TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Canton
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Tel: (330)497-9396

TestAmerica Job ID: 240-91479-1
Client Project/Site: Ford LTP Livonia MI - E203728

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

Attn: Kristoffer Hinskey

Denise Pohl

Authorized for release by:
2/26/2018 5:00:13 PM

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
U	Indicates the analyte was analyzed for but not detected.
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.
F2	MS/MSD RPD exceeds control limits

Glossary

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

Job ID: 240-91479-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford LTP Livonia MI - E203728

Report Number: 240-91479-1

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.

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 2/14/2018 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.5º C and 2.9º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples MW-51_020818 (240-91479-1), MW-46_021218 (240-91479-2), MW-71_021218 (240-91479-3), MW-7_021218 (240-91479-4), MW-67_021218 (240-91479-5), TRIP BLANK (240-91479-6), MW-32_021218 (240-91479-7), MW-37_021218 (240-91479-8), MW-50_021218 (240-91479-9) and MW-68_021218 (240-91479-10) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 02/16/2018 and 02/19/2018.

2-Butanone (MEK), Dibromochloromethane and Diethyl ether failed the recovery criteria high for LCS 240-315091/5. 1,2-Dibromoethane, 2-Butanone (MEK), Dibromochloromethane and Diethyl ether failed the recovery criteria high for LCS 240-315290/4. Refer to the QC report for details.

Bromomethane failed the recovery criteria high for the MS of sample 240-91441-2 in batch 240-315091. Methyl tert-butyl ether failed the recovery criteria low for the MS of sample MW-71_021218MS (240-91479-3) in batch 240-315290. 1,1,2-Trichloro-1,2,2-trifluoroethane, Bromomethane, Dichlorodifluoromethane and Trichlorofluoromethane failed the recovery criteria high.
1,1,2-Trichloro-1,2,2-trifluoroethane, Bromomethane and Diethyl ether failed the recovery criteria high for the MSD of sample

Job ID: 240-91479-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

MW-71_021218MSD (240-91479-3) in batch 240-315290. 2-Hexanone exceeded the RPD limit. Refer to the QC report for details.

Samples MW-67_021218 (240-91479-5)[3.33X] and MW-50_021218 (240-91479-9)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8260B: The laboratory control sample (LCS) for analytical batch 240-315091 recovered outside control limits for multiple analytes: These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.
MW-51_020818 (240-91479-1), MW-46_021218 (240-91479-2), MW-7_021218 (240-91479-4), MW-67_021218 (240-91479-5), TRIP BLANK (240-91479-6), MW-32_021218 (240-91479-7), MW-37_021218 (240-91479-8), MW-50_021218 (240-91479-9) and (LCS 240-315091/5)

Method(s) 8260B: The laboratory control sample (LCS) for analytical batch 240-315290 recovered outside control limits for multiple analytes: These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.
MW-71_021218 (240-91479-3), MW-68_021218 (240-91479-10) and (LCS 240-315290/4)

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-51_020818 (240-91479-1), MW-46_021218 (240-91479-2), MW-71_021218 (240-91479-3), MW-7_021218 (240-91479-4), MW-67_021218 (240-91479-5), MW-32_021218 (240-91479-7), MW-37_021218 (240-91479-8), MW-50_021218 (240-91479-9) and MW-68_021218 (240-91479-10) were analyzed for volatile organic compounds (GCMS SIM) in accordance with EPA SW-846 Method 8260B SIM. The samples were analyzed on 02/19/2018 and 02/21/2018.

Method(s) 8260B SIM: The pH is greater than 2 for the following samples: (240-91428-C-6 MSD)

No additional 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: 240-91479-1

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

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: 240-91479-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-91479-1	MW-51_020818	Water	02/08/18 16:55	02/14/18 09:00
240-91479-2	MW-46_021218	Water	02/12/18 11:52	02/14/18 09:00
240-91479-3	MW-71_021218	Water	02/12/18 13:12	02/14/18 09:00
240-91479-4	MW-7_021218	Water	02/12/18 15:22	02/14/18 09:00
240-91479-5	MW-67_021218	Water	02/12/18 16:47	02/14/18 09:00
240-91479-6	TRIP BLANK	Water	02/12/18 00:00	02/14/18 09:00
240-91479-7	MW-32_021218	Water	02/12/18 10:15	02/14/18 09:00
240-91479-8	MW-37_021218	Water	02/12/18 12:17	02/14/18 09:00
240-91479-9	MW-50_021218	Water	02/12/18 16:05	02/14/18 09:00
240-91479-10	MW-68_021218	Water	02/12/18 14:17	02/14/18 09:00

Detection Summary

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

TestAmerica Job ID: 240-91479-1

Client Sample ID: MW-51_020818 — Lab Sample ID: 240-91479-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	1.1	J	2.0	0.24	ug/L	1		8260B SIM	Total/NA
cis-1,2-Dichloroethene	0.31	J	1.0	0.30	ug/L	1		8260B	Total/NA
1,1-Dichloroethane	0.84	J	1.0	0.25	ug/L	1		8260B	Total/NA

Client Sample ID: MW-46_021218 — Lab Sample ID: 240-91479-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	11		2.0	0.24	ug/L	1		8260B SIM	Total/NA
cis-1,2-Dichloroethene	14		1.0	0.30	ug/L	1		8260B	Total/NA
1,1-Dichloroethane	2.4		1.0	0.25	ug/L	1		8260B	Total/NA
1,2-Dichloroethane	0.55	J	1.0	0.30	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	0.46	J	1.0	0.27	ug/L	1		8260B	Total/NA
trans-1,2-Dichloroethene	1.7		1.0	0.29	ug/L	1		8260B	Total/NA
Vinyl chloride	38		1.0	0.45	ug/L	1		8260B	Total/NA

Client Sample ID: MW-71_021218 — Lab Sample ID: 240-91479-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	0.57	J	2.0	0.24	ug/L	1		8260B SIM	Total/NA
cis-1,2-Dichloroethene	0.37	J	1.0	0.30	ug/L	1		8260B	Total/NA
Vinyl chloride	0.59	J	1.0	0.45	ug/L	1		8260B	Total/NA

Client Sample ID: MW-7_021218 — Lab Sample ID: 240-91479-4

No Detections.

Client Sample ID: MW-67_021218 — Lab Sample ID: 240-91479-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	9.6		3.3	1.0	ug/L	3.33		8260B	Total/NA
Methylene Chloride	1.8	J	17	1.8	ug/L	3.33		8260B	Total/NA
trans-1,2-Dichloroethene	1.1	J	3.3	0.97	ug/L	3.33		8260B	Total/NA
Trichloroethene	83		3.3	1.1	ug/L	3.33		8260B	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 240-91479-6

No Detections.

Client Sample ID: MW-32_021218 — Lab Sample ID: 240-91479-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.37	J	1.0	0.30	ug/L	1		8260B	Total/NA

Client Sample ID: MW-37_021218 — Lab Sample ID: 240-91479-8

No Detections.

