TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Tel: (330)497-9396

TestAmerica Job ID: 240-95779-1
Client Project/Site: Ford LTP Livonia MI - E203728
Revision: 2

For:
ARCADIS U.S., Inc.
28550 Cabot Drive
Suite 500
Novi, Michigan 48377

Attn: Kristoffer Hinskey

Authorized for release by:
6/15/2018 9:13:43 AM

Michael DelMonico, Project Manager I
(330)497-9396
michael.delmonico@testamericainc.com

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
F2	MS/MSD RPD exceeds control limits
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.
F1	MS and/or MSD Recovery is outside acceptance limits.
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 240-95779-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford LTP Livonia MI - E203728

Report Number: 240-95779-1

Revision

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

This report was revised on 6/15/2018 to report a longer list of VOCs.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 5/18/2018 8:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.9º C and 3.9º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples MW-58_051418 (240-95779-1), MW-70_051418 (240-95779-2), MW-51_051418 (240-95779-3), TW-16-01_051518 (240-95779-4), PW-16-01_051518 (240-95779-5), MW-68_051518 (240-95779-6), MW-21_051518 (240-95779-7), MW-28_051518 (240-95779-8), DUP-04_051518 (240-95779-9), MW-48_051518 (240-95779-10) and TRIP BLANK (240-95779-11) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 05/26/2018, 05/27/2018 and 05/29/2018.

The laboratory control sample (LCS) for analytical batch 240-328754 recovered outside acceptance limits for Methyl tert-butyl ether.

cis-1,2-Dichloroethene and Vinyl chloride failed the recovery criteria high for the MS/MSD of sample PW-16-01_051518MS/MSD

Job ID: 240-95779-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

(240-95779-5) in batch 240-328928. Refer to the QC report for details.

Samples MW-70_051418 (240-95779-2)[3.33X], TW-16-01_051518 (240-95779-4)[33.33X], PW-16-01_051518 (240-95779-5)[14.28X], PW-16-01_051518 (240-95779-5)[8X], MW-21_051518 (240-95779-7)[1000X] and DUP-04_051518 (240-95779-9)[40X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8260B: There was an MS/MSD analyzed in batch 328754 but could not be reported because the associated sample needed reanalyzed in a different batch: TW-16-01_051518 (240-95779-4), MW-68_051518 (240-95779-6), MW-21_051518 (240-95779-7), MW-28_051518 (240-95779-8), DUP-04_051518 (240-95779-9), MW-48_051518 (240-95779-10) and TRIP BLANK (240-95779-11).

Method(s) 8260B: Sample 240-95779-5 had a reanalysis that had different results than the original analysis. This is most likely due to non-homogeneity in the sample. Both runs are reported: PW-16-01_051518 (240-95779-5).

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

VOLATILE ORGANIC COMPOUNDS (GCMS SIM)

Samples MW-58_051418 (240-95779-1), MW-70_051418 (240-95779-2), MW-51_051418 (240-95779-3), TW-16-01_051518 (240-95779-4), PW-16-01_051518 (240-95779-5), MW-68_051518 (240-95779-6), MW-21_051518 (240-95779-7), MW-28_051518 (240-95779-8), DUP-04_051518 (240-95779-9) and MW-48_051518 (240-95779-10) were analyzed for volatile organic compounds (GCMS SIM) in accordance with EPA SW-846 Method 8260B SIM. The samples were analyzed on 05/24/2018.

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

Method Summary

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95779-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
8260B SIM	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
5030B	Purge and Trap	SW846	TAL CAN

Protocol References:

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

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Sample Summary

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95779-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-95779-1	MW-58_051418	Water	05/14/18 14:19	05/18/18 08:30
240-95779-2	MW-70_051418	Water	05/14/18 15:24	05/18/18 08:30
240-95779-3	MW-51_051418	Water	05/14/18 16:21	05/18/18 08:30
240-95779-4	TW-16-01_051518	Water	05/15/18 09:10	05/18/18 08:30
240-95779-5	PW-16-01_051518	Water	05/15/18 10:23	05/18/18 08:30
240-95779-6	MW-68_051518	Water	05/15/18 11:30	05/18/18 08:30
240-95779-7	MW-21_051518	Water	05/15/18 13:35	05/18/18 08:30
240-95779-8	MW-28_051518	Water	05/15/18 15:01	05/18/18 08:30
240-95779-9	DUP-04_051518	Water	05/15/18 00:00	05/18/18 08:30
240-95779-10	MW-48_051518	Water	05/15/18 16:13	05/18/18 08:30
240-95779-11	TRIP BLANK	Water	05/15/18 00:00	05/18/18 08:30

Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95779-1

Client Sample ID: MW-58_051418 — Lab Sample ID: 240-95779-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	3.6		2.0	0.24	ug/L	1		8260B SIM	Total/NA
Acetone	4.4	J B	10	1.8	ug/L	1		8260B	Total/NA

Client Sample ID: MW-70_051418 — Lab Sample ID: 240-95779-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	3.0		2.0	0.24	ug/L	1		8260B SIM	Total/NA
Acetone	15	J B	33	5.9	ug/L	3.333		8260B	Total/NA
cis-1,2-Dichloroethene	260		3.3	1.0	ug/L	3.333		8260B	Total/NA
1,4-Dichlorobenzene	0.79	J B	3.3	0.77	ug/L	3.333		8260B	Total/NA
1,1-Dichloroethane	2.2	J	3.3	0.83	ug/L	3.333		8260B	Total/NA
1,1-Dichloroethene	2.1	J	3.3	0.90	ug/L	3.333		8260B	Total/NA
trans-1,2-Dichloroethene	3.0	J	3.3	0.97	ug/L	3.333		8260B	Total/NA
1,2,4-Trichlorobenzene	2.5	J B	3.3	0.90	ug/L	3.333		8260B	Total/NA
Vinyl chloride	210		3.3	1.5	ug/L	3.333		8260B	Total/NA

Client Sample ID: MW-51_051418 — Lab Sample ID: 240-95779-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	0.49	J	2.0	0.24	ug/L	1		8260B SIM	Total/NA
Acetone	3.9	J B	10	1.8	ug/L	1		8260B	Total/NA
1,1-Dichloroethane	0.45	J	1.0	0.25	ug/L	1		8260B	Total/NA
Vinyl chloride	0.70	J	1.0	0.45	ug/L	1		8260B	Total/NA

Client Sample ID: TW-16-01_051518 — Lab Sample ID: 240-95779-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	68	J	330	59	ug/L	33.33		8260B	Total/NA
cis-1,2-Dichloroethene	68		33	10	ug/L	33.33		8260B	Total/NA
Methylene Chloride	20	J	170	18	ug/L	33.33		8260B	Total/NA
trans-1,2-Dichloroethene	11	J	33	9.7	ug/L	33.33		8260B	Total/NA
Vinyl chloride	720		33	15	ug/L	33.33		8260B	Total/NA

Client Sample ID: PW-16-01_051518 — Lab Sample ID: 240-95779-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	32	J	140	25	ug/L	14.28		8260B	Total/NA
cis-1,2-Dichloroethene	7.1	J	14	4.3	ug/L	14.28		8260B	Total/NA
Methylene Chloride	8.6	J	71	7.6	ug/L	14.28		8260B	Total/NA
Vinyl chloride	37		14	6.4	ug/L	14.28		8260B	Total/NA
Acetone - RA	16	J	80	14	ug/L	8		8260B	Total/NA
Benzene - RA	6.6	J	8.0	2.2	ug/L	8		8260B	Total/NA
Bromodichloromethane - RA	3.8	J	8.0	2.4	ug/L	8		8260B	Total/NA
Bromomethane - RA	7.5	J	8.0	3.4	ug/L	8		8260B	Total/NA
2-Butanone (MEK) - RA	16	J	80	8.2	ug/L	8		8260B	Total/NA
Carbon disulfide - RA	8.4	J	40	2.7	ug/L	8		8260B	Total/NA
Carbon tetrachloride - RA	7.4	J	8.0	2.8	ug/L	8		8260B	Total/NA
Chlorobenzene - RA	5.3	J	8.0	2.6	ug/L	8		8260B	Total/NA
Chloroethane - RA	11		8.0	3.3	ug/L	8		8260B	Total/NA
Chloroform - RA	5.4	J	8.0	2.5	ug/L	8		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: PW-16-01_051518 (Continued) — Lab Sample ID: 240-95779-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloromethane - RA	8.6		8.0	3.4	ug/L	8		8260B	Total/NA
cis-1,2-Dichloroethene - RA	39	F1	8.0	2.4	ug/L	8		8260B	Total/NA
cis-1,3-Dichloropropene - RA	3.1	J	8.0	2.1	ug/L	8		8260B	Total/NA
Cyclohexane - RA	11		8.0	3.5	ug/L	8		8260B	Total/NA
Dibromochloromethane - RA	3.2	J	8.0	2.0	ug/L	8		8260B	Total/NA
1,2-Dibromoethane - RA	2.8	J	8.0	1.8	ug/L	8		8260B	Total/NA
1,2-Dichlorobenzene - RA	4.5	J	8.0	2.1	ug/L	8		8260B	Total/NA
1,3-Dichlorobenzene - RA	5.9	J	8.0	2.6	ug/L	8		8260B	Total/NA
1,4-Dichlorobenzene - RA	5.2	J	8.0	1.8	ug/L	8		8260B	Total/NA
Dichlorodifluoromethane - RA	10		8.0	4.0	ug/L	8		8260B	Total/NA
1,1-Dichloroethane - RA	6.5	J	8.0	2.0	ug/L	8		8260B	Total/NA
1,2-Dichloroethane - RA	4.0	J	8.0	2.4	ug/L	8		8260B	Total/NA
1,1-Dichloroethene - RA	9.5		8.0	2.2	ug/L	8		8260B	Total/NA
1,2-Dichloropropane - RA	4.9	J	8.0	2.4	ug/L	8		8260B	Total/NA
Ethylbenzene - RA	6.4	J	8.0	2.1	ug/L	8		8260B	Total/NA
Isopropylbenzene - RA	7.6	J	8.0	1.7	ug/L	8		8260B	Total/NA
Methylcyclohexane - RA	15		8.0	3.6	ug/L	8		8260B	Total/NA
Methylene Chloride - RA	10	J B	40	4.2	ug/L	8		8260B	Total/NA
Styrene - RA	4.0	J	8.0	1.8	ug/L	8		8260B	Total/NA
1,1,2,2-Tetrachloroethane - RA	3.4	J	8.0	2.6	ug/L	8		8260B	Total/NA
Tetrachloroethene - RA	9.8		8.0	2.4	ug/L	8		8260B	Total/NA
Toluene - RA	6.7	J	8.0	1.8	ug/L	8		8260B	Total/NA
trans-1,2-Dichloroethene - RA	8.3		8.0	2.3	ug/L	8		8260B	Total/NA
1,2,4-Trichlorobenzene - RA	7.7	J	8.0	2.2	ug/L	8		8260B	Total/NA
1,1,1-Trichloroethane - RA	6.5	J	8.0	1.8	ug/L	8		8260B	Total/NA
1,1,2-Trichloroethane - RA	3.1	J	8.0	2.7	ug/L	8		8260B	Total/NA
Trichloroethene - RA	6.8	J	8.0	2.6	ug/L	8		8260B	Total/NA
Trichlorofluoromethane - RA	13		8.0	4.0	ug/L	8		8260B	Total/NA
1,1,2-Trichloro-1,2,2-trifluoroethane - RA	11		8.0	3.3	ug/L	8		8260B	Total/NA
1,2,4-Trimethylbenzene - RA	6.1	J	8.0	1.9	ug/L	8		8260B	Total/NA
1,3,5-Trimethylbenzene - RA	7.5	J	8.0	1.9	ug/L	8		8260B	Total/NA
Vinyl chloride - RA	190	F1	8.0	3.6	ug/L	8		8260B	Total/NA
Xylenes, Total - RA	11	J	16	1.9	ug/L	8		8260B	Total/NA
1,4-Dioxane - RA	130	J	400	97	ug/L	8		8260B	Total/NA
Diethyl ether - RA	4.2	J	16	2.8	ug/L	8		8260B	Total/NA

Client Sample ID: MW-68_051518 — Lab Sample ID: 240-95779-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	10		1.0	0.30	ug/L	1		8260B	Total/NA
1,1-Dichloroethane	1.4		1.0	0.25	ug/L	1		8260B	Total/NA
trans-1,2-Dichloroethene	1.4		1.0	0.29	ug/L	1		8260B	Total/NA
Vinyl chloride	2.1		1.0	0.45	ug/L	1		8260B	Total/NA

Client Sample ID: MW-21_051518 — Lab Sample ID: 240-95779-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	5.3		2.0	0.24	ug/L	1		8260B SIM	Total/NA
Acetone	2100	J	10000	1800	ug/L	1000		8260B	Total/NA
cis-1,2-Dichloroethene	18000		1000	300	ug/L	1000		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-21_051518 (Continued) — Lab Sample ID: 240-95779-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	560	J	5000	530	ug/L	1000		8260B	Total/NA
Vinyl chloride	3700		1000	450	ug/L	1000		8260B	Total/NA

Client Sample ID: MW-28_051518 — Lab Sample ID: 240-95779-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.43	J	1.0	0.30	ug/L	1		8260B	Total/NA
1,1-Dichloroethane	13		1.0	0.25	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	0.57	J	1.0	0.27	ug/L	1		8260B	Total/NA
1,1,1-Trichloroethane	24		1.0	0.23	ug/L	1		8260B	Total/NA
Trichloroethene	0.51	J	1.0	0.33	ug/L	1		8260B	Total/NA

Client Sample ID: DUP-04_051518 — Lab Sample ID: 240-95779-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	66		40	12	ug/L	40		8260B	Total/NA
Methylene Chloride	21	J	200	21	ug/L	40		8260B	Total/NA
Vinyl chloride	690		40	18	ug/L	40		8260B	Total/NA

Client Sample ID: MW-48_051518 — Lab Sample ID: 240-95779-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	12		2.0	0.24	ug/L	1		8260B SIM	Total/NA
Acetone	3.8	J	10	1.8	ug/L	1		8260B	Total/NA
Vinyl chloride	7.4		1.0	0.45	ug/L	1		8260B	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 240-95779-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.0	J	10	1.8	ug/L	1		8260B	Total/NA
Methylene Chloride	0.88	J	5.0	0.53	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95779-1

Client Sample ID: MW-58_051418
Date Collected: 05/14/18 14:19
Date Received: 05/18/18 08:30

Lab Sample ID: 240-95779-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	3.6		2.0	0.24	ug/L			05/24/18 13:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*80*		*63 - 125*		*05/24/18 13:15*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	4.4	J B	10	1.8	ug/L			05/26/18 15:43	1
Benzene	1.0	U	1.0	0.28	ug/L			05/26/18 15:43	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			05/26/18 15:43	1
Bromoform	1.0	U F2	1.0	0.43	ug/L			05/26/18 15:43	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/26/18 15:43	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/26/18 15:43	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			05/26/18 15:43	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			05/26/18 15:43	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			05/26/18 15:43	1
Chloroethane	1.0	U	1.0	0.41	ug/L			05/26/18 15:43	1
Chloroform	1.0	U	1.0	0.31	ug/L			05/26/18 15:43	1
Chloromethane	1.0	U	1.0	0.43	ug/L			05/26/18 15:43	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/26/18 15:43	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			05/26/18 15:43	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			05/26/18 15:43	1
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			05/26/18 15:43	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			05/26/18 15:43	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			05/26/18 15:43	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			05/26/18 15:43	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			05/26/18 15:43	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			05/26/18 15:43	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			05/26/18 15:43	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/26/18 15:43	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/26/18 15:43	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			05/26/18 15:43	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			05/26/18 15:43	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			05/26/18 15:43	1
2-Hexanone	10	U F2	10	1.2	ug/L			05/26/18 15:43	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			05/26/18 15:43	1
Methyl acetate	10	U	10	1.4	ug/L			05/26/18 15:43	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			05/26/18 15:43	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			05/26/18 15:43	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			05/26/18 15:43	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			05/26/18 15:43	1
Styrene	1.0	U	1.0	0.23	ug/L			05/26/18 15:43	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			05/26/18 15:43	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			05/26/18 15:43	1
Toluene	1.0	U	1.0	0.23	ug/L			05/26/18 15:43	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			05/26/18 15:43	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			05/26/18 15:43	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			05/26/18 15:43	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			05/26/18 15:43	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			05/26/18 15:43	1

