40
Matrix: Water
Date Received: 01/07/21 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	565523	01/08/21 13:08	CRL	TAL BUF
Total/NA	Prep	3005A			565478	01/08/21 10:10	ADM	TAL BUF
Total/NA	Analysis	6010		1	565725	01/08/21 17:49	LMH	TAL BUF
Total/NA	Prep	Distill/Ammonia			565694	01/11/21 06:30	CLT	TAL BUF
Total/NA	Analysis	350.1		5	565696	01/11/21 08:47	CLT	TAL BUF
Total/NA	Analysis	353.2		1	565500	01/07/21 19:28	ALT	TAL BUF
Total/NA	Analysis	9038		20	565508	01/08/21 03:46	SRW	TAL BUF

Client Sample ID: REW-6-20210106

Lab Sample ID: 480-179926-3

Date Collected: 01/06/21 09:40

Matrix: Water

Date Received: 01/07/21 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9040C		1	566179	01/14/21 16:12	KEB	TAL BUF
Total/NA	Analysis	9060A		1	565835	01/12/21 00:22	IMZ	TAL BUF
Total/NA	Analysis	9251		1	565506	01/08/21 01:10	SRW	TAL BUF
Total/NA	Analysis	SM 2320B		1	565817	01/11/21 20:23	KEB	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	565491	01/07/21 15:55	CSS	TAL BUF

Client Sample ID: REW-7-20210106

Lab Sample ID: 480-179926-4

Date Collected: 01/06/21 12:20

Matrix: Water

Date Received: 01/07/21 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	565523	01/08/21 13:32	CRL	TAL BUF
Total/NA	Prep	3005A			565478	01/08/21 10:10	ADM	TAL BUF
Total/NA	Analysis	6010		1	565725	01/08/21 17:53	LMH	TAL BUF
Total/NA	Prep	Distill/Ammonia			565695	01/11/21 06:30	CLT	TAL BUF
Total/NA	Analysis	350.1		1	565696	01/11/21 10:02	CLT	TAL BUF
Total/NA	Analysis	353.2		1	565500	01/07/21 19:29	ALT	TAL BUF
Total/NA	Analysis	9038		1	565508	01/08/21 03:19	SRW	TAL BUF
Total/NA	Analysis	9040C		1	565914	01/12/21 14:20	KEB	TAL BUF
Total/NA	Analysis	9060A		1	565835	01/12/21 00:50	IMZ	TAL BUF
Total/NA	Analysis	9251		1	565506	01/08/21 01:10	SRW	TAL BUF
Total/NA	Analysis	SM 2320B		1	565817	01/11/21 20:42	KEB	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	565491	01/07/21 15:55	CSS	TAL BUF

Client Sample ID: DUP-1-20210106

Lab Sample ID: 480-179926-5

Date Collected: 01/06/21 00:00

Matrix: Water

Date Received: 01/07/21 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		4	565523	01/08/21 13:57	CRL	TAL BUF

Client Sample ID: TRIP BLANK-20210106

Lab Sample ID: 480-179926-6

Date Collected: 01/06/21 00:00

Matrix: Water

Date Received: 01/07/21 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	565523	01/08/21 14:22	CRL	TAL BUF

Laboratory References:

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

Accreditation/Certification Summary

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

Job ID: 480-179926-1

Laboratory: Eurofins TestAmerica, Buffalo

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-0686	07-07-21
California	State	2931	04-01-20 *
Connecticut	State	PH-0568	09-30-20 *
Florida	NELAP	E87672	07-01-21
Georgia	State	10026 (NY)	04-01-21
Georgia	State Program	N/A	03-31-09 *
Georgia (DW)	State	956	04-01-21
Illinois	NELAP	200003	10-01-21
Iowa	State	374	02-28-21
Kansas	NELAP	E-10187	02-01-21
Kentucky (DW)	State	90029	12-31-20 *
Kentucky (UST)	State	30	04-01-21
Kentucky (WW)	State	KY90029	12-31-20 *
Louisiana	NELAP	02031	07-01-21
Maine	State	NY00044	12-05-22
Maryland	State	294	04-01-21
Massachusetts	State	M-NY044	06-30-21
Michigan	State	9937	04-01-21
Michigan	State Program	9937	04-01-09 *
Minnesota	NELAP	1524384	01-01-22
New Hampshire	NELAP	2973	09-11-19 *
New Hampshire	NELAP	2337	11-19-21
New Jersey	NELAP	NY455	06-30-21
New York	NELAP	10026	04-01-21
North Dakota	State	R-176	04-01-21
Oklahoma	State	9421	09-02-21
Oregon	NELAP	NY200003	06-11-21
Pennsylvania	NELAP	68-00281	07-31-21
Rhode Island	State	LAO00328	12-30-20 *
Tennessee	State	02970	04-01-21
Texas	NELAP	T104704412-18-10	08-02-21
USDA	US Federal Programs	P330-18-00039	02-06-21
Virginia	NELAP	460185	09-14-21
Washington	State	C784	02-11-21
Wisconsin	State	998310390	09-01-21

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

Method Summary

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

Job ID: 480-179926-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds (GC/MS)	MA DEP	TAL BUF
6010	Metals (ICP)	SW846	TAL BUF
350.1	Nitrogen, Ammonia	MCAWW	TAL BUF
353.2	Nitrate	EPA	TAL BUF
9038	Sulfate, Turbidimetric	SW846	TAL BUF
9040C	pH	SW846	TAL BUF
9060A	Organic Carbon, Total (TOC)	SW846	TAL BUF
9251	Chloride	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 P E	Orthophosphate	SM	TAL BUF
3005A	Preparation, Total Metals	SW846	TAL BUF
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 = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

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

Job ID: 480-179926-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-179926-1	MW-268S-20210106	Water	01/06/21 09:40	01/07/21 10:00	
480-179926-2	MW-268M-20210106	Water	01/06/21 10:40	01/07/21 10:00	
480-179926-3	REW-6-20210106	Water	01/06/21 09:40	01/07/21 10:00	
480-179926-4	REW-7-20210106	Water	01/06/21 12:20	01/07/21 10:00	
480-179926-5	DUP-1-20210106	Water	01/06/21 00:00	01/07/21 10:00	
480-179926-6	TRIP BLANK-20210106	Water	01/06/21 00:00	01/07/21 10:00	

Login Sample Receipt Checklist

Client: Innovative Engineering Solutions, Inc

Job Number: 480-179926-1

Login Number: 179926

List Source: Eurofins TestAmerica, Buffalo

List Number: 1

Creator: Stopa, Erik S

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (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	IEIS
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

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

Boston #215

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:	Sample Collector's Name (Please Print Neatly): Dan Jakes	Lab PM:	Lab COC Barcode Label	COC No: 37971
Client Contact: Vicki Perkins	Sample Collector's Phone: 508-404-3196	E-Mail:		Page: 1 of 1
Company: Innovative Engineering Solutions Inc				Job #:
Address: 37 Pearl St	Due Date Requested: 1/13/21			
City: Brockton	Turnaround Time (TAT) Requested (business days): 5 days			
State and Zip: MA 02184				
Client's Phone: 508-668-0033	Quote # or Project #:			
Client's Contact Email: V.perkins@testamericainc.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 MSP	9060A TOC	350.1 NH3	6010 MSP Total Iron	9320B Alkalinity	353.2 NO3, 9251 Cl, 9038 SO4	9040C pH, 4500-F Oatho PO4	Total Number of Containers (enter total for each line)	Special Instructions & Notes:
Preservation Codes ▸					A	A	S	D	N	N	N	↓	
MW-268S-20210106-	1/6/21	0940	G	W	X	X	X	X	X	X	X	11	CW-3 requirements
MW-268M-20210106-	1/6/21	1040	G	W	X	X	X	X	X	X	X	11	
REW-6-20210106-	1/6/21	0940	G	W	X	X	X	X	X	X	X	11	please provide a copy of report to
REW-7-20210106-	1/6/21	1220	G	W	X	X	X	X	X	X	X	11	J.Falchko@TestAmericainc.
Dup1-20210106-	1/6/21	~	G	W	X							3	com
Trip Blank	~	~	~	W	X							2	

480-179926 Chain of Custody

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

Sample Disposal Requirements (if longer than 1 month):
☐ Return To Client ☐ 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
	1/6/21 1340	IESI		1/6/21 13:40	TA
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	1/6/21 17:00	TA		1/7/21 1000	TAB
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 2.9

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

WI-QA-010 rev 8

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 480-180013-1
Client Project/Site: IDS Wayland

For:
Innovative Engineering Solutions, Inc
37 Pearl St
1
Braintree, Massachusetts 02184

Attn: Vicki Pariyar

Authorized for release by:
1/18/2021 10:41:38 AM

Becky Mason, Project Manager II
(413)572-4000
Becky.Mason@Eurofinset.com

Table of Contents

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

Job ID: 480-180013-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.

General Chemistry

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.
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
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

Job ID: 480-180013-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative
480-180013-1

Receipt
The samples were received on 1/8/2021 10:00 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.5º C.

GC/MS VOA
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 sample was collected in a properly preserved vial; however, the pH was outside the required criteria when verified by the laboratory. The sample was analyzed within the 7-day holding time specified for unpreserved samples: REW-11-20210107 (480-180013-3). Sample pH is 5.

Method 8260C: The following sample was diluted due to the abundance of non-target analytes: REW-11-20210107 (480-180013-3). Elevated reporting limits (RLs) are provided.

Method 8260C: The continuing calibration verification (CCV) for 2,2-Dichloropropane associated with batch 480-565659 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-266MB-02210107 (480-180013-1), REW-11-20210107 (480-180013-3), REW-12-20210107 (480-180013-4) and TRIP BLANK (480-180013-5).

Method 8260C: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 480-565659 recovered outside control limits for the following analytes: Acetone, Tert-amyl methyl ether, Tetrahydrofuran and 1,4-Dioxane. The following samples were affected : MW-266MB-02210107 (480-180013-1), REW-11-20210107 (480-180013-3), REW-12-20210107 (480-180013-4) and TRIP BLANK (480-180013-5).

Method 8260C: The laboratory control sample (LCS) and / or the laboratory control sample duplicate (LCSD) for batch 480-565659 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-266MB-02210107 (480-180013-1), REW-11-20210107 (480-180013-3), REW-12-20210107 (480-180013-4) and TRIP BLANK (480-180013-5).

Method 8260C: The continuing calibration verification (CCV) for Dichlorodifluoromethane associated with batch 480-565806 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 sample was affected : MW-268D-20210107 (480-180013-2).

Method 8260C: The laboratory control sample (LCS) and / or the laboratory control sample duplicate (LCSD) for batch 480-565806 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 sample was affected : MW-268D-20210107 (480-180013-2).

Method 8260C: The laboratory control sample (LCS) and / or the laboratory control sample duplicate (LCSD) for batch 480-565806 exceeded control limits for the following analytes: Dichlorodifluoromethane and Acetone . MCP protocol allows for 10% of the target compounds to be outside of the limits provided the recoveries are over 10%. The following sample was affected : MW-268D-20210107 (480-180013-2).

Method 8260C: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 480-565806 recovered outside control limits for the following analytes: Tetrahydrofuran, Tert-amyl methyl ether, 1,4-Dioxane, and Acetone .

Job ID: 480-180013-1 (Continued)

Laboratory: Eurofins TestAmerica, Buffalo (Continued)

The following sample was affected : MW-268D-20210107 (480-180013-2).

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
Methods 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-266MB-02210107 (480-180013-1), MW-268D-20210107 (480-180013-2), REW-11-20210107 (480-180013-3) and REW-12-20210107 (480-180013-4).

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 #: **480-180013-1**

Project Location: **Wayland MA** RTN:

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

480-180013-1[1-5]

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 ☐ Yes	☐ No ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	■ Yes	☐ No

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

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

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

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

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

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

Signature:  Position: Project Manager

Printed Name: Becky Mason Date: 1/18/21 10:40

This form has been electronically signed and approved

Detection Summary

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

Job ID: 480-180013-1

Client Sample ID: MW-266MB-02210107 — Lab Sample ID: 480-180013-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.6		1.0		ug/L	1		8260C	Total/NA
Ethylbenzene	4.1		1.0		ug/L	1		8260C	Total/NA
m-Xylene & p-Xylene	5.6		2.0		ug/L	1		8260C	Total/NA
o-Xylene	4.6		1.0		ug/L	1		8260C	Total/NA
Tetrahydrofuran	15	*+ *1	10		ug/L	1		8260C	Total/NA
Vinyl chloride	10		1.0		ug/L	1		8260C	Total/NA
Iron	43		0.050		mg/L	1		6010	Total/NA
Ammonia	0.29		0.20		mg/L	1		350.1	Total/NA
Nitrate as N	0.26		0.050		mg/L	1		353.2	Total/NA
pH	6.7	HF	0.1		SU	1		9040C	Total/NA
Temperature	22.0	HF	0.001		Degrees C	1		9040C	Total/NA
TOC Result 1	2.6		1.0		mg/L	1		9060A	Total/NA
TOC Result 2	2.7		1.0		mg/L	1		9060A	Total/NA
Total Organic Carbon - Duplicates	2.6		1.0		mg/L	1		9060A	Total/NA
Chloride	37		1.0		mg/L	1		9251	Total/NA
Alkalinity, Total	420		5.0		mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-268D-20210107 — Lab Sample ID: 480-180013-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	7.3		1.0		ug/L	1		8260C	Total/NA
Toluene	7.7		1.0		ug/L	1		8260C	Total/NA
Trichloroethene	3.1		1.0		ug/L	1		8260C	Total/NA
Iron	0.28		0.050		mg/L	1		6010	Total/NA
Sulfate	32		5.0		mg/L	1		9038	Total/NA
pH	8.0	HF	0.1		SU	1		9040C	Total/NA
Temperature	22.0	HF	0.001		Degrees C	1		9040C	Total/NA
TOC Result 1	20		1.0		mg/L	1		9060A	Total/NA
TOC Result 2	20		1.0		mg/L	1		9060A	Total/NA
Total Organic Carbon - Duplicates	20		1.0		mg/L	1		9060A	Total/NA
Chloride	49		1.0		mg/L	1		9251	Total/NA
Alkalinity, Total	77		5.0		mg/L	1		SM 2320B	Total/NA
ortho-Phosphate	0.10		0.020		mg/L	1		SM 4500 P E	Total/NA

Client Sample ID: REW-11-20210107 — Lab Sample ID: 480-180013-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	1000	*+	200		ug/L	20		8260C	Total/NA
Iron	250		0.050		mg/L	1		6010	Total/NA
Nitrate as N	0.080		0.050		mg/L	1		353.2	Total/NA
Sulfate	12		5.0		mg/L	1		9038	Total/NA
pH	6.2	HF	0.1		SU	1		9040C	Total/NA
Temperature	21.9	HF	0.001		Degrees C	1		9040C	Total/NA
TOC Result 1	2200		40		mg/L	40		9060A	Total/NA
TOC Result 2	2100		40		mg/L	40		9060A	Total/NA
Total Organic Carbon - Duplicates	2200		40		mg/L	40		9060A	Total/NA
Chloride	60		5.0		mg/L	5		9251	Total/NA
Alkalinity, Total	1600		5.0		mg/L	1		SM 2320B	Total/NA
ortho-Phosphate	0.17		0.020		mg/L	1		SM 4500 P E	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