Client Sample ID: MW-50_021218 — Lab Sample ID: 240-91479-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	0.78	J	2.0	0.24	ug/L	1		8260B SIM	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Client Sample ID: MW-50_021218 (Continued) — Lab Sample ID: 240-91479-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	22		5.0	1.5	ug/L	5		8260B	Total/NA
Methylene Chloride	3.5	J	25	2.7	ug/L	5		8260B	Total/NA
Vinyl chloride	76		5.0	2.3	ug/L	5		8260B	Total/NA

Client Sample ID: MW-68_021218 — Lab Sample ID: 240-91479-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	0.54	J	2.0	0.24	ug/L	1		8260B SIM	Total/NA
cis-1,2-Dichloroethene	13		1.0	0.30	ug/L	1		8260B	Total/NA
1,1-Dichloroethane	2.0		1.0	0.25	ug/L	1		8260B	Total/NA
trans-1,2-Dichloroethene	1.8		1.0	0.29	ug/L	1		8260B	Total/NA
Vinyl chloride	2.5		1.0	0.45	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-51_020818
Date Collected: 02/08/18 16:55
Date Received: 02/14/18 09:00

Lab Sample ID: 240-91479-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**1.1**	**J**	2.0	0.24	ug/L			02/19/18 17:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*63 - 125*		*02/19/18 17:33*	*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			02/16/18 20:47	1
Benzene	1.0	U	1.0	0.28	ug/L			02/16/18 20:47	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			02/16/18 20:47	1
Bromoform	1.0	U	1.0	0.43	ug/L			02/16/18 20:47	1
Bromomethane	1.0	U	1.0	0.42	ug/L			02/16/18 20:47	1
2-Butanone (MEK)	10	U *	10	1.0	ug/L			02/16/18 20:47	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			02/16/18 20:47	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			02/16/18 20:47	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			02/16/18 20:47	1
Chloroethane	1.0	U	1.0	0.41	ug/L			02/16/18 20:47	1
Chloroform	1.0	U	1.0	0.31	ug/L			02/16/18 20:47	1
Chloromethane	1.0	U	1.0	0.43	ug/L			02/16/18 20:47	1
cis-1,2-Dichloroethene	**0.31**	**J**	1.0	0.30	ug/L			02/16/18 20:47	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			02/16/18 20:47	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			02/16/18 20:47	1
Dibromochloromethane	1.0	U *	1.0	0.25	ug/L			02/16/18 20:47	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			02/16/18 20:47	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			02/16/18 20:47	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			02/16/18 20:47	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			02/16/18 20:47	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			02/16/18 20:47	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			02/16/18 20:47	1
1,1-Dichloroethane	**0.84**	**J**	1.0	0.25	ug/L			02/16/18 20:47	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			02/16/18 20:47	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			02/16/18 20:47	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			02/16/18 20:47	1
Diethyl ether	2.0	U *	2.0	0.35	ug/L			02/16/18 20:47	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			02/16/18 20:47	1
2-Hexanone	10	U	10	1.2	ug/L			02/16/18 20:47	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			02/16/18 20:47	1
Methyl acetate	10	U	10	1.4	ug/L			02/16/18 20:47	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			02/16/18 20:47	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			02/16/18 20:47	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			02/16/18 20:47	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			02/16/18 20:47	1
Styrene	1.0	U	1.0	0.23	ug/L			02/16/18 20:47	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			02/16/18 20:47	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			02/16/18 20:47	1
Toluene	1.0	U	1.0	0.23	ug/L			02/16/18 20:47	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			02/16/18 20:47	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			02/16/18 20:47	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			02/16/18 20:47	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			02/16/18 20:47	1

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

TestAmerica Job ID: 240-91479-1

Client Sample ID: MW-51_020818
Date Collected: 02/08/18 16:55
Date Received: 02/14/18 09:00

Lab Sample ID: 240-91479-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			02/16/18 20:47	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			02/16/18 20:47	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			02/16/18 20:47	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			02/16/18 20:47	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			02/16/18 20:47	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			02/16/18 20:47	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			02/16/18 20:47	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			02/16/18 20:47	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			02/16/18 20:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*77*		*69 - 120*		*02/16/18 20:47*	*1*
Dibromofluoromethane (Surr)	*107*		*69 - 124*		*02/16/18 20:47*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*61 - 138*		*02/16/18 20:47*	*1*
Toluene-d8 (Surr)	*77*		*73 - 120*		*02/16/18 20:47*	*1*

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

TestAmerica Job ID: 240-91479-1

Client Sample ID: MW-46_021218
Date Collected: 02/12/18 11:52
Date Received: 02/14/18 09:00

Lab Sample ID: 240-91479-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**11**		2.0	0.24	ug/L			02/19/18 17:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*63 - 125*		*02/19/18 17:59*	*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			02/16/18 21:11	1
Benzene	1.0	U	1.0	0.28	ug/L			02/16/18 21:11	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			02/16/18 21:11	1
Bromoform	1.0	U	1.0	0.43	ug/L			02/16/18 21:11	1
Bromomethane	1.0	U	1.0	0.42	ug/L			02/16/18 21:11	1
2-Butanone (MEK)	10	U *	10	1.0	ug/L			02/16/18 21:11	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			02/16/18 21:11	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			02/16/18 21:11	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			02/16/18 21:11	1
Chloroethane	1.0	U	1.0	0.41	ug/L			02/16/18 21:11	1
Chloroform	1.0	U	1.0	0.31	ug/L			02/16/18 21:11	1
Chloromethane	1.0	U	1.0	0.43	ug/L			02/16/18 21:11	1
cis-1,2-Dichloroethene	**14**		1.0	0.30	ug/L			02/16/18 21:11	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			02/16/18 21:11	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			02/16/18 21:11	1
Dibromochloromethane	1.0	U *	1.0	0.25	ug/L			02/16/18 21:11	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			02/16/18 21:11	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			02/16/18 21:11	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			02/16/18 21:11	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			02/16/18 21:11	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			02/16/18 21:11	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			02/16/18 21:11	1
1,1-Dichloroethane	**2.4**		1.0	0.25	ug/L			02/16/18 21:11	1
1,2-Dichloroethane	**0.55**	**J**	1.0	0.30	ug/L			02/16/18 21:11	1
1,1-Dichloroethene	**0.46**	**J**	1.0	0.27	ug/L			02/16/18 21:11	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			02/16/18 21:11	1
Diethyl ether	2.0	U *	2.0	0.35	ug/L			02/16/18 21:11	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			02/16/18 21:11	1
2-Hexanone	10	U	10	1.2	ug/L			02/16/18 21:11	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			02/16/18 21:11	1
Methyl acetate	10	U	10	1.4	ug/L			02/16/18 21:11	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			02/16/18 21:11	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			02/16/18 21:11	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			02/16/18 21:11	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			02/16/18 21:11	1
Styrene	1.0	U	1.0	0.23	ug/L			02/16/18 21:11	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			02/16/18 21:11	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			02/16/18 21:11	1
Toluene	1.0	U	1.0	0.23	ug/L			02/16/18 21:11	1
trans-1,2-Dichloroethene	**1.7**		1.0	0.29	ug/L			02/16/18 21:11	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			02/16/18 21:11	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			02/16/18 21:11	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			02/16/18 21:11	1

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

TestAmerica Job ID: 240-91479-1

Client Sample ID: MW-46_021218
Date Collected: 02/12/18 11:52
Date Received: 02/14/18 09:00

Lab Sample ID: 240-91479-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			02/16/18 21:11	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			02/16/18 21:11	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			02/16/18 21:11	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			02/16/18 21:11	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			02/16/18 21:11	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			02/16/18 21:11	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			02/16/18 21:11	1
Vinyl chloride	**38**		1.0	0.45	ug/L			02/16/18 21:11	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			02/16/18 21:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*79*		*69 - 120*		*02/16/18 21:11*	*1*
Dibromofluoromethane (Surr)	*108*		*69 - 124*		*02/16/18 21:11*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*61 - 138*		*02/16/18 21:11*	*1*
Toluene-d8 (Surr)	*77*		*73 - 120*		*02/16/18 21:11*	*1*

Client Sample ID: MW-71_021218
Date Collected: 02/12/18 13:12
Date Received: 02/14/18 09:00