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95779-1

Client Sample ID: MW-58_051418
Date Collected: 05/14/18 14:19
Date Received: 05/18/18 08:30

Lab Sample ID: 240-95779-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1.0	U	1.0	0.33	ug/L			05/26/18 15:43	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			05/26/18 15:43	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/26/18 15:43	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/26/18 15:43	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/26/18 15:43	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/26/18 15:43	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			05/26/18 15:43	1
1,4-Dioxane	50	U	50	12	ug/L			05/26/18 15:43	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			05/26/18 15:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*69 - 120*		*05/26/18 15:43*	*1*
Dibromofluoromethane (Surr)	*98*		*69 - 124*		*05/26/18 15:43*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*61 - 138*		*05/26/18 15:43*	*1*
Toluene-d8 (Surr)	*105*		*73 - 120*		*05/26/18 15:43*	*1*

Client Sample ID: MW-70_051418
Date Collected: 05/14/18 15:24
Date Received: 05/18/18 08:30

Lab Sample ID: 240-95779-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**3.0**		2.0	0.24	ug/L			05/24/18 14:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*76*		*63 - 125*		*05/24/18 14:30*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**15**	**J B**	33	5.9	ug/L			05/26/18 16:59	3.333
Benzene	3.3	U	3.3	0.93	ug/L			05/26/18 16:59	3.333
Bromodichloromethane	3.3	U	3.3	1.0	ug/L			05/26/18 16:59	3.333
Bromoform	3.3	U	3.3	1.4	ug/L			05/26/18 16:59	3.333
Bromomethane	3.3	U	3.3	1.4	ug/L			05/26/18 16:59	3.333
2-Butanone (MEK)	33	U	33	3.4	ug/L			05/26/18 16:59	3.333
Carbon disulfide	17	U	17	1.1	ug/L			05/26/18 16:59	3.333
Carbon tetrachloride	3.3	U	3.3	1.2	ug/L			05/26/18 16:59	3.333
Chlorobenzene	3.3	U	3.3	1.1	ug/L			05/26/18 16:59	3.333
Chloroethane	3.3	U	3.3	1.4	ug/L			05/26/18 16:59	3.333
Chloroform	3.3	U	3.3	1.0	ug/L			05/26/18 16:59	3.333
Chloromethane	3.3	U	3.3	1.4	ug/L			05/26/18 16:59	3.333
cis-1,2-Dichloroethene	**260**		3.3	1.0	ug/L			05/26/18 16:59	3.333
cis-1,3-Dichloropropene	3.3	U	3.3	0.87	ug/L			05/26/18 16:59	3.333
Cyclohexane	3.3	U	3.3	1.5	ug/L			05/26/18 16:59	3.333
Dibromochloromethane	3.3	U	3.3	0.83	ug/L			05/26/18 16:59	3.333
1,2-Dibromo-3-Chloropropane	3.3	U	3.3	1.6	ug/L			05/26/18 16:59	3.333
1,2-Dibromoethane	3.3	U	3.3	0.77	ug/L			05/26/18 16:59	3.333
1,2-Dichlorobenzene	3.3	U	3.3	0.87	ug/L			05/26/18 16:59	3.333
1,3-Dichlorobenzene	3.3	U	3.3	1.1	ug/L			05/26/18 16:59	3.333
1,4-Dichlorobenzene	**0.79**	**J B**	3.3	0.77	ug/L			05/26/18 16:59	3.333
Dichlorodifluoromethane	3.3	U	3.3	1.7	ug/L			05/26/18 16:59	3.333
1,1-Dichloroethane	**2.2**	**J**	3.3	0.83	ug/L			05/26/18 16:59	3.333
1,2-Dichloroethane	3.3	U	3.3	1.0	ug/L			05/26/18 16:59	3.333
1,1-Dichloroethene	**2.1**	**J**	3.3	0.90	ug/L			05/26/18 16:59	3.333
1,2-Dichloropropane	3.3	U	3.3	1.0	ug/L			05/26/18 16:59	3.333
Ethylbenzene	3.3	U	3.3	0.87	ug/L			05/26/18 16:59	3.333
2-Hexanone	33	U	33	4.1	ug/L			05/26/18 16:59	3.333
Isopropylbenzene	3.3	U	3.3	0.70	ug/L			05/26/18 16:59	3.333
Methyl acetate	33	U	33	4.8	ug/L			05/26/18 16:59	3.333
Methylcyclohexane	3.3	U	3.3	1.5	ug/L			05/26/18 16:59	3.333
Methylene Chloride	17	U	17	1.8	ug/L			05/26/18 16:59	3.333
4-Methyl-2-pentanone (MIBK)	33	U	33	2.4	ug/L			05/26/18 16:59	3.333
Methyl tert-butyl ether	3.3	U	3.3	0.90	ug/L			05/26/18 16:59	3.333
Styrene	3.3	U	3.3	0.77	ug/L			05/26/18 16:59	3.333
1,1,2,2-Tetrachloroethane	3.3	U	3.3	1.1	ug/L			05/26/18 16:59	3.333
Tetrachloroethene	3.3	U	3.3	1.0	ug/L			05/26/18 16:59	3.333
Toluene	3.3	U	3.3	0.77	ug/L			05/26/18 16:59	3.333
trans-1,2-Dichloroethene	**3.0**	**J**	3.3	0.97	ug/L			05/26/18 16:59	3.333
trans-1,3-Dichloropropene	3.3	U	3.3	1.0	ug/L			05/26/18 16:59	3.333
1,2,4-Trichlorobenzene	**2.5**	**J B**	3.3	0.90	ug/L			05/26/18 16:59	3.333
1,1,1-Trichloroethane	3.3	U	3.3	0.77	ug/L			05/26/18 16:59	3.333
1,1,2-Trichloroethane	3.3	U	3.3	1.1	ug/L			05/26/18 16:59	3.333

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95779-1

Client Sample ID: MW-70_051418
Date Collected: 05/14/18 15:24
Date Received: 05/18/18 08:30

Lab Sample ID: 240-95779-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	3.3	U	3.3	1.1	ug/L			05/26/18 16:59	3.333
Trichlorofluoromethane	3.3	U	3.3	1.7	ug/L			05/26/18 16:59	3.333
1,1,2-Trichloro-1,2,2-trifluoroethane	3.3	U	3.3	1.4	ug/L			05/26/18 16:59	3.333
1,2,4-Trimethylbenzene	3.3	U	3.3	0.80	ug/L			05/26/18 16:59	3.333
1,3,5-Trimethylbenzene	3.3	U	3.3	0.80	ug/L			05/26/18 16:59	3.333
Vinyl chloride	**210**		3.3	1.5	ug/L			05/26/18 16:59	3.333
Xylenes, Total	6.7	U	6.7	0.80	ug/L			05/26/18 16:59	3.333
1,4-Dioxane	170	U	170	40	ug/L			05/26/18 16:59	3.333
Diethyl ether	6.7	U	6.7	1.2	ug/L			05/26/18 16:59	3.333

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*69 - 120*		*05/26/18 16:59*	*3.333*
Dibromofluoromethane (Surr)	*103*		*69 - 124*		*05/26/18 16:59*	*3.333*
1,2-Dichloroethane-d4 (Surr)	*102*		*61 - 138*		*05/26/18 16:59*	*3.333*
Toluene-d8 (Surr)	*107*		*73 - 120*		*05/26/18 16:59*	*3.333*

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95779-1

Client Sample ID: MW-51_051418
Date Collected: 05/14/18 16:21
Date Received: 05/18/18 08:30

Lab Sample ID: 240-95779-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.49**	**J**	2.0	0.24	ug/L			05/24/18 14:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*80*		*63 - 125*		*05/24/18 14:56*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**3.9**	**J B**	10	1.8	ug/L			05/26/18 17:24	1
Benzene	1.0	U	1.0	0.28	ug/L			05/26/18 17:24	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			05/26/18 17:24	1
Bromoform	1.0	U	1.0	0.43	ug/L			05/26/18 17:24	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/26/18 17:24	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/26/18 17:24	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			05/26/18 17:24	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			05/26/18 17:24	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			05/26/18 17:24	1
Chloroethane	1.0	U	1.0	0.41	ug/L			05/26/18 17:24	1
Chloroform	1.0	U	1.0	0.31	ug/L			05/26/18 17:24	1
Chloromethane	1.0	U	1.0	0.43	ug/L			05/26/18 17:24	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/26/18 17:24	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			05/26/18 17:24	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			05/26/18 17:24	1
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			05/26/18 17:24	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			05/26/18 17:24	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			05/26/18 17:24	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			05/26/18 17:24	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			05/26/18 17:24	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			05/26/18 17:24	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			05/26/18 17:24	1
1,1-Dichloroethane	**0.45**	**J**	1.0	0.25	ug/L			05/26/18 17:24	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/26/18 17:24	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			05/26/18 17:24	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			05/26/18 17:24	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			05/26/18 17:24	1
2-Hexanone	10	U	10	1.2	ug/L			05/26/18 17:24	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			05/26/18 17:24	1
Methyl acetate	10	U	10	1.4	ug/L			05/26/18 17:24	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			05/26/18 17:24	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			05/26/18 17:24	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			05/26/18 17:24	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			05/26/18 17:24	1
Styrene	1.0	U	1.0	0.23	ug/L			05/26/18 17:24	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			05/26/18 17:24	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			05/26/18 17:24	1
Toluene	1.0	U	1.0	0.23	ug/L			05/26/18 17:24	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			05/26/18 17:24	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			05/26/18 17:24	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			05/26/18 17:24	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			05/26/18 17:24	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			05/26/18 17:24	1

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95779-1

Client Sample ID: MW-51_051418
Date Collected: 05/14/18 16:21
Date Received: 05/18/18 08:30

Lab Sample ID: 240-95779-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1.0	U	1.0	0.33	ug/L			05/26/18 17:24	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			05/26/18 17:24	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/26/18 17:24	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/26/18 17:24	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/26/18 17:24	1
Vinyl chloride	**0.70**	**J**	1.0	0.45	ug/L			05/26/18 17:24	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			05/26/18 17:24	1
1,4-Dioxane	50	U	50	12	ug/L			05/26/18 17:24	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			05/26/18 17:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*69 - 120*		*05/26/18 17:24*	*1*
Dibromofluoromethane (Surr)	*102*		*69 - 124*		*05/26/18 17:24*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*61 - 138*		*05/26/18 17:24*	*1*
Toluene-d8 (Surr)	*108*		*73 - 120*		*05/26/18 17:24*	*1*

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95779-1

Client Sample ID: TW-16-01_051518
Date Collected: 05/15/18 09:10
Date Received: 05/18/18 08:30

Lab Sample ID: 240-95779-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.24	ug/L			05/24/18 17:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*79*		*63 - 125*		*05/24/18 17:52*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**68**	**J**	330	59	ug/L			05/26/18 23:24	33.33
Benzene	33	U	33	9.3	ug/L			05/26/18 23:24	33.33
Bromodichloromethane	33	U	33	10	ug/L			05/26/18 23:24	33.33
Bromoform	33	U	33	14	ug/L			05/26/18 23:24	33.33
Bromomethane	33	U	33	14	ug/L			05/26/18 23:24	33.33
2-Butanone (MEK)	330	U	330	34	ug/L			05/26/18 23:24	33.33
Carbon disulfide	170	U	170	11	ug/L			05/26/18 23:24	33.33
Carbon tetrachloride	33	U	33	12	ug/L			05/26/18 23:24	33.33
Chlorobenzene	33	U	33	11	ug/L			05/26/18 23:24	33.33
Chloroethane	33	U	33	14	ug/L			05/26/18 23:24	33.33
Chloroform	33	U	33	10	ug/L			05/26/18 23:24	33.33
Chloromethane	33	U	33	14	ug/L			05/26/18 23:24	33.33
cis-1,2-Dichloroethene	**68**		33	10	ug/L			05/26/18 23:24	33.33
cis-1,3-Dichloropropene	33	U	33	8.7	ug/L			05/26/18 23:24	33.33
Cyclohexane	33	U	33	15	ug/L			05/26/18 23:24	33.33
Dibromochloromethane	33	U	33	8.3	ug/L			05/26/18 23:24	33.33
1,2-Dibromo-3-Chloropropane	33	U	33	16	ug/L			05/26/18 23:24	33.33
1,2-Dibromoethane	33	U	33	7.7	ug/L			05/26/18 23:24	33.33
1,2-Dichlorobenzene	33	U	33	8.7	ug/L			05/26/18 23:24	33.33
1,3-Dichlorobenzene	33	U	33	11	ug/L			05/26/18 23:24	33.33
1,4-Dichlorobenzene	33	U	33	7.7	ug/L			05/26/18 23:24	33.33
Dichlorodifluoromethane	33	U	33	17	ug/L			05/26/18 23:24	33.33
1,1-Dichloroethane	33	U	33	8.3	ug/L			05/26/18 23:24	33.33
1,2-Dichloroethane	33	U	33	10	ug/L			05/26/18 23:24	33.33
1,1-Dichloroethene	33	U	33	9.0	ug/L			05/26/18 23:24	33.33
1,2-Dichloropropane	33	U	33	10	ug/L			05/26/18 23:24	33.33
Ethylbenzene	33	U	33	8.7	ug/L			05/26/18 23:24	33.33
2-Hexanone	330	U	330	41	ug/L			05/26/18 23:24	33.33
Isopropylbenzene	33	U	33	7.0	ug/L			05/26/18 23:24	33.33
Methyl acetate	330	U	330	48	ug/L			05/26/18 23:24	33.33
Methylcyclohexane	33	U	33	15	ug/L			05/26/18 23:24	33.33
Methylene Chloride	**20**	**J**	170	18	ug/L			05/26/18 23:24	33.33
4-Methyl-2-pentanone (MIBK)	330	U	330	24	ug/L			05/26/18 23:24	33.33
Methyl tert-butyl ether	33	U *	33	9.0	ug/L			05/26/18 23:24	33.33
Styrene	33	U	33	7.7	ug/L			05/26/18 23:24	33.33
1,1,2,2-Tetrachloroethane	33	U	33	11	ug/L			05/26/18 23:24	33.33
Tetrachloroethene	33	U	33	10	ug/L			05/26/18 23:24	33.33
Toluene	33	U	33	7.7	ug/L			05/26/18 23:24	33.33
trans-1,2-Dichloroethene	**11**	**J**	33	9.7	ug/L			05/26/18 23:24	33.33
trans-1,3-Dichloropropene	33	U	33	10	ug/L			05/26/18 23:24	33.33
1,2,4-Trichlorobenzene	33	U	33	9.0	ug/L			05/26/18 23:24	33.33
1,1,1-Trichloroethane	33	U	33	7.7	ug/L			05/26/18 23:24	33.33
1,1,2-Trichloroethane	33	U	33	11	ug/L			05/26/18 23:24	33.33

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95779-1

Client Sample ID: TW-16-01_051518
Date Collected: 05/15/18 09:10
Date Received: 05/18/18 08:30

Lab Sample ID: 240-95779-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	33	U	33	11	ug/L			05/26/18 23:24	33.33
Trichlorofluoromethane	33	U	33	17	ug/L			05/26/18 23:24	33.33
1,1,2-Trichloro-1,2,2-trifluoroethane	33	U	33	14	ug/L			05/26/18 23:24	33.33
1,2,3-Trimethylbenzene	170	U	170	7.3	ug/L			05/26/18 23:24	33.33
1,2,4-Trimethylbenzene	33	U	33	8.0	ug/L			05/26/18 23:24	33.33
1,3,5-Trimethylbenzene	33	U	33	8.0	ug/L			05/26/18 23:24	33.33
Vinyl chloride	**720**		33	15	ug/L			05/26/18 23:24	33.33
Xylenes, Total	67	U	67	8.0	ug/L			05/26/18 23:24	33.33
1,4-Dioxane	1700	U	1700	400	ug/L			05/26/18 23:24	33.33
Diethyl ether	67	U	67	12	ug/L			05/26/18 23:24	33.33

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*69 - 120*		*05/26/18 23:24*	*33.33*
Dibromofluoromethane (Surr)	*100*		*69 - 124*		*05/26/18 23:24*	*33.33*
1,2-Dichloroethane-d4 (Surr)	*104*		*61 - 138*		*05/26/18 23:24*	*33.33*
Toluene-d8 (Surr)	*95*		*73 - 120*		*05/26/18 23:24*	*33.33*