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

Job ID: 480-180013-1

Client Sample ID: REW-12-20210107 — Lab Sample ID: 480-180013-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	1.3		1.0		ug/L	1		8260C	Total/NA
m-Xylene & p-Xylene	4.2		2.0		ug/L	1		8260C	Total/NA
o-Xylene	1.3		1.0		ug/L	1		8260C	Total/NA
Iron	46		0.050		mg/L	1		6010	Total/NA
Ammonia	2.8		0.40		mg/L	2		350.1	Total/NA
Nitrate as N	0.25		0.050		mg/L	1		353.2	Total/NA
pH	6.6	HF	0.1		SU	1		9040C	Total/NA
Temperature	22.0	HF	0.001		Degrees C	1		9040C	Total/NA
TOC Result 1	1.5		1.0		mg/L	1		9060A	Total/NA
TOC Result 2	1.8		1.0		mg/L	1		9060A	Total/NA
Total Organic Carbon - Duplicates	1.6		1.0		mg/L	1		9060A	Total/NA
Chloride	46		1.0		mg/L	1		9251	Total/NA
Alkalinity, Total	240		5.0		mg/L	1		SM 2320B	Total/NA
ortho-Phosphate	0.090		0.020		mg/L	1		SM 4500 P E	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-180013-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrahydrofuran	11	*+ *1	10		ug/L	1		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

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

Job ID: 480-180013-1

Client Sample ID: MW-266MB-02210107
Date Collected: 01/07/21 09:50
Date Received: 01/08/21 10:00

Lab Sample ID: 480-180013-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			01/11/21 13:38	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/11/21 13:38	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			01/11/21 13:38	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/11/21 13:38	1
1,1-Dichloroethane	ND		1.0		ug/L			01/11/21 13:38	1
1,1-Dichloroethene	ND		1.0		ug/L			01/11/21 13:38	1
1,1-Dichloropropene	ND		1.0		ug/L			01/11/21 13:38	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/11/21 13:38	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/11/21 13:38	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/11/21 13:38	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/11/21 13:38	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/11/21 13:38	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/11/21 13:38	1
1,2-Dichloroethane	ND		1.0		ug/L			01/11/21 13:38	1
1,2-Dichloropropane	ND		1.0		ug/L			01/11/21 13:38	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/11/21 13:38	1
1,3-Dichlorobenzene	ND		1.0		ug/L			01/11/21 13:38	1
1,3-Dichloropropane	ND		1.0		ug/L			01/11/21 13:38	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/11/21 13:38	1
1,4-Dioxane	ND	*1	50		ug/L			01/11/21 13:38	1
2,2-Dichloropropane	ND		1.0		ug/L			01/11/21 13:38	1
2-Butanone (MEK)	ND	*+	10		ug/L			01/11/21 13:38	1
2-Chlorotoluene	ND		1.0		ug/L			01/11/21 13:38	1
2-Hexanone	ND		10		ug/L			01/11/21 13:38	1
4-Chlorotoluene	ND		1.0		ug/L			01/11/21 13:38	1
4-Isopropyltoluene	ND		1.0		ug/L			01/11/21 13:38	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			01/11/21 13:38	1
Acetone	ND	*1	50		ug/L			01/11/21 13:38	1
Benzene	ND		1.0		ug/L			01/11/21 13:38	1
Bromobenzene	ND		1.0		ug/L			01/11/21 13:38	1
Bromoform	ND		1.0		ug/L			01/11/21 13:38	1
Bromomethane	ND		2.0		ug/L			01/11/21 13:38	1
Carbon disulfide	ND		10		ug/L			01/11/21 13:38	1
Carbon tetrachloride	ND		1.0		ug/L			01/11/21 13:38	1
Chlorobenzene	ND		1.0		ug/L			01/11/21 13:38	1
Chlorobromomethane	ND		1.0		ug/L			01/11/21 13:38	1
Chlorodibromomethane	ND		0.50		ug/L			01/11/21 13:38	1
Chloroethane	ND		2.0		ug/L			01/11/21 13:38	1
Chloroform	ND		1.0		ug/L			01/11/21 13:38	1
Chloromethane	ND		2.0		ug/L			01/11/21 13:38	1
cis-1,2-Dichloroethene	**1.6**		1.0		ug/L			01/11/21 13:38	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			01/11/21 13:38	1
Dichlorobromomethane	ND		0.50		ug/L			01/11/21 13:38	1
Dichlorodifluoromethane	ND		1.0		ug/L			01/11/21 13:38	1
Ethyl ether	ND		1.0		ug/L			01/11/21 13:38	1
Ethylbenzene	**4.1**		1.0		ug/L			01/11/21 13:38	1
Ethylene Dibromide	ND		1.0		ug/L			01/11/21 13:38	1
Hexachlorobutadiene	ND		0.40		ug/L			01/11/21 13:38	1
Isopropyl ether	ND		10		ug/L			01/11/21 13:38	1

Client Sample ID: MW-266MB-02210107
Date Collected: 01/07/21 09:50
Date Received: 01/08/21 10:00

Lab Sample ID: 480-180013-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			01/11/21 13:38	1
Methyl tert-butyl ether	ND		1.0		ug/L			01/11/21 13:38	1
Methylene Chloride	ND		1.0		ug/L			01/11/21 13:38	1
m-Xylene & p-Xylene	**5.6**		2.0		ug/L			01/11/21 13:38	1
Naphthalene	ND		5.0		ug/L			01/11/21 13:38	1
n-Butylbenzene	ND		1.0		ug/L			01/11/21 13:38	1
N-Propylbenzene	ND		1.0		ug/L			01/11/21 13:38	1
o-Xylene	**4.6**		1.0		ug/L			01/11/21 13:38	1
sec-Butylbenzene	ND		1.0		ug/L			01/11/21 13:38	1
Styrene	ND		1.0		ug/L			01/11/21 13:38	1
Tert-amyl methyl ether	ND	*1	5.0		ug/L			01/11/21 13:38	1
Tert-butyl ethyl ether	ND		5.0		ug/L			01/11/21 13:38	1
tert-Butylbenzene	ND		1.0		ug/L			01/11/21 13:38	1
Tetrachloroethene	ND		1.0		ug/L			01/11/21 13:38	1
Tetrahydrofuran	**15**	***+ *1**	10		ug/L			01/11/21 13:38	1
Toluene	ND		1.0		ug/L			01/11/21 13:38	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/11/21 13:38	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			01/11/21 13:38	1
Trichloroethene	ND		1.0		ug/L			01/11/21 13:38	1
Trichlorofluoromethane	ND		1.0		ug/L			01/11/21 13:38	1
Vinyl chloride	**10**		1.0		ug/L			01/11/21 13:38	1
Dibromomethane	ND		1.0		ug/L			01/11/21 13:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*79*		*70 - 130*		*01/11/21 13:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*01/11/21 13:38*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*01/11/21 13:38*	*1*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**43**		0.050		mg/L		01/11/21 11:20	01/12/21 14:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	**0.29**		0.20		mg/L		01/11/21 06:30	01/11/21 10:04	1
Nitrate as N	**0.26**		0.050		mg/L			01/08/21 19:38	1
Sulfate	ND		5.0		mg/L			01/11/21 21:50	1
TOC Result 1	**2.6**		1.0		mg/L			01/14/21 13:09	1
TOC Result 2	**2.7**		1.0		mg/L			01/14/21 13:09	1
Total Organic Carbon - Duplicates	**2.6**		1.0		mg/L			01/14/21 13:09	1
Chloride	**37**		1.0		mg/L			01/11/21 20:13	1
Alkalinity, Total	**420**		5.0		mg/L			01/11/21 17:23	1
ortho-Phosphate	ND		0.020		mg/L			01/08/21 19:26	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**6.7**	**HF**	0.1		SU			01/12/21 14:15	1
Temperature	**22.0**	**HF**	0.001		Degrees C			01/12/21 14:15	1

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

Job ID: 480-180013-1

Client Sample ID: MW-268D-20210107
Date Collected: 01/07/21 08:55
Date Received: 01/08/21 10:00

Lab Sample ID: 480-180013-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			01/12/21 13:01	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/12/21 13:01	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			01/12/21 13:01	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/12/21 13:01	1
1,1-Dichloroethane	ND		1.0		ug/L			01/12/21 13:01	1
1,1-Dichloroethene	ND		1.0		ug/L			01/12/21 13:01	1
1,1-Dichloropropene	ND		1.0		ug/L			01/12/21 13:01	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/12/21 13:01	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/12/21 13:01	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/12/21 13:01	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/12/21 13:01	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/12/21 13:01	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/12/21 13:01	1
1,2-Dichloroethane	ND		1.0		ug/L			01/12/21 13:01	1
1,2-Dichloropropane	ND		1.0		ug/L			01/12/21 13:01	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/12/21 13:01	1
1,3-Dichlorobenzene	ND		1.0		ug/L			01/12/21 13:01	1
1,3-Dichloropropane	ND		1.0		ug/L			01/12/21 13:01	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/12/21 13:01	1
1,4-Dioxane	ND	*1	50		ug/L			01/12/21 13:01	1
2,2-Dichloropropane	ND		1.0		ug/L			01/12/21 13:01	1
2-Butanone (MEK)	ND	*+	10		ug/L			01/12/21 13:01	1
2-Chlorotoluene	ND		1.0		ug/L			01/12/21 13:01	1
2-Hexanone	ND		10		ug/L			01/12/21 13:01	1
4-Chlorotoluene	ND		1.0		ug/L			01/12/21 13:01	1
4-Isopropyltoluene	ND		1.0		ug/L			01/12/21 13:01	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			01/12/21 13:01	1
Acetone	ND	*- *1	50		ug/L			01/12/21 13:01	1
Benzene	ND		1.0		ug/L			01/12/21 13:01	1
Bromobenzene	ND		1.0		ug/L			01/12/21 13:01	1
Bromoform	ND		1.0		ug/L			01/12/21 13:01	1
Bromomethane	ND		2.0		ug/L			01/12/21 13:01	1
Carbon disulfide	ND		10		ug/L			01/12/21 13:01	1
Carbon tetrachloride	ND		1.0		ug/L			01/12/21 13:01	1
Chlorobenzene	ND		1.0		ug/L			01/12/21 13:01	1
Chlorobromomethane	ND		1.0		ug/L			01/12/21 13:01	1
Chlorodibromomethane	ND		0.50		ug/L			01/12/21 13:01	1
Chloroethane	ND		2.0		ug/L			01/12/21 13:01	1
Chloroform	ND		1.0		ug/L			01/12/21 13:01	1
Chloromethane	ND		2.0		ug/L			01/12/21 13:01	1
cis-1,2-Dichloroethene	**7.3**		1.0		ug/L			01/12/21 13:01	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			01/12/21 13:01	1
Dichlorobromomethane	ND		0.50		ug/L			01/12/21 13:01	1
Dichlorodifluoromethane	ND	*+	1.0		ug/L			01/12/21 13:01	1
Ethyl ether	ND		1.0		ug/L			01/12/21 13:01	1
Ethylbenzene	ND		1.0		ug/L			01/12/21 13:01	1
Ethylene Dibromide	ND		1.0		ug/L			01/12/21 13:01	1
Hexachlorobutadiene	ND		0.40		ug/L			01/12/21 13:01	1
Isopropyl ether	ND		10		ug/L			01/12/21 13:01	1

Client Sample ID: MW-268D-20210107
Date Collected: 01/07/21 08:55
Date Received: 01/08/21 10:00

Lab Sample ID: 480-180013-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			01/12/21 13:01	1
Methyl tert-butyl ether	ND		1.0		ug/L			01/12/21 13:01	1
Methylene Chloride	ND		1.0		ug/L			01/12/21 13:01	1
m-Xylene & p-Xylene	ND		2.0		ug/L			01/12/21 13:01	1
Naphthalene	ND		5.0		ug/L			01/12/21 13:01	1
n-Butylbenzene	ND		1.0		ug/L			01/12/21 13:01	1
N-Propylbenzene	ND		1.0		ug/L			01/12/21 13:01	1
o-Xylene	ND		1.0		ug/L			01/12/21 13:01	1
sec-Butylbenzene	ND		1.0		ug/L			01/12/21 13:01	1
Styrene	ND		1.0		ug/L			01/12/21 13:01	1
Tert-amyl methyl ether	ND	*1	5.0		ug/L			01/12/21 13:01	1
Tert-butyl ethyl ether	ND		5.0		ug/L			01/12/21 13:01	1
tert-Butylbenzene	ND		1.0		ug/L			01/12/21 13:01	1
Tetrachloroethene	ND		1.0		ug/L			01/12/21 13:01	1
Tetrahydrofuran	ND	*1	10		ug/L			01/12/21 13:01	1
Toluene	**7.7**		1.0		ug/L			01/12/21 13:01	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/12/21 13:01	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			01/12/21 13:01	1
Trichloroethene	**3.1**		1.0		ug/L			01/12/21 13:01	1
Trichlorofluoromethane	ND		1.0		ug/L			01/12/21 13:01	1
Vinyl chloride	ND		1.0		ug/L			01/12/21 13:01	1
Dibromomethane	ND		1.0		ug/L			01/12/21 13:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*85*		*70 - 130*		*01/12/21 13:01*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*		*01/12/21 13:01*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*01/12/21 13:01*	*1*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.28**		0.050		mg/L		01/11/21 11:20	01/12/21 14:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.20		mg/L		01/11/21 06:30	01/11/21 10:07	1
Nitrate as N	ND		0.050		mg/L			01/08/21 19:39	1
Sulfate	**32**		5.0		mg/L			01/11/21 21:50	1
TOC Result 1	**20**		1.0		mg/L			01/14/21 13:36	1
TOC Result 2	**20**		1.0		mg/L			01/14/21 13:36	1
Total Organic Carbon - Duplicates	**20**		1.0		mg/L			01/14/21 13:36	1
Chloride	**49**		1.0		mg/L			01/11/21 20:13	1
Alkalinity, Total	**77**		5.0		mg/L			01/11/21 17:29	1
ortho-Phosphate	**0.10**		0.020		mg/L			01/08/21 19:26	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.0**	**HF**	0.1		SU			01/12/21 14:25	1
Temperature	**22.0**	**HF**	0.001		Degrees C			01/12/21 14:25	1

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

Job ID: 480-180013-1

Client Sample ID: REW-11-20210107
Date Collected: 01/07/21 07:40
Date Received: 01/08/21 10:00