Lab Sample ID: 240-91479-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.57	J	2.0	0.24	ug/L			02/21/18 15:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*63 - 125*		*02/21/18 15:40*	*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			02/19/18 15:00	1
Benzene	1.0	U	1.0	0.28	ug/L			02/19/18 15:00	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			02/19/18 15:00	1
Bromoform	1.0	U	1.0	0.43	ug/L			02/19/18 15:00	1
Bromomethane	1.0	U F1	1.0	0.42	ug/L			02/19/18 15:00	1
2-Butanone (MEK)	10	U *	10	1.0	ug/L			02/19/18 15:00	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			02/19/18 15:00	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			02/19/18 15:00	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			02/19/18 15:00	1
Chloroethane	1.0	U	1.0	0.41	ug/L			02/19/18 15:00	1
Chloroform	1.0	U	1.0	0.31	ug/L			02/19/18 15:00	1
Chloromethane	1.0	U	1.0	0.43	ug/L			02/19/18 15:00	1
cis-1,2-Dichloroethene	0.37	J	1.0	0.30	ug/L			02/19/18 15:00	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			02/19/18 15:00	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			02/19/18 15:00	1
Dibromochloromethane	1.0	U *	1.0	0.25	ug/L			02/19/18 15:00	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			02/19/18 15:00	1
1,2-Dibromoethane	1.0	U *	1.0	0.23	ug/L			02/19/18 15:00	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			02/19/18 15:00	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			02/19/18 15:00	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			02/19/18 15:00	1
Dichlorodifluoromethane	1.0	U F1	1.0	0.50	ug/L			02/19/18 15:00	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			02/19/18 15:00	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			02/19/18 15:00	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			02/19/18 15:00	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			02/19/18 15:00	1
Diethyl ether	2.0	U * F1	2.0	0.35	ug/L			02/19/18 15:00	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			02/19/18 15:00	1
2-Hexanone	10	U F2	10	1.2	ug/L			02/19/18 15:00	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			02/19/18 15:00	1
Methyl acetate	10	U	10	1.4	ug/L			02/19/18 15:00	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			02/19/18 15:00	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			02/19/18 15:00	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			02/19/18 15:00	1
Methyl tert-butyl ether	1.0	U F1	1.0	0.27	ug/L			02/19/18 15:00	1
Styrene	1.0	U	1.0	0.23	ug/L			02/19/18 15:00	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			02/19/18 15:00	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			02/19/18 15:00	1
Toluene	1.0	U	1.0	0.23	ug/L			02/19/18 15:00	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			02/19/18 15:00	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			02/19/18 15:00	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			02/19/18 15:00	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			02/19/18 15:00	1

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

TestAmerica Job ID: 240-91479-1

Client Sample ID: MW-71_021218
Date Collected: 02/12/18 13:12
Date Received: 02/14/18 09:00

Lab Sample ID: 240-91479-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			02/19/18 15:00	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			02/19/18 15:00	1
Trichlorofluoromethane	1.0	U F1	1.0	0.50	ug/L			02/19/18 15:00	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U F1	1.0	0.41	ug/L			02/19/18 15:00	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			02/19/18 15:00	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			02/19/18 15:00	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			02/19/18 15:00	1
Vinyl chloride	**0.59**	**J**	1.0	0.45	ug/L			02/19/18 15:00	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			02/19/18 15:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*76*		*69 - 120*		*02/19/18 15:00*	*1*
Dibromofluoromethane (Surr)	*101*		*69 - 124*		*02/19/18 15:00*	*1*
1,2-Dichloroethane-d4 (Surr)	*91*		*61 - 138*		*02/19/18 15:00*	*1*
Toluene-d8 (Surr)	*81*		*73 - 120*		*02/19/18 15:00*	*1*

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

TestAmerica Job ID: 240-91479-1

Client Sample ID: MW-7_021218
Date Collected: 02/12/18 15:22
Date Received: 02/14/18 09:00

Lab Sample ID: 240-91479-4
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			02/19/18 18:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*63 - 125*		*02/19/18 18:24*	*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			02/16/18 21:34	1
Benzene	1.0	U	1.0	0.28	ug/L			02/16/18 21:34	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			02/16/18 21:34	1
Bromoform	1.0	U	1.0	0.43	ug/L			02/16/18 21:34	1
Bromomethane	1.0	U	1.0	0.42	ug/L			02/16/18 21:34	1
2-Butanone (MEK)	10	U *	10	1.0	ug/L			02/16/18 21:34	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			02/16/18 21:34	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			02/16/18 21:34	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			02/16/18 21:34	1
Chloroethane	1.0	U	1.0	0.41	ug/L			02/16/18 21:34	1
Chloroform	1.0	U	1.0	0.31	ug/L			02/16/18 21:34	1
Chloromethane	1.0	U	1.0	0.43	ug/L			02/16/18 21:34	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			02/16/18 21:34	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			02/16/18 21:34	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			02/16/18 21:34	1
Dibromochloromethane	1.0	U *	1.0	0.25	ug/L			02/16/18 21:34	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			02/16/18 21:34	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			02/16/18 21:34	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			02/16/18 21:34	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			02/16/18 21:34	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			02/16/18 21:34	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			02/16/18 21:34	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			02/16/18 21:34	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			02/16/18 21:34	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			02/16/18 21:34	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			02/16/18 21:34	1
Diethyl ether	2.0	U *	2.0	0.35	ug/L			02/16/18 21:34	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			02/16/18 21:34	1
2-Hexanone	10	U	10	1.2	ug/L			02/16/18 21:34	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			02/16/18 21:34	1
Methyl acetate	10	U	10	1.4	ug/L			02/16/18 21:34	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			02/16/18 21:34	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			02/16/18 21:34	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			02/16/18 21:34	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			02/16/18 21:34	1
Styrene	1.0	U	1.0	0.23	ug/L			02/16/18 21:34	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			02/16/18 21:34	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			02/16/18 21:34	1
Toluene	1.0	U	1.0	0.23	ug/L			02/16/18 21:34	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			02/16/18 21:34	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			02/16/18 21:34	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			02/16/18 21:34	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			02/16/18 21:34	1

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

TestAmerica Job ID: 240-91479-1

Client Sample ID: MW-7_021218
Date Collected: 02/12/18 15:22
Date Received: 02/14/18 09:00

Lab Sample ID: 240-91479-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			02/16/18 21:34	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			02/16/18 21:34	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			02/16/18 21:34	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			02/16/18 21:34	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			02/16/18 21:34	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			02/16/18 21:34	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			02/16/18 21:34	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			02/16/18 21:34	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			02/16/18 21:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*76*		*69 - 120*		*02/16/18 21:34*	*1*
Dibromofluoromethane (Surr)	*107*		*69 - 124*		*02/16/18 21:34*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*61 - 138*		*02/16/18 21:34*	*1*
Toluene-d8 (Surr)	*78*		*73 - 120*		*02/16/18 21:34*	*1*