Client Sample ID: PW-16-01_051518
Date Collected: 05/15/18 10:23
Date Received: 05/18/18 08:30

Lab Sample ID: 240-95779-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.24	ug/L			05/24/18 18:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*72*		*63 - 125*		*05/24/18 18:17*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**32**	**J**	140	25	ug/L			05/27/18 02:29	14.28
Benzene	14	U	14	4.0	ug/L			05/27/18 02:29	14.28
Bromodichloromethane	14	U	14	4.3	ug/L			05/27/18 02:29	14.28
Bromoform	14	U	14	6.1	ug/L			05/27/18 02:29	14.28
Bromomethane	14	U	14	6.0	ug/L			05/27/18 02:29	14.28
2-Butanone (MEK)	140	U	140	15	ug/L			05/27/18 02:29	14.28
Carbon disulfide	71	U	71	4.9	ug/L			05/27/18 02:29	14.28
Carbon tetrachloride	14	U	14	5.0	ug/L			05/27/18 02:29	14.28
Chlorobenzene	14	U	14	4.6	ug/L			05/27/18 02:29	14.28
Chloroethane	14	U	14	5.9	ug/L			05/27/18 02:29	14.28
Chloroform	14	U	14	4.4	ug/L			05/27/18 02:29	14.28
Chloromethane	14	U	14	6.1	ug/L			05/27/18 02:29	14.28
cis-1,2-Dichloroethene	**7.1**	**J**	14	4.3	ug/L			05/27/18 02:29	14.28
cis-1,3-Dichloropropene	14	U	14	3.7	ug/L			05/27/18 02:29	14.28
Cyclohexane	14	U	14	6.3	ug/L			05/27/18 02:29	14.28
Dibromochloromethane	14	U	14	3.6	ug/L			05/27/18 02:29	14.28
1,2-Dibromo-3-Chloropropane	14	U	14	6.7	ug/L			05/27/18 02:29	14.28
1,2-Dibromoethane	14	U	14	3.3	ug/L			05/27/18 02:29	14.28
1,2-Dichlorobenzene	14	U	14	3.7	ug/L			05/27/18 02:29	14.28
1,3-Dichlorobenzene	14	U	14	4.6	ug/L			05/27/18 02:29	14.28
1,4-Dichlorobenzene	14	U	14	3.3	ug/L			05/27/18 02:29	14.28
Dichlorodifluoromethane	14	U	14	7.1	ug/L			05/27/18 02:29	14.28
1,1-Dichloroethane	14	U	14	3.6	ug/L			05/27/18 02:29	14.28
1,2-Dichloroethane	14	U	14	4.3	ug/L			05/27/18 02:29	14.28
1,1-Dichloroethene	14	U	14	3.9	ug/L			05/27/18 02:29	14.28
1,2-Dichloropropane	14	U	14	4.3	ug/L			05/27/18 02:29	14.28
Ethylbenzene	14	U	14	3.7	ug/L			05/27/18 02:29	14.28
2-Hexanone	140	U	140	18	ug/L			05/27/18 02:29	14.28
Isopropylbenzene	14	U	14	3.0	ug/L			05/27/18 02:29	14.28
Methyl acetate	140	U	140	20	ug/L			05/27/18 02:29	14.28
Methylcyclohexane	14	U	14	6.4	ug/L			05/27/18 02:29	14.28
Methylene Chloride	**8.6**	**J**	71	7.6	ug/L			05/27/18 02:29	14.28
4-Methyl-2-pentanone (MIBK)	140	U	140	10	ug/L			05/27/18 02:29	14.28
Methyl tert-butyl ether	14	U *	14	3.9	ug/L			05/27/18 02:29	14.28
Styrene	14	U	14	3.3	ug/L			05/27/18 02:29	14.28
1,1,2,2-Tetrachloroethane	14	U	14	4.6	ug/L			05/27/18 02:29	14.28
Tetrachloroethene	14	U	14	4.3	ug/L			05/27/18 02:29	14.28
Toluene	14	U	14	3.3	ug/L			05/27/18 02:29	14.28
trans-1,2-Dichloroethene	14	U	14	4.1	ug/L			05/27/18 02:29	14.28
trans-1,3-Dichloropropene	14	U	14	4.4	ug/L			05/27/18 02:29	14.28
1,2,4-Trichlorobenzene	14	U	14	3.9	ug/L			05/27/18 02:29	14.28
1,1,1-Trichloroethane	14	U	14	3.3	ug/L			05/27/18 02:29	14.28
1,1,2-Trichloroethane	14	U	14	4.9	ug/L			05/27/18 02:29	14.28

Client Sample ID: PW-16-01_051518
Date Collected: 05/15/18 10:23
Date Received: 05/18/18 08:30

Lab Sample ID: 240-95779-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	14	U	14	4.7	ug/L			05/27/18 02:29	14.28
Trichlorofluoromethane	14	U	14	7.1	ug/L			05/27/18 02:29	14.28
1,1,2-Trichloro-1,2,2-trifluoroethane	14	U	14	5.9	ug/L			05/27/18 02:29	14.28
1,2,3-Trimethylbenzene	71	U	71	3.1	ug/L			05/27/18 02:29	14.28
1,2,4-Trimethylbenzene	14	U	14	3.4	ug/L			05/27/18 02:29	14.28
1,3,5-Trimethylbenzene	14	U	14	3.4	ug/L			05/27/18 02:29	14.28
Vinyl chloride	**37**		14	6.4	ug/L			05/27/18 02:29	14.28
Xylenes, Total	29	U	29	3.4	ug/L			05/27/18 02:29	14.28
1,4-Dioxane	710	U	710	170	ug/L			05/27/18 02:29	14.28
Diethyl ether	29	U	29	5.0	ug/L			05/27/18 02:29	14.28

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*69 - 120*		*05/27/18 02:29*	*14.28*
Dibromofluoromethane (Surr)	*100*		*69 - 124*		*05/27/18 02:29*	*14.28*
1,2-Dichloroethane-d4 (Surr)	*102*		*61 - 138*		*05/27/18 02:29*	*14.28*
Toluene-d8 (Surr)	*93*		*73 - 120*		*05/27/18 02:29*	*14.28*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**16**	**J**	80	14	ug/L			05/29/18 15:53	8
Benzene	**6.6**	**J**	8.0	2.2	ug/L			05/29/18 15:53	8
Bromodichloromethane	**3.8**	**J**	8.0	2.4	ug/L			05/29/18 15:53	8
Bromoform	8.0	U	8.0	3.4	ug/L			05/29/18 15:53	8
Bromomethane	**7.5**	**J**	8.0	3.4	ug/L			05/29/18 15:53	8
2-Butanone (MEK)	**16**	**J**	80	8.2	ug/L			05/29/18 15:53	8
Carbon disulfide	**8.4**	**J**	40	2.7	ug/L			05/29/18 15:53	8
Carbon tetrachloride	**7.4**	**J**	8.0	2.8	ug/L			05/29/18 15:53	8
Chlorobenzene	**5.3**	**J**	8.0	2.6	ug/L			05/29/18 15:53	8
Chloroethane	**11**		8.0	3.3	ug/L			05/29/18 15:53	8
Chloroform	**5.4**	**J**	8.0	2.5	ug/L			05/29/18 15:53	8
Chloromethane	**8.6**		8.0	3.4	ug/L			05/29/18 15:53	8
cis-1,2-Dichloroethene	**39**	**F1**	8.0	2.4	ug/L			05/29/18 15:53	8
cis-1,3-Dichloropropene	**3.1**	**J**	8.0	2.1	ug/L			05/29/18 15:53	8
Cyclohexane	**11**		8.0	3.5	ug/L			05/29/18 15:53	8
Dibromochloromethane	**3.2**	**J**	8.0	2.0	ug/L			05/29/18 15:53	8
1,2-Dibromo-3-Chloropropane	8.0	U	8.0	3.8	ug/L			05/29/18 15:53	8
1,2-Dibromoethane	**2.8**	**J**	8.0	1.8	ug/L			05/29/18 15:53	8
1,2-Dichlorobenzene	**4.5**	**J**	8.0	2.1	ug/L			05/29/18 15:53	8
1,3-Dichlorobenzene	**5.9**	**J**	8.0	2.6	ug/L			05/29/18 15:53	8
1,4-Dichlorobenzene	**5.2**	**J**	8.0	1.8	ug/L			05/29/18 15:53	8
Dichlorodifluoromethane	**10**		8.0	4.0	ug/L			05/29/18 15:53	8
1,1-Dichloroethane	**6.5**	**J**	8.0	2.0	ug/L			05/29/18 15:53	8
1,2-Dichloroethane	**4.0**	**J**	8.0	2.4	ug/L			05/29/18 15:53	8
1,1-Dichloroethene	**9.5**		8.0	2.2	ug/L			05/29/18 15:53	8
1,2-Dichloropropane	**4.9**	**J**	8.0	2.4	ug/L			05/29/18 15:53	8
Ethylbenzene	**6.4**	**J**	8.0	2.1	ug/L			05/29/18 15:53	8
2-Hexanone	80	U	80	9.8	ug/L			05/29/18 15:53	8
Isopropylbenzene	**7.6**	**J**	8.0	1.7	ug/L			05/29/18 15:53	8
Methyl acetate	80	U	80	11	ug/L			05/29/18 15:53	8
Methylcyclohexane	**15**		8.0	3.6	ug/L			05/29/18 15:53	8

Client Sample ID: PW-16-01_051518
Date Collected: 05/15/18 10:23
Date Received: 05/18/18 08:30

Lab Sample ID: 240-95779-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	**10**	**J B**	40	4.2	ug/L			05/29/18 15:53	8
4-Methyl-2-pentanone (MIBK)	80	U	80	5.7	ug/L			05/29/18 15:53	8
Methyl tert-butyl ether	8.0	U F1	8.0	2.2	ug/L			05/29/18 15:53	8
Styrene	**4.0**	**J**	8.0	1.8	ug/L			05/29/18 15:53	8
1,1,2,2-Tetrachloroethane	**3.4**	**J**	8.0	2.6	ug/L			05/29/18 15:53	8
Tetrachloroethene	**9.8**		8.0	2.4	ug/L			05/29/18 15:53	8
Toluene	**6.7**	**J**	8.0	1.8	ug/L			05/29/18 15:53	8
trans-1,2-Dichloroethene	**8.3**		8.0	2.3	ug/L			05/29/18 15:53	8
trans-1,3-Dichloropropene	8.0	U	8.0	2.5	ug/L			05/29/18 15:53	8
1,2,4-Trichlorobenzene	**7.7**	**J**	8.0	2.2	ug/L			05/29/18 15:53	8
1,1,1-Trichloroethane	**6.5**	**J**	8.0	1.8	ug/L			05/29/18 15:53	8
1,1,2-Trichloroethane	**3.1**	**J**	8.0	2.7	ug/L			05/29/18 15:53	8
Trichloroethene	**6.8**	**J**	8.0	2.6	ug/L			05/29/18 15:53	8
Trichlorofluoromethane	**13**		8.0	4.0	ug/L			05/29/18 15:53	8
1,1,2-Trichloro-1,2,2-trifluoroethane	**11**		8.0	3.3	ug/L			05/29/18 15:53	8
1,2,3-Trimethylbenzene	40	U	40	1.8	ug/L			05/29/18 15:53	8
1,2,4-Trimethylbenzene	**6.1**	**J**	8.0	1.9	ug/L			05/29/18 15:53	8
1,3,5-Trimethylbenzene	**7.5**	**J**	8.0	1.9	ug/L			05/29/18 15:53	8
Vinyl chloride	**190**	**F1**	8.0	3.6	ug/L			05/29/18 15:53	8
Xylenes, Total	**11**	**J**	16	1.9	ug/L			05/29/18 15:53	8
1,4-Dioxane	**130**	**J**	400	97	ug/L			05/29/18 15:53	8
Diethyl ether	**4.2**	**J**	16	2.8	ug/L			05/29/18 15:53	8

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*69 - 120*		*05/29/18 15:53*	*8*
Dibromofluoromethane (Surr)	*98*		*69 - 124*		*05/29/18 15:53*	*8*
1,2-Dichloroethane-d4 (Surr)	*104*		*61 - 138*		*05/29/18 15:53*	*8*
Toluene-d8 (Surr)	*96*		*73 - 120*		*05/29/18 15:53*	*8*

Client Sample ID: MW-68_051518
Date Collected: 05/15/18 11:30
Date Received: 05/18/18 08:30

Lab Sample ID: 240-95779-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.24	ug/L			05/24/18 19:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*74*		*63 - 125*		*05/24/18 19:32*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			05/26/18 23:47	1
Benzene	1.0	U	1.0	0.28	ug/L			05/26/18 23:47	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			05/26/18 23:47	1
Bromoform	1.0	U	1.0	0.43	ug/L			05/26/18 23:47	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/26/18 23:47	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/26/18 23:47	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			05/26/18 23:47	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			05/26/18 23:47	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			05/26/18 23:47	1
Chloroethane	1.0	U	1.0	0.41	ug/L			05/26/18 23:47	1
Chloroform	1.0	U	1.0	0.31	ug/L			05/26/18 23:47	1
Chloromethane	1.0	U	1.0	0.43	ug/L			05/26/18 23:47	1
cis-1,2-Dichloroethene	**10**		1.0	0.30	ug/L			05/26/18 23:47	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			05/26/18 23:47	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			05/26/18 23:47	1
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			05/26/18 23:47	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			05/26/18 23:47	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			05/26/18 23:47	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			05/26/18 23:47	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			05/26/18 23:47	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			05/26/18 23:47	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			05/26/18 23:47	1
1,1-Dichloroethane	**1.4**		1.0	0.25	ug/L			05/26/18 23:47	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/26/18 23:47	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			05/26/18 23:47	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			05/26/18 23:47	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			05/26/18 23:47	1
2-Hexanone	10	U	10	1.2	ug/L			05/26/18 23:47	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			05/26/18 23:47	1
Methyl acetate	10	U	10	1.4	ug/L			05/26/18 23:47	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			05/26/18 23:47	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			05/26/18 23:47	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			05/26/18 23:47	1
Methyl tert-butyl ether	1.0	U *	1.0	0.27	ug/L			05/26/18 23:47	1
Styrene	1.0	U	1.0	0.23	ug/L			05/26/18 23:47	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			05/26/18 23:47	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			05/26/18 23:47	1
Toluene	1.0	U	1.0	0.23	ug/L			05/26/18 23:47	1
trans-1,2-Dichloroethene	**1.4**		1.0	0.29	ug/L			05/26/18 23:47	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			05/26/18 23:47	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			05/26/18 23:47	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			05/26/18 23:47	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			05/26/18 23:47	1

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95779-1

Client Sample ID: MW-68_051518
Date Collected: 05/15/18 11:30
Date Received: 05/18/18 08:30

Lab Sample ID: 240-95779-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1.0	U	1.0	0.33	ug/L			05/26/18 23:47	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			05/26/18 23:47	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/26/18 23:47	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			05/26/18 23:47	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/26/18 23:47	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/26/18 23:47	1
Vinyl chloride	**2.1**		1.0	0.45	ug/L			05/26/18 23:47	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			05/26/18 23:47	1
1,4-Dioxane	50	U	50	12	ug/L			05/26/18 23:47	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			05/26/18 23:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*69 - 120*		*05/26/18 23:47*	*1*
Dibromofluoromethane (Surr)	*102*		*69 - 124*		*05/26/18 23:47*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*61 - 138*		*05/26/18 23:47*	*1*
Toluene-d8 (Surr)	*93*		*73 - 120*		*05/26/18 23:47*	*1*

Client Sample ID: MW-21_051518
Date Collected: 05/15/18 13:35
Date Received: 05/18/18 08:30