Lab Sample ID: 480-180013-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		20		ug/L			01/11/21 14:28	20
1,1,1-Trichloroethane	ND		20		ug/L			01/11/21 14:28	20
1,1,2,2-Tetrachloroethane	ND		10		ug/L			01/11/21 14:28	20
1,1,2-Trichloroethane	ND		20		ug/L			01/11/21 14:28	20
1,1-Dichloroethane	ND		20		ug/L			01/11/21 14:28	20
1,1-Dichloroethene	ND		20		ug/L			01/11/21 14:28	20
1,1-Dichloropropene	ND		20		ug/L			01/11/21 14:28	20
1,2,3-Trichlorobenzene	ND		20		ug/L			01/11/21 14:28	20
1,2,3-Trichloropropane	ND		20		ug/L			01/11/21 14:28	20
1,2,4-Trichlorobenzene	ND		20		ug/L			01/11/21 14:28	20
1,2,4-Trimethylbenzene	ND		20		ug/L			01/11/21 14:28	20
1,2-Dibromo-3-Chloropropane	ND		100		ug/L			01/11/21 14:28	20
1,2-Dichlorobenzene	ND		20		ug/L			01/11/21 14:28	20
1,2-Dichloroethane	ND		20		ug/L			01/11/21 14:28	20
1,2-Dichloropropane	ND		20		ug/L			01/11/21 14:28	20
1,3,5-Trimethylbenzene	ND		20		ug/L			01/11/21 14:28	20
1,3-Dichlorobenzene	ND		20		ug/L			01/11/21 14:28	20
1,3-Dichloropropane	ND		20		ug/L			01/11/21 14:28	20
1,4-Dichlorobenzene	ND		20		ug/L			01/11/21 14:28	20
1,4-Dioxane	ND	*1	1000		ug/L			01/11/21 14:28	20
2,2-Dichloropropane	ND		20		ug/L			01/11/21 14:28	20
2-Butanone (MEK)	**1000**	***+**	200		ug/L			01/11/21 14:28	20
2-Chlorotoluene	ND		20		ug/L			01/11/21 14:28	20
2-Hexanone	ND		200		ug/L			01/11/21 14:28	20
4-Chlorotoluene	ND		20		ug/L			01/11/21 14:28	20
4-Isopropyltoluene	ND		20		ug/L			01/11/21 14:28	20
4-Methyl-2-pentanone (MIBK)	ND		200		ug/L			01/11/21 14:28	20
Acetone	ND	*1	1000		ug/L			01/11/21 14:28	20
Benzene	ND		20		ug/L			01/11/21 14:28	20
Bromobenzene	ND		20		ug/L			01/11/21 14:28	20
Bromoform	ND		20		ug/L			01/11/21 14:28	20
Bromomethane	ND		40		ug/L			01/11/21 14:28	20
Carbon disulfide	ND		200		ug/L			01/11/21 14:28	20
Carbon tetrachloride	ND		20		ug/L			01/11/21 14:28	20
Chlorobenzene	ND		20		ug/L			01/11/21 14:28	20
Chlorobromomethane	ND		20		ug/L			01/11/21 14:28	20
Chlorodibromomethane	ND		10		ug/L			01/11/21 14:28	20
Chloroethane	ND		40		ug/L			01/11/21 14:28	20
Chloroform	ND		20		ug/L			01/11/21 14:28	20
Chloromethane	ND		40		ug/L			01/11/21 14:28	20
cis-1,2-Dichloroethene	ND		20		ug/L			01/11/21 14:28	20
cis-1,3-Dichloropropene	ND		8.0		ug/L			01/11/21 14:28	20
Dichlorobromomethane	ND		10		ug/L			01/11/21 14:28	20
Dichlorodifluoromethane	ND		20		ug/L			01/11/21 14:28	20
Ethyl ether	ND		20		ug/L			01/11/21 14:28	20
Ethylbenzene	ND		20		ug/L			01/11/21 14:28	20
Ethylene Dibromide	ND		20		ug/L			01/11/21 14:28	20
Hexachlorobutadiene	ND		8.0		ug/L			01/11/21 14:28	20
Isopropyl ether	ND		200		ug/L			01/11/21 14:28	20

Client Sample ID: REW-11-20210107
Date Collected: 01/07/21 07:40
Date Received: 01/08/21 10:00

Lab Sample ID: 480-180013-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		20		ug/L			01/11/21 14:28	20
Methyl tert-butyl ether	ND		20		ug/L			01/11/21 14:28	20
Methylene Chloride	ND		20		ug/L			01/11/21 14:28	20
m-Xylene & p-Xylene	ND		40		ug/L			01/11/21 14:28	20
Naphthalene	ND		100		ug/L			01/11/21 14:28	20
n-Butylbenzene	ND		20		ug/L			01/11/21 14:28	20
N-Propylbenzene	ND		20		ug/L			01/11/21 14:28	20
o-Xylene	ND		20		ug/L			01/11/21 14:28	20
sec-Butylbenzene	ND		20		ug/L			01/11/21 14:28	20
Styrene	ND		20		ug/L			01/11/21 14:28	20
Tert-amyl methyl ether	ND	*1	100		ug/L			01/11/21 14:28	20
Tert-butyl ethyl ether	ND		100		ug/L			01/11/21 14:28	20
tert-Butylbenzene	ND		20		ug/L			01/11/21 14:28	20
Tetrachloroethene	ND		20		ug/L			01/11/21 14:28	20
Tetrahydrofuran	ND	*+ *1	200		ug/L			01/11/21 14:28	20
Toluene	ND		20		ug/L			01/11/21 14:28	20
trans-1,2-Dichloroethene	ND		20		ug/L			01/11/21 14:28	20
trans-1,3-Dichloropropene	ND		8.0		ug/L			01/11/21 14:28	20
Trichloroethene	ND		20		ug/L			01/11/21 14:28	20
Trichlorofluoromethane	ND		20		ug/L			01/11/21 14:28	20
Vinyl chloride	ND		20		ug/L			01/11/21 14:28	20
Dibromomethane	ND		20		ug/L			01/11/21 14:28	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*84*		*70 - 130*		*01/11/21 14:28*	*20*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*01/11/21 14:28*	*20*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*		*01/11/21 14:28*	*20*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**250**		0.050		mg/L		01/11/21 11:20	01/12/21 14:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.20		mg/L		01/11/21 06:30	01/11/21 10:28	1
Nitrate as N	**0.080**		0.050		mg/L			01/08/21 19:40	1
Sulfate	**12**		5.0		mg/L			01/11/21 21:51	1
TOC Result 1	**2200**		40		mg/L			01/14/21 15:01	40
TOC Result 2	**2100**		40		mg/L			01/14/21 15:01	40
Total Organic Carbon - Duplicates	**2200**		40		mg/L			01/14/21 15:01	40
Chloride	**60**		5.0		mg/L			01/11/21 20:23	5
Alkalinity, Total	**1600**		5.0		mg/L			01/11/21 16:57	1
ortho-Phosphate	**0.17**		0.020		mg/L			01/08/21 19:26	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**6.2**	**HF**	0.1		SU			01/12/21 14:12	1
Temperature	**21.9**	**HF**	0.001		Degrees C			01/12/21 14:12	1

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

Job ID: 480-180013-1

Client Sample ID: REW-12-20210107
Date Collected: 01/07/21 08:15
Date Received: 01/08/21 10:00

Lab Sample ID: 480-180013-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			01/11/21 14:52	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/11/21 14:52	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			01/11/21 14:52	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/11/21 14:52	1
1,1-Dichloroethane	ND		1.0		ug/L			01/11/21 14:52	1
1,1-Dichloroethene	ND		1.0		ug/L			01/11/21 14:52	1
1,1-Dichloropropene	ND		1.0		ug/L			01/11/21 14:52	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/11/21 14:52	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/11/21 14:52	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/11/21 14:52	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/11/21 14:52	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/11/21 14:52	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/11/21 14:52	1
1,2-Dichloroethane	ND		1.0		ug/L			01/11/21 14:52	1
1,2-Dichloropropane	ND		1.0		ug/L			01/11/21 14:52	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/11/21 14:52	1
1,3-Dichlorobenzene	ND		1.0		ug/L			01/11/21 14:52	1
1,3-Dichloropropane	ND		1.0		ug/L			01/11/21 14:52	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/11/21 14:52	1
1,4-Dioxane	ND	*1	50		ug/L			01/11/21 14:52	1
2,2-Dichloropropane	ND		1.0		ug/L			01/11/21 14:52	1
2-Butanone (MEK)	ND	*+	10		ug/L			01/11/21 14:52	1
2-Chlorotoluene	ND		1.0		ug/L			01/11/21 14:52	1
2-Hexanone	ND		10		ug/L			01/11/21 14:52	1
4-Chlorotoluene	ND		1.0		ug/L			01/11/21 14:52	1
4-Isopropyltoluene	ND		1.0		ug/L			01/11/21 14:52	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			01/11/21 14:52	1
Acetone	ND	*1	50		ug/L			01/11/21 14:52	1
Benzene	ND		1.0		ug/L			01/11/21 14:52	1
Bromobenzene	ND		1.0		ug/L			01/11/21 14:52	1
Bromoform	ND		1.0		ug/L			01/11/21 14:52	1
Bromomethane	ND		2.0		ug/L			01/11/21 14:52	1
Carbon disulfide	ND		10		ug/L			01/11/21 14:52	1
Carbon tetrachloride	ND		1.0		ug/L			01/11/21 14:52	1
Chlorobenzene	ND		1.0		ug/L			01/11/21 14:52	1
Chlorobromomethane	ND		1.0		ug/L			01/11/21 14:52	1
Chlorodibromomethane	ND		0.50		ug/L			01/11/21 14:52	1
Chloroethane	ND		2.0		ug/L			01/11/21 14:52	1
Chloroform	ND		1.0		ug/L			01/11/21 14:52	1
Chloromethane	ND		2.0		ug/L			01/11/21 14:52	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			01/11/21 14:52	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			01/11/21 14:52	1
Dichlorobromomethane	ND		0.50		ug/L			01/11/21 14:52	1
Dichlorodifluoromethane	ND		1.0		ug/L			01/11/21 14:52	1
Ethyl ether	ND		1.0		ug/L			01/11/21 14:52	1
Ethylbenzene	**1.3**		1.0		ug/L			01/11/21 14:52	1
Ethylene Dibromide	ND		1.0		ug/L			01/11/21 14:52	1
Hexachlorobutadiene	ND		0.40		ug/L			01/11/21 14:52	1
Isopropyl ether	ND		10		ug/L			01/11/21 14:52	1

Client Sample ID: REW-12-20210107
Date Collected: 01/07/21 08:15
Date Received: 01/08/21 10:00

Lab Sample ID: 480-180013-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			01/11/21 14:52	1
Methyl tert-butyl ether	ND		1.0		ug/L			01/11/21 14:52	1
Methylene Chloride	ND		1.0		ug/L			01/11/21 14:52	1
m-Xylene & p-Xylene	**4.2**		2.0		ug/L			01/11/21 14:52	1
Naphthalene	ND		5.0		ug/L			01/11/21 14:52	1
n-Butylbenzene	ND		1.0		ug/L			01/11/21 14:52	1
N-Propylbenzene	ND		1.0		ug/L			01/11/21 14:52	1
o-Xylene	**1.3**		1.0		ug/L			01/11/21 14:52	1
sec-Butylbenzene	ND		1.0		ug/L			01/11/21 14:52	1
Styrene	ND		1.0		ug/L			01/11/21 14:52	1
Tert-amyl methyl ether	ND	*1	5.0		ug/L			01/11/21 14:52	1
Tert-butyl ethyl ether	ND		5.0		ug/L			01/11/21 14:52	1
tert-Butylbenzene	ND		1.0		ug/L			01/11/21 14:52	1
Tetrachloroethene	ND		1.0		ug/L			01/11/21 14:52	1
Tetrahydrofuran	ND	*+ *1	10		ug/L			01/11/21 14:52	1
Toluene	ND		1.0		ug/L			01/11/21 14:52	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/11/21 14:52	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			01/11/21 14:52	1
Trichloroethene	ND		1.0		ug/L			01/11/21 14:52	1
Trichlorofluoromethane	ND		1.0		ug/L			01/11/21 14:52	1
Vinyl chloride	ND		1.0		ug/L			01/11/21 14:52	1
Dibromomethane	ND		1.0		ug/L			01/11/21 14:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*84*		*70 - 130*		*01/11/21 14:52*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*		*01/11/21 14:52*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*01/11/21 14:52*	*1*

Method: 6010 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**46**		0.050		mg/L		01/11/21 11:20	01/12/21 14:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	**2.8**		0.40		mg/L		01/12/21 06:00	01/12/21 07:53	2
Nitrate as N	**0.25**		0.050		mg/L			01/08/21 19:43	1
Sulfate	ND		5.0		mg/L			01/11/21 21:52	1
TOC Result 1	**1.5**		1.0		mg/L			01/14/21 15:57	1
TOC Result 2	**1.8**		1.0		mg/L			01/14/21 15:57	1
Total Organic Carbon - Duplicates	**1.6**		1.0		mg/L			01/14/21 15:57	1
Chloride	**46**		1.0		mg/L			01/11/21 20:15	1
Alkalinity, Total	**240**		5.0		mg/L			01/11/21 17:04	1
ortho-Phosphate	**0.090**		0.020		mg/L			01/08/21 19:26	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**6.6**	**HF**	0.1		SU			01/12/21 14:13	1
Temperature	**22.0**	**HF**	0.001		Degrees C			01/12/21 14:13	1

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

Job ID: 480-180013-1

Client Sample ID: TRIP BLANK
Date Collected: 01/07/21 00:00
Date Received: 01/08/21 10:00

Lab Sample ID: 480-180013-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			01/11/21 15:17	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/11/21 15:17	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			01/11/21 15:17	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/11/21 15:17	1
1,1-Dichloroethane	ND		1.0		ug/L			01/11/21 15:17	1
1,1-Dichloroethene	ND		1.0		ug/L			01/11/21 15:17	1
1,1-Dichloropropene	ND		1.0		ug/L			01/11/21 15:17	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/11/21 15:17	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/11/21 15:17	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/11/21 15:17	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/11/21 15:17	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/11/21 15:17	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/11/21 15:17	1
1,2-Dichloroethane	ND		1.0		ug/L			01/11/21 15:17	1
1,2-Dichloropropane	ND		1.0		ug/L			01/11/21 15:17	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/11/21 15:17	1
1,3-Dichlorobenzene	ND		1.0		ug/L			01/11/21 15:17	1
1,3-Dichloropropane	ND		1.0		ug/L			01/11/21 15:17	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/11/21 15:17	1
1,4-Dioxane	ND	*1	50		ug/L			01/11/21 15:17	1
2,2-Dichloropropane	ND		1.0		ug/L			01/11/21 15:17	1
2-Butanone (MEK)	ND	*+	10		ug/L			01/11/21 15:17	1
2-Chlorotoluene	ND		1.0		ug/L			01/11/21 15:17	1
2-Hexanone	ND		10		ug/L			01/11/21 15:17	1
4-Chlorotoluene	ND		1.0		ug/L			01/11/21 15:17	1
4-Isopropyltoluene	ND		1.0		ug/L			01/11/21 15:17	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			01/11/21 15:17	1
Acetone	ND	*1	50		ug/L			01/11/21 15:17	1
Benzene	ND		1.0		ug/L			01/11/21 15:17	1
Bromobenzene	ND		1.0		ug/L			01/11/21 15:17	1
Bromoform	ND		1.0		ug/L			01/11/21 15:17	1
Bromomethane	ND		2.0		ug/L			01/11/21 15:17	1
Carbon disulfide	ND		10		ug/L			01/11/21 15:17	1
Carbon tetrachloride	ND		1.0		ug/L			01/11/21 15:17	1
Chlorobenzene	ND		1.0		ug/L			01/11/21 15:17	1
Chlorobromomethane	ND		1.0		ug/L			01/11/21 15:17	1
Chlorodibromomethane	ND		0.50		ug/L			01/11/21 15:17	1
Chloroethane	ND		2.0		ug/L			01/11/21 15:17	1
Chloroform	ND		1.0		ug/L			01/11/21 15:17	1
Chloromethane	ND		2.0		ug/L			01/11/21 15:17	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			01/11/21 15:17	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			01/11/21 15:17	1
Dichlorobromomethane	ND		0.50		ug/L			01/11/21 15:17	1
Dichlorodifluoromethane	ND		1.0		ug/L			01/11/21 15:17	1
Ethyl ether	ND		1.0		ug/L			01/11/21 15:17	1
Ethylbenzene	ND		1.0		ug/L			01/11/21 15:17	1
Ethylene Dibromide	ND		1.0		ug/L			01/11/21 15:17	1
Hexachlorobutadiene	ND		0.40		ug/L			01/11/21 15:17	1
Isopropyl ether	ND		10		ug/L			01/11/21 15:17	1

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

Job ID: 480-180013-1

Client Sample ID: TRIP BLANK
Date Collected: 01/07/21 00:00
Date Received: 01/08/21 10:00