Client Sample ID: MW-67_021218

Date Collected: 02/12/18 16:47
Date Received: 02/14/18 09:00

Lab Sample ID: 240-91479-5

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			02/19/18 18:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*63 - 125*		*02/19/18 18:49*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	33	U	33	5.9	ug/L			02/16/18 21:57	3.33
Benzene	3.3	U	3.3	0.93	ug/L			02/16/18 21:57	3.33
Bromodichloromethane	3.3	U	3.3	1.0	ug/L			02/16/18 21:57	3.33
Bromoform	3.3	U	3.3	1.4	ug/L			02/16/18 21:57	3.33
Bromomethane	3.3	U	3.3	1.4	ug/L			02/16/18 21:57	3.33
2-Butanone (MEK)	33	U *	33	3.4	ug/L			02/16/18 21:57	3.33
Carbon disulfide	17	U	17	1.1	ug/L			02/16/18 21:57	3.33
Carbon tetrachloride	3.3	U	3.3	1.2	ug/L			02/16/18 21:57	3.33
Chlorobenzene	3.3	U	3.3	1.1	ug/L			02/16/18 21:57	3.33
Chloroethane	3.3	U	3.3	1.4	ug/L			02/16/18 21:57	3.33
Chloroform	3.3	U	3.3	1.0	ug/L			02/16/18 21:57	3.33
Chloromethane	3.3	U	3.3	1.4	ug/L			02/16/18 21:57	3.33
cis-1,2-Dichloroethene	**9.6**		3.3	1.0	ug/L			02/16/18 21:57	3.33
cis-1,3-Dichloropropene	3.3	U	3.3	0.87	ug/L			02/16/18 21:57	3.33
Cyclohexane	3.3	U	3.3	1.5	ug/L			02/16/18 21:57	3.33
Dibromochloromethane	3.3	U *	3.3	0.83	ug/L			02/16/18 21:57	3.33
1,2-Dibromo-3-Chloropropane	3.3	U	3.3	1.6	ug/L			02/16/18 21:57	3.33
1,2-Dibromoethane	3.3	U	3.3	0.77	ug/L			02/16/18 21:57	3.33
1,2-Dichlorobenzene	3.3	U	3.3	0.87	ug/L			02/16/18 21:57	3.33
1,3-Dichlorobenzene	3.3	U	3.3	1.1	ug/L			02/16/18 21:57	3.33
1,4-Dichlorobenzene	3.3	U	3.3	0.77	ug/L			02/16/18 21:57	3.33
Dichlorodifluoromethane	3.3	U	3.3	1.7	ug/L			02/16/18 21:57	3.33
1,1-Dichloroethane	3.3	U	3.3	0.83	ug/L			02/16/18 21:57	3.33
1,2-Dichloroethane	3.3	U	3.3	1.0	ug/L			02/16/18 21:57	3.33
1,1-Dichloroethene	3.3	U	3.3	0.90	ug/L			02/16/18 21:57	3.33
1,2-Dichloropropane	3.3	U	3.3	1.0	ug/L			02/16/18 21:57	3.33
Diethyl ether	6.7	U *	6.7	1.2	ug/L			02/16/18 21:57	3.33
Ethylbenzene	3.3	U	3.3	0.87	ug/L			02/16/18 21:57	3.33
2-Hexanone	33	U	33	4.1	ug/L			02/16/18 21:57	3.33
Isopropylbenzene	3.3	U	3.3	0.70	ug/L			02/16/18 21:57	3.33
Methyl acetate	33	U	33	4.8	ug/L			02/16/18 21:57	3.33
Methylcyclohexane	3.3	U	3.3	1.5	ug/L			02/16/18 21:57	3.33
Methylene Chloride	**1.8**	**J**	17	1.8	ug/L			02/16/18 21:57	3.33
4-Methyl-2-pentanone (MIBK)	33	U	33	2.4	ug/L			02/16/18 21:57	3.33
Methyl tert-butyl ether	3.3	U	3.3	0.90	ug/L			02/16/18 21:57	3.33
Styrene	3.3	U	3.3	0.77	ug/L			02/16/18 21:57	3.33
1,1,2,2-Tetrachloroethane	3.3	U	3.3	1.1	ug/L			02/16/18 21:57	3.33
Tetrachloroethene	3.3	U	3.3	1.0	ug/L			02/16/18 21:57	3.33
Toluene	3.3	U	3.3	0.77	ug/L			02/16/18 21:57	3.33
trans-1,2-Dichloroethene	**1.1**	**J**	3.3	0.97	ug/L			02/16/18 21:57	3.33
trans-1,3-Dichloropropene	3.3	U	3.3	1.0	ug/L			02/16/18 21:57	3.33
1,2,4-Trichlorobenzene	3.3	U	3.3	0.90	ug/L			02/16/18 21:57	3.33
1,1,1-Trichloroethane	3.3	U	3.3	0.77	ug/L			02/16/18 21:57	3.33

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

TestAmerica Job ID: 240-91479-1

Client Sample ID: MW-67_021218
Date Collected: 02/12/18 16:47
Date Received: 02/14/18 09:00

Lab Sample ID: 240-91479-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	3.3	U	3.3	1.1	ug/L			02/16/18 21:57	3.33
Trichloroethene	**83**		3.3	1.1	ug/L			02/16/18 21:57	3.33
Trichlorofluoromethane	3.3	U	3.3	1.7	ug/L			02/16/18 21:57	3.33
1,1,2-Trichloro-1,2,2-trifluoroethane	3.3	U	3.3	1.4	ug/L			02/16/18 21:57	3.33
1,2,3-Trimethylbenzene	17	U	17	0.73	ug/L			02/16/18 21:57	3.33
1,2,4-Trimethylbenzene	3.3	U	3.3	0.80	ug/L			02/16/18 21:57	3.33
1,3,5-Trimethylbenzene	3.3	U	3.3	0.80	ug/L			02/16/18 21:57	3.33
Vinyl chloride	3.3	U	3.3	1.5	ug/L			02/16/18 21:57	3.33
Xylenes, Total	6.7	U	6.7	0.80	ug/L			02/16/18 21:57	3.33

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*75*		*69 - 120*		*02/16/18 21:57*	*3.33*
Dibromofluoromethane (Surr)	*105*		*69 - 124*		*02/16/18 21:57*	*3.33*
1,2-Dichloroethane-d4 (Surr)	*97*		*61 - 138*		*02/16/18 21:57*	*3.33*
Toluene-d8 (Surr)	*80*		*73 - 120*		*02/16/18 21:57*	*3.33*

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

TestAmerica Job ID: 240-91479-1

Client Sample ID: TRIP BLANK
Date Collected: 02/12/18 00:00
Date Received: 02/14/18 09:00

Lab Sample ID: 240-91479-6
Matrix: Water

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			02/16/18 22:20	1
Benzene	1.0	U	1.0	0.28	ug/L			02/16/18 22:20	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			02/16/18 22:20	1
Bromoform	1.0	U	1.0	0.43	ug/L			02/16/18 22:20	1
Bromomethane	1.0	U	1.0	0.42	ug/L			02/16/18 22:20	1
2-Butanone (MEK)	10	U *	10	1.0	ug/L			02/16/18 22:20	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			02/16/18 22:20	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			02/16/18 22:20	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			02/16/18 22:20	1
Chloroethane	1.0	U	1.0	0.41	ug/L			02/16/18 22:20	1
Chloroform	1.0	U	1.0	0.31	ug/L			02/16/18 22:20	1
Chloromethane	1.0	U	1.0	0.43	ug/L			02/16/18 22:20	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			02/16/18 22:20	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			02/16/18 22:20	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			02/16/18 22:20	1
Dibromochloromethane	1.0	U *	1.0	0.25	ug/L			02/16/18 22:20	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			02/16/18 22:20	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			02/16/18 22:20	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			02/16/18 22:20	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			02/16/18 22:20	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			02/16/18 22:20	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			02/16/18 22:20	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			02/16/18 22:20	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			02/16/18 22:20	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			02/16/18 22:20	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			02/16/18 22:20	1
Diethyl ether	2.0	U *	2.0	0.35	ug/L			02/16/18 22:20	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			02/16/18 22:20	1
2-Hexanone	10	U	10	1.2	ug/L			02/16/18 22:20	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			02/16/18 22:20	1
Methyl acetate	10	U	10	1.4	ug/L			02/16/18 22:20	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			02/16/18 22:20	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			02/16/18 22:20	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			02/16/18 22:20	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			02/16/18 22:20	1
Styrene	1.0	U	1.0	0.23	ug/L			02/16/18 22:20	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			02/16/18 22:20	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			02/16/18 22:20	1
Toluene	1.0	U	1.0	0.23	ug/L			02/16/18 22:20	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			02/16/18 22:20	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			02/16/18 22:20	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			02/16/18 22:20	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			02/16/18 22:20	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			02/16/18 22:20	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			02/16/18 22:20	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			02/16/18 22:20	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			02/16/18 22:20	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			02/16/18 22:20	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			02/16/18 22:20	1

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

TestAmerica Job ID: 240-91479-1

Client Sample ID: TRIP BLANK
Date Collected: 02/12/18 00:00
Date Received: 02/14/18 09:00

Lab Sample ID: 240-91479-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			02/16/18 22:20	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			02/16/18 22:20	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			02/16/18 22:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*73*		*69 - 120*		*02/16/18 22:20*	*1*
Dibromofluoromethane (Surr)	*108*		*69 - 124*		*02/16/18 22:20*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*61 - 138*		*02/16/18 22:20*	*1*
Toluene-d8 (Surr)	*78*		*73 - 120*		*02/16/18 22:20*	*1*

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

TestAmerica Job ID: 240-91479-1

Client Sample ID: MW-32_021218
Date Collected: 02/12/18 10:15
Date Received: 02/14/18 09:00