Lab Sample ID: 240-95779-7
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**5.3**		2.0	0.24	ug/L			05/24/18 19:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*72*		*63 - 125*		*05/24/18 19:57*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**2100**	**J**	10000	1800	ug/L			05/27/18 00:10	1000
Benzene	1000	U	1000	280	ug/L			05/27/18 00:10	1000
Bromodichloromethane	1000	U	1000	300	ug/L			05/27/18 00:10	1000
Bromoform	1000	U	1000	430	ug/L			05/27/18 00:10	1000
Bromomethane	1000	U	1000	420	ug/L			05/27/18 00:10	1000
2-Butanone (MEK)	10000	U	10000	1000	ug/L			05/27/18 00:10	1000
Carbon disulfide	5000	U	5000	340	ug/L			05/27/18 00:10	1000
Carbon tetrachloride	1000	U	1000	350	ug/L			05/27/18 00:10	1000
Chlorobenzene	1000	U	1000	320	ug/L			05/27/18 00:10	1000
Chloroethane	1000	U	1000	410	ug/L			05/27/18 00:10	1000
Chloroform	1000	U	1000	310	ug/L			05/27/18 00:10	1000
Chloromethane	1000	U	1000	430	ug/L			05/27/18 00:10	1000
cis-1,2-Dichloroethene	**18000**		1000	300	ug/L			05/27/18 00:10	1000
cis-1,3-Dichloropropene	1000	U	1000	260	ug/L			05/27/18 00:10	1000
Cyclohexane	1000	U	1000	440	ug/L			05/27/18 00:10	1000
Dibromochloromethane	1000	U	1000	250	ug/L			05/27/18 00:10	1000
1,2-Dibromo-3-Chloropropane	1000	U	1000	470	ug/L			05/27/18 00:10	1000
1,2-Dibromoethane	1000	U	1000	230	ug/L			05/27/18 00:10	1000
1,2-Dichlorobenzene	1000	U	1000	260	ug/L			05/27/18 00:10	1000
1,3-Dichlorobenzene	1000	U	1000	320	ug/L			05/27/18 00:10	1000
1,4-Dichlorobenzene	1000	U	1000	230	ug/L			05/27/18 00:10	1000
Dichlorodifluoromethane	1000	U	1000	500	ug/L			05/27/18 00:10	1000
1,1-Dichloroethane	1000	U	1000	250	ug/L			05/27/18 00:10	1000
1,2-Dichloroethane	1000	U	1000	300	ug/L			05/27/18 00:10	1000
1,1-Dichloroethene	1000	U	1000	270	ug/L			05/27/18 00:10	1000
1,2-Dichloropropane	1000	U	1000	300	ug/L			05/27/18 00:10	1000
Ethylbenzene	1000	U	1000	260	ug/L			05/27/18 00:10	1000
2-Hexanone	10000	U	10000	1200	ug/L			05/27/18 00:10	1000
Isopropylbenzene	1000	U	1000	210	ug/L			05/27/18 00:10	1000
Methyl acetate	10000	U	10000	1400	ug/L			05/27/18 00:10	1000
Methylcyclohexane	1000	U	1000	450	ug/L			05/27/18 00:10	1000
Methylene Chloride	**560**	**J**	5000	530	ug/L			05/27/18 00:10	1000
4-Methyl-2-pentanone (MIBK)	10000	U	10000	710	ug/L			05/27/18 00:10	1000
Methyl tert-butyl ether	1000	U *	1000	270	ug/L			05/27/18 00:10	1000
Styrene	1000	U	1000	230	ug/L			05/27/18 00:10	1000
1,1,2,2-Tetrachloroethane	1000	U	1000	320	ug/L			05/27/18 00:10	1000
Tetrachloroethene	1000	U	1000	300	ug/L			05/27/18 00:10	1000
Toluene	1000	U	1000	230	ug/L			05/27/18 00:10	1000
trans-1,2-Dichloroethene	1000	U	1000	290	ug/L			05/27/18 00:10	1000
trans-1,3-Dichloropropene	1000	U	1000	310	ug/L			05/27/18 00:10	1000
1,2,4-Trichlorobenzene	1000	U	1000	270	ug/L			05/27/18 00:10	1000
1,1,1-Trichloroethane	1000	U	1000	230	ug/L			05/27/18 00:10	1000
1,1,2-Trichloroethane	1000	U	1000	340	ug/L			05/27/18 00:10	1000

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95779-1

Client Sample ID: MW-21_051518
Date Collected: 05/15/18 13:35
Date Received: 05/18/18 08:30

Lab Sample ID: 240-95779-7
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1000	U	1000	330	ug/L			05/27/18 00:10	1000
Trichlorofluoromethane	1000	U	1000	500	ug/L			05/27/18 00:10	1000
1,1,2-Trichloro-1,2,2-trifluoroethane	1000	U	1000	410	ug/L			05/27/18 00:10	1000
1,2,3-Trimethylbenzene	5000	U	5000	220	ug/L			05/27/18 00:10	1000
1,2,4-Trimethylbenzene	1000	U	1000	240	ug/L			05/27/18 00:10	1000
1,3,5-Trimethylbenzene	1000	U	1000	240	ug/L			05/27/18 00:10	1000
Vinyl chloride	**3700**		1000	450	ug/L			05/27/18 00:10	1000
Xylenes, Total	2000	U	2000	240	ug/L			05/27/18 00:10	1000
1,4-Dioxane	50000	U	50000	12000	ug/L			05/27/18 00:10	1000
Diethyl ether	2000	U	2000	350	ug/L			05/27/18 00:10	1000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*69 - 120*		*05/27/18 00:10*	*1000*
Dibromofluoromethane (Surr)	*97*		*69 - 124*		*05/27/18 00:10*	*1000*
1,2-Dichloroethane-d4 (Surr)	*100*		*61 - 138*		*05/27/18 00:10*	*1000*
Toluene-d8 (Surr)	*93*		*73 - 120*		*05/27/18 00:10*	*1000*

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95779-1

Client Sample ID: MW-28_051518
Date Collected: 05/15/18 15:01
Date Received: 05/18/18 08:30

Lab Sample ID: 240-95779-8
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.24	ug/L			05/24/18 20:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*74*		*63 - 125*		*05/24/18 20:22*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			05/27/18 00:34	1
Benzene	1.0	U	1.0	0.28	ug/L			05/27/18 00:34	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			05/27/18 00:34	1
Bromoform	1.0	U	1.0	0.43	ug/L			05/27/18 00:34	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/27/18 00:34	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/27/18 00:34	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			05/27/18 00:34	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			05/27/18 00:34	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			05/27/18 00:34	1
Chloroethane	1.0	U	1.0	0.41	ug/L			05/27/18 00:34	1
Chloroform	1.0	U	1.0	0.31	ug/L			05/27/18 00:34	1
Chloromethane	1.0	U	1.0	0.43	ug/L			05/27/18 00:34	1
cis-1,2-Dichloroethene	**0.43**	**J**	1.0	0.30	ug/L			05/27/18 00:34	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			05/27/18 00:34	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			05/27/18 00:34	1
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			05/27/18 00:34	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			05/27/18 00:34	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			05/27/18 00:34	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			05/27/18 00:34	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			05/27/18 00:34	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			05/27/18 00:34	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			05/27/18 00:34	1
1,1-Dichloroethane	**13**		1.0	0.25	ug/L			05/27/18 00:34	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/27/18 00:34	1
1,1-Dichloroethene	**0.57**	**J**	1.0	0.27	ug/L			05/27/18 00:34	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			05/27/18 00:34	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			05/27/18 00:34	1
2-Hexanone	10	U	10	1.2	ug/L			05/27/18 00:34	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			05/27/18 00:34	1
Methyl acetate	10	U	10	1.4	ug/L			05/27/18 00:34	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			05/27/18 00:34	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			05/27/18 00:34	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			05/27/18 00:34	1
Methyl tert-butyl ether	1.0	U *	1.0	0.27	ug/L			05/27/18 00:34	1
Styrene	1.0	U	1.0	0.23	ug/L			05/27/18 00:34	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			05/27/18 00:34	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			05/27/18 00:34	1
Toluene	1.0	U	1.0	0.23	ug/L			05/27/18 00:34	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			05/27/18 00:34	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			05/27/18 00:34	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			05/27/18 00:34	1
1,1,1-Trichloroethane	**24**		1.0	0.23	ug/L			05/27/18 00:34	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			05/27/18 00:34	1

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95779-1

Client Sample ID: MW-28_051518
Date Collected: 05/15/18 15:01
Date Received: 05/18/18 08:30

Lab Sample ID: 240-95779-8
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	**0.51**	**J**	1.0	0.33	ug/L			05/27/18 00:34	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			05/27/18 00:34	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/27/18 00:34	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			05/27/18 00:34	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/27/18 00:34	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/27/18 00:34	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/27/18 00:34	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			05/27/18 00:34	1
1,4-Dioxane	50	U	50	12	ug/L			05/27/18 00:34	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			05/27/18 00:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*69 - 120*		*05/27/18 00:34*	*1*
Dibromofluoromethane (Surr)	*96*		*69 - 124*		*05/27/18 00:34*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*61 - 138*		*05/27/18 00:34*	*1*
Toluene-d8 (Surr)	*98*		*73 - 120*		*05/27/18 00:34*	*1*

Client Sample ID: DUP-04_051518

Date Collected: 05/15/18 00:00
Date Received: 05/18/18 08:30

Lab Sample ID: 240-95779-9

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.24	ug/L			05/24/18 20:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*75*		*63 - 125*		*05/24/18 20:48*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	400	U	400	70	ug/L			05/27/18 00:57	40
Benzene	40	U	40	11	ug/L			05/27/18 00:57	40
Bromodichloromethane	40	U	40	12	ug/L			05/27/18 00:57	40
Bromoform	40	U	40	17	ug/L			05/27/18 00:57	40
Bromomethane	40	U	40	17	ug/L			05/27/18 00:57	40
2-Butanone (MEK)	400	U	400	41	ug/L			05/27/18 00:57	40
Carbon disulfide	200	U	200	14	ug/L			05/27/18 00:57	40
Carbon tetrachloride	40	U	40	14	ug/L			05/27/18 00:57	40
Chlorobenzene	40	U	40	13	ug/L			05/27/18 00:57	40
Chloroethane	40	U	40	16	ug/L			05/27/18 00:57	40
Chloroform	40	U	40	12	ug/L			05/27/18 00:57	40
Chloromethane	40	U	40	17	ug/L			05/27/18 00:57	40
cis-1,2-Dichloroethene	**66**		40	12	ug/L			05/27/18 00:57	40
cis-1,3-Dichloropropene	40	U	40	10	ug/L			05/27/18 00:57	40
Cyclohexane	40	U	40	18	ug/L			05/27/18 00:57	40
Dibromochloromethane	40	U	40	10	ug/L			05/27/18 00:57	40
1,2-Dibromo-3-Chloropropane	40	U	40	19	ug/L			05/27/18 00:57	40
1,2-Dibromoethane	40	U	40	9.2	ug/L			05/27/18 00:57	40
1,2-Dichlorobenzene	40	U	40	10	ug/L			05/27/18 00:57	40
1,3-Dichlorobenzene	40	U	40	13	ug/L			05/27/18 00:57	40
1,4-Dichlorobenzene	40	U	40	9.2	ug/L			05/27/18 00:57	40
Dichlorodifluoromethane	40	U	40	20	ug/L			05/27/18 00:57	40
1,1-Dichloroethane	40	U	40	10	ug/L			05/27/18 00:57	40
1,2-Dichloroethane	40	U	40	12	ug/L			05/27/18 00:57	40
1,1-Dichloroethene	40	U	40	11	ug/L			05/27/18 00:57	40
1,2-Dichloropropane	40	U	40	12	ug/L			05/27/18 00:57	40
Ethylbenzene	40	U	40	10	ug/L			05/27/18 00:57	40
2-Hexanone	400	U	400	49	ug/L			05/27/18 00:57	40
Isopropylbenzene	40	U	40	8.4	ug/L			05/27/18 00:57	40
Methyl acetate	400	U	400	57	ug/L			05/27/18 00:57	40
Methylcyclohexane	40	U	40	18	ug/L			05/27/18 00:57	40
Methylene Chloride	**21**	**J**	200	21	ug/L			05/27/18 00:57	40
4-Methyl-2-pentanone (MIBK)	400	U	400	28	ug/L			05/27/18 00:57	40
Methyl tert-butyl ether	40	U *	40	11	ug/L			05/27/18 00:57	40
Styrene	40	U	40	9.2	ug/L			05/27/18 00:57	40
1,1,2,2-Tetrachloroethane	40	U	40	13	ug/L			05/27/18 00:57	40
Tetrachloroethene	40	U	40	12	ug/L			05/27/18 00:57	40
Toluene	40	U	40	9.2	ug/L			05/27/18 00:57	40
trans-1,2-Dichloroethene	40	U	40	12	ug/L			05/27/18 00:57	40
trans-1,3-Dichloropropene	40	U	40	12	ug/L			05/27/18 00:57	40
1,2,4-Trichlorobenzene	40	U	40	11	ug/L			05/27/18 00:57	40
1,1,1-Trichloroethane	40	U	40	9.2	ug/L			05/27/18 00:57	40
1,1,2-Trichloroethane	40	U	40	14	ug/L			05/27/18 00:57	40

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95779-1

Client Sample ID: DUP-04_051518
Date Collected: 05/15/18 00:00
Date Received: 05/18/18 08:30

Lab Sample ID: 240-95779-9
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	40	U	40	13	ug/L			05/27/18 00:57	40
Trichlorofluoromethane	40	U	40	20	ug/L			05/27/18 00:57	40
1,1,2-Trichloro-1,2,2-trifluoroethane	40	U	40	16	ug/L			05/27/18 00:57	40
1,2,3-Trimethylbenzene	200	U	200	8.8	ug/L			05/27/18 00:57	40
1,2,4-Trimethylbenzene	40	U	40	9.6	ug/L			05/27/18 00:57	40
1,3,5-Trimethylbenzene	40	U	40	9.6	ug/L			05/27/18 00:57	40
Vinyl chloride	**690**		40	18	ug/L			05/27/18 00:57	40
Xylenes, Total	80	U	80	9.6	ug/L			05/27/18 00:57	40
1,4-Dioxane	2000	U	2000	480	ug/L			05/27/18 00:57	40
Diethyl ether	80	U	80	14	ug/L			05/27/18 00:57	40

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*69 - 120*		*05/27/18 00:57*	*40*
Dibromofluoromethane (Surr)	*98*		*69 - 124*		*05/27/18 00:57*	*40*
1,2-Dichloroethane-d4 (Surr)	*106*		*61 - 138*		*05/27/18 00:57*	*40*
Toluene-d8 (Surr)	*99*		*73 - 120*		*05/27/18 00:57*	*40*

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95779-1

Client Sample ID: MW-48_051518
Date Collected: 05/15/18 16:13
Date Received: 05/18/18 08:30

Lab Sample ID: 240-95779-10
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	12		2.0	0.24	ug/L			05/24/18 21:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*74*		*63 - 125*		*05/24/18 21:13*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.8	J	10	1.8	ug/L			05/27/18 01:20	1
Benzene	1.0	U	1.0	0.28	ug/L			05/27/18 01:20	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			05/27/18 01:20	1
Bromoform	1.0	U	1.0	0.43	ug/L			05/27/18 01:20	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/27/18 01:20	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/27/18 01:20	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			05/27/18 01:20	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			05/27/18 01:20	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			05/27/18 01:20	1
Chloroethane	1.0	U	1.0	0.41	ug/L			05/27/18 01:20	1
Chloroform	1.0	U	1.0	0.31	ug/L			05/27/18 01:20	1
Chloromethane	1.0	U	1.0	0.43	ug/L			05/27/18 01:20	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/27/18 01:20	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			05/27/18 01:20	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			05/27/18 01:20	1
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			05/27/18 01:20	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			05/27/18 01:20	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			05/27/18 01:20	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			05/27/18 01:20	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			05/27/18 01:20	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			05/27/18 01:20	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			05/27/18 01:20	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/27/18 01:20	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/27/18 01:20	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			05/27/18 01:20	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			05/27/18 01:20	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			05/27/18 01:20	1
2-Hexanone	10	U	10	1.2	ug/L			05/27/18 01:20	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			05/27/18 01:20	1
Methyl acetate	10	U	10	1.4	ug/L			05/27/18 01:20	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			05/27/18 01:20	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			05/27/18 01:20	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			05/27/18 01:20	1
Methyl tert-butyl ether	1.0	U *	1.0	0.27	ug/L			05/27/18 01:20	1
Styrene	1.0	U	1.0	0.23	ug/L			05/27/18 01:20	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			05/27/18 01:20	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			05/27/18 01:20	1
Toluene	1.0	U	1.0	0.23	ug/L			05/27/18 01:20	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			05/27/18 01:20	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			05/27/18 01:20	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			05/27/18 01:20	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			05/27/18 01:20	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			05/27/18 01:20	1

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95779-1

Client Sample ID: MW-48_051518
Date Collected: 05/15/18 16:13
Date Received: 05/18/18 08:30