Lab Sample ID: 480-180013-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			01/11/21 15:17	1
Methyl tert-butyl ether	ND		1.0		ug/L			01/11/21 15:17	1
Methylene Chloride	ND		1.0		ug/L			01/11/21 15:17	1
m-Xylene & p-Xylene	ND		2.0		ug/L			01/11/21 15:17	1
Naphthalene	ND		5.0		ug/L			01/11/21 15:17	1
n-Butylbenzene	ND		1.0		ug/L			01/11/21 15:17	1
N-Propylbenzene	ND		1.0		ug/L			01/11/21 15:17	1
o-Xylene	ND		1.0		ug/L			01/11/21 15:17	1
sec-Butylbenzene	ND		1.0		ug/L			01/11/21 15:17	1
Styrene	ND		1.0		ug/L			01/11/21 15:17	1
Tert-amyl methyl ether	ND	*1	5.0		ug/L			01/11/21 15:17	1
Tert-butyl ethyl ether	ND		5.0		ug/L			01/11/21 15:17	1
tert-Butylbenzene	ND		1.0		ug/L			01/11/21 15:17	1
Tetrachloroethene	ND		1.0		ug/L			01/11/21 15:17	1
Tetrahydrofuran	**11**	***+ *1**	10		ug/L			01/11/21 15:17	1
Toluene	ND		1.0		ug/L			01/11/21 15:17	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/11/21 15:17	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			01/11/21 15:17	1
Trichloroethene	ND		1.0		ug/L			01/11/21 15:17	1
Trichlorofluoromethane	ND		1.0		ug/L			01/11/21 15:17	1
Vinyl chloride	ND		1.0		ug/L			01/11/21 15:17	1
Dibromomethane	ND		1.0		ug/L			01/11/21 15:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*84*		*70 - 130*		*01/11/21 15:17*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*		*01/11/21 15:17*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*01/11/21 15:17*	*1*

Surrogate Summary

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

Job ID: 480-180013-1

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)
480-180013-1	MW-266MB-02210107	79	101	98
480-180013-2	MW-268D-20210107	85	99	101
480-180013-3	REW-11-20210107	84	100	105
480-180013-4	REW-12-20210107	84	104	102
480-180013-5	TRIP BLANK	84	99	103
LCS 480-565659/5	Lab Control Sample	79	100	96
LCS 480-565806/6	Lab Control Sample	86	104	100
LCSD 480-565659/9	Lab Control Sample Dup	80	92	98
LCSD 480-565806/7	Lab Control Sample Dup	85	96	95
MB 480-565659/7	Method Blank	83	101	101
MB 480-565806/9	Method Blank	82	97	98

Surrogate Legend

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

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

Lab Sample ID: MB 480-565659/7
Matrix: Water
Analysis Batch: 565659

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			01/11/21 12:40	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/11/21 12:40	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			01/11/21 12:40	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/11/21 12:40	1
1,1-Dichloroethane	ND		1.0		ug/L			01/11/21 12:40	1
1,1-Dichloroethene	ND		1.0		ug/L			01/11/21 12:40	1
1,1-Dichloropropene	ND		1.0		ug/L			01/11/21 12:40	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/11/21 12:40	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/11/21 12:40	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/11/21 12:40	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/11/21 12:40	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/11/21 12:40	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/11/21 12:40	1
1,2-Dichloroethane	ND		1.0		ug/L			01/11/21 12:40	1
1,2-Dichloropropane	ND		1.0		ug/L			01/11/21 12:40	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/11/21 12:40	1
1,3-Dichlorobenzene	ND		1.0		ug/L			01/11/21 12:40	1
1,3-Dichloropropane	ND		1.0		ug/L			01/11/21 12:40	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/11/21 12:40	1
1,4-Dioxane	ND		50		ug/L			01/11/21 12:40	1
2,2-Dichloropropane	ND		1.0		ug/L			01/11/21 12:40	1
2-Butanone (MEK)	ND		10		ug/L			01/11/21 12:40	1
2-Chlorotoluene	ND		1.0		ug/L			01/11/21 12:40	1
2-Hexanone	ND		10		ug/L			01/11/21 12:40	1
4-Chlorotoluene	ND		1.0		ug/L			01/11/21 12:40	1
4-Isopropyltoluene	ND		1.0		ug/L			01/11/21 12:40	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			01/11/21 12:40	1
Acetone	ND		50		ug/L			01/11/21 12:40	1
Benzene	ND		1.0		ug/L			01/11/21 12:40	1
Bromobenzene	ND		1.0		ug/L			01/11/21 12:40	1
Bromoform	ND		1.0		ug/L			01/11/21 12:40	1
Bromomethane	ND		2.0		ug/L			01/11/21 12:40	1
Carbon disulfide	ND		10		ug/L			01/11/21 12:40	1
Carbon tetrachloride	ND		1.0		ug/L			01/11/21 12:40	1
Chlorobenzene	ND		1.0		ug/L			01/11/21 12:40	1
Chlorobromomethane	ND		1.0		ug/L			01/11/21 12:40	1
Chlorodibromomethane	ND		0.50		ug/L			01/11/21 12:40	1
Chloroethane	ND		2.0		ug/L			01/11/21 12:40	1
Chloroform	ND		1.0		ug/L			01/11/21 12:40	1
Chloromethane	ND		2.0		ug/L			01/11/21 12:40	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			01/11/21 12:40	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			01/11/21 12:40	1
Dichlorobromomethane	ND		0.50		ug/L			01/11/21 12:40	1
Dichlorodifluoromethane	ND		1.0		ug/L			01/11/21 12:40	1
Ethyl ether	ND		1.0		ug/L			01/11/21 12:40	1
Ethylbenzene	ND		1.0		ug/L			01/11/21 12:40	1
Ethylene Dibromide	ND		1.0		ug/L			01/11/21 12:40	1
Hexachlorobutadiene	ND		0.40		ug/L			01/11/21 12:40	1

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

Lab Sample ID: MB 480-565659/7
Matrix: Water
Analysis Batch: 565659

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropyl ether	ND		10		ug/L			01/11/21 12:40	1
Isopropylbenzene	ND		1.0		ug/L			01/11/21 12:40	1
Methyl tert-butyl ether	ND		1.0		ug/L			01/11/21 12:40	1
Methylene Chloride	ND		1.0		ug/L			01/11/21 12:40	1
m-Xylene & p-Xylene	ND		2.0		ug/L			01/11/21 12:40	1
Naphthalene	ND		5.0		ug/L			01/11/21 12:40	1
n-Butylbenzene	ND		1.0		ug/L			01/11/21 12:40	1
N-Propylbenzene	ND		1.0		ug/L			01/11/21 12:40	1
o-Xylene	ND		1.0		ug/L			01/11/21 12:40	1
sec-Butylbenzene	ND		1.0		ug/L			01/11/21 12:40	1
Styrene	ND		1.0		ug/L			01/11/21 12:40	1
Tert-amyl methyl ether	ND		5.0		ug/L			01/11/21 12:40	1
Tert-butyl ethyl ether	ND		5.0		ug/L			01/11/21 12:40	1
tert-Butylbenzene	ND		1.0		ug/L			01/11/21 12:40	1
Tetrachloroethene	ND		1.0		ug/L			01/11/21 12:40	1
Tetrahydrofuran	ND		10		ug/L			01/11/21 12:40	1
Toluene	ND		1.0		ug/L			01/11/21 12:40	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/11/21 12:40	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			01/11/21 12:40	1
Trichloroethene	ND		1.0		ug/L			01/11/21 12:40	1
Trichlorofluoromethane	ND		1.0		ug/L			01/11/21 12:40	1
Vinyl chloride	ND		1.0		ug/L			01/11/21 12:40	1
Dibromomethane	ND		1.0		ug/L			01/11/21 12:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*83*		*70 - 130*		*01/11/21 12:40*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*01/11/21 12:40*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*01/11/21 12:40*	*1*

Lab Sample ID: LCS 480-565659/5
Matrix: Water
Analysis Batch: 565659

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	25.0	25.1		ug/L		100	70 - 130
1,1,1-Trichloroethane	25.0	29.0		ug/L		116	70 - 130
1,1,2,2-Tetrachloroethane	25.0	21.3		ug/L		85	70 - 130
1,1,2-Trichloroethane	25.0	22.5		ug/L		90	70 - 130
1,1-Dichloroethane	25.0	26.3		ug/L		105	70 - 130
1,1-Dichloroethene	25.0	23.8		ug/L		95	70 - 130
1,1-Dichloropropene	25.0	27.3		ug/L		109	70 - 130
1,2,3-Trichlorobenzene	25.0	23.9		ug/L		96	70 - 130
1,2,3-Trichloropropane	25.0	22.0		ug/L		88	70 - 130
1,2,4-Trichlorobenzene	25.0	24.2		ug/L		97	70 - 130
1,2,4-Trimethylbenzene	25.0	23.8		ug/L		95	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	24.0		ug/L		96	70 - 130
1,2-Dichlorobenzene	25.0	22.0		ug/L		88	70 - 130
1,2-Dichloroethane	25.0	28.2		ug/L		113	70 - 130

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

Lab Sample ID: LCS 480-565659/5
Matrix: Water
Analysis Batch: 565659

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	26.3		ug/L		105	70 - 130
1,3,5-Trimethylbenzene	25.0	23.6		ug/L		95	70 - 130
1,3-Dichlorobenzene	25.0	22.5		ug/L		90	70 - 130
1,3-Dichloropropane	25.0	22.5		ug/L		90	70 - 130
1,4-Dichlorobenzene	25.0	22.0		ug/L		88	70 - 130
1,4-Dioxane	500	558		ug/L		112	70 - 130
2,2-Dichloropropane	25.0	30.3		ug/L		121	70 - 130
2-Butanone (MEK)	125	227	*+	ug/L		181	70 - 130
2-Chlorotoluene	25.0	22.8		ug/L		91	70 - 130
2-Hexanone	125	117		ug/L		93	70 - 130
4-Chlorotoluene	25.0	23.7		ug/L		95	70 - 130
4-Isopropyltoluene	25.0	24.6		ug/L		98	70 - 130
4-Methyl-2-pentanone (MIBK)	125	117		ug/L		94	70 - 130
Acetone	125	128		ug/L		102	70 - 130
Benzene	25.0	25.7		ug/L		103	70 - 130
Bromobenzene	25.0	23.0		ug/L		92	70 - 130
Bromoform	25.0	26.9		ug/L		108	70 - 130
Bromomethane	25.0	22.2		ug/L		89	70 - 130
Carbon disulfide	25.0	22.5		ug/L		90	70 - 130
Carbon tetrachloride	25.0	30.7		ug/L		123	70 - 130
Chlorobenzene	25.0	23.0		ug/L		92	70 - 130
Chlorobromomethane	25.0	26.7		ug/L		107	70 - 130
Chlorodibromomethane	25.0	25.0		ug/L		100	70 - 130
Chloroethane	25.0	22.4		ug/L		89	70 - 130
Chloroform	25.0	25.7		ug/L		103	70 - 130
Chloromethane	25.0	23.7		ug/L		95	70 - 130
cis-1,2-Dichloroethene	25.0	25.0		ug/L		100	70 - 130
cis-1,3-Dichloropropene	25.0	30.0		ug/L		120	70 - 130
Dichlorobromomethane	25.0	29.3		ug/L		117	70 - 130
Dichlorodifluoromethane	25.0	29.9		ug/L		120	70 - 130
Ethyl ether	25.0	23.1		ug/L		92	70 - 130
Ethylbenzene	25.0	23.4		ug/L		94	70 - 130
Ethylene Dibromide	25.0	23.5		ug/L		94	70 - 130
Hexachlorobutadiene	25.0	26.2		ug/L		105	70 - 130
Isopropyl ether	25.0	27.3		ug/L		109	70 - 130
Isopropylbenzene	25.0	23.4		ug/L		93	70 - 130
Methyl tert-butyl ether	25.0	26.4		ug/L		105	70 - 130
Methylene Chloride	25.0	25.6		ug/L		102	70 - 130
m-Xylene & p-Xylene	25.0	23.5		ug/L		94	70 - 130
Naphthalene	25.0	23.3		ug/L		93	70 - 130
n-Butylbenzene	25.0	23.4		ug/L		94	70 - 130
N-Propylbenzene	25.0	22.4		ug/L		89	70 - 130
o-Xylene	25.0	23.9		ug/L		96	70 - 130
sec-Butylbenzene	25.0	22.8		ug/L		91	70 - 130
Styrene	25.0	25.0		ug/L		100	70 - 130
Tert-amyl methyl ether	25.0	29.2		ug/L		117	70 - 130
Tert-butyl ethyl ether	25.0	27.4		ug/L		109	70 - 130
tert-Butylbenzene	25.0	24.4		ug/L		97	70 - 130
Tetrachloroethene	25.0	24.9		ug/L		100	70 - 130

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

Lab Sample ID: LCS 480-565659/5
Matrix: Water
Analysis Batch: 565659

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Tetrahydrofuran			50.0	66.3	*+	ug/L		133	70 - 130		
Toluene			25.0	21.7		ug/L		87	70 - 130		
trans-1,2-Dichloroethene			25.0	25.5		ug/L		102	70 - 130		
trans-1,3-Dichloropropene			25.0	25.0		ug/L		100	70 - 130		
Trichloroethene			25.0	27.4		ug/L		109	70 - 130		
Trichlorofluoromethane			25.0	27.6		ug/L		110	70 - 130		
Vinyl chloride			25.0	25.2		ug/L		101	70 - 130		
Dibromomethane			25.0	28.0		ug/L		112	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*79*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: LCSD 480-565659/9
Matrix: Water
Analysis Batch: 565659

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	25.5		ug/L		102	70 - 130	2	20
1,1,1-Trichloroethane			25.0	28.4		ug/L		114	70 - 130	2	20
1,1,2,2-Tetrachloroethane			25.0	22.1		ug/L		88	70 - 130	3	20
1,1,2-Trichloroethane			25.0	23.2		ug/L		93	70 - 130	3	20
1,1-Dichloroethane			25.0	25.1		ug/L		100	70 - 130	5	20
1,1-Dichloroethene			25.0	22.8		ug/L		91	70 - 130	5	20
1,1-Dichloropropene			25.0	26.6		ug/L		106	70 - 130	3	20
1,2,3-Trichlorobenzene			25.0	22.7		ug/L		91	70 - 130	5	20
1,2,3-Trichloropropane			25.0	22.4		ug/L		90	70 - 130	2	20
1,2,4-Trichlorobenzene			25.0	23.1		ug/L		92	70 - 130	5	20
1,2,4-Trimethylbenzene			25.0	22.9		ug/L		92	70 - 130	4	20
1,2-Dibromo-3-Chloropropane			25.0	26.0		ug/L		104	70 - 130	8	20
1,2-Dichlorobenzene			25.0	21.1		ug/L		84	70 - 130	4	20
1,2-Dichloroethane			25.0	26.0		ug/L		104	70 - 130	8	20
1,2-Dichloropropane			25.0	26.4		ug/L		106	70 - 130	1	20
1,3,5-Trimethylbenzene			25.0	22.5		ug/L		90	70 - 130	5	20
1,3-Dichlorobenzene			25.0	21.8		ug/L		87	70 - 130	3	20
1,3-Dichloropropane			25.0	22.8		ug/L		91	70 - 130	1	20
1,4-Dichlorobenzene			25.0	21.5		ug/L		86	70 - 130	2	20
1,4-Dioxane			500	402	*1	ug/L		80	70 - 130	32	20
2,2-Dichloropropane			25.0	28.3		ug/L		113	70 - 130	7	20
2-Butanone (MEK)			125	248	*+	ug/L		199	70 - 130	9	20
2-Chlorotoluene			25.0	21.9		ug/L		88	70 - 130	4	20
2-Hexanone			125	126		ug/L		101	70 - 130	8	20
4-Chlorotoluene			25.0	23.2		ug/L		93	70 - 130	2	20
4-Isopropyltoluene			25.0	23.4		ug/L		93	70 - 130	5	20
4-Methyl-2-pentanone (MIBK)			125	122		ug/L		98	70 - 130	4	20
Acetone			125	88.5	*1	ug/L		71	70 - 130	36	20
Benzene			25.0	24.3		ug/L		97	70 - 130	6	20