Lab Sample ID: 240-91479-7
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.24	ug/L			02/19/18 19:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*63 - 125*		*02/19/18 19:15*	*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			02/16/18 22:43	1
Benzene	1.0	U	1.0	0.28	ug/L			02/16/18 22:43	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			02/16/18 22:43	1
Bromoform	1.0	U	1.0	0.43	ug/L			02/16/18 22:43	1
Bromomethane	1.0	U	1.0	0.42	ug/L			02/16/18 22:43	1
2-Butanone (MEK)	10	U *	10	1.0	ug/L			02/16/18 22:43	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			02/16/18 22:43	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			02/16/18 22:43	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			02/16/18 22:43	1
Chloroethane	1.0	U	1.0	0.41	ug/L			02/16/18 22:43	1
Chloroform	1.0	U	1.0	0.31	ug/L			02/16/18 22:43	1
Chloromethane	1.0	U	1.0	0.43	ug/L			02/16/18 22:43	1
cis-1,2-Dichloroethene	**0.37**	**J**	1.0	0.30	ug/L			02/16/18 22:43	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			02/16/18 22:43	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			02/16/18 22:43	1
Dibromochloromethane	1.0	U *	1.0	0.25	ug/L			02/16/18 22:43	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			02/16/18 22:43	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			02/16/18 22:43	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			02/16/18 22:43	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			02/16/18 22:43	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			02/16/18 22:43	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			02/16/18 22:43	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			02/16/18 22:43	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			02/16/18 22:43	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			02/16/18 22:43	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			02/16/18 22:43	1
Diethyl ether	2.0	U *	2.0	0.35	ug/L			02/16/18 22:43	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			02/16/18 22:43	1
2-Hexanone	10	U	10	1.2	ug/L			02/16/18 22:43	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			02/16/18 22:43	1
Methyl acetate	10	U	10	1.4	ug/L			02/16/18 22:43	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			02/16/18 22:43	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			02/16/18 22:43	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			02/16/18 22:43	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			02/16/18 22:43	1
Styrene	1.0	U	1.0	0.23	ug/L			02/16/18 22:43	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			02/16/18 22:43	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			02/16/18 22:43	1
Toluene	1.0	U	1.0	0.23	ug/L			02/16/18 22:43	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			02/16/18 22:43	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			02/16/18 22:43	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			02/16/18 22:43	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			02/16/18 22:43	1

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

TestAmerica Job ID: 240-91479-1

Client Sample ID: MW-32_021218
Date Collected: 02/12/18 10:15
Date Received: 02/14/18 09:00

Lab Sample ID: 240-91479-7
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			02/16/18 22:43	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			02/16/18 22:43	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			02/16/18 22:43	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			02/16/18 22:43	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			02/16/18 22:43	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			02/16/18 22:43	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			02/16/18 22:43	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			02/16/18 22:43	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			02/16/18 22:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*75*		*69 - 120*		*02/16/18 22:43*	*1*
Dibromofluoromethane (Surr)	*108*		*69 - 124*		*02/16/18 22:43*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*61 - 138*		*02/16/18 22:43*	*1*
Toluene-d8 (Surr)	*73*		*73 - 120*		*02/16/18 22:43*	*1*

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

TestAmerica Job ID: 240-91479-1

Client Sample ID: MW-37_021218
Date Collected: 02/12/18 12:17
Date Received: 02/14/18 09:00

Lab Sample ID: 240-91479-8
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			02/19/18 19:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*63 - 125*		*02/19/18 19:40*	*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			02/16/18 23:30	1
Benzene	1.0	U	1.0	0.28	ug/L			02/16/18 23:30	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			02/16/18 23:30	1
Bromoform	1.0	U	1.0	0.43	ug/L			02/16/18 23:30	1
Bromomethane	1.0	U	1.0	0.42	ug/L			02/16/18 23:30	1
2-Butanone (MEK)	10	U *	10	1.0	ug/L			02/16/18 23:30	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			02/16/18 23:30	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			02/16/18 23:30	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			02/16/18 23:30	1
Chloroethane	1.0	U	1.0	0.41	ug/L			02/16/18 23:30	1
Chloroform	1.0	U	1.0	0.31	ug/L			02/16/18 23:30	1
Chloromethane	1.0	U	1.0	0.43	ug/L			02/16/18 23:30	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			02/16/18 23:30	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			02/16/18 23:30	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			02/16/18 23:30	1
Dibromochloromethane	1.0	U *	1.0	0.25	ug/L			02/16/18 23:30	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			02/16/18 23:30	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			02/16/18 23:30	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			02/16/18 23:30	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			02/16/18 23:30	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			02/16/18 23:30	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			02/16/18 23:30	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			02/16/18 23:30	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			02/16/18 23:30	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			02/16/18 23:30	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			02/16/18 23:30	1
Diethyl ether	2.0	U *	2.0	0.35	ug/L			02/16/18 23:30	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			02/16/18 23:30	1
2-Hexanone	10	U	10	1.2	ug/L			02/16/18 23:30	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			02/16/18 23:30	1
Methyl acetate	10	U	10	1.4	ug/L			02/16/18 23:30	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			02/16/18 23:30	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			02/16/18 23:30	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			02/16/18 23:30	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			02/16/18 23:30	1
Styrene	1.0	U	1.0	0.23	ug/L			02/16/18 23:30	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			02/16/18 23:30	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			02/16/18 23:30	1
Toluene	1.0	U	1.0	0.23	ug/L			02/16/18 23:30	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			02/16/18 23:30	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			02/16/18 23:30	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			02/16/18 23:30	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			02/16/18 23:30	1

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

TestAmerica Job ID: 240-91479-1

Client Sample ID: MW-37_021218
Date Collected: 02/12/18 12:17
Date Received: 02/14/18 09:00

Lab Sample ID: 240-91479-8
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			02/16/18 23:30	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			02/16/18 23:30	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			02/16/18 23:30	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			02/16/18 23:30	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			02/16/18 23:30	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			02/16/18 23:30	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			02/16/18 23:30	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			02/16/18 23:30	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			02/16/18 23:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*78*		*69 - 120*		*02/16/18 23:30*	*1*
Dibromofluoromethane (Surr)	*108*		*69 - 124*		*02/16/18 23:30*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*61 - 138*		*02/16/18 23:30*	*1*
Toluene-d8 (Surr)	*76*		*73 - 120*		*02/16/18 23:30*	*1*

Client Sample ID: MW-50_021218
Date Collected: 02/12/18 16:05
Date Received: 02/14/18 09:00

Lab Sample ID: 240-91479-9
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.78**	**J**	2.0	0.24	ug/L			02/19/18 20:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*63 - 125*		*02/19/18 20:05*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	50	U	50	8.8	ug/L			02/16/18 23:53	5
Benzene	5.0	U	5.0	1.4	ug/L			02/16/18 23:53	5
Bromodichloromethane	5.0	U	5.0	1.5	ug/L			02/16/18 23:53	5
Bromoform	5.0	U	5.0	2.2	ug/L			02/16/18 23:53	5
Bromomethane	5.0	U	5.0	2.1	ug/L			02/16/18 23:53	5
2-Butanone (MEK)	50	U *	50	5.1	ug/L			02/16/18 23:53	5
Carbon disulfide	25	U	25	1.7	ug/L			02/16/18 23:53	5
Carbon tetrachloride	5.0	U	5.0	1.8	ug/L			02/16/18 23:53	5
Chlorobenzene	5.0	U	5.0	1.6	ug/L			02/16/18 23:53	5
Chloroethane	5.0	U	5.0	2.1	ug/L			02/16/18 23:53	5
Chloroform	5.0	U	5.0	1.6	ug/L			02/16/18 23:53	5
Chloromethane	5.0	U	5.0	2.2	ug/L			02/16/18 23:53	5
cis-1,2-Dichloroethene	**22**		5.0	1.5	ug/L			02/16/18 23:53	5
cis-1,3-Dichloropropene	5.0	U	5.0	1.3	ug/L			02/16/18 23:53	5
Cyclohexane	5.0	U	5.0	2.2	ug/L			02/16/18 23:53	5
Dibromochloromethane	5.0	U *	5.0	1.3	ug/L			02/16/18 23:53	5
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	2.4	ug/L			02/16/18 23:53	5
1,2-Dibromoethane	5.0	U	5.0	1.2	ug/L			02/16/18 23:53	5
1,2-Dichlorobenzene	5.0	U	5.0	1.3	ug/L			02/16/18 23:53	5
1,3-Dichlorobenzene	5.0	U	5.0	1.6	ug/L			02/16/18 23:53	5
1,4-Dichlorobenzene	5.0	U	5.0	1.2	ug/L			02/16/18 23:53	5
Dichlorodifluoromethane	5.0	U	5.0	2.5	ug/L			02/16/18 23:53	5
1,1-Dichloroethane	5.0	U	5.0	1.3	ug/L			02/16/18 23:53	5
1,2-Dichloroethane	5.0	U	5.0	1.5	ug/L			02/16/18 23:53	5
1,1-Dichloroethene	5.0	U	5.0	1.4	ug/L			02/16/18 23:53	5
1,2-Dichloropropane	5.0	U	5.0	1.5	ug/L			02/16/18 23:53	5
Diethyl ether	10	U *	10	1.8	ug/L			02/16/18 23:53	5
Ethylbenzene	5.0	U	5.0	1.3	ug/L			02/16/18 23:53	5
2-Hexanone	50	U	50	6.2	ug/L			02/16/18 23:53	5
Isopropylbenzene	5.0	U	5.0	1.1	ug/L			02/16/18 23:53	5
Methyl acetate	50	U	50	7.2	ug/L			02/16/18 23:53	5
Methylcyclohexane	5.0	U	5.0	2.3	ug/L			02/16/18 23:53	5
Methylene Chloride	**3.5**	**J**	25	2.7	ug/L			02/16/18 23:53	5
4-Methyl-2-pentanone (MIBK)	50	U	50	3.6	ug/L			02/16/18 23:53	5
Methyl tert-butyl ether	5.0	U	5.0	1.4	ug/L			02/16/18 23:53	5
Styrene	5.0	U	5.0	1.2	ug/L			02/16/18 23:53	5
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1.6	ug/L			02/16/18 23:53	5
Tetrachloroethene	5.0	U	5.0	1.5	ug/L			02/16/18 23:53	5
Toluene	5.0	U	5.0	1.2	ug/L			02/16/18 23:53	5
trans-1,2-Dichloroethene	5.0	U	5.0	1.5	ug/L			02/16/18 23:53	5
trans-1,3-Dichloropropene	5.0	U	5.0	1.6	ug/L			02/16/18 23:53	5
1,2,4-Trichlorobenzene	5.0	U	5.0	1.4	ug/L			02/16/18 23:53	5
1,1,1-Trichloroethane	5.0	U	5.0	1.2	ug/L			02/16/18 23:53	5