Lab Sample ID: 240-95779-10
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1.0	U	1.0	0.33	ug/L			05/27/18 01:20	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			05/27/18 01:20	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/27/18 01:20	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			05/27/18 01:20	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/27/18 01:20	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/27/18 01:20	1
Vinyl chloride	**7.4**		1.0	0.45	ug/L			05/27/18 01:20	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			05/27/18 01:20	1
1,4-Dioxane	50	U	50	12	ug/L			05/27/18 01:20	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			05/27/18 01:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*69 - 120*		*05/27/18 01:20*	*1*
Dibromofluoromethane (Surr)	*98*		*69 - 124*		*05/27/18 01:20*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*61 - 138*		*05/27/18 01:20*	*1*
Toluene-d8 (Surr)	*100*		*73 - 120*		*05/27/18 01:20*	*1*

Client Sample ID: TRIP BLANK

Date Collected: 05/15/18 00:00
Date Received: 05/18/18 08:30

Lab Sample ID: 240-95779-11

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**3.0**	**J**	10	1.8	ug/L			05/27/18 01:43	1
Benzene	1.0	U	1.0	0.28	ug/L			05/27/18 01:43	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			05/27/18 01:43	1
Bromoform	1.0	U	1.0	0.43	ug/L			05/27/18 01:43	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/27/18 01:43	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/27/18 01:43	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			05/27/18 01:43	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			05/27/18 01:43	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			05/27/18 01:43	1
Chloroethane	1.0	U	1.0	0.41	ug/L			05/27/18 01:43	1
Chloroform	1.0	U	1.0	0.31	ug/L			05/27/18 01:43	1
Chloromethane	1.0	U	1.0	0.43	ug/L			05/27/18 01:43	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/27/18 01:43	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			05/27/18 01:43	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			05/27/18 01:43	1
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			05/27/18 01:43	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			05/27/18 01:43	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			05/27/18 01:43	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			05/27/18 01:43	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			05/27/18 01:43	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			05/27/18 01:43	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			05/27/18 01:43	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/27/18 01:43	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/27/18 01:43	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			05/27/18 01:43	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			05/27/18 01:43	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			05/27/18 01:43	1
2-Hexanone	10	U	10	1.2	ug/L			05/27/18 01:43	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			05/27/18 01:43	1
Methyl acetate	10	U	10	1.4	ug/L			05/27/18 01:43	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			05/27/18 01:43	1
Methylene Chloride	**0.88**	**J**	5.0	0.53	ug/L			05/27/18 01:43	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			05/27/18 01:43	1
Methyl tert-butyl ether	1.0	U *	1.0	0.27	ug/L			05/27/18 01:43	1
Styrene	1.0	U	1.0	0.23	ug/L			05/27/18 01:43	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			05/27/18 01:43	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			05/27/18 01:43	1
Toluene	1.0	U	1.0	0.23	ug/L			05/27/18 01:43	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			05/27/18 01:43	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			05/27/18 01:43	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			05/27/18 01:43	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			05/27/18 01:43	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			05/27/18 01:43	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			05/27/18 01:43	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			05/27/18 01:43	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/27/18 01:43	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			05/27/18 01:43	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/27/18 01:43	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/27/18 01:43	1

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95779-1

Client Sample ID: TRIP BLANK
Date Collected: 05/15/18 00:00
Date Received: 05/18/18 08:30

Lab Sample ID: 240-95779-11
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/27/18 01:43	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			05/27/18 01:43	1
1,4-Dioxane	50	U	50	12	ug/L			05/27/18 01:43	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			05/27/18 01:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*69 - 120*		*05/27/18 01:43*	*1*
Dibromofluoromethane (Surr)	*100*		*69 - 124*		*05/27/18 01:43*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*61 - 138*		*05/27/18 01:43*	*1*
Toluene-d8 (Surr)	*97*		*73 - 120*		*05/27/18 01:43*	*1*

Surrogate Summary

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95779-1

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

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

		Percent Surrogate Recovery (Acceptance Limits)			
		BFB	DBFM	DCA	TOL
Lab Sample ID	Client Sample ID	(69-120)	(69-124)	(61-138)	(73-120)
240-95779-1	MW-58_051418	100	98	96	105
240-95779-1 MS	MW-58_051418	100	101	95	107
240-95779-1 MSD	MW-58_051418	101	101	98	105
240-95779-2	MW-70_051418	103	103	102	107
240-95779-3	MW-51_051418	103	102	101	108
240-95779-4	TW-16-01_051518	86	100	104	95
240-95779-5	PW-16-01_051518	82	100	102	93
240-95779-5 - RA	PW-16-01_051518	92	98	104	96
240-95779-5 MS	PW-16-01_051518	90	92	99	99
240-95779-5 MSD	PW-16-01_051518	88	96	100	98
240-95779-6	MW-68_051518	88	102	107	93
240-95779-7	MW-21_051518	90	97	100	93
240-95779-8	MW-28_051518	88	96	103	98
240-95779-9	DUP-04_051518	86	98	106	99
240-95779-10	MW-48_051518	86	98	99	100
240-95779-11	TRIP BLANK	87	100	102	97
LCS 240-328712/4	Lab Control Sample	102	103	98	108
LCS 240-328754/5	Lab Control Sample	91	98	99	101
LCS 240-328928/5	Lab Control Sample	93	96	99	97
MB 240-328712/5	Method Blank	101	101	100	105
MB 240-328754/7	Method Blank	86	96	97	93
MB 240-328928/7	Method Blank	86	97	100	95

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)
		DCA
Lab Sample ID	Client Sample ID	(63-125)
240-95779-1	MW-58_051418	80
240-95779-1 MS	MW-58_051418	79
240-95779-1 MSD	MW-58_051418	76
240-95779-2	MW-70_051418	76
240-95779-3	MW-51_051418	80
240-95779-4	TW-16-01_051518	79
240-95779-5	PW-16-01_051518	72
240-95779-5 MS	PW-16-01_051518	70
240-95779-5 MSD	PW-16-01_051518	75
240-95779-6	MW-68_051518	74
240-95779-7	MW-21_051518	72
240-95779-8	MW-28_051518	74
240-95779-9	DUP-04_051518	75
240-95779-10	MW-48_051518	74

Surrogate Summary

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95779-1

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

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

		Percent Surrogate Recovery (Acceptance Limits)								
Lab Sample ID	Client Sample ID	DCA (63-125)								
LCS 240-328355/4	Lab Control Sample	81								
MB 240-328355/5	Method Blank	77								

Surrogate Legend

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

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

Lab Sample ID: MB 240-328712/5
Matrix: Water
Analysis Batch: 328712

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	4.75	J	10	1.8	ug/L			05/26/18 11:06	1
Benzene	1.0	U	1.0	0.28	ug/L			05/26/18 11:06	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			05/26/18 11:06	1
Bromoform	1.0	U	1.0	0.43	ug/L			05/26/18 11:06	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/26/18 11:06	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/26/18 11:06	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			05/26/18 11:06	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			05/26/18 11:06	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			05/26/18 11:06	1
Chloroethane	1.0	U	1.0	0.41	ug/L			05/26/18 11:06	1
Chloroform	1.0	U	1.0	0.31	ug/L			05/26/18 11:06	1
Chloromethane	1.0	U	1.0	0.43	ug/L			05/26/18 11:06	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/26/18 11:06	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			05/26/18 11:06	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			05/26/18 11:06	1
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			05/26/18 11:06	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			05/26/18 11:06	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			05/26/18 11:06	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			05/26/18 11:06	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			05/26/18 11:06	1
1,4-Dichlorobenzene	0.230	J	1.0	0.23	ug/L			05/26/18 11:06	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			05/26/18 11:06	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/26/18 11:06	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/26/18 11:06	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			05/26/18 11:06	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			05/26/18 11:06	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			05/26/18 11:06	1
2-Hexanone	10	U	10	1.2	ug/L			05/26/18 11:06	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			05/26/18 11:06	1
Methyl acetate	10	U	10	1.4	ug/L			05/26/18 11:06	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			05/26/18 11:06	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			05/26/18 11:06	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			05/26/18 11:06	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			05/26/18 11:06	1
Styrene	1.0	U	1.0	0.23	ug/L			05/26/18 11:06	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			05/26/18 11:06	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			05/26/18 11:06	1
Toluene	1.0	U	1.0	0.23	ug/L			05/26/18 11:06	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			05/26/18 11:06	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			05/26/18 11:06	1
1,2,4-Trichlorobenzene	0.744	J	1.0	0.27	ug/L			05/26/18 11:06	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			05/26/18 11:06	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			05/26/18 11:06	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			05/26/18 11:06	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			05/26/18 11:06	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/26/18 11:06	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/26/18 11:06	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/26/18 11:06	1

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

Lab Sample ID: MB 240-328712/5
Matrix: Water
Analysis Batch: 328712

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/26/18 11:06	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			05/26/18 11:06	1
1,4-Dioxane	50	U	50	12	ug/L			05/26/18 11:06	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			05/26/18 11:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*69 - 120*		*05/26/18 11:06*	*1*
Dibromofluoromethane (Surr)	*101*		*69 - 124*		*05/26/18 11:06*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*61 - 138*		*05/26/18 11:06*	*1*
Toluene-d8 (Surr)	*105*		*73 - 120*		*05/26/18 11:06*	*1*

Lab Sample ID: LCS 240-328712/4
Matrix: Water
Analysis Batch: 328712

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	112		ug/L		112	35 - 131
Benzene	50.0	48.0		ug/L		96	79 - 120
Bromodichloromethane	50.0	48.7		ug/L		97	79 - 125
Bromoform	50.0	47.9		ug/L		96	55 - 145
Bromomethane	20.0	17.4		ug/L		87	17 - 158
2-Butanone (MEK)	100	108		ug/L		108	43 - 149
Carbon disulfide	50.0	49.5		ug/L		99	49 - 141
Carbon tetrachloride	50.0	45.4		ug/L		91	55 - 171
Chlorobenzene	50.0	47.8		ug/L		96	80 - 120
Chloroethane	20.0	18.1		ug/L		91	10 - 149
Chloroform	50.0	47.6		ug/L		95	80 - 120
Chloromethane	20.0	17.5		ug/L		88	59 - 124
cis-1,2-Dichloroethene	50.0	48.0		ug/L		96	77 - 120
cis-1,3-Dichloropropene	50.0	51.6		ug/L		103	75 - 120
Cyclohexane	50.0	47.8		ug/L		96	66 - 135
Dibromochloromethane	50.0	53.1		ug/L		106	64 - 129
1,2-Dibromo-3-Chloropropane	50.0	43.0		ug/L		86	50 - 130
1,2-Dibromoethane	50.0	51.0		ug/L		102	80 - 120
1,2-Dichlorobenzene	50.0	47.1		ug/L		94	80 - 120
1,3-Dichlorobenzene	50.0	47.6		ug/L		95	80 - 120
1,4-Dichlorobenzene	50.0	46.8		ug/L		94	80 - 120
Dichlorodifluoromethane	20.0	16.0		ug/L		80	42 - 141
1,1-Dichloroethane	50.0	47.8		ug/L		96	74 - 120
1,2-Dichloroethane	50.0	48.9		ug/L		98	68 - 133
1,1-Dichloroethene	50.0	49.1		ug/L		98	65 - 127
1,2-Dichloropropane	50.0	48.9		ug/L		98	78 - 127
Ethylbenzene	50.0	48.5		ug/L		97	80 - 120
2-Hexanone	100	114		ug/L		114	28 - 169
Isopropylbenzene	50.0	50.3		ug/L		101	80 - 128
Methyl acetate	100	108		ug/L		108	63 - 137
Methylcyclohexane	50.0	46.0		ug/L		92	63 - 141
Methylene Chloride	50.0	46.9		ug/L		94	64 - 140

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

Lab Sample ID: LCS 240-328712/4
Matrix: Water
Analysis Batch: 328712

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Methyl-2-pentanone (MIBK)	100	109		ug/L		109	53 - 144
Methyl tert-butyl ether	50.0	45.9		ug/L		92	73 - 120
Styrene	50.0	49.3		ug/L		99	80 - 121
1,1,2,2-Tetrachloroethane	50.0	52.4		ug/L		105	58 - 122
Tetrachloroethene	50.0	48.0		ug/L		96	80 - 122
Toluene	50.0	48.0		ug/L		96	78 - 120
trans-1,2-Dichloroethene	50.0	49.6		ug/L		99	74 - 124
trans-1,3-Dichloropropene	50.0	41.3		ug/L		83	67 - 120
1,2,4-Trichlorobenzene	50.0	45.1		ug/L		90	34 - 141
1,1,1-Trichloroethane	50.0	50.4		ug/L		101	64 - 147
1,1,2-Trichloroethane	50.0	51.4		ug/L		103	76 - 121
Trichloroethene	50.0	48.0		ug/L		96	76 - 124
Trichlorofluoromethane	20.0	18.4		ug/L		92	27 - 176
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	46.9		ug/L		94	65 - 144
1,2,4-Trimethylbenzene	50.0	47.8		ug/L		96	80 - 120
1,3,5-Trimethylbenzene	50.0	48.9		ug/L		98	79 - 120
Vinyl chloride	20.0	17.0		ug/L		85	65 - 124
Xylenes, Total	100	96.6		ug/L		97	80 - 120
1,4-Dioxane	1000	1160		ug/L		116	35 - 134
Diethyl ether	50.0	50.8		ug/L		102	72 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*69 - 120*
Dibromofluoromethane (Surr)	*103*		*69 - 124*
1,2-Dichloroethane-d4 (Surr)	*98*		*61 - 138*
Toluene-d8 (Surr)	*108*		*73 - 120*

Lab Sample ID: 240-95779-1 MS
Matrix: Water
Analysis Batch: 328712

Client Sample ID: MW-58_051418
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	4.4	J B	100	97.2		ug/L		93	19 - 133
Benzene	1.0	U	50.0	44.1		ug/L		88	69 - 127
Bromodichloromethane	1.0	U	50.0	46.2		ug/L		92	75 - 128
Bromoform	1.0	U F2	50.0	39.3		ug/L		79	61 - 135
Bromomethane	1.0	U	20.0	16.0		ug/L		80	10 - 148
2-Butanone (MEK)	10	U	100	97.4		ug/L		97	34 - 153
Carbon disulfide	5.0	U	50.0	43.8		ug/L		88	46 - 143
Carbon tetrachloride	1.0	U	50.0	33.0		ug/L		66	53 - 175
Chlorobenzene	1.0	U	50.0	44.2		ug/L		88	76 - 120
Chloroethane	1.0	U	20.0	16.9		ug/L		84	10 - 141
Chloroform	1.0	U	50.0	45.0		ug/L		90	74 - 125
Chloromethane	1.0	U	20.0	16.7		ug/L		83	34 - 127
cis-1,2-Dichloroethene	1.0	U	50.0	44.9		ug/L		90	69 - 127
cis-1,3-Dichloropropene	1.0	U	50.0	46.1		ug/L		92	68 - 120
Cyclohexane	1.0	U	50.0	41.1		ug/L		82	56 - 135