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

Lab Sample ID: LCSD 480-565659/9
Matrix: Water
Analysis Batch: 565659

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
Bromobenzene	25.0	22.2		ug/L		89	70 - 130	4	20
Bromoform	25.0	28.1		ug/L		112	70 - 130	4	20
Bromomethane	25.0	21.0		ug/L		84	70 - 130	5	20
Carbon disulfide	25.0	21.4		ug/L		86	70 - 130	5	20
Carbon tetrachloride	25.0	29.1		ug/L		117	70 - 130	5	20
Chlorobenzene	25.0	22.4		ug/L		90	70 - 130	2	20
Chlorobromomethane	25.0	23.4		ug/L		94	70 - 130	13	20
Chlorodibromomethane	25.0	25.4		ug/L		102	70 - 130	2	20
Chloroethane	25.0	22.4		ug/L		90	70 - 130	0	20
Chloroform	25.0	24.3		ug/L		97	70 - 130	6	20
Chloromethane	25.0	23.1		ug/L		92	70 - 130	3	20
cis-1,2-Dichloroethene	25.0	24.0		ug/L		96	70 - 130	4	20
cis-1,3-Dichloropropene	25.0	30.8		ug/L		123	70 - 130	2	20
Dichlorobromomethane	25.0	28.7		ug/L		115	70 - 130	2	20
Dichlorodifluoromethane	25.0	29.4		ug/L		118	70 - 130	2	20
Ethyl ether	25.0	21.7		ug/L		87	70 - 130	6	20
Ethylbenzene	25.0	22.7		ug/L		91	70 - 130	3	20
Ethylene Dibromide	25.0	24.4		ug/L		98	70 - 130	4	20
Hexachlorobutadiene	25.0	24.9		ug/L		100	70 - 130	5	20
Isopropyl ether	25.0	26.2		ug/L		105	70 - 130	4	20
Isopropylbenzene	25.0	22.3		ug/L		89	70 - 130	5	20
Methyl tert-butyl ether	25.0	23.6		ug/L		95	70 - 130	11	20
Methylene Chloride	25.0	23.6		ug/L		95	70 - 130	8	20
m-Xylene & p-Xylene	25.0	22.7		ug/L		91	70 - 130	4	20
Naphthalene	25.0	22.4		ug/L		90	70 - 130	4	20
n-Butylbenzene	25.0	22.2		ug/L		89	70 - 130	5	20
N-Propylbenzene	25.0	21.4		ug/L		86	70 - 130	5	20
o-Xylene	25.0	23.0		ug/L		92	70 - 130	4	20
sec-Butylbenzene	25.0	22.1		ug/L		89	70 - 130	3	20
Styrene	25.0	25.1		ug/L		100	70 - 130	0	20
Tert-amyl methyl ether	25.0	23.4	*1	ug/L		94	70 - 130	22	20
Tert-butyl ethyl ether	25.0	26.6		ug/L		106	70 - 130	3	20
tert-Butylbenzene	25.0	23.8		ug/L		95	70 - 130	2	20
Tetrachloroethene	25.0	24.2		ug/L		97	70 - 130	3	20
Tetrahydrofuran	50.0	51.5	*1	ug/L		103	70 - 130	25	20
Toluene	25.0	22.0		ug/L		88	70 - 130	2	20
trans-1,2-Dichloroethene	25.0	24.0		ug/L		96	70 - 130	6	20
trans-1,3-Dichloropropene	25.0	26.0		ug/L		104	70 - 130	4	20
Trichloroethene	25.0	26.5		ug/L		106	70 - 130	3	20
Trichlorofluoromethane	25.0	26.8		ug/L		107	70 - 130	3	20
Vinyl chloride	25.0	23.8		ug/L		95	70 - 130	6	20
Dibromomethane	25.0	28.8		ug/L		115	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*80*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 130*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*

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

Lab Sample ID: MB 480-565806/9
Matrix: Water
Analysis Batch: 565806

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			01/12/21 12:29	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/12/21 12:29	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			01/12/21 12:29	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/12/21 12:29	1
1,1-Dichloroethane	ND		1.0		ug/L			01/12/21 12:29	1
1,1-Dichloroethene	ND		1.0		ug/L			01/12/21 12:29	1
1,1-Dichloropropene	ND		1.0		ug/L			01/12/21 12:29	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/12/21 12:29	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/12/21 12:29	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/12/21 12:29	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/12/21 12:29	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/12/21 12:29	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/12/21 12:29	1
1,2-Dichloroethane	ND		1.0		ug/L			01/12/21 12:29	1
1,2-Dichloropropane	ND		1.0		ug/L			01/12/21 12:29	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/12/21 12:29	1
1,3-Dichlorobenzene	ND		1.0		ug/L			01/12/21 12:29	1
1,3-Dichloropropane	ND		1.0		ug/L			01/12/21 12:29	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/12/21 12:29	1
1,4-Dioxane	ND		50		ug/L			01/12/21 12:29	1
2,2-Dichloropropane	ND		1.0		ug/L			01/12/21 12:29	1
2-Butanone (MEK)	ND		10		ug/L			01/12/21 12:29	1
2-Chlorotoluene	ND		1.0		ug/L			01/12/21 12:29	1
2-Hexanone	ND		10		ug/L			01/12/21 12:29	1
4-Chlorotoluene	ND		1.0		ug/L			01/12/21 12:29	1
4-Isopropyltoluene	ND		1.0		ug/L			01/12/21 12:29	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			01/12/21 12:29	1
Acetone	ND		50		ug/L			01/12/21 12:29	1
Benzene	ND		1.0		ug/L			01/12/21 12:29	1
Bromobenzene	ND		1.0		ug/L			01/12/21 12:29	1
Bromoform	ND		1.0		ug/L			01/12/21 12:29	1
Bromomethane	ND		2.0		ug/L			01/12/21 12:29	1
Carbon disulfide	ND		10		ug/L			01/12/21 12:29	1
Carbon tetrachloride	ND		1.0		ug/L			01/12/21 12:29	1
Chlorobenzene	ND		1.0		ug/L			01/12/21 12:29	1
Chlorobromomethane	ND		1.0		ug/L			01/12/21 12:29	1
Chlorodibromomethane	ND		0.50		ug/L			01/12/21 12:29	1
Chloroethane	ND		2.0		ug/L			01/12/21 12:29	1
Chloroform	ND		1.0		ug/L			01/12/21 12:29	1
Chloromethane	ND		2.0		ug/L			01/12/21 12:29	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			01/12/21 12:29	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			01/12/21 12:29	1
Dichlorobromomethane	ND		0.50		ug/L			01/12/21 12:29	1
Dichlorodifluoromethane	ND		1.0		ug/L			01/12/21 12:29	1
Ethyl ether	ND		1.0		ug/L			01/12/21 12:29	1
Ethylbenzene	ND		1.0		ug/L			01/12/21 12:29	1
Ethylene Dibromide	ND		1.0		ug/L			01/12/21 12:29	1
Hexachlorobutadiene	ND		0.40		ug/L			01/12/21 12:29	1

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

Lab Sample ID: MB 480-565806/9
Matrix: Water
Analysis Batch: 565806

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropyl ether	ND		10		ug/L			01/12/21 12:29	1
Isopropylbenzene	ND		1.0		ug/L			01/12/21 12:29	1
Methyl tert-butyl ether	ND		1.0		ug/L			01/12/21 12:29	1
Methylene Chloride	ND		1.0		ug/L			01/12/21 12:29	1
m-Xylene & p-Xylene	ND		2.0		ug/L			01/12/21 12:29	1
Naphthalene	ND		5.0		ug/L			01/12/21 12:29	1
n-Butylbenzene	ND		1.0		ug/L			01/12/21 12:29	1
N-Propylbenzene	ND		1.0		ug/L			01/12/21 12:29	1
o-Xylene	ND		1.0		ug/L			01/12/21 12:29	1
sec-Butylbenzene	ND		1.0		ug/L			01/12/21 12:29	1
Styrene	ND		1.0		ug/L			01/12/21 12:29	1
Tert-amyl methyl ether	ND		5.0		ug/L			01/12/21 12:29	1
Tert-butyl ethyl ether	ND		5.0		ug/L			01/12/21 12:29	1
tert-Butylbenzene	ND		1.0		ug/L			01/12/21 12:29	1
Tetrachloroethene	ND		1.0		ug/L			01/12/21 12:29	1
Tetrahydrofuran	ND		10		ug/L			01/12/21 12:29	1
Toluene	ND		1.0		ug/L			01/12/21 12:29	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/12/21 12:29	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			01/12/21 12:29	1
Trichloroethene	ND		1.0		ug/L			01/12/21 12:29	1
Trichlorofluoromethane	ND		1.0		ug/L			01/12/21 12:29	1
Vinyl chloride	ND		1.0		ug/L			01/12/21 12:29	1
Dibromomethane	ND		1.0		ug/L			01/12/21 12:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*82*		*70 - 130*		*01/12/21 12:29*	*1*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*		*01/12/21 12:29*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*01/12/21 12:29*	*1*

Lab Sample ID: LCS 480-565806/6
Matrix: Water
Analysis Batch: 565806

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		103	70 - 130
1,1,1-Trichloroethane	25.0	28.1		ug/L		112	70 - 130
1,1,2,2-Tetrachloroethane	25.0	21.8		ug/L		87	70 - 130
1,1,2-Trichloroethane	25.0	23.7		ug/L		95	70 - 130
1,1-Dichloroethane	25.0	25.8		ug/L		103	70 - 130
1,1-Dichloroethene	25.0	22.9		ug/L		92	70 - 130
1,1-Dichloropropene	25.0	26.6		ug/L		106	70 - 130
1,2,3-Trichlorobenzene	25.0	24.3		ug/L		97	70 - 130
1,2,3-Trichloropropane	25.0	22.8		ug/L		91	70 - 130
1,2,4-Trichlorobenzene	25.0	24.2		ug/L		97	70 - 130
1,2,4-Trimethylbenzene	25.0	24.7		ug/L		99	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	24.2		ug/L		97	70 - 130
1,2-Dichlorobenzene	25.0	22.6		ug/L		90	70 - 130
1,2-Dichloroethane	25.0	27.4		ug/L		110	70 - 130

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

Lab Sample ID: LCS 480-565806/6
Matrix: Water
Analysis Batch: 565806

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	25.6		ug/L		102	70 - 130
1,3,5-Trimethylbenzene	25.0	24.3		ug/L		97	70 - 130
1,3-Dichlorobenzene	25.0	23.2		ug/L		93	70 - 130
1,3-Dichloropropane	25.0	22.4		ug/L		90	70 - 130
1,4-Dichlorobenzene	25.0	23.0		ug/L		92	70 - 130
1,4-Dioxane	500	563		ug/L		113	70 - 130
2,2-Dichloropropane	25.0	29.4		ug/L		117	70 - 130
2-Butanone (MEK)	125	224	*+	ug/L		179	70 - 130
2-Chlorotoluene	25.0	23.8		ug/L		95	70 - 130
2-Hexanone	125	120		ug/L		96	70 - 130
4-Chlorotoluene	25.0	24.8		ug/L		99	70 - 130
4-Isopropyltoluene	25.0	25.2		ug/L		101	70 - 130
4-Methyl-2-pentanone (MIBK)	125	119		ug/L		95	70 - 130
Acetone	125	133		ug/L		107	70 - 130
Benzene	25.0	24.9		ug/L		100	70 - 130
Bromobenzene	25.0	23.4		ug/L		94	70 - 130
Bromoform	25.0	26.6		ug/L		106	70 - 130
Bromomethane	25.0	22.1		ug/L		88	70 - 130
Carbon disulfide	25.0	21.2		ug/L		85	70 - 130
Carbon tetrachloride	25.0	29.1		ug/L		116	70 - 130
Chlorobenzene	25.0	23.7		ug/L		95	70 - 130
Chlorobromomethane	25.0	25.1		ug/L		100	70 - 130
Chlorodibromomethane	25.0	25.6		ug/L		102	70 - 130
Chloroethane	25.0	21.5		ug/L		86	70 - 130
Chloroform	25.0	25.3		ug/L		101	70 - 130
Chloromethane	25.0	25.0		ug/L		100	70 - 130
cis-1,2-Dichloroethene	25.0	25.0		ug/L		100	70 - 130
cis-1,3-Dichloropropene	25.0	28.6		ug/L		114	70 - 130
Dichlorobromomethane	25.0	27.4		ug/L		110	70 - 130
Dichlorodifluoromethane	25.0	32.9	*+	ug/L		132	70 - 130
Ethyl ether	25.0	22.9		ug/L		92	70 - 130
Ethylbenzene	25.0	24.2		ug/L		97	70 - 130
Ethylene Dibromide	25.0	24.1		ug/L		97	70 - 130
Hexachlorobutadiene	25.0	25.5		ug/L		102	70 - 130
Isopropyl ether	25.0	27.1		ug/L		108	70 - 130
Isopropylbenzene	25.0	24.1		ug/L		96	70 - 130
Methyl tert-butyl ether	25.0	25.5		ug/L		102	70 - 130
Methylene Chloride	25.0	25.3		ug/L		101	70 - 130
m-Xylene & p-Xylene	25.0	24.7		ug/L		99	70 - 130
Naphthalene	25.0	23.0		ug/L		92	70 - 130
n-Butylbenzene	25.0	24.0		ug/L		96	70 - 130
N-Propylbenzene	25.0	23.1		ug/L		93	70 - 130
o-Xylene	25.0	24.5		ug/L		98	70 - 130
sec-Butylbenzene	25.0	23.7		ug/L		95	70 - 130
Styrene	25.0	25.3		ug/L		101	70 - 130
Tert-amyl methyl ether	25.0	28.0		ug/L		112	70 - 130
Tert-butyl ethyl ether	25.0	26.7		ug/L		107	70 - 130
tert-Butylbenzene	25.0	25.8		ug/L		103	70 - 130
Tetrachloroethene	25.0	26.3		ug/L		105	70 - 130

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

Lab Sample ID: LCS 480-565806/6
Matrix: Water
Analysis Batch: 565806

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Tetrahydrofuran	50.0	64.0		ug/L		128	70 - 130
Toluene	25.0	22.6		ug/L		90	70 - 130
trans-1,2-Dichloroethene	25.0	24.6		ug/L		98	70 - 130
trans-1,3-Dichloropropene	25.0	24.9		ug/L		100	70 - 130
Trichloroethene	25.0	26.5		ug/L		106	70 - 130
Trichlorofluoromethane	25.0	27.8		ug/L		111	70 - 130
Vinyl chloride	25.0	25.3		ug/L		101	70 - 130
Dibromomethane	25.0	27.2		ug/L		109	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*86*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 480-565806/7
Matrix: Water
Analysis Batch: 565806