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

TestAmerica Job ID: 240-91479-1

Client Sample ID: MW-50_021218
Date Collected: 02/12/18 16:05
Date Received: 02/14/18 09:00

Lab Sample ID: 240-91479-9
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	5.0	U	5.0	1.7	ug/L			02/16/18 23:53	5
Trichloroethene	5.0	U	5.0	1.7	ug/L			02/16/18 23:53	5
Trichlorofluoromethane	5.0	U	5.0	2.5	ug/L			02/16/18 23:53	5
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U	5.0	2.1	ug/L			02/16/18 23:53	5
1,2,3-Trimethylbenzene	25	U	25	1.1	ug/L			02/16/18 23:53	5
1,2,4-Trimethylbenzene	5.0	U	5.0	1.2	ug/L			02/16/18 23:53	5
1,3,5-Trimethylbenzene	5.0	U	5.0	1.2	ug/L			02/16/18 23:53	5
Vinyl chloride	**76**		5.0	2.3	ug/L			02/16/18 23:53	5
Xylenes, Total	10	U	10	1.2	ug/L			02/16/18 23:53	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*71*		*69 - 120*		*02/16/18 23:53*	*5*
Dibromofluoromethane (Surr)	*110*		*69 - 124*		*02/16/18 23:53*	*5*
1,2-Dichloroethane-d4 (Surr)	*101*		*61 - 138*		*02/16/18 23:53*	*5*
Toluene-d8 (Surr)	*78*		*73 - 120*		*02/16/18 23:53*	*5*

Client Sample ID: MW-68_021218

Date Collected: 02/12/18 14:17
Date Received: 02/14/18 09:00

Lab Sample ID: 240-91479-10

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.54**	**J**	2.0	0.24	ug/L			02/19/18 20:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*63 - 125*		*02/19/18 20:30*	*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			02/19/18 16:33	1
Benzene	1.0	U	1.0	0.28	ug/L			02/19/18 16:33	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			02/19/18 16:33	1
Bromoform	1.0	U	1.0	0.43	ug/L			02/19/18 16:33	1
Bromomethane	1.0	U	1.0	0.42	ug/L			02/19/18 16:33	1
2-Butanone (MEK)	10	U *	10	1.0	ug/L			02/19/18 16:33	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			02/19/18 16:33	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			02/19/18 16:33	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			02/19/18 16:33	1
Chloroethane	1.0	U	1.0	0.41	ug/L			02/19/18 16:33	1
Chloroform	1.0	U	1.0	0.31	ug/L			02/19/18 16:33	1
Chloromethane	1.0	U	1.0	0.43	ug/L			02/19/18 16:33	1
cis-1,2-Dichloroethene	**13**		1.0	0.30	ug/L			02/19/18 16:33	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			02/19/18 16:33	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			02/19/18 16:33	1
Dibromochloromethane	1.0	U *	1.0	0.25	ug/L			02/19/18 16:33	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			02/19/18 16:33	1
1,2-Dibromoethane	1.0	U *	1.0	0.23	ug/L			02/19/18 16:33	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			02/19/18 16:33	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			02/19/18 16:33	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			02/19/18 16:33	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			02/19/18 16:33	1
1,1-Dichloroethane	**2.0**		1.0	0.25	ug/L			02/19/18 16:33	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			02/19/18 16:33	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			02/19/18 16:33	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			02/19/18 16:33	1
Diethyl ether	2.0	U *	2.0	0.35	ug/L			02/19/18 16:33	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			02/19/18 16:33	1
2-Hexanone	10	U	10	1.2	ug/L			02/19/18 16:33	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			02/19/18 16:33	1
Methyl acetate	10	U	10	1.4	ug/L			02/19/18 16:33	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			02/19/18 16:33	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			02/19/18 16:33	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			02/19/18 16:33	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			02/19/18 16:33	1
Styrene	1.0	U	1.0	0.23	ug/L			02/19/18 16:33	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			02/19/18 16:33	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			02/19/18 16:33	1
Toluene	1.0	U	1.0	0.23	ug/L			02/19/18 16:33	1
trans-1,2-Dichloroethene	**1.8**		1.0	0.29	ug/L			02/19/18 16:33	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			02/19/18 16:33	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			02/19/18 16:33	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			02/19/18 16:33	1

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

TestAmerica Job ID: 240-91479-1

Client Sample ID: MW-68_021218
Date Collected: 02/12/18 14:17
Date Received: 02/14/18 09:00

Lab Sample ID: 240-91479-10
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			02/19/18 16:33	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			02/19/18 16:33	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			02/19/18 16:33	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			02/19/18 16:33	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			02/19/18 16:33	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			02/19/18 16:33	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			02/19/18 16:33	1
Vinyl chloride	**2.5**		1.0	0.45	ug/L			02/19/18 16:33	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			02/19/18 16:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*75*		*69 - 120*		*02/19/18 16:33*	*1*
Dibromofluoromethane (Surr)	*104*		*69 - 124*		*02/19/18 16:33*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*61 - 138*		*02/19/18 16:33*	*1*
Toluene-d8 (Surr)	*81*		*73 - 120*		*02/19/18 16:33*	*1*

Surrogate Summary

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

TestAmerica Job ID: 240-91479-1

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)
240-91441-D-2 MS	Matrix Spike	97	93	86	85
240-91441-E-2 MSD	Matrix Spike Duplicate	91	94	83	84
240-91479-1	MW-51_020818	77	107	93	77
240-91479-2	MW-46_021218	79	108	99	77
240-91479-3	MW-71_021218	76	101	91	81
240-91479-3 MS	MW-71_021218	92	89	83	84
240-91479-3 MSD	MW-71_021218	93	93	85	86
240-91479-4	MW-7_021218	76	107	99	78
240-91479-5	MW-67_021218	75	105	97	80
240-91479-6	TRIP BLANK	73	108	93	78
240-91479-7	MW-32_021218	75	108	96	73
240-91479-8	MW-37_021218	78	108	98	76
240-91479-9	MW-50_021218	71	110	101	78
240-91479-10	MW-68_021218	75	104	96	81
LCS 240-315091/5	Lab Control Sample	95	93	86	85
LCS 240-315290/4	Lab Control Sample	92	92	84	86
MB 240-315091/7	Method Blank	76	100	89	78
MB 240-315290/6	Method Blank	78	102	91	82