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

Lab Sample ID: 240-95779-1 MS
Matrix: Water
Analysis Batch: 328712

Client Sample ID: MW-58_051418
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Dibromochloromethane	1.0	U	50.0	47.4		ug/L		95	62 - 131
1,2-Dibromo-3-Chloropropane	1.0	U	50.0	34.7		ug/L		69	48 - 130
1,2-Dibromoethane	1.0	U	50.0	48.8		ug/L		98	73 - 121
1,2-Dichlorobenzene	1.0	U	50.0	42.7		ug/L		85	70 - 120
1,3-Dichlorobenzene	1.0	U	50.0	41.5		ug/L		83	71 - 120
1,4-Dichlorobenzene	1.0	U	50.0	40.6		ug/L		81	72 - 120
Dichlorodifluoromethane	1.0	U	20.0	13.5		ug/L		67	45 - 130
1,1-Dichloroethane	1.0	U	50.0	43.9		ug/L		88	69 - 122
1,2-Dichloroethane	1.0	U	50.0	48.6		ug/L		97	64 - 138
1,1-Dichloroethene	1.0	U	50.0	42.2		ug/L		84	62 - 127
1,2-Dichloropropane	1.0	U	50.0	47.6		ug/L		95	72 - 131
Ethylbenzene	1.0	U	50.0	42.8		ug/L		86	72 - 121
2-Hexanone	10	U F2	100	102		ug/L		102	21 - 184
Isopropylbenzene	1.0	U	50.0	43.2		ug/L		86	70 - 132
Methyl acetate	10	U	100	94.5		ug/L		95	52 - 139
Methylcyclohexane	1.0	U	50.0	39.2		ug/L		78	46 - 139
Methylene Chloride	5.0	U	50.0	45.9		ug/L		92	52 - 137
4-Methyl-2-pentanone (MIBK)	10	U	100	99.2		ug/L		99	53 - 147
Methyl tert-butyl ether	1.0	U	50.0	45.1		ug/L		90	67 - 125
Styrene	1.0	U	50.0	45.3		ug/L		91	74 - 125
1,1,2,2-Tetrachloroethane	1.0	U	50.0	47.6		ug/L		95	51 - 123
Tetrachloroethene	1.0	U	50.0	39.7		ug/L		79	69 - 126
Toluene	1.0	U	50.0	43.1		ug/L		86	69 - 125
trans-1,2-Dichloroethene	1.0	U	50.0	43.9		ug/L		88	66 - 131
trans-1,3-Dichloropropene	1.0	U	50.0	35.3		ug/L		71	59 - 120
1,2,4-Trichlorobenzene	1.0	U	50.0	38.0		ug/L		76	26 - 138
1,1,1-Trichloroethane	1.0	U	50.0	40.5		ug/L		81	57 - 156
1,1,2-Trichloroethane	1.0	U	50.0	49.9		ug/L		100	68 - 127
Trichloroethene	1.0	U	50.0	41.6		ug/L		83	68 - 129
Trichlorofluoromethane	1.0	U	20.0	15.2		ug/L		76	28 - 172
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	50.0	40.4		ug/L		81	58 - 137
1,2,4-Trimethylbenzene	1.0	U	50.0	41.3		ug/L		83	64 - 120
1,3,5-Trimethylbenzene	1.0	U	50.0	41.5		ug/L		83	67 - 120
Vinyl chloride	1.0	U	20.0	15.6		ug/L		78	55 - 123
Xylenes, Total	2.0	U	100	86.5		ug/L		87	71 - 122
1,4-Dioxane	50	U	1000	1060		ug/L		106	13 - 155
Diethyl ether	2.0	U	50.0	49.1		ug/L		98	65 - 124

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*69 - 120*
Dibromofluoromethane (Surr)	*101*		*69 - 124*
1,2-Dichloroethane-d4 (Surr)	*95*		*61 - 138*
Toluene-d8 (Surr)	*107*		*73 - 120*

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

Lab Sample ID: 240-95779-1 MSD
Matrix: Water
Analysis Batch: 328712

Client Sample ID: MW-58_051418
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	4.4	J B	100	113		ug/L		109	19 - 133	15	35
Benzene	1.0	U	50.0	43.8		ug/L		88	69 - 127	1	10
Bromodichloromethane	1.0	U	50.0	47.9		ug/L		96	75 - 128	4	13
Bromoform	1.0	U F2	50.0	45.4	F2	ug/L		91	61 - 135	15	13
Bromomethane	1.0	U	20.0	15.4		ug/L		77	10 - 148	4	35
2-Butanone (MEK)	10	U	100	111		ug/L		111	34 - 153	13	23
Carbon disulfide	5.0	U	50.0	43.0		ug/L		86	46 - 143	2	18
Carbon tetrachloride	1.0	U	50.0	34.8		ug/L		70	53 - 175	5	17
Chlorobenzene	1.0	U	50.0	45.7		ug/L		91	76 - 120	3	12
Chloroethane	1.0	U	20.0	16.6		ug/L		83	10 - 141	2	35
Chloroform	1.0	U	50.0	45.7		ug/L		91	74 - 125	2	11
Chloromethane	1.0	U	20.0	15.9		ug/L		79	34 - 127	5	25
cis-1,2-Dichloroethene	1.0	U	50.0	44.9		ug/L		90	69 - 127	0	11
cis-1,3-Dichloropropene	1.0	U	50.0	48.7		ug/L		97	68 - 120	6	13
Cyclohexane	1.0	U	50.0	40.6		ug/L		81	56 - 135	1	35
Dibromochloromethane	1.0	U	50.0	52.4		ug/L		105	62 - 131	10	15
1,2-Dibromo-3-Chloropropane	1.0	U	50.0	42.1		ug/L		84	48 - 130	19	31
1,2-Dibromoethane	1.0	U	50.0	52.7		ug/L		105	73 - 121	8	12
1,2-Dichlorobenzene	1.0	U	50.0	46.1		ug/L		92	70 - 120	8	19
1,3-Dichlorobenzene	1.0	U	50.0	44.7		ug/L		89	71 - 120	7	18
1,4-Dichlorobenzene	1.0	U	50.0	44.4		ug/L		89	72 - 120	9	17
Dichlorodifluoromethane	1.0	U	20.0	13.5		ug/L		67	45 - 130	0	34
1,1-Dichloroethane	1.0	U	50.0	44.3		ug/L		89	69 - 122	1	11
1,2-Dichloroethane	1.0	U	50.0	50.4		ug/L		101	64 - 138	4	11
1,1-Dichloroethene	1.0	U	50.0	41.5		ug/L		83	62 - 127	2	14
1,2-Dichloropropane	1.0	U	50.0	48.1		ug/L		96	72 - 131	1	12
Ethylbenzene	1.0	U	50.0	44.1		ug/L		88	72 - 121	3	15
2-Hexanone	10	U F2	100	122	F2	ug/L		122	21 - 184	18	12
Isopropylbenzene	1.0	U	50.0	45.6		ug/L		91	70 - 132	5	16
Methyl acetate	10	U	100	108		ug/L		108	52 - 139	14	14
Methylcyclohexane	1.0	U	50.0	39.5		ug/L		79	46 - 139	1	35
Methylene Chloride	5.0	U	50.0	46.1		ug/L		92	52 - 137	1	12
4-Methyl-2-pentanone (MIBK)	10	U	100	117		ug/L		117	53 - 147	16	16
Methyl tert-butyl ether	1.0	U	50.0	48.7		ug/L		97	67 - 125	8	12
Styrene	1.0	U	50.0	47.0		ug/L		94	74 - 125	4	14
1,1,2,2-Tetrachloroethane	1.0	U	50.0	54.1		ug/L		108	51 - 123	13	17
Tetrachloroethene	1.0	U	50.0	41.5		ug/L		83	69 - 126	5	18
Toluene	1.0	U	50.0	43.9		ug/L		88	69 - 125	2	14
trans-1,2-Dichloroethene	1.0	U	50.0	44.2		ug/L		88	66 - 131	1	11
trans-1,3-Dichloropropene	1.0	U	50.0	38.5		ug/L		77	59 - 120	9	14
1,2,4-Trichlorobenzene	1.0	U	50.0	42.7		ug/L		85	26 - 138	12	35
1,1,1-Trichloroethane	1.0	U	50.0	41.2		ug/L		82	57 - 156	2	13
1,1,2-Trichloroethane	1.0	U	50.0	53.3		ug/L		107	68 - 127	7	11
Trichloroethene	1.0	U	50.0	41.6		ug/L		83	68 - 129	0	12
Trichlorofluoromethane	1.0	U	20.0	14.6		ug/L		73	28 - 172	4	26
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	50.0	39.0		ug/L		78	58 - 137	4	35
1,2,4-Trimethylbenzene	1.0	U	50.0	45.0		ug/L		90	64 - 120	9	22

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

Lab Sample ID: 240-95779-1 MSD
Matrix: Water
Analysis Batch: 328712

Client Sample ID: MW-58_051418
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trimethylbenzene	1.0	U	50.0	44.9		ug/L		90	67 - 120	8	25
Vinyl chloride	1.0	U	20.0	14.9		ug/L		75	55 - 123	4	12
Xylenes, Total	2.0	U	100	90.0		ug/L		90	71 - 122	4	14
1,4-Dioxane	50	U	1000	1220		ug/L		122	13 - 155	14	35
Diethyl ether	2.0	U	50.0	52.4		ug/L		105	65 - 124	7	11

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*69 - 120*
Dibromofluoromethane (Surr)	*101*		*69 - 124*
1,2-Dichloroethane-d4 (Surr)	*98*		*61 - 138*
Toluene-d8 (Surr)	*105*		*73 - 120*

Lab Sample ID: MB 240-328754/7
Matrix: Water
Analysis Batch: 328754

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			05/26/18 18:36	1
Benzene	1.0	U	1.0	0.28	ug/L			05/26/18 18:36	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			05/26/18 18:36	1
Bromoform	1.0	U	1.0	0.43	ug/L			05/26/18 18:36	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/26/18 18:36	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/26/18 18:36	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			05/26/18 18:36	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			05/26/18 18:36	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			05/26/18 18:36	1
Chloroethane	1.0	U	1.0	0.41	ug/L			05/26/18 18:36	1
Chloroform	1.0	U	1.0	0.31	ug/L			05/26/18 18:36	1
Chloromethane	1.0	U	1.0	0.43	ug/L			05/26/18 18:36	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/26/18 18:36	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			05/26/18 18:36	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			05/26/18 18:36	1
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			05/26/18 18:36	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			05/26/18 18:36	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			05/26/18 18:36	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			05/26/18 18:36	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			05/26/18 18:36	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			05/26/18 18:36	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			05/26/18 18:36	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/26/18 18:36	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/26/18 18:36	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			05/26/18 18:36	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			05/26/18 18:36	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			05/26/18 18:36	1
2-Hexanone	10	U	10	1.2	ug/L			05/26/18 18:36	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			05/26/18 18:36	1
Methyl acetate	10	U	10	1.4	ug/L			05/26/18 18:36	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			05/26/18 18:36	1

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

Lab Sample ID: MB 240-328754/7
Matrix: Water
Analysis Batch: 328754

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	5.0	U	5.0	0.53	ug/L			05/26/18 18:36	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			05/26/18 18:36	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			05/26/18 18:36	1
Styrene	1.0	U	1.0	0.23	ug/L			05/26/18 18:36	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			05/26/18 18:36	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			05/26/18 18:36	1
Toluene	1.0	U	1.0	0.23	ug/L			05/26/18 18:36	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			05/26/18 18:36	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			05/26/18 18:36	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			05/26/18 18:36	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			05/26/18 18:36	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			05/26/18 18:36	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			05/26/18 18:36	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			05/26/18 18:36	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/26/18 18:36	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			05/26/18 18:36	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/26/18 18:36	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/26/18 18:36	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/26/18 18:36	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			05/26/18 18:36	1
1,4-Dioxane	50	U	50	12	ug/L			05/26/18 18:36	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			05/26/18 18:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*69 - 120*		*05/26/18 18:36*	*1*
Dibromofluoromethane (Surr)	*96*		*69 - 124*		*05/26/18 18:36*	*1*
1,2-Dichloroethane-d4 (Surr)	*97*		*61 - 138*		*05/26/18 18:36*	*1*
Toluene-d8 (Surr)	*93*		*73 - 120*		*05/26/18 18:36*	*1*

Lab Sample ID: LCS 240-328754/5
Matrix: Water
Analysis Batch: 328754

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	23.4		ug/L		117	35 - 131
Benzene	10.0	10.4		ug/L		104	79 - 120
Bromodichloromethane	10.0	9.91		ug/L		99	79 - 125
Bromoform	10.0	10.6		ug/L		106	55 - 145
Bromomethane	10.0	11.5		ug/L		115	17 - 158
2-Butanone (MEK)	20.0	22.8		ug/L		114	43 - 149
Carbon disulfide	10.0	10.7		ug/L		107	49 - 141
Carbon tetrachloride	10.0	10.1		ug/L		101	55 - 171
Chlorobenzene	10.0	11.1		ug/L		111	80 - 120
Chloroethane	10.0	12.2		ug/L		122	10 - 149
Chloroform	10.0	10.5		ug/L		105	80 - 120
Chloromethane	10.0	10.8		ug/L		108	59 - 124
cis-1,2-Dichloroethene	10.0	10.2		ug/L		102	77 - 120
cis-1,3-Dichloropropene	10.0	9.08		ug/L		91	75 - 120

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

Lab Sample ID: LCS 240-328754/5
Matrix: Water
Analysis Batch: 328754

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyclohexane	10.0	11.6		ug/L		116	66 - 135
Dibromochloromethane	10.0	10.7		ug/L		107	64 - 129
1,2-Dibromo-3-Chloropropane	10.0	8.27		ug/L		83	50 - 130
1,2-Dibromoethane	10.0	10.8		ug/L		108	80 - 120
1,2-Dichlorobenzene	10.0	10.6		ug/L		106	80 - 120
1,3-Dichlorobenzene	10.0	11.2		ug/L		112	80 - 120
1,4-Dichlorobenzene	10.0	11.3		ug/L		113	80 - 120
Dichlorodifluoromethane	10.0	10.4		ug/L		104	42 - 141
1,1-Dichloroethane	10.0	10.4		ug/L		104	74 - 120
1,2-Dichloroethane	10.0	11.2		ug/L		112	68 - 133
1,1-Dichloroethene	10.0	10.7		ug/L		107	65 - 127
1,2-Dichloropropane	10.0	10.7		ug/L		107	78 - 127
Ethylbenzene	10.0	10.7		ug/L		107	80 - 120
2-Hexanone	20.0	19.5		ug/L		98	28 - 169
Isopropylbenzene	10.0	10.6		ug/L		106	80 - 128
Methyl acetate	20.0	19.5		ug/L		97	63 - 137
Methylcyclohexane	10.0	10.1		ug/L		101	63 - 141
Methylene Chloride	10.0	10.1		ug/L		101	64 - 140
4-Methyl-2-pentanone (MIBK)	20.0	18.7		ug/L		93	53 - 144
Methyl tert-butyl ether	10.0	7.21	*	ug/L		72	73 - 120
Styrene	10.0	10.6		ug/L		106	80 - 121
1,1,2,2-Tetrachloroethane	10.0	11.3		ug/L		113	58 - 122
Tetrachloroethene	10.0	11.4		ug/L		114	80 - 122
Toluene	10.0	11.3		ug/L		113	78 - 120
trans-1,2-Dichloroethene	10.0	10.9		ug/L		109	74 - 124
trans-1,3-Dichloropropene	10.0	8.43		ug/L		84	67 - 120
1,2,4-Trichlorobenzene	10.0	9.35		ug/L		94	34 - 141
1,1,1-Trichloroethane	10.0	9.68		ug/L		97	64 - 147
1,1,2-Trichloroethane	10.0	11.4		ug/L		114	76 - 121
Trichloroethene	10.0	10.1		ug/L		101	76 - 124
Trichlorofluoromethane	10.0	13.3		ug/L		133	27 - 176
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	11.9		ug/L		119	65 - 144
1,2,4-Trimethylbenzene	10.0	10.6		ug/L		106	80 - 120
1,3,5-Trimethylbenzene	10.0	10.8		ug/L		108	79 - 120
Vinyl chloride	10.0	12.2		ug/L		122	65 - 124
Xylenes, Total	20.0	21.3		ug/L		107	80 - 120
1,4-Dioxane	200	97.9		ug/L		49	35 - 134
Diethyl ether	10.0	11.3		ug/L		113	72 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*69 - 120*
Dibromofluoromethane (Surr)	*98*		*69 - 124*
1,2-Dichloroethane-d4 (Surr)	*99*		*61 - 138*
Toluene-d8 (Surr)	*101*		*73 - 120*

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

Lab Sample ID: MB 240-328928/7
Matrix: Water
Analysis Batch: 328928

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			05/29/18 14:23	1
Benzene	1.0	U	1.0	0.28	ug/L			05/29/18 14:23	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			05/29/18 14:23	1
Bromoform	1.0	U	1.0	0.43	ug/L			05/29/18 14:23	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/29/18 14:23	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/29/18 14:23	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			05/29/18 14:23	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			05/29/18 14:23	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			05/29/18 14:23	1
Chloroethane	1.0	U	1.0	0.41	ug/L			05/29/18 14:23	1
Chloroform	1.0	U	1.0	0.31	ug/L			05/29/18 14:23	1
Chloromethane	1.0	U	1.0	0.43	ug/L			05/29/18 14:23	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/29/18 14:23	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			05/29/18 14:23	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			05/29/18 14:23	1
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			05/29/18 14:23	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			05/29/18 14:23	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			05/29/18 14:23	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			05/29/18 14:23	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			05/29/18 14:23	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			05/29/18 14:23	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			05/29/18 14:23	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/29/18 14:23	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/29/18 14:23	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			05/29/18 14:23	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			05/29/18 14:23	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			05/29/18 14:23	1
2-Hexanone	10	U	10	1.2	ug/L			05/29/18 14:23	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			05/29/18 14:23	1
Methyl acetate	10	U	10	1.4	ug/L			05/29/18 14:23	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			05/29/18 14:23	1
Methylene Chloride	0.673	J	5.0	0.53	ug/L			05/29/18 14:23	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			05/29/18 14:23	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			05/29/18 14:23	1
Styrene	1.0	U	1.0	0.23	ug/L			05/29/18 14:23	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			05/29/18 14:23	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			05/29/18 14:23	1
Toluene	1.0	U	1.0	0.23	ug/L			05/29/18 14:23	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			05/29/18 14:23	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			05/29/18 14:23	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			05/29/18 14:23	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			05/29/18 14:23	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			05/29/18 14:23	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			05/29/18 14:23	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			05/29/18 14:23	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/29/18 14:23	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			05/29/18 14:23	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/29/18 14:23	1