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	26.2		ug/L		105	70 - 130	1	20
1,1,1-Trichloroethane	25.0	27.1		ug/L		108	70 - 130	3	20
1,1,2,2-Tetrachloroethane	25.0	22.3		ug/L		89	70 - 130	2	20
1,1,2-Trichloroethane	25.0	22.6		ug/L		91	70 - 130	4	20
1,1-Dichloroethane	25.0	24.7		ug/L		99	70 - 130	4	20
1,1-Dichloroethene	25.0	22.8		ug/L		91	70 - 130	1	20
1,1-Dichloropropene	25.0	25.9		ug/L		104	70 - 130	2	20
1,2,3-Trichlorobenzene	25.0	24.3		ug/L		97	70 - 130	0	20
1,2,3-Trichloropropane	25.0	22.7		ug/L		91	70 - 130	0	20
1,2,4-Trichlorobenzene	25.0	24.6		ug/L		98	70 - 130	1	20
1,2,4-Trimethylbenzene	25.0	24.2		ug/L		97	70 - 130	2	20
1,2-Dibromo-3-Chloropropane	25.0	24.6		ug/L		99	70 - 130	2	20
1,2-Dichlorobenzene	25.0	22.6		ug/L		90	70 - 130	0	20
1,2-Dichloroethane	25.0	24.9		ug/L		100	70 - 130	10	20
1,2-Dichloropropane	25.0	25.0		ug/L		100	70 - 130	3	20
1,3,5-Trimethylbenzene	25.0	23.5		ug/L		94	70 - 130	3	20
1,3-Dichlorobenzene	25.0	22.6		ug/L		90	70 - 130	3	20
1,3-Dichloropropane	25.0	22.3		ug/L		89	70 - 130	0	20
1,4-Dichlorobenzene	25.0	22.2		ug/L		89	70 - 130	3	20
1,4-Dioxane	500	386	*1	ug/L		77	70 - 130	37	20
2,2-Dichloropropane	25.0	28.2		ug/L		113	70 - 130	4	20
2-Butanone (MEK)	125	225	*+	ug/L		180	70 - 130	1	20
2-Chlorotoluene	25.0	23.2		ug/L		93	70 - 130	2	20
2-Hexanone	125	116		ug/L		93	70 - 130	4	20
4-Chlorotoluene	25.0	21.6		ug/L		86	70 - 130	14	20
4-Isopropyltoluene	25.0	24.5		ug/L		98	70 - 130	3	20
4-Methyl-2-pentanone (MIBK)	125	121		ug/L		96	70 - 130	1	20
Acetone	125	74.4	*- *1	ug/L		60	70 - 130	57	20
Benzene	25.0	23.4		ug/L		94	70 - 130	6	20

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

Lab Sample ID: LCSD 480-565806/7
Matrix: Water
Analysis Batch: 565806

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
Bromobenzene	25.0	22.8		ug/L		91	70 - 130	3	20
Bromoform	25.0	26.6		ug/L		106	70 - 130	0	20
Bromomethane	25.0	22.0		ug/L		88	70 - 130	0	20
Carbon disulfide	25.0	20.4		ug/L		82	70 - 130	4	20
Carbon tetrachloride	25.0	28.1		ug/L		113	70 - 130	3	20
Chlorobenzene	25.0	22.8		ug/L		91	70 - 130	4	20
Chlorobromomethane	25.0	23.4		ug/L		93	70 - 130	7	20
Chlorodibromomethane	25.0	25.4		ug/L		102	70 - 130	1	20
Chloroethane	25.0	21.7		ug/L		87	70 - 130	1	20
Chloroform	25.0	23.8		ug/L		95	70 - 130	6	20
Chloromethane	25.0	24.5		ug/L		98	70 - 130	2	20
cis-1,2-Dichloroethene	25.0	23.2		ug/L		93	70 - 130	7	20
cis-1,3-Dichloropropene	25.0	28.2		ug/L		113	70 - 130	1	20
Dichlorobromomethane	25.0	27.5		ug/L		110	70 - 130	0	20
Dichlorodifluoromethane	25.0	32.5		ug/L		130	70 - 130	1	20
Ethyl ether	25.0	21.4		ug/L		86	70 - 130	7	20
Ethylbenzene	25.0	23.3		ug/L		93	70 - 130	4	20
Ethylene Dibromide	25.0	24.1		ug/L		96	70 - 130	0	20
Hexachlorobutadiene	25.0	26.1		ug/L		104	70 - 130	2	20
Isopropyl ether	25.0	26.1		ug/L		104	70 - 130	4	20
Isopropylbenzene	25.0	23.5		ug/L		94	70 - 130	2	20
Methyl tert-butyl ether	25.0	23.1		ug/L		93	70 - 130	10	20
Methylene Chloride	25.0	23.5		ug/L		94	70 - 130	7	20
m-Xylene & p-Xylene	25.0	23.4		ug/L		94	70 - 130	5	20
Naphthalene	25.0	23.5		ug/L		94	70 - 130	2	20
n-Butylbenzene	25.0	23.3		ug/L		93	70 - 130	3	20
N-Propylbenzene	25.0	22.1		ug/L		88	70 - 130	5	20
o-Xylene	25.0	23.9		ug/L		95	70 - 130	3	20
sec-Butylbenzene	25.0	23.2		ug/L		93	70 - 130	2	20
Styrene	25.0	25.0		ug/L		100	70 - 130	1	20
Tert-amyl methyl ether	25.0	22.5	*1	ug/L		90	70 - 130	22	20
Tert-butyl ethyl ether	25.0	25.8		ug/L		103	70 - 130	3	20
tert-Butylbenzene	25.0	24.9		ug/L		100	70 - 130	4	20
Tetrachloroethene	25.0	24.3		ug/L		97	70 - 130	8	20
Tetrahydrofuran	50.0	46.0	*1	ug/L		92	70 - 130	33	20
Toluene	25.0	22.1		ug/L		88	70 - 130	2	20
trans-1,2-Dichloroethene	25.0	23.2		ug/L		93	70 - 130	6	20
trans-1,3-Dichloropropene	25.0	25.1		ug/L		101	70 - 130	1	20
Trichloroethene	25.0	25.5		ug/L		102	70 - 130	4	20
Trichlorofluoromethane	25.0	26.8		ug/L		107	70 - 130	4	20
Vinyl chloride	25.0	24.7		ug/L		99	70 - 130	2	20
Dibromomethane	25.0	27.4		ug/L		109	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*85*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 130*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*

Method: 6010 - Metals (ICP)

Lab Sample ID: MB 480-565665/1-A
Matrix: Water
Analysis Batch: 565972

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 565665

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050		mg/L		01/11/21 11:20	01/12/21 12:33	1

Lab Sample ID: LCS 480-565665/2-A
Matrix: Water
Analysis Batch: 565972

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 565665

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Iron			10.0	9.91		mg/L		99	80 - 120		

Lab Sample ID: LCSD 480-565665/3-A
Matrix: Water
Analysis Batch: 565972

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 565665

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron			10.0	9.82		mg/L		98	80 - 120	1	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-565696/45
Matrix: Water
Analysis Batch: 565696

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.20		mg/L			01/11/21 09:44	1

Lab Sample ID: LCS 480-565696/46
Matrix: Water
Analysis Batch: 565696

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ammonia			1.00	0.995		mg/L		100	90 - 110		

Lab Sample ID: 480-180013-4 MS
Matrix: Water
Analysis Batch: 565786

Client Sample ID: REW-12-20210107
Prep Type: Total/NA
Prep Batch: 565770

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ammonia	2.8		0.400	3.18	4	mg/L		99	90 - 110		

Lab Sample ID: 480-180013-4 DU
Matrix: Water
Analysis Batch: 565786

Client Sample ID: REW-12-20210107
Prep Type: Total/NA
Prep Batch: 565770

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Ammonia	2.8			2.79		mg/L				0.06	20

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: MB 480-565786/17
Matrix: Water
Analysis Batch: 565786

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.20		mg/L			01/12/21 07:48	1

Lab Sample ID: LCS 480-565786/18
Matrix: Water
Analysis Batch: 565786

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

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

Method: 9038 - Sulfate, Turbidimetric

Lab Sample ID: MB 480-565769/17
Matrix: Water
Analysis Batch: 565769

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		5.0		mg/L			01/11/21 21:28	1

Lab Sample ID: MB 480-565769/49
Matrix: Water
Analysis Batch: 565769

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		5.0		mg/L			01/11/21 21:46	1

Lab Sample ID: LCS 480-565769/18
Matrix: Water
Analysis Batch: 565769

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	30.0	31.0		mg/L		103	90 - 110

Lab Sample ID: LCS 480-565769/50
Matrix: Water
Analysis Batch: 565769

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	30.0	31.6		mg/L		105	90 - 110

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

Lab Sample ID: MB 480-566300/27
Matrix: Water
Analysis Batch: 566300

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TOC Result 1	ND		1.0		mg/L			01/14/21 09:28	1
TOC Result 2	ND		1.0		mg/L			01/14/21 09:28	1
Total Organic Carbon - Duplicates	ND		1.0		mg/L			01/14/21 09:28	1

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

Lab Sample ID: MB 480-566300/51
Matrix: Water
Analysis Batch: 566300

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TOC Result 1	ND		1.0		mg/L			01/14/21 20:32	1
TOC Result 2	ND		1.0		mg/L			01/14/21 20:32	1
Total Organic Carbon - Duplicates	ND		1.0		mg/L			01/14/21 20:32	1

Lab Sample ID: LCS 480-566300/28
Matrix: Water
Analysis Batch: 566300

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
TOC Result 1	60.0	59.6		mg/L		99	90 - 110
TOC Result 2	60.0	57.9		mg/L		96	90 - 110
Total Organic Carbon - Duplicates	60.0	58.7		mg/L		98	90 - 110

Lab Sample ID: LCS 480-566300/52
Matrix: Water
Analysis Batch: 566300

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	59.3		mg/L		99	90 - 110
TOC Result 2	60.0	59.3		mg/L		99	90 - 110
Total Organic Carbon - Duplicates	60.0	59.3		mg/L		99	90 - 110

Lab Sample ID: 480-180013-3 MS
Matrix: Water
Analysis Batch: 566300

Client Sample ID: REW-11-20210107
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
TOC Result 1	2200		1000	3230		mg/L		104	54 - 131
TOC Result 2	2100		1000	3140		mg/L		104	54 - 131
Total Organic Carbon - Duplicates	2200		1000	3190		mg/L		104	54 - 131

Lab Sample ID: 480-180013-4 DU
Matrix: Water
Analysis Batch: 566300

Client Sample ID: REW-12-20210107
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
TOC Result 1	1.5		1.46		mg/L		1	20
TOC Result 2	1.8		1.51		mg/L		18	20
Total Organic Carbon - Duplicates	1.6		1.48		mg/L		10	20

Method: 9251 - Chloride

Lab Sample ID: MB 480-565767/48
Matrix: Water
Analysis Batch: 565767

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0		mg/L			01/11/21 19:53	1

Lab Sample ID: MB 480-565767/60
Matrix: Water
Analysis Batch: 565767

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0		mg/L			01/11/21 20:11	1

Lab Sample ID: MB 480-565767/68
Matrix: Water
Analysis Batch: 565767

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0		mg/L			01/11/21 20:14	1

Lab Sample ID: MB 480-565767/79
Matrix: Water
Analysis Batch: 565767

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0		mg/L			01/11/21 20:22	1

Lab Sample ID: LCS 480-565767/47
Matrix: Water
Analysis Batch: 565767

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			25.0	27.4		mg/L		110	90 - 110		

Lab Sample ID: LCS 480-565767/59
Matrix: Water
Analysis Batch: 565767

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			25.0	27.2		mg/L		109	90 - 110		

Lab Sample ID: LCS 480-565767/67
Matrix: Water
Analysis Batch: 565767

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			25.0	27.2		mg/L		109	90 - 110		

Lab Sample ID: LCS 480-565767/78
Matrix: Water
Analysis Batch: 565767

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			25.0	27.4		mg/L		109	90 - 110		

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-565817/3
Matrix: Water
Analysis Batch: 565817

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	ND		5.0		mg/L			01/11/21 15:18	1

Lab Sample ID: LCS 480-565817/2
Matrix: Water
Analysis Batch: 565817

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	95.0		mg/L		95	90 - 110		

Method: SM 4500 P E - Orthophosphate

Lab Sample ID: MB 480-565587/3
Matrix: Water
Analysis Batch: 565587

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
ortho-Phosphate	ND		0.020		mg/L			01/08/21 19:26	1

Lab Sample ID: LCS 480-565587/4
Matrix: Water
Analysis Batch: 565587

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

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

Lab Sample ID: 480-180013-1 MS
Matrix: Water
Analysis Batch: 565587

Client Sample ID: MW-266MB-02210107
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
ortho-Phosphate	ND		1.00	0.888		mg/L		89	49 - 138		

Lab Sample ID: 480-180013-1 MSD
Matrix: Water
Analysis Batch: 565587

Client Sample ID: MW-266MB-02210107
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	ND		1.00	0.872		mg/L		87	49 - 138	2	20

GC/MS VOA

Analysis Batch: 565659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-180013-1	MW-266MB-02210107	Total/NA	Water	8260C	
480-180013-3	REW-11-20210107	Total/NA	Water	8260C	
480-180013-4	REW-12-20210107	Total/NA	Water	8260C	
480-180013-5	TRIP BLANK	Total/NA	Water	8260C	
MB 480-565659/7	Method Blank	Total/NA	Water	8260C	
LCS 480-565659/5	Lab Control Sample	Total/NA	Water	8260C	
LCSD 480-565659/9	Lab Control Sample Dup	Total/NA	Water	8260C	

Analysis Batch: 565806

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-180013-2	MW-268D-20210107	Total/NA	Water	8260C	
MB 480-565806/9	Method Blank	Total/NA	Water	8260C	
LCS 480-565806/6	Lab Control Sample	Total/NA	Water	8260C	
LCSD 480-565806/7	Lab Control Sample Dup	Total/NA	Water	8260C	

Metals

Prep Batch: 565665

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-180013-1	MW-266MB-02210107	Total/NA	Water	3005A	
480-180013-2	MW-268D-20210107	Total/NA	Water	3005A	
480-180013-3	REW-11-20210107	Total/NA	Water	3005A	
480-180013-4	REW-12-20210107	Total/NA	Water	3005A	
MB 480-565665/1-A	Method Blank	Total/NA	Water	3005A	
LCS 480-565665/2-A	Lab Control Sample	Total/NA	Water	3005A	
LCSD 480-565665/3-A	Lab Control Sample Dup	Total/NA	Water	3005A	

Analysis Batch: 565972

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-180013-1	MW-266MB-02210107	Total/NA	Water	6010	565665
480-180013-2	MW-268D-20210107	Total/NA	Water	6010	565665
480-180013-3	REW-11-20210107	Total/NA	Water	6010	565665
480-180013-4	REW-12-20210107	Total/NA	Water	6010	565665
MB 480-565665/1-A	Method Blank	Total/NA	Water	6010	565665
LCS 480-565665/2-A	Lab Control Sample	Total/NA	Water	6010	565665
LCSD 480-565665/3-A	Lab Control Sample Dup	Total/NA	Water	6010	565665

General Chemistry

Analysis Batch: 565587

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-180013-1	MW-266MB-02210107	Total/NA	Water	SM 4500 P E	
480-180013-2	MW-268D-20210107	Total/NA	Water	SM 4500 P E	
480-180013-3	REW-11-20210107	Total/NA	Water	SM 4500 P E	
480-180013-4	REW-12-20210107	Total/NA	Water	SM 4500 P E	
MB 480-565587/3	Method Blank	Total/NA	Water	SM 4500 P E	
LCS 480-565587/4	Lab Control Sample	Total/NA	Water	SM 4500 P E	
480-180013-1 MS	MW-266MB-02210107	Total/NA	Water	SM 4500 P E	
480-180013-1 MSD	MW-266MB-02210107	Total/NA	Water	SM 4500 P E	