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)
240-91428-C-6 MS	Matrix Spike	94
240-91428-C-6 MSD	Matrix Spike Duplicate	103
240-91479-1	MW-51_020818	106
240-91479-2	MW-46_021218	102
240-91479-3	MW-71_021218	93
240-91479-3 MS	MW-71_021218	98
240-91479-3 MSD	MW-71_021218	90
240-91479-4	MW-7_021218	110
240-91479-5	MW-67_021218	104
240-91479-7	MW-32_021218	102
240-91479-8	MW-37_021218	94
240-91479-9	MW-50_021218	108
240-91479-10	MW-68_021218	104
LCS 240-315270/4	Lab Control Sample	104
LCS 240-315654/4	Lab Control Sample	90
MB 240-315270/5	Method Blank	92
MB 240-315654/5	Method Blank	90

Surrogate Legend

Surrogate Summary

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

TestAmerica Job ID: 240-91479-1

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

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

Lab Sample ID: MB 240-315091/7
Matrix: Water
Analysis Batch: 315091

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			02/16/18 14:57	1
Benzene	1.0	U	1.0	0.28	ug/L			02/16/18 14:57	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			02/16/18 14:57	1
Bromoform	1.0	U	1.0	0.43	ug/L			02/16/18 14:57	1
Bromomethane	1.0	U	1.0	0.42	ug/L			02/16/18 14:57	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			02/16/18 14:57	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			02/16/18 14:57	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			02/16/18 14:57	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			02/16/18 14:57	1
Chloroethane	1.0	U	1.0	0.41	ug/L			02/16/18 14:57	1
Chloroform	1.0	U	1.0	0.31	ug/L			02/16/18 14:57	1
Chloromethane	1.0	U	1.0	0.43	ug/L			02/16/18 14:57	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			02/16/18 14:57	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			02/16/18 14:57	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			02/16/18 14:57	1
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			02/16/18 14:57	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			02/16/18 14:57	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			02/16/18 14:57	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			02/16/18 14:57	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			02/16/18 14:57	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			02/16/18 14:57	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			02/16/18 14:57	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			02/16/18 14:57	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			02/16/18 14:57	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			02/16/18 14:57	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			02/16/18 14:57	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			02/16/18 14:57	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			02/16/18 14:57	1
2-Hexanone	10	U	10	1.2	ug/L			02/16/18 14:57	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			02/16/18 14:57	1
Methyl acetate	10	U	10	1.4	ug/L			02/16/18 14:57	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			02/16/18 14:57	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			02/16/18 14:57	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			02/16/18 14:57	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			02/16/18 14:57	1
Styrene	1.0	U	1.0	0.23	ug/L			02/16/18 14:57	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			02/16/18 14:57	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			02/16/18 14:57	1
Toluene	1.0	U	1.0	0.23	ug/L			02/16/18 14:57	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			02/16/18 14:57	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			02/16/18 14:57	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			02/16/18 14:57	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			02/16/18 14:57	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			02/16/18 14:57	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			02/16/18 14:57	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			02/16/18 14:57	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			02/16/18 14:57	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			02/16/18 14:57	1

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

Lab Sample ID: MB 240-315091/7
Matrix: Water
Analysis Batch: 315091

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			02/16/18 14:57	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			02/16/18 14:57	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			02/16/18 14:57	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			02/16/18 14:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*76*		*69 - 120*		*02/16/18 14:57*	*1*
Dibromofluoromethane (Surr)	*100*		*69 - 124*		*02/16/18 14:57*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*61 - 138*		*02/16/18 14:57*	*1*
Toluene-d8 (Surr)	*78*		*73 - 120*		*02/16/18 14:57*	*1*

Lab Sample ID: LCS 240-315091/5
Matrix: Water
Analysis Batch: 315091

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	24.7		ug/L		123	35 - 131
Benzene	10.0	10.8		ug/L		108	79 - 120
Bromodichloromethane	10.0	11.5		ug/L		115	79 - 125
Bromoform	10.0	13.3		ug/L		133	55 - 145
Bromomethane	10.0	12.5		ug/L		125	17 - 158
2-Butanone (MEK)	20.0	32.7	*	ug/L		164	43 - 149
Carbon disulfide	10.0	10.2		ug/L		102	49 - 141
Carbon tetrachloride	10.0	13.3		ug/L		133	55 - 171
Chlorobenzene	10.0	11.1		ug/L		111	80 - 120
Chloroethane	10.0	8.98		ug/L		90	10 - 149
Chloroform	10.0	11.4		ug/L		114	80 - 120
Chloromethane	10.0	8.50		ug/L		85	59 - 124
cis-1,2-Dichloroethene	10.0	11.1		ug/L		111	77 - 120
cis-1,3-Dichloropropene	10.0	9.68		ug/L		97	75 - 120
Cyclohexane	10.0	13.2		ug/L		132	66 - 135
Dibromochloromethane	10.0	13.3	*	ug/L		133	64 - 129
1,2-Dibromo-3-Chloropropane	10.0	9.43		ug/L		94	50 - 130
1,2-Dibromoethane	10.0	11.9		ug/L		119	80 - 120
1,2-Dichlorobenzene	10.0	9.62		ug/L		96	80 - 120
1,3-Dichlorobenzene	10.0	9.82		ug/L		98	80 - 120
1,4-Dichlorobenzene	10.0	9.61		ug/L		96	80 - 120
Dichlorodifluoromethane	10.0	12.5		ug/L		125	42 - 141
1,1-Dichloroethane	10.0	11.1		ug/L		111	74 - 120
1,2-Dichloroethane	10.0	11.6		ug/L		116	68 - 133
1,1-Dichloroethene	10.0	10.9		ug/L		109	65 - 127
1,2-Dichloropropane	10.0	11.2		ug/L		112	78 - 127
Diethyl ether	10.0	14.2	*	ug/L		142	72 - 125
Ethylbenzene	10.0	10.6		ug/L		106	80 - 120
2-Hexanone	20.0	28.7		ug/L		143	28 - 169
Isopropylbenzene	10.0	10.5		ug/L		105	80 - 128
Methyl acetate	20.0	27.4		ug/L		137	63 - 137
Methylcyclohexane	10.0	10.8		ug/L		108	63 - 141

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

Lab Sample ID: LCS 240-315091/5
Matrix: Water
Analysis Batch: 315091

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	11.0		ug/L		110	64 - 140
4-Methyl-2-pentanone (MIBK)	20.0	23.8		ug/L		119	53 - 144
Methyl tert-butyl ether	10.0	7.93		ug/L		79	73 - 120
Styrene	10.0	11.1		ug/L		111	80 - 121
1,1,2,2-Tetrachloroethane	10.0	10.8		ug/L		108	58 - 122
Tetrachloroethene	10.0	12.1		ug/L		121	80 - 122
Toluene	10.0	10.6		ug/L		106	78 - 120
trans-1,2-Dichloroethene	10.0	11.9		ug/L		119	74 - 124
trans-1,3-Dichloropropene	10.0	9.26		ug/L		93	67 - 120
1,2,4-Trichlorobenzene	10.0	6.66		ug/L		67	34 - 141
1,1,1-Trichloroethane	10.0	11.8		ug/L		118	64 - 147
1,1,2-Trichloroethane	10.0	11.4		ug/L		114	76 - 121
Trichloroethene	10.0	11.0		ug/L		110	76 - 124
Trichlorofluoromethane	10.0	15.8		ug/L		158	27 - 176
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	14.1		ug/L		141	65 - 144
1,2,4-Trimethylbenzene	10.0	9.64		ug/L		96	80 - 120
1,3,5-Trimethylbenzene	10.0	9.93		ug/L		99	79 - 120
Vinyl chloride	10.0	8.61		ug/L		86	65 - 124
Xylenes, Total	20.0	21.5		ug/L		108	80 - 120
1,4-Dioxane	200	166		ug/L		83	35 - 134