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

Lab Sample ID: MB 240-328928/7
Matrix: Water
Analysis Batch: 328928

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/29/18 14:23	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/29/18 14:23	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			05/29/18 14:23	1
1,4-Dioxane	50	U	50	12	ug/L			05/29/18 14:23	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			05/29/18 14:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*69 - 120*		*05/29/18 14:23*	*1*
Dibromofluoromethane (Surr)	*97*		*69 - 124*		*05/29/18 14:23*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*61 - 138*		*05/29/18 14:23*	*1*
Toluene-d8 (Surr)	*95*		*73 - 120*		*05/29/18 14:23*	*1*

Lab Sample ID: LCS 240-328928/5
Matrix: Water
Analysis Batch: 328928

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	24.1		ug/L		121	35 - 131
Benzene	10.0	10.5		ug/L		105	79 - 120
Bromodichloromethane	10.0	10.0		ug/L		100	79 - 125
Bromoform	10.0	10.8		ug/L		108	55 - 145
Bromomethane	10.0	11.2		ug/L		112	17 - 158
2-Butanone (MEK)	20.0	24.1		ug/L		121	43 - 149
Carbon disulfide	10.0	10.7		ug/L		107	49 - 141
Carbon tetrachloride	10.0	9.96		ug/L		100	55 - 171
Chlorobenzene	10.0	10.8		ug/L		108	80 - 120
Chloroethane	10.0	12.3		ug/L		123	10 - 149
Chloroform	10.0	10.3		ug/L		103	80 - 120
Chloromethane	10.0	10.4		ug/L		104	59 - 124
cis-1,2-Dichloroethene	10.0	10.2		ug/L		102	77 - 120
cis-1,3-Dichloropropene	10.0	9.51		ug/L		95	75 - 120
Cyclohexane	10.0	11.6		ug/L		116	66 - 135
Dibromochloromethane	10.0	10.7		ug/L		107	64 - 129
1,2-Dibromo-3-Chloropropane	10.0	9.54		ug/L		95	50 - 130
1,2-Dibromoethane	10.0	10.4		ug/L		104	80 - 120
1,2-Dichlorobenzene	10.0	11.0		ug/L		110	80 - 120
1,3-Dichlorobenzene	10.0	10.7		ug/L		107	80 - 120
1,4-Dichlorobenzene	10.0	11.0		ug/L		110	80 - 120
Dichlorodifluoromethane	10.0	9.66		ug/L		97	42 - 141
1,1-Dichloroethane	10.0	10.4		ug/L		104	74 - 120
1,2-Dichloroethane	10.0	11.3		ug/L		113	68 - 133
1,1-Dichloroethene	10.0	10.8		ug/L		108	65 - 127
1,2-Dichloropropane	10.0	11.0		ug/L		110	78 - 127
Ethylbenzene	10.0	10.5		ug/L		105	80 - 120
2-Hexanone	20.0	21.7		ug/L		109	28 - 169
Isopropylbenzene	10.0	10.5		ug/L		105	80 - 128
Methyl acetate	20.0	20.5		ug/L		102	63 - 137
Methylcyclohexane	10.0	10.3		ug/L		103	63 - 141

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

Lab Sample ID: LCS 240-328928/5
Matrix: Water
Analysis Batch: 328928

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methylene Chloride	10.0	10.3		ug/L		103	64 - 140
4-Methyl-2-pentanone (MIBK)	20.0	19.5		ug/L		98	53 - 144
Methyl tert-butyl ether	10.0	7.40		ug/L		74	73 - 120
Styrene	10.0	10.7		ug/L		107	80 - 121
1,1,2,2-Tetrachloroethane	10.0	11.0		ug/L		110	58 - 122
Tetrachloroethene	10.0	11.0		ug/L		110	80 - 122
Toluene	10.0	10.6		ug/L		106	78 - 120
trans-1,2-Dichloroethene	10.0	11.1		ug/L		111	74 - 124
trans-1,3-Dichloropropene	10.0	8.33		ug/L		83	67 - 120
1,2,4-Trichlorobenzene	10.0	12.3		ug/L		123	34 - 141
1,1,1-Trichloroethane	10.0	9.33		ug/L		93	64 - 147
1,1,2-Trichloroethane	10.0	11.2		ug/L		112	76 - 121
Trichloroethene	10.0	10.2		ug/L		102	76 - 124
Trichlorofluoromethane	10.0	12.8		ug/L		128	27 - 176
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	12.2		ug/L		122	65 - 144
1,2,4-Trimethylbenzene	10.0	10.3		ug/L		103	80 - 120
1,3,5-Trimethylbenzene	10.0	10.3		ug/L		103	79 - 120
Vinyl chloride	10.0	11.6		ug/L		116	65 - 124
Xylenes, Total	20.0	20.7		ug/L		104	80 - 120
1,4-Dioxane	200	162		ug/L		81	35 - 134
Diethyl ether	10.0	11.1		ug/L		111	72 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*69 - 120*
Dibromofluoromethane (Surr)	*96*		*69 - 124*
1,2-Dichloroethane-d4 (Surr)	*99*		*61 - 138*
Toluene-d8 (Surr)	*97*		*73 - 120*

Lab Sample ID: 240-95779-5 MS
Matrix: Water
Analysis Batch: 328928

Client Sample ID: PW-16-01_051518
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	16	J	160	159		ug/L		90	19 - 133
Benzene	6.6	J	80.0	75.4		ug/L		86	69 - 127
Bromodichloromethane	3.8	J	80.0	72.3		ug/L		86	75 - 128
Bromoform	8.0	U	80.0	73.4		ug/L		92	61 - 135
Bromomethane	7.5	J	80.0	88.9		ug/L		102	10 - 148
2-Butanone (MEK)	16	J	160	184		ug/L		105	34 - 153
Carbon disulfide	8.4	J	80.0	73.4		ug/L		81	46 - 143
Carbon tetrachloride	7.4	J	80.0	72.6		ug/L		81	53 - 175
Chlorobenzene	5.3	J	80.0	79.5		ug/L		93	76 - 120
Chloroethane	11		80.0	94.5		ug/L		104	10 - 141
Chloroform	5.4	J	80.0	74.2		ug/L		86	74 - 125
Chloromethane	8.6		80.0	83.8		ug/L		94	34 - 127
cis-1,2-Dichloroethene	39	F1	80.0	251	F1	ug/L		265	69 - 127
cis-1,3-Dichloropropene	3.1	J	80.0	65.3		ug/L		78	68 - 120

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

Lab Sample ID: 240-95779-5 MS
Matrix: Water
Analysis Batch: 328928

Client Sample ID: PW-16-01_051518
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyclohexane	11		80.0	81.4		ug/L		87	56 - 135
Dibromochloromethane	3.2	J	80.0	77.0		ug/L		92	62 - 131
1,2-Dibromo-3-Chloropropane	8.0	U	80.0	65.2		ug/L		81	48 - 130
1,2-Dibromoethane	2.8	J	80.0	78.5		ug/L		95	73 - 121
1,2-Dichlorobenzene	4.5	J	80.0	77.4		ug/L		91	70 - 120
1,3-Dichlorobenzene	5.9	J	80.0	80.5		ug/L		93	71 - 120
1,4-Dichlorobenzene	5.2	J	80.0	78.3		ug/L		91	72 - 120
Dichlorodifluoromethane	10		80.0	74.4		ug/L		80	45 - 130
1,1-Dichloroethane	6.5	J	80.0	74.4		ug/L		85	69 - 122
1,2-Dichloroethane	4.0	J	80.0	81.6		ug/L		97	64 - 138
1,1-Dichloroethene	9.5		80.0	77.0		ug/L		84	62 - 127
1,2-Dichloropropane	4.9	J	80.0	76.7		ug/L		90	72 - 131
Ethylbenzene	6.4	J	80.0	74.7		ug/L		85	72 - 121
2-Hexanone	80	U	160	167		ug/L		104	21 - 184
Isopropylbenzene	7.6	J	80.0	72.9		ug/L		82	70 - 132
Methyl acetate	80	U	160	161		ug/L		100	52 - 139
Methylcyclohexane	15		80.0	71.9		ug/L		71	46 - 139
Methylene Chloride	10	J B	80.0	77.2		ug/L		84	52 - 137
4-Methyl-2-pentanone (MIBK)	80	U	160	145		ug/L		91	53 - 147
Methyl tert-butyl ether	8.0	U F1	80.0	52.8	F1	ug/L		66	67 - 125
Styrene	4.0	J	80.0	76.6		ug/L		91	74 - 125
1,1,2,2-Tetrachloroethane	3.4	J	80.0	86.5		ug/L		104	51 - 123
Tetrachloroethene	9.8		80.0	80.1		ug/L		88	69 - 126
Toluene	6.7	J	80.0	77.9		ug/L		89	69 - 125
trans-1,2-Dichloroethene	8.3		80.0	80.6		ug/L		90	66 - 131
trans-1,3-Dichloropropene	8.0	U	80.0	61.0		ug/L		76	59 - 120
1,2,4-Trichlorobenzene	7.7	J	80.0	60.5		ug/L		66	26 - 138
1,1,1-Trichloroethane	6.5	J	80.0	66.7		ug/L		75	57 - 156
1,1,2-Trichloroethane	3.1	J	80.0	85.7		ug/L		103	68 - 127
Trichloroethene	6.8	J	80.0	72.5		ug/L		82	68 - 129
Trichlorofluoromethane	13		80.0	98.9		ug/L		107	28 - 172
1,1,2-Trichloro-1,2,2-trifluoroethane	11		80.0	85.2		ug/L		93	58 - 137
1,2,4-Trimethylbenzene	6.1	J	80.0	74.7		ug/L		86	64 - 120
1,3,5-Trimethylbenzene	7.5	J	80.0	77.3		ug/L		87	67 - 120
Vinyl chloride	190	F1	80.0	1100	E F1	ug/L		1145	55 - 123
Xylenes, Total	11	J	160	149		ug/L		86	71 - 122
1,4-Dioxane	130	J	1600	930		ug/L		50	13 - 155
Diethyl ether	4.2	J	80.0	85.5		ug/L		102	65 - 124

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*90*		*69 - 120*
Dibromofluoromethane (Surr)	*92*		*69 - 124*
1,2-Dichloroethane-d4 (Surr)	*99*		*61 - 138*
Toluene-d8 (Surr)	*99*		*73 - 120*

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

Lab Sample ID: 240-95779-5 MSD
Matrix: Water
Analysis Batch: 328928

Client Sample ID: PW-16-01_051518
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	16	J	160	171		ug/L		97	19 - 133	7	35
Benzene	6.6	J	80.0	73.2		ug/L		83	69 - 127	3	10
Bromodichloromethane	3.8	J	80.0	70.5		ug/L		83	75 - 128	2	13
Bromoform	8.0	U	80.0	75.2		ug/L		94	61 - 135	2	13
Bromomethane	7.5	J	80.0	87.2		ug/L		100	10 - 148	2	35
2-Butanone (MEK)	16	J	160	185		ug/L		106	34 - 153	1	23
Carbon disulfide	8.4	J	80.0	70.9		ug/L		78	46 - 143	3	18
Carbon tetrachloride	7.4	J	80.0	70.7		ug/L		79	53 - 175	3	17
Chlorobenzene	5.3	J	80.0	77.9		ug/L		91	76 - 120	2	12
Chloroethane	11		80.0	94.9		ug/L		105	10 - 141	0	35
Chloroform	5.4	J	80.0	74.1		ug/L		86	74 - 125	0	11
Chloromethane	8.6		80.0	82.4		ug/L		92	34 - 127	2	25
cis-1,2-Dichloroethene	39	F1	80.0	255	F1	ug/L		271	69 - 127	2	11
cis-1,3-Dichloropropene	3.1	J	80.0	63.5		ug/L		76	68 - 120	3	13
Cyclohexane	11		80.0	80.6		ug/L		86	56 - 135	1	35
Dibromochloromethane	3.2	J	80.0	77.3		ug/L		93	62 - 131	0	15
1,2-Dibromo-3-Chloropropane	8.0	U	80.0	72.0		ug/L		90	48 - 130	10	31
1,2-Dibromoethane	2.8	J	80.0	81.0		ug/L		98	73 - 121	3	12
1,2-Dichlorobenzene	4.5	J	80.0	77.1		ug/L		91	70 - 120	0	19
1,3-Dichlorobenzene	5.9	J	80.0	76.0		ug/L		88	71 - 120	6	18
1,4-Dichlorobenzene	5.2	J	80.0	80.5		ug/L		94	72 - 120	3	17
Dichlorodifluoromethane	10		80.0	73.4		ug/L		79	45 - 130	1	34
1,1-Dichloroethane	6.5	J	80.0	72.8		ug/L		83	69 - 122	2	11
1,2-Dichloroethane	4.0	J	80.0	82.3		ug/L		98	64 - 138	1	11
1,1-Dichloroethene	9.5		80.0	76.3		ug/L		84	62 - 127	1	14
1,2-Dichloropropane	4.9	J	80.0	76.6		ug/L		90	72 - 131	0	12
Ethylbenzene	6.4	J	80.0	74.5		ug/L		85	72 - 121	0	15
2-Hexanone	80	U	160	171		ug/L		107	21 - 184	3	12
Isopropylbenzene	7.6	J	80.0	73.6		ug/L		82	70 - 132	1	16
Methyl acetate	80	U	160	162		ug/L		101	52 - 139	1	14
Methylcyclohexane	15		80.0	72.1		ug/L		72	46 - 139	0	35
Methylene Chloride	10	J B	80.0	75.4		ug/L		82	52 - 137	2	12
4-Methyl-2-pentanone (MIBK)	80	U	160	152		ug/L		95	53 - 147	4	16
Methyl tert-butyl ether	8.0	U F1	80.0	51.8	F1	ug/L		65	67 - 125	2	12
Styrene	4.0	J	80.0	76.6		ug/L		91	74 - 125	0	14
1,1,2,2-Tetrachloroethane	3.4	J	80.0	86.0		ug/L		103	51 - 123	1	17
Tetrachloroethene	9.8		80.0	79.7		ug/L		87	69 - 126	0	18
Toluene	6.7	J	80.0	77.4		ug/L		88	69 - 125	1	14
trans-1,2-Dichloroethene	8.3		80.0	82.3		ug/L		92	66 - 131	2	11
trans-1,3-Dichloropropene	8.0	U	80.0	60.2		ug/L		75	59 - 120	1	14
1,2,4-Trichlorobenzene	7.7	J	80.0	67.1		ug/L		74	26 - 138	10	35
1,1,1-Trichloroethane	6.5	J	80.0	65.7		ug/L		74	57 - 156	2	13
1,1,2-Trichloroethane	3.1	J	80.0	81.7		ug/L		98	68 - 127	5	11
Trichloroethene	6.8	J	80.0	75.0		ug/L		85	68 - 129	3	12
Trichlorofluoromethane	13		80.0	98.6		ug/L		107	28 - 172	0	26
1,1,2-Trichloro-1,2,2-trifluoroethane	11		80.0	82.3		ug/L		89	58 - 137	3	35
1,2,4-Trimethylbenzene	6.1	J	80.0	74.1		ug/L		85	64 - 120	1	22