General Chemistry

Analysis Batch: 565591

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-180013-1	MW-266MB-02210107	Total/NA	Water	353.2	
480-180013-2	MW-268D-20210107	Total/NA	Water	353.2	
480-180013-3	REW-11-20210107	Total/NA	Water	353.2	
480-180013-4	REW-12-20210107	Total/NA	Water	353.2	

Prep Batch: 565695

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-180013-1	MW-266MB-02210107	Total/NA	Water	Distill/Ammonia	
480-180013-2	MW-268D-20210107	Total/NA	Water	Distill/Ammonia	
480-180013-3	REW-11-20210107	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 565696

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-180013-1	MW-266MB-02210107	Total/NA	Water	350.1	565695
480-180013-2	MW-268D-20210107	Total/NA	Water	350.1	565695
480-180013-3	REW-11-20210107	Total/NA	Water	350.1	565695
MB 480-565696/45	Method Blank	Total/NA	Water	350.1	
LCS 480-565696/46	Lab Control Sample	Total/NA	Water	350.1	

Analysis Batch: 565767

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-180013-1	MW-266MB-02210107	Total/NA	Water	9251	
480-180013-2	MW-268D-20210107	Total/NA	Water	9251	
480-180013-3	REW-11-20210107	Total/NA	Water	9251	
480-180013-4	REW-12-20210107	Total/NA	Water	9251	
MB 480-565767/48	Method Blank	Total/NA	Water	9251	
MB 480-565767/60	Method Blank	Total/NA	Water	9251	
MB 480-565767/68	Method Blank	Total/NA	Water	9251	
MB 480-565767/79	Method Blank	Total/NA	Water	9251	
LCS 480-565767/47	Lab Control Sample	Total/NA	Water	9251	
LCS 480-565767/59	Lab Control Sample	Total/NA	Water	9251	
LCS 480-565767/67	Lab Control Sample	Total/NA	Water	9251	
LCS 480-565767/78	Lab Control Sample	Total/NA	Water	9251	

Analysis Batch: 565769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-180013-1	MW-266MB-02210107	Total/NA	Water	9038	
480-180013-2	MW-268D-20210107	Total/NA	Water	9038	
480-180013-3	REW-11-20210107	Total/NA	Water	9038	
480-180013-4	REW-12-20210107	Total/NA	Water	9038	
MB 480-565769/17	Method Blank	Total/NA	Water	9038	
MB 480-565769/49	Method Blank	Total/NA	Water	9038	
LCS 480-565769/18	Lab Control Sample	Total/NA	Water	9038	
LCS 480-565769/50	Lab Control Sample	Total/NA	Water	9038	

Prep Batch: 565770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-180013-4	REW-12-20210107	Total/NA	Water	Distill/Ammonia	
480-180013-4 MS	REW-12-20210107	Total/NA	Water	Distill/Ammonia	
480-180013-4 DU	REW-12-20210107	Total/NA	Water	Distill/Ammonia	

General Chemistry

Analysis Batch: 565786

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-180013-4	REW-12-20210107	Total/NA	Water	350.1	565770
MB 480-565786/17	Method Blank	Total/NA	Water	350.1	
LCS 480-565786/18	Lab Control Sample	Total/NA	Water	350.1	
480-180013-4 MS	REW-12-20210107	Total/NA	Water	350.1	565770
480-180013-4 DU	REW-12-20210107	Total/NA	Water	350.1	565770

Analysis Batch: 565817

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-180013-1	MW-266MB-02210107	Total/NA	Water	SM 2320B	
480-180013-2	MW-268D-20210107	Total/NA	Water	SM 2320B	
480-180013-3	REW-11-20210107	Total/NA	Water	SM 2320B	
480-180013-4	REW-12-20210107	Total/NA	Water	SM 2320B	
MB 480-565817/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 480-565817/2	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 565914

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-180013-1	MW-266MB-02210107	Total/NA	Water	9040C	
480-180013-2	MW-268D-20210107	Total/NA	Water	9040C	
480-180013-3	REW-11-20210107	Total/NA	Water	9040C	
480-180013-4	REW-12-20210107	Total/NA	Water	9040C	
LCS 480-565914/1	Lab Control Sample	Total/NA	Water	9040C	
LCS 480-565914/23	Lab Control Sample	Total/NA	Water	9040C	

Analysis Batch: 566300

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-180013-1	MW-266MB-02210107	Total/NA	Water	9060A	
480-180013-2	MW-268D-20210107	Total/NA	Water	9060A	
480-180013-3	REW-11-20210107	Total/NA	Water	9060A	
480-180013-4	REW-12-20210107	Total/NA	Water	9060A	
MB 480-566300/27	Method Blank	Total/NA	Water	9060A	
MB 480-566300/51	Method Blank	Total/NA	Water	9060A	
LCS 480-566300/28	Lab Control Sample	Total/NA	Water	9060A	
LCS 480-566300/52	Lab Control Sample	Total/NA	Water	9060A	
480-180013-3 MS	REW-11-20210107	Total/NA	Water	9060A	
480-180013-4 DU	REW-12-20210107	Total/NA	Water	9060A	

Lab Chronicle

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

Job ID: 480-180013-1

Client Sample ID: MW-266MB-02210107

Lab Sample ID: 480-180013-1

Date Collected: 01/07/21 09:50

Matrix: Water

Date Received: 01/08/21 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	565659	01/11/21 13:38	RJF	TAL BUF
Total/NA	Prep	3005A			565665	01/11/21 11:20	ADM	TAL BUF
Total/NA	Analysis	6010		1	565972	01/12/21 14:16	LMH	TAL BUF
Total/NA	Prep	Distill/Ammonia			565695	01/11/21 06:30	CLT	TAL BUF
Total/NA	Analysis	350.1		1	565696	01/11/21 10:04	CLT	TAL BUF
Total/NA	Analysis	353.2		1	565591	01/08/21 19:38	ALT	TAL BUF
Total/NA	Analysis	9038		1	565769	01/11/21 21:50	SRW	TAL BUF
Total/NA	Analysis	9040C		1	565914	01/12/21 14:15	KEB	TAL BUF
Total/NA	Analysis	9060A		1	566300	01/14/21 13:09	CLA	TAL BUF
Total/NA	Analysis	9251		1	565767	01/11/21 20:13	SRW	TAL BUF
Total/NA	Analysis	SM 2320B		1	565817	01/11/21 17:23	KEB	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	565587	01/08/21 19:26	CRK	TAL BUF

Client Sample ID: MW-268D-20210107

Lab Sample ID: 480-180013-2

Date Collected: 01/07/21 08:55

Matrix: Water

Date Received: 01/08/21 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	565806	01/12/21 13:01	RJF	TAL BUF
Total/NA	Prep	3005A			565665	01/11/21 11:20	ADM	TAL BUF
Total/NA	Analysis	6010		1	565972	01/12/21 14:20	LMH	TAL BUF
Total/NA	Prep	Distill/Ammonia			565695	01/11/21 06:30	CLT	TAL BUF
Total/NA	Analysis	350.1		1	565696	01/11/21 10:07	CLT	TAL BUF
Total/NA	Analysis	353.2		1	565591	01/08/21 19:39	ALT	TAL BUF
Total/NA	Analysis	9038		1	565769	01/11/21 21:50	SRW	TAL BUF
Total/NA	Analysis	9040C		1	565914	01/12/21 14:25	KEB	TAL BUF
Total/NA	Analysis	9060A		1	566300	01/14/21 13:36	CLA	TAL BUF
Total/NA	Analysis	9251		1	565767	01/11/21 20:13	SRW	TAL BUF
Total/NA	Analysis	SM 2320B		1	565817	01/11/21 17:29	KEB	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	565587	01/08/21 19:26	CRK	TAL BUF

Client Sample ID: REW-11-20210107

Lab Sample ID: 480-180013-3

Date Collected: 01/07/21 07:40

Matrix: Water

Date Received: 01/08/21 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		20	565659	01/11/21 14:28	RJF	TAL BUF
Total/NA	Prep	3005A			565665	01/11/21 11:20	ADM	TAL BUF
Total/NA	Analysis	6010		1	565972	01/12/21 14:24	LMH	TAL BUF
Total/NA	Prep	Distill/Ammonia			565695	01/11/21 06:30	CLT	TAL BUF
Total/NA	Analysis	350.1		1	565696	01/11/21 10:28	CLT	TAL BUF
Total/NA	Analysis	353.2		1	565591	01/08/21 19:40	ALT	TAL BUF
Total/NA	Analysis	9038		1	565769	01/11/21 21:51	SRW	TAL BUF

Lab Chronicle

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

Job ID: 480-180013-1

Client Sample ID: REW-11-20210107

Lab Sample ID: 480-180013-3

Date Collected: 01/07/21 07:40

Matrix: Water

Date Received: 01/08/21 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9040C		1	565914	01/12/21 14:12	KEB	TAL BUF
Total/NA	Analysis	9060A		40	566300	01/14/21 15:01	CLA	TAL BUF
Total/NA	Analysis	9251		5	565767	01/11/21 20:23	SRW	TAL BUF
Total/NA	Analysis	SM 2320B		1	565817	01/11/21 16:57	KEB	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	565587	01/08/21 19:26	CRK	TAL BUF

Client Sample ID: REW-12-20210107

Lab Sample ID: 480-180013-4

Date Collected: 01/07/21 08:15

Matrix: Water

Date Received: 01/08/21 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	565659	01/11/21 14:52	RJF	TAL BUF
Total/NA	Prep	3005A			565665	01/11/21 11:20	ADM	TAL BUF
Total/NA	Analysis	6010		1	565972	01/12/21 14:28	LMH	TAL BUF
Total/NA	Prep	Distill/Ammonia			565770	01/12/21 06:00	CLT	TAL BUF
Total/NA	Analysis	350.1		2	565786	01/12/21 07:53	CLT	TAL BUF
Total/NA	Analysis	353.2		1	565591	01/08/21 19:43	ALT	TAL BUF
Total/NA	Analysis	9038		1	565769	01/11/21 21:52	SRW	TAL BUF
Total/NA	Analysis	9040C		1	565914	01/12/21 14:13	KEB	TAL BUF
Total/NA	Analysis	9060A		1	566300	01/14/21 15:57	CLA	TAL BUF
Total/NA	Analysis	9251		1	565767	01/11/21 20:15	SRW	TAL BUF
Total/NA	Analysis	SM 2320B		1	565817	01/11/21 17:04	KEB	TAL BUF
Total/NA	Analysis	SM 4500 P E		1	565587	01/08/21 19:26	CRK	TAL BUF

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-180013-5

Date Collected: 01/07/21 00:00

Matrix: Water

Date Received: 01/08/21 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	565659	01/11/21 15:17	RJF	TAL BUF

Laboratory References:

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

Accreditation/Certification Summary

Client: Innovative Engineering Solutions, Inc
Job ID: 480-180013-1
Project/Site: IDS Wayland

Laboratory: Eurofins TestAmerica, Buffalo

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-0686	07-07-21
California	State	2931	04-01-20 *
Connecticut	State	PH-0568	09-30-20 *
Florida	NELAP	E87672	07-01-21
Georgia	State	10026 (NY)	04-01-21
Georgia	State Program	N/A	03-31-09 *
Georgia (DW)	State	956	04-01-21
Illinois	NELAP	200003	10-01-21
Iowa	State	374	02-28-21
Kansas	NELAP	E-10187	02-01-21
Kentucky (DW)	State	90029	12-31-20 *
Kentucky (UST)	State	30	04-01-21
Kentucky (WW)	State	KY90029	12-31-20 *
Louisiana	NELAP	02031	07-01-21
Maine	State	NY00044	12-05-22
Maryland	State	294	04-01-21
Massachusetts	State	M-NY044	06-30-21
Michigan	State	9937	04-01-21
Michigan	State Program	9937	04-01-09 *
Minnesota	NELAP	1524384	01-01-22
New Hampshire	NELAP	2973	09-11-19 *
New Hampshire	NELAP	2337	11-19-21
New Jersey	NELAP	NY455	06-30-21
New York	NELAP	10026	04-01-21
North Dakota	State	R-176	04-01-21
Oklahoma	State	9421	09-02-21
Oregon	NELAP	NY200003	06-11-21
Pennsylvania	NELAP	68-00281	07-31-21
Rhode Island	State	LAO00328	12-30-20 *
Tennessee	State	02970	04-01-21
Texas	NELAP	T104704412-18-10	08-02-21
USDA	US Federal Programs	P330-18-00039	02-06-21
Virginia	NELAP	460185	09-14-21
Washington	State	C784	02-11-21
Wisconsin	State	998310390	09-01-21

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

Method Summary

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

Job ID: 480-180013-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds (GC/MS)	MA DEP	TAL BUF
6010	Metals (ICP)	SW846	TAL BUF
350.1	Nitrogen, Ammonia	MCAWW	TAL BUF
353.2	Nitrate	EPA	TAL BUF
9038	Sulfate, Turbidimetric	SW846	TAL BUF
9040C	pH	SW846	TAL BUF
9060A	Organic Carbon, Total (TOC)	SW846	TAL BUF
9251	Chloride	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 P E	Orthophosphate	SM	TAL BUF
3005A	Preparation, Total Metals	SW846	TAL BUF
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 = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

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

Job ID: 480-180013-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-180013-1	MW-266MB-02210107	Water	01/07/21 09:50	01/08/21 10:00	
480-180013-2	MW-268D-20210107	Water	01/07/21 08:55	01/08/21 10:00	
480-180013-3	REW-11-20210107	Water	01/07/21 07:40	01/08/21 10:00	
480-180013-4	REW-12-20210107	Water	01/07/21 08:15	01/08/21 10:00	
480-180013-5	TRIP BLANK	Water	01/07/21 00:00	01/08/21 10:00	

Login Sample Receipt Checklist

Client: Innovative Engineering Solutions, Inc

Job Number: 480-180013-1

Login Number: 180013

List Source: Eurofins TestAmerica, Buffalo

List Number: 1

Creator: Wallace, Cameron

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.	N/A	

Boston #215

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:	Sample Collector's Name (Please Print Neatly): Dany Jones	Lab PM:	Lab COC Barcode Label	COC No: 37972
Client Contact: Vicki Parsons	Sample Collector's Phone: 508-404-3916	E-Mail:		Page: 1 of 1
Company: Innovative Engineering Solutions Inc				Job #:
Address: 37 Pearl St	Due Date Requested: 1/14/21			
City: Braintree	Turnaround Time (TAT) Requested (business days): 5 days			
State and Zip: MA 02184				
Client's Phone: 508-668-0033	Quote # or Project #:			
Client's Contact Email: v.parsons@TESTamerica.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:

Sample Identification	Sample Collection Date (MM/DD/YY)	Sample Collection Time (24 Hour Clock)	Sample Type: C=Comp G=Grab	Matrix Type **	8260 MCP	6010A TOC	350.1 NH3	6010 MCP Total Lead	8330B Alkalinity	353.2 NO3+NO2 9251	9038 SO4	6010C pH, 4500-P E Ortho	POA	Containers (enter total for each line)	Special Instructions & Notes:
Preservation Codes =>					A	A	S	D	N	N		N		↓	
MW-21dMB-20210107	1/7/21	0950	G	W	X	X	X	X	X	X		X		11	GW-3 Requirements
MW-21SD-20210107	1/7/21	0955	G	W	X	X	X	X	X	X		X		11	
REW-11-20210107	1/7/21	0940	G	W	X	X	X	X	X	X		X		11	Please provide
REW-12-20210107	1/7/21	0915	G	W	X	X	X	X	X	X		X		11	copy of report to
Trip Blanks	-	-	-	W	X									2	d.fralick@TESTamerica.com

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: 1/7/21 1505	Company: IESI	Received by:	Date/Time: 1/7/21 1305	Company: ETA
Relinquished by:	Date/Time: 1/7/21 1700	Company: ETA	Received by:	Date/Time: 1/8/21 1000	Company: TA3
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: 2.3

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WI-QA-010 rev 8

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

ANALYTICAL REPORT

Lab Number:	L2100764
Client:	Innovative Engineering Solutions, Inc. 37 Pearl Street #1 Braintree, MA 02184
ATTN:	Vicki Pariyar
Phone:	(508) 623-1224
Project Name:	RAYTHEON WAYLAND
Project Number:	RA-008
Report Date:	01/18/21

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

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: L2100764
Report Date: 01/18/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2100764-01	MW-266M6-20210107	WATER	WAYLAND, MA	01/07/21 09:50	01/07/21
L2100764-02	MW-268S-20210106	WATER	WAYLAND, MA	01/06/21 09:40	01/07/21
L2100764-03	MW-268M-20210106	WATER	WAYLAND, MA	01/06/21 10:40	01/07/21
L2100764-04	MW-268D-20210107	WATER	WAYLAND, MA	01/07/21 08:55	01/07/21
L2100764-05	REW-6-20210106	WATER	WAYLAND, MA	01/06/21 09:40	01/07/21
L2100764-06	REW-7-20210107	WATER	WAYLAND, MA	01/07/21 12:20	01/07/21
L2100764-07	REW-11-20210106	WATER	WAYLAND, MA	01/06/21 09:40	01/07/21
L2100764-08	REW-12-20210107	WATER	WAYLAND, MA	01/07/21 08:15	01/07/21

Project Name:	RAYTHEON WAYLAND	**Lab Number:**	L2100764
Project Number:	RA-008	**Report Date:**	01/18/21

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. 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 Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data 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.

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 Alpha Project Manager 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 Project Management at 800-624-9220 with any questions.

Project Name: RAYTHEON WAYLAND **Lab Number:** L2100764
Project Number: RA-008 **Report Date:** 01/18/21

Case Narrative (continued)

Dissolved Gases

L2100764-02, -03, -05, -06, -07 & -08: The samples were 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.

L2100764-07: The sample was collected in pre-preserved vials; however, the pH of the sample was determined to be greater than two.

The WG1453507-5 MS/MSD recoveries, performed on L2100764-04, are outside the acceptance criteria for methane (440%). The unacceptable percent recoveries are attributed to the elevated concentrations of target compounds present in the native sample.

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

Authorized Signature: Christopher J. Anderson

Title: Technical Director/Representative Date: 01/18/21

ORGANICS

VOLATILES

Project Name: RAYTHEON WAYLAND
Lab Number: L2100764
Project Number: RA-008
Report Date: 01/18/21

SAMPLE RESULTS

Lab ID: L2100764-01
Client ID: MW-266M6-20210107
Sample Location: WAYLAND, MA
Date Collected: 01/07/21 09:50
Date Received: 01/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/21 07:45
Analyst: AW

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	16700		ug/l	2.00	--	1	A
Ethene	5.06		ug/l	0.500	--	1	A
Ethane	8.41		ug/l	0.500	--	1	A

Project Name: RAYTHEON WAYLAND
Lab Number: L2100764
Project Number: RA-008
Report Date: 01/18/21

SAMPLE RESULTS

Lab ID: L2100764-02
Client ID: MW-268S-20210106
Sample Location: WAYLAND, MA

Date Collected: 01/06/21 09:40
Date Received: 01/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/21 08:01
Analyst: AW

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	29800	E	ug/l	2.00	--	1	A
Ethene	8.04		ug/l	0.500	--	1	A
Ethane	8.09		ug/l	0.500	--	1	A

Project Name: RAYTHEON WAYLAND
Lab Number: L2100764
Project Number: RA-008
Report Date: 01/18/21

SAMPLE RESULTS

Lab ID: L2100764-02 D
Client ID: MW-268S-20210106
Sample Location: WAYLAND, MA

Date Collected: 01/06/21 09:40
Date Received: 01/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/21 12:46
Analyst: AW

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	25900		ug/l	4.00	--	2	A

Project Name: RAYTHEON WAYLAND
Lab Number: L2100764
Project Number: RA-008
Report Date: 01/18/21

SAMPLE RESULTS

Lab ID: L2100764-03
Client ID: MW-268M-20210106
Sample Location: WAYLAND, MA

Date Collected: 01/06/21 10:40
Date Received: 01/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/21 08:19
Analyst: AW

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	34200	E	ug/l	2.00	--	1	A
Ethene	1.79		ug/l	0.500	--	1	A
Ethane	12.9		ug/l	0.500	--	1	A

Project Name: RAYTHEON WAYLAND
Lab Number: L2100764
Project Number: RA-008
Report Date: 01/18/21

SAMPLE RESULTS

Lab ID: L2100764-03 D
Client ID: MW-268M-20210106
Sample Location: WAYLAND, MA

Date Collected: 01/06/21 10:40
Date Received: 01/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/21 13:03
Analyst: AW

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	31400		ug/l	4.00	--	2	A

Project Name: RAYTHEON WAYLAND
Lab Number: L2100764
Project Number: RA-008
Report Date: 01/18/21

SAMPLE RESULTS

Lab ID: L2100764-04
Client ID: MW-268D-20210107
Sample Location: WAYLAND, MA

Date Collected: 01/07/21 08:55
Date Received: 01/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/21 08:36
Analyst: AW

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	5240		ug/l	2.00	--	1	A
Ethene	ND		ug/l	0.500	--	1	A
Ethane	1.37		ug/l	0.500	--	1	A

Project Name: RAYTHEON WAYLAND
Lab Number: L2100764
Project Number: RA-008
Report Date: 01/18/21

SAMPLE RESULTS

Lab ID: L2100764-05
Client ID: REW-6-20210106
Sample Location: WAYLAND, MA

Date Collected: 01/06/21 09:40
Date Received: 01/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/21 08:54
Analyst: AW

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	24700	E	ug/l	2.00	--	1	A
Ethene	ND		ug/l	0.500	--	1	A
Ethane	2.70		ug/l	0.500	--	1	A

Project Name: RAYTHEON WAYLAND
Lab Number: L2100764
Project Number: RA-008
Report Date: 01/18/21

SAMPLE RESULTS

Lab ID: L2100764-05 D
Client ID: REW-6-20210106
Sample Location: WAYLAND, MA

Date Collected: 01/06/21 09:40
Date Received: 01/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/21 11:37
Analyst: AW

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	22800		ug/l	4.00	--	2	A

Project Name: RAYTHEON WAYLAND
Lab Number: L2100764
Project Number: RA-008
Report Date: 01/18/21

SAMPLE RESULTS

Lab ID: L2100764-06
Client ID: REW-7-20210107
Sample Location: WAYLAND, MA

Date Collected: 01/07/21 12:20
Date Received: 01/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/21 09:12
Analyst: AW

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	25800	E	ug/l	2.00	--	1	A
Ethene	ND		ug/l	0.500	--	1	A
Ethane	6.57		ug/l	0.500	--	1	A

Project Name: RAYTHEON WAYLAND
Lab Number: L2100764
Project Number: RA-008
Report Date: 01/18/21

SAMPLE RESULTS

Lab ID: L2100764-06 D
Client ID: REW-7-20210107
Sample Location: WAYLAND, MA

Date Collected: 01/07/21 12:20
Date Received: 01/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/21 12:10
Analyst: AW

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	23500		ug/l	4.00	--	2	A

Project Name: RAYTHEON WAYLAND
Lab Number: L2100764
Project Number: RA-008
Report Date: 01/18/21

SAMPLE RESULTS

Lab ID: L2100764-07
Client ID: REW-11-20210106
Sample Location: WAYLAND, MA

Date Collected: 01/06/21 09:40
Date Received: 01/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/21 09:29
Analyst: AW

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	26800	E	ug/l	2.00	--	1	A
Ethene	1.26		ug/l	0.500	--	1	A
Ethane	13.6		ug/l	0.500	--	1	A

Project Name: RAYTHEON WAYLAND
Lab Number: L2100764
Project Number: RA-008
Report Date: 01/18/21

SAMPLE RESULTS

Lab ID: L2100764-07 D
Client ID: REW-11-20210106
Sample Location: WAYLAND, MA

Date Collected: 01/06/21 09:40
Date Received: 01/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/21 12:28
Analyst: AW

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	27200		ug/l	4.00	--	2	A

Project Name: RAYTHEON WAYLAND
Lab Number: L2100764
Project Number: RA-008
Report Date: 01/18/21

SAMPLE RESULTS

Lab ID: L2100764-08
Client ID: REW-12-20210107
Sample Location: WAYLAND, MA
Date Collected: 01/07/21 08:15
Date Received: 01/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/21 09:47
Analyst: AW

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	25500	E	ug/l	2.00	--	1	A
Ethene	ND		ug/l	0.500	--	1	A
Ethane	5.78		ug/l	0.500	--	1	A

Project Name: RAYTHEON WAYLAND
Lab Number: L2100764
Project Number: RA-008
Report Date: 01/18/21

SAMPLE RESULTS

Lab ID: L2100764-08 D
Client ID: REW-12-20210107
Sample Location: WAYLAND, MA

Date Collected: 01/07/21 08:15
Date Received: 01/07/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 01/11/21 11:53
Analyst: AW

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Dissolved Gases by GC - Mansfield Lab							
Methane	22800		ug/l	4.00	--	2	A

Project Name: RAYTHEON WAYLAND **Lab Number:** L2100764

Project Number: RA-008 **Report Date:** 01/18/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 117,-
Analytical Date: 01/11/21 07:23
Analyst: AW

Parameter	Result	Qualifier	Units	RL	MDL	
Dissolved Gases by GC - Mansfield Lab for sample(s): 01-08 Batch: WG1453507-3						
Methane	ND		ug/l	2.00	--	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: L2100764

Report Date: 01/18/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Dissolved Gases by GC - Mansfield Lab Associated sample(s): 01-08 Batch: WG1453507-2									
Methane	101		-		80-120	-		25	A
Ethene	89		-		80-120	-		25	A
Ethane	89		-		80-120	-		25	A

Matrix Spike Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Project Number: RA-008

Lab Number: L2100764

Report Date: 01/18/21

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): 01-08	QC Batch ID: WG1453507-5	QC Sample: L2100764-04	Client ID: MW-268D-20210107									
Methane	5240	54.6	5480	**440**	Q	-	-		80-120	-		25	A
Ethene	ND	95.5	94.3	99		-	-		80-120	-		25	A
Ethane	1.37	102	101	97		-	-		80-120	-		25	A

Lab Duplicate Analysis
Batch Quality Control

Project Name: RAYTHEON WAYLAND
Project Number: RA-008

Lab Number: L2100764
Report Date: 01/18/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits	
Dissolved Gases by GC - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG1453507-4 QC Sample: L2100764-01 Client ID: MW-266M6-20210107							
Methane	16700	18900	ug/l	12		25	A
Ethene	5.06	5.78	ug/l	13		25	A
Ethane	8.41	9.74	ug/l	15		25	A

Project Name: RAYTHEON WAYLAND
Project Number: RA-008

Lab Number: L2100764
Report Date: 01/18/21

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(*)
L2100764-01A	20ml Vial HCl preserved	A	NA		5.0	Y	Absent		DISSGAS(14)
L2100764-01B	20ml Vial HCl preserved	A	NA		5.0	Y	Absent		DISSGAS(14)
L2100764-02A	20ml Vial HCl preserved	A	NA		5.0	Y	Absent		DISSGAS(14)
L2100764-02B	20ml Vial HCl preserved	A	NA		5.0	Y	Absent		DISSGAS(14)
L2100764-03A	20ml Vial HCl preserved	A	NA		5.0	Y	Absent		DISSGAS(14)
L2100764-03B	20ml Vial HCl preserved	A	NA		5.0	Y	Absent		DISSGAS(14)
L2100764-04A	20ml Vial HCl preserved	A	NA		5.0	Y	Absent		DISSGAS(14)
L2100764-04B	20ml Vial HCl preserved	A	NA		5.0	Y	Absent		DISSGAS(14)
L2100764-05A	20ml Vial HCl preserved	A	NA		5.0	Y	Absent		DISSGAS(14)
L2100764-05B	20ml Vial HCl preserved	A	NA		5.0	Y	Absent		DISSGAS(14)
L2100764-06A	20ml Vial HCl preserved	A	NA		5.0	Y	Absent		DISSGAS(14)
L2100764-06B	20ml Vial HCl preserved	A	NA		5.0	Y	Absent		DISSGAS(14)
L2100764-07A	20ml Vial HCl preserved	A	NA		5.0	Y	Absent		DISSGAS(14)
L2100764-07B	20ml Vial HCl preserved	A	NA		5.0	Y	Absent		DISSGAS(14)
L2100764-08A	20ml Vial HCl preserved	A	NA		5.0	Y	Absent		DISSGAS(14)
L2100764-08B	20ml Vial HCl preserved	A	NA		5.0	Y	Absent		DISSGAS(14)

*Values in parentheses indicate holding time in days

Project Name:	RAYTHEON WAYLAND	**Lab Number:**	L2100764
Project Number:	RA-008	**Report Date:**	01/18/21

GLOSSARY

Acronyms

DL	- 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 limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
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.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
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. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
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.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
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.

Report Format: Data Usability Report

Project Name:	RAYTHEON WAYLAND	**Lab Number:**	L2100764
Project Number:	RA-008	**Report Date:**	01/18/21

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.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

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.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. (Note: 'PFAS, Total (6)' is applicable to MassDEP DW compliance analysis only.). If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

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.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

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.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

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.

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

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

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

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where

Report Format: Data Usability Report

Project Name:	RAYTHEON WAYLAND	**Lab Number:**	L2100764
Project Number:	RA-008	**Report Date:**	01/18/21

Data Qualifiers

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.

Report Format: Data Usability Report

REFERENCES

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

LIMITATION OF LIABILITIES

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

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

Certification Information

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

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
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.
EPA TO-12 Non-methane organics
EPA 3C Fixed gases
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, SM4500NO2-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 1

Date Rec'd in Lab: 1/7/21

ALPHA Job #: L2100764

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

Client Information

Client: Innovative Engineering Solutions, Inc.
Address: 37 Pond St
Bridgewater MA 02184
Phone: 508-668-0034
Email: vparipra@IESonline.com

Project Information

Project Name: Raytheon Wayland
Project Location: Wayland MA
Project #: RA-008
Project Manager: Vidhi Paripra
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)
Date Due: 5 days 1/14/21

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 GW-3

Additional Project Information:

please provide a copy of the report:
d.fedatho@IESonline.com

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	ANALYSIS: Dissolved Gases (methane, ethane, ethene)	SAMPLE INFO	TOTAL # BOTTLES
764-01	MW-24Mb-20210107	1/7/21	0950	GW	IM	X	please provide	2
-02	MW-26BS-20210106	1/6/21	0940	GW	DS	X	a copy	2
-03	MW-26BM-20210106	1/6/21	1040	GW	DS	X		2
-04	MW-26BD-20210107	1/7/21	0855	GW	DS	X		2
-05	REW-6-20210106	1/6/21	0940	GW	IM	X		2
-06	REW-7-20210107	1/7/21	1220	GW	IM	X		2
-07	REW-11-20210106	1/6/21	0940	GW	IM	X		2
-08	REW-12-20210107	1/7/21	0815	GW	DS	X		2
	Temp Blank	—	—	—	—			1

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
	1/7/21 1400	Turned into Alpha (Covid)	1/7/21 1400

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

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