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

Lab Sample ID: 240-95779-5 MSD
Matrix: Water
Analysis Batch: 328928

Client Sample ID: PW-16-01_051518
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trimethylbenzene	7.5	J	80.0	76.2		ug/L		86	67 - 120	1	25
Vinyl chloride	190	F1	80.0	1130	E F1	ug/L		1184	55 - 123	3	12
Xylenes, Total	11	J	160	150		ug/L		87	71 - 122	1	14
1,4-Dioxane	130	J	1600	1040		ug/L		56	13 - 155	11	35
Diethyl ether	4.2	J	80.0	84.0		ug/L		100	65 - 124	2	11

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*88*		*69 - 120*
Dibromofluoromethane (Surr)	*96*		*69 - 124*
1,2-Dichloroethane-d4 (Surr)	*100*		*61 - 138*
Toluene-d8 (Surr)	*98*		*73 - 120*

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

Lab Sample ID: MB 240-328355/5
Matrix: Water
Analysis Batch: 328355

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.24	ug/L			05/24/18 12:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*77*		*63 - 125*		*05/24/18 12:25*	*1*

Lab Sample ID: LCS 240-328355/4
Matrix: Water
Analysis Batch: 328355

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			10.0	8.55		ug/L		86	59 - 131		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*81*		*63 - 125*

Lab Sample ID: 240-95779-1 MS
Matrix: Water
Analysis Batch: 328355

Client Sample ID: MW-58_051418
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane	3.6		10.0	13.0		ug/L		94	52 - 129		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*79*		*63 - 125*

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

Lab Sample ID: 240-95779-1 MSD
Matrix: Water
Analysis Batch: 328355

Client Sample ID: MW-58_051418
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane	3.6		10.0	11.6		ug/L		80	52 - 129	11	13

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*76*		*63 - 125*

Lab Sample ID: 240-95779-5 MS
Matrix: Water
Analysis Batch: 328355

Client Sample ID: PW-16-01_051518
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane	2.0	U	10.0	9.06		ug/L		91	52 - 129		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*70*		*63 - 125*

Lab Sample ID: 240-95779-5 MSD
Matrix: Water
Analysis Batch: 328355

Client Sample ID: PW-16-01_051518
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane	2.0	U	10.0	8.97		ug/L		90	52 - 129	1	13

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*75*		*63 - 125*

GC/MS VOA

Analysis Batch: 328355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-95779-1	MW-58_051418	Total/NA	Water	8260B SIM	
240-95779-2	MW-70_051418	Total/NA	Water	8260B SIM	
240-95779-3	MW-51_051418	Total/NA	Water	8260B SIM	
240-95779-4	TW-16-01_051518	Total/NA	Water	8260B SIM	
240-95779-5	PW-16-01_051518	Total/NA	Water	8260B SIM	
240-95779-6	MW-68_051518	Total/NA	Water	8260B SIM	
240-95779-7	MW-21_051518	Total/NA	Water	8260B SIM	
240-95779-8	MW-28_051518	Total/NA	Water	8260B SIM	
240-95779-9	DUP-04_051518	Total/NA	Water	8260B SIM	
240-95779-10	MW-48_051518	Total/NA	Water	8260B SIM	
MB 240-328355/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-328355/4	Lab Control Sample	Total/NA	Water	8260B SIM	
240-95779-1 MS	MW-58_051418	Total/NA	Water	8260B SIM	
240-95779-1 MSD	MW-58_051418	Total/NA	Water	8260B SIM	
240-95779-5 MS	PW-16-01_051518	Total/NA	Water	8260B SIM	
240-95779-5 MSD	PW-16-01_051518	Total/NA	Water	8260B SIM	

Analysis Batch: 328712

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-95779-1	MW-58_051418	Total/NA	Water	8260B	
240-95779-2	MW-70_051418	Total/NA	Water	8260B	
240-95779-3	MW-51_051418	Total/NA	Water	8260B	
MB 240-328712/5	Method Blank	Total/NA	Water	8260B	
LCS 240-328712/4	Lab Control Sample	Total/NA	Water	8260B	
240-95779-1 MS	MW-58_051418	Total/NA	Water	8260B	
240-95779-1 MSD	MW-58_051418	Total/NA	Water	8260B	

Analysis Batch: 328754

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-95779-4	TW-16-01_051518	Total/NA	Water	8260B	
240-95779-5	PW-16-01_051518	Total/NA	Water	8260B	
240-95779-6	MW-68_051518	Total/NA	Water	8260B	
240-95779-7	MW-21_051518	Total/NA	Water	8260B	
240-95779-8	MW-28_051518	Total/NA	Water	8260B	
240-95779-9	DUP-04_051518	Total/NA	Water	8260B	
240-95779-10	MW-48_051518	Total/NA	Water	8260B	
240-95779-11	TRIP BLANK	Total/NA	Water	8260B	
MB 240-328754/7	Method Blank	Total/NA	Water	8260B	
LCS 240-328754/5	Lab Control Sample	Total/NA	Water	8260B	

Analysis Batch: 328928

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-95779-5 - RA	PW-16-01_051518	Total/NA	Water	8260B	
MB 240-328928/7	Method Blank	Total/NA	Water	8260B	
LCS 240-328928/5	Lab Control Sample	Total/NA	Water	8260B	
240-95779-5 MS	PW-16-01_051518	Total/NA	Water	8260B	
240-95779-5 MSD	PW-16-01_051518	Total/NA	Water	8260B	

Client Sample ID: MW-58_051418

Lab Sample ID: 240-95779-1

Date Collected: 05/14/18 14:19

Matrix: Water

Date Received: 05/18/18 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	328712	05/26/18 15:43	SAM	TAL CAN
Total/NA	Analysis	8260B SIM		1	328355	05/24/18 13:15	SAM	TAL CAN

Client Sample ID: MW-70_051418

Lab Sample ID: 240-95779-2

Date Collected: 05/14/18 15:24

Matrix: Water

Date Received: 05/18/18 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		3.333	328712	05/26/18 16:59	SAM	TAL CAN
Total/NA	Analysis	8260B SIM		1	328355	05/24/18 14:30	SAM	TAL CAN

Client Sample ID: MW-51_051418

Lab Sample ID: 240-95779-3

Date Collected: 05/14/18 16:21

Matrix: Water

Date Received: 05/18/18 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	328712	05/26/18 17:24	SAM	TAL CAN
Total/NA	Analysis	8260B SIM		1	328355	05/24/18 14:56	SAM	TAL CAN

Client Sample ID: TW-16-01_051518

Lab Sample ID: 240-95779-4

Date Collected: 05/15/18 09:10

Matrix: Water

Date Received: 05/18/18 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		33.33	328754	05/26/18 23:24	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	328355	05/24/18 17:52	SAM	TAL CAN

Client Sample ID: PW-16-01_051518

Lab Sample ID: 240-95779-5

Date Collected: 05/15/18 10:23

Matrix: Water

Date Received: 05/18/18 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		14.28	328754	05/27/18 02:29	LRW	TAL CAN
Total/NA	Analysis	8260B	RA	8	328928	05/29/18 15:53	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	328355	05/24/18 18:17	SAM	TAL CAN

Client Sample ID: MW-68_051518

Lab Sample ID: 240-95779-6

Date Collected: 05/15/18 11:30

Matrix: Water

Date Received: 05/18/18 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	328754	05/26/18 23:47	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	328355	05/24/18 19:32	SAM	TAL CAN

Client Sample ID: MW-21_051518

Lab Sample ID: 240-95779-7

Date Collected: 05/15/18 13:35

Matrix: Water

Date Received: 05/18/18 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1000	328754	05/27/18 00:10	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	328355	05/24/18 19:57	SAM	TAL CAN

Client Sample ID: MW-28_051518

Lab Sample ID: 240-95779-8

Date Collected: 05/15/18 15:01

Matrix: Water

Date Received: 05/18/18 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	328754	05/27/18 00:34	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	328355	05/24/18 20:22	SAM	TAL CAN

Client Sample ID: DUP-04_051518

Lab Sample ID: 240-95779-9

Date Collected: 05/15/18 00:00

Matrix: Water

Date Received: 05/18/18 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		40	328754	05/27/18 00:57	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	328355	05/24/18 20:48	SAM	TAL CAN

Client Sample ID: MW-48_051518

Lab Sample ID: 240-95779-10

Date Collected: 05/15/18 16:13

Matrix: Water

Date Received: 05/18/18 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	328754	05/27/18 01:20	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	328355	05/24/18 21:13	SAM	TAL CAN

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-95779-11

Date Collected: 05/15/18 00:00

Matrix: Water

Date Received: 05/18/18 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	328754	05/27/18 01:43	LRW	TAL CAN

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95779-1

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Accreditation/Certification Summary

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP Livonia MI - E203728

TestAmerica Job ID: 240-95779-1

Laboratory: TestAmerica Canton

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

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	2927	02-23-19
Connecticut	State Program	1	PH-0590	12-31-19
Florida	NELAP	4	E87225	06-30-18 *
Illinois	NELAP	5	200004	07-31-18 *
Kansas	NELAP	7	E-10336	01-31-19
Kentucky (UST)	State Program	4	58	02-23-19
Kentucky (WW)	State Program	4	98016	12-31-18
Minnesota	NELAP	5	039-999-348	12-31-18
Minnesota (Petrofund)	State Program	1	3506	07-31-18 *
Nevada	State Program	9	OH-000482008A	07-31-18 *
New Jersey	NELAP	2	OH001	06-30-18 *
New York	NELAP	2	10975	03-31-19
Ohio VAP	State Program	5	CL0024	09-06-19
Oregon	NELAP	10	4062	02-23-19
Pennsylvania	NELAP	3	68-00340	08-31-18 *
Texas	NELAP	6	T104704517-17-9	08-31-18 *
USDA	Federal		P330-16-00404	12-28-19
Virginia	NELAP	3	460175	09-14-18 *
Washington	State Program	10	C971	01-12-19
West Virginia DEP	State Program	3	210	12-31-18

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

3.8/3.9 1.8/1.9

MICHIGAN 190

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

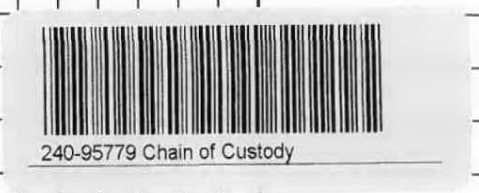
TestAmerica Laboratory location: Brighton --- 10448 Citation Drive, Suite 200 / Brighton, MI 48116 / 810-229-2763

Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other

TestAmerica Laboratories, Inc.

Client Contact	Client Project Manager: Kris Hinskey	Site Contact: Angela DeGrandis	Lab Contact: Denise Pohl	COC No: 1
Company Name: Arcadis				of 2 COCs
Address: 28550 Cabot Drive, Suite 500	Telephone: 248-994-2240	Telephone: 734-320-0065	Telephone: 330-966-9789	
City/State/Zip: Novi, MI, 48377	Email: kristoffer.hinskey@arcadis.com	Analysis Turnaround Time	Analyses	For lab use only
Phone: 248-994-2240		TAT if different from below: ☐ 3 weeks ☑ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day (10 day)		Walk-in client
Project Name: Ford LTP				Lab sampling
Project Number: MI001454.0004.00001	Method of Shipment/Carrier:			Job/SDG No
PO # MI001454.0004.00001	Shipping/Tracking No:			

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite=C / Grab=G	VOCs 8260B	1,4-Dioxane 8260B SIM	MS / MSD	Sample Specific Notes / Special Instructions:
MW-58_051418	5-14-18	1419		X						18					N	G	X	X	X	
MW-70_051418	5-14-18	1524		X						6					N	G	X	X		
MW-51_051418	5-14-18	1621		X						6					N	G	X	X		
TW-16-01_051518	5-15-18	910		X						6					N	G	X	X		
PW-16-01_051518	5-15-18	1023		X						18					N	G	X	X	X	
MW-68_051518	5-15-18	1130		X						6					N	G	X	X		
MW-21_051518	5-15-18	1335		X						6					N	G	X	X		
MW-28_051518	5-15-18	1501		X						6					N	G	X	X		
~~MW-48_051518~~	~~5-15-18~~	~~1613~~		~~X~~						~~6~~					~~N~~	~~G~~	~~X~~	~~X~~		KMB 5-15-18
DUP-04_051518	5-15-18	-		X						6					N	G	X	X		



Possible Hazard Identification: ☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return to Client ☑ Disposal By Lab ☐ Archive For ____ Months

Special Instructions/QC Requirements & Comments:

Submit all results through Cadena at jim.tomalia@cadena.com. Cadena #E203728

Lab#:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Kalan Briggs / KALAN BRIGGS	ARCADIS	5/15/18 / 1720	DIVYA KAMATH	ARCADIS	5/15/18 / 1720
DIVYA KAMATH	ARCADIS	5/15/18 / 1840	NOVI FRIDGE	ARCADIS	5/15/18 / 1840
RACHEL WISMAN ON BEHALF OF NOVI FRIDGE	ARCADIS	05/17/18 9:10	Received in Laboratory by: Jeni Hauli	Company: TAL PTK	Date/Time: 5/17/18 911 5/18/18 830

Jeni Hauli 5/17/18 935

MICHIGAN 190

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: Brighton — 10448 Citation Drive, Suite 200 / Brighton, MI 48116 / 810-229-2763

Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other

TestAmerica Laboratories, Inc.

Client Contact	Client Project Manager: Kris Hinskey	Site Contact: Angela DeGrandis	Lab Contact: Denise Pohl	COC No: 2
Company Name: Arcadis	Telephone: 248-994-2240	Telephone: 734-320-0065	Telephone: 330-966-9789	2 of 2 COCs
Address: 28550 Cabot Drive, Suite 500	Email: kristoffer.hinskey@arcadis.com	Analysis Turnaround Time		For lab use only
City/State/Zip: Novi, MI, 48377		TAT if different from below: ☐ 3 weeks ☑ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		Walk-in client:
Phone: 248-994-2240		10 day		Lab sampling:
Project Name: Ford LTP	Method of Shipment/Carrier:			Job/SDG No.
Project Number: MI001454.0004.00001	Shipping/Tracking No:			
PO # MI001454.0004.00001				

Analyses

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	Zn Ac/ NaOH	Unpres	Other:	Filtered Sample (Y / N)	Composite=C / Grab=G	VOCs 8260B	1,4-Dioxane 8260B SIM	Sample Specific Notes / Special Instructions:
MW-48_051518	5-15-18	1613		X						5					N	G	X	X	
TRIP BLANK	5.15.18	-		X						*					N	G	X	X	

Possible Hazard Identification: ☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return to Client ☑ Disposal By Lab ☐ Archive For ____ Months

Special Instructions/QC Requirements & Comments:

Submit all results through Cadena at jim.tomalia@cadenas.com. Cadena #E202728 Lab#:

Relinquished by	Company	Date/Time	Received by	Company	Date/Time
KALON OBIGGS	ARCADIS	5-15-18/1720	DIVYA KAMATH	ARCADIS	5/15/18/1720
DIVYA KAMATH	ARCADIS	5-15-18/1840	NOVI FRIDGE	ARCADIS	5/15/18/1840
RACHEL WISMAN OBO NOVI FRIDGE	ARCADIS	5/17/18 9:10	Received in Laboratory by:	Company: TAL	Date/Time: 5/17/18 9:11
5/17/18 935					5/18/18 830

6/15/2018 (Rev. 2)

TestAmerica Canton Sample Receipt Form/Narrative **Login # :** 95779
Canton Facility

Client Accuris Site Name _____ Cooler unpacked by: SAG

Cooler Received on 5/18/18 Opened on 5/18/18

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # 1A Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form

IR GUN# IR-8 (CF +0.1 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C

IR GUN #36 (CF +0.3°C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C

~~IR GUN # 627 (CF -1.3°C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C~~

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels be reconciled with the COC?	Yes	No
9. Were correct bottle(s) used for the test(s) indicated?	Yes	No
10. Sufficient quantity received to perform indicated analyses?	Yes	No
11. Are these work share samples?	Yes	No
If yes, Questions 12-16 have been checked at the originating laboratory.		
12. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC732776
13. Were VOAs on the COC?	Yes	No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this.	Yes	No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # N/A	Yes	No
16. Was a LL Hg or Me Hg trip blank present? _____	Yes	No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM ODJ Date 5-18-18 by AS via Verbal Voice Mail Other

Concerning #17

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: JR.

Did not rec'v. 1,4 Dioxane Sim volume for TB, will not log

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

WI-NC-099

TestAmerica Multiple Cooler Receipt Form/Narrative
Canton Facility

Login # : 45779

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
TA	8	3.8	3.9	Wet Ice
TA	8	1.8	1.9	" "