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*69 - 120*
Dibromofluoromethane (Surr)	*93*		*69 - 124*
1,2-Dichloroethane-d4 (Surr)	*86*		*61 - 138*
Toluene-d8 (Surr)	*85*		*73 - 120*

Lab Sample ID: 240-91441-D-2 MS
Matrix: Water
Analysis Batch: 315091

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	10	U	20.0	21.1		ug/L		106	19 - 133
Benzene	1.0	U	10.0	9.91		ug/L		99	69 - 127
Bromodichloromethane	1.0	U	10.0	10.8		ug/L		108	75 - 128
Bromoform	1.0	U	10.0	11.9		ug/L		119	61 - 135
Bromomethane	1.0	U F1	10.0	15.2	F1	ug/L		152	10 - 148
2-Butanone (MEK)	10	U *	20.0	26.7		ug/L		133	34 - 153
Carbon disulfide	5.0	U	10.0	10.3		ug/L		103	46 - 143
Carbon tetrachloride	1.0	U	10.0	13.0		ug/L		130	53 - 175
Chlorobenzene	1.0	U	10.0	10.1		ug/L		101	76 - 120
Chloroethane	1.0	U	10.0	12.5		ug/L		125	10 - 141
Chloroform	1.0	U	10.0	10.5		ug/L		105	74 - 125
Chloromethane	1.0	U	10.0	8.72		ug/L		87	34 - 127
cis-1,2-Dichloroethene	0.41	J	10.0	10.7		ug/L		103	69 - 127
cis-1,3-Dichloropropene	1.0	U	10.0	8.11		ug/L		81	68 - 120
Cyclohexane	1.0	U	10.0	12.4		ug/L		124	56 - 135

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

Lab Sample ID: 240-91441-D-2 MS
Matrix: Water
Analysis Batch: 315091

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Dibromochloromethane	1.0	U *	10.0	12.2		ug/L		122	62 - 131
1,2-Dichlorobenzene	1.0	U	10.0	8.96		ug/L		90	70 - 120
1,3-Dichlorobenzene	1.0	U	10.0	8.87		ug/L		89	71 - 120
1,4-Dichlorobenzene	1.0	U	10.0	8.90		ug/L		89	72 - 120
Dichlorodifluoromethane	1.0	U	10.0	12.8		ug/L		128	45 - 130
1,1-Dichloroethane	1.0	U	10.0	10.2		ug/L		102	69 - 122
1,2-Dichloroethane	1.0	U	10.0	10.5		ug/L		105	64 - 138
1,1-Dichloroethene	1.0	U	10.0	10.9		ug/L		109	62 - 127
1,2-Dichloropropane	1.0	U	10.0	10.2		ug/L		102	72 - 131
Ethylbenzene	1.0	U	10.0	9.74		ug/L		97	72 - 121
2-Hexanone	10	U	20.0	23.0		ug/L		115	21 - 184
Isopropylbenzene	1.0	U	10.0	9.50		ug/L		95	70 - 132
Methyl acetate	10	U	20.0	22.0		ug/L		110	52 - 139
Methylcyclohexane	1.0	U	10.0	9.84		ug/L		98	46 - 139
Methylene Chloride	5.0	U	10.0	10.2		ug/L		102	52 - 137
4-Methyl-2-pentanone (MIBK)	10	U	20.0	19.1		ug/L		96	53 - 147
Methyl tert-butyl ether	1.0	U	10.0	6.86		ug/L		69	67 - 125
Styrene	1.0	U	10.0	10.2		ug/L		102	74 - 125
1,1,2,2-Tetrachloroethane	1.0	U	10.0	9.03		ug/L		90	51 - 123
Tetrachloroethene	1.0	U	10.0	11.1		ug/L		111	69 - 126
Toluene	1.0	U	10.0	9.92		ug/L		99	69 - 125
trans-1,2-Dichloroethene	1.0	U	10.0	11.0		ug/L		110	66 - 131
trans-1,3-Dichloropropene	1.0	U	10.0	8.21		ug/L		82	59 - 120
1,2,4-Trichlorobenzene	1.0	U	10.0	5.78		ug/L		58	26 - 138
1,1,1-Trichloroethane	1.0	U	10.0	10.7		ug/L		107	57 - 156
1,1,2-Trichloroethane	1.0	U	10.0	10.8		ug/L		108	68 - 127
Trichloroethene	1.0	U	10.0	10.1		ug/L		101	68 - 129
Trichlorofluoromethane	1.0	U	10.0	17.2		ug/L		172	28 - 172
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	10.0	13.7		ug/L		137	58 - 137
Vinyl chloride	0.81	J	10.0	10.0		ug/L		92	55 - 123
Xylenes, Total	2.0	U	20.0	19.4		ug/L		97	71 - 122

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*69 - 120*
Dibromofluoromethane (Surr)	*93*		*69 - 124*
1,2-Dichloroethane-d4 (Surr)	*86*		*61 - 138*
Toluene-d8 (Surr)	*85*		*73 - 120*

Lab Sample ID: 240-91441-E-2 MSD
Matrix: Water
Analysis Batch: 315091

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	10	U	20.0	21.8		ug/L		109	19 - 133	3	35
Benzene	1.0	U	10.0	9.27		ug/L		93	69 - 127	7	10
Bromodichloromethane	1.0	U	10.0	9.89		ug/L		99	75 - 128	9	13
Bromoform	1.0	U	10.0	11.3		ug/L		113	61 - 135	5	13

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

Lab Sample ID: 240-91441-E-2 MSD
Matrix: Water
Analysis Batch: 315091

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromomethane	1.0	U F1	10.0	13.0		ug/L		130	10 - 148	15	35
2-Butanone (MEK)	10	U *	20.0	27.2		ug/L		136	34 - 153	2	23
Carbon disulfide	5.0	U	10.0	8.98		ug/L		90	46 - 143	14	18
Carbon tetrachloride	1.0	U	10.0	11.5		ug/L		115	53 - 175	12	17
Chlorobenzene	1.0	U	10.0	9.41		ug/L		94	76 - 120	7	12
Chloroethane	1.0	U	10.0	9.50		ug/L		95	10 - 141	27	35
Chloroform	1.0	U	10.0	9.97		ug/L		100	74 - 125	5	11
Chloromethane	1.0	U	10.0	8.08		ug/L		81	34 - 127	8	25
cis-1,2-Dichloroethene	0.41	J	10.0	10.0		ug/L		96	69 - 127	7	11
cis-1,3-Dichloropropene	1.0	U	10.0	7.54		ug/L		75	68 - 120	7	13
Cyclohexane	1.0	U	10.0	11.1		ug/L		111	56 - 135	11	35
Dibromochloromethane	1.0	U *	10.0	11.8		ug/L		118	62 - 131	3	15
1,2-Dichlorobenzene	1.0	U	10.0	8.26		ug/L		83	70 - 120	8	19
1,3-Dichlorobenzene	1.0	U	10.0	8.35		ug/L		83	71 - 120	6	18
1,4-Dichlorobenzene	1.0	U	10.0	8.34		ug/L		83	72 - 120	7	17
Dichlorodifluoromethane	1.0	U	10.0	11.8		ug/L		118	45 - 130	9	34
1,1-Dichloroethane	1.0	U	10.0	9.63		ug/L		96	69 - 122	6	11
1,2-Dichloroethane	1.0	U	10.0	10.2		ug/L		102	64 - 138	3	11
1,1-Dichloroethene	1.0	U	10.0	9.79		ug/L		98	62 - 127	11	14
1,2-Dichloropropane	1.0	U	10.0	9.47		ug/L		95	72 - 131	8	12
Ethylbenzene	1.0	U	10.0	9.16		ug/L		92	72 - 121	6	15
2-Hexanone	10	U	20.0	25.1		ug/L		126	21 - 184	9	12
Isopropylbenzene	1.0	U	10.0	8.68		ug/L		87	70 - 132	9	16
Methyl acetate	10	U	20.0	23.0		ug/L		115	52 - 139	4	14
Methylcyclohexane	1.0	U	10.0	9.11		ug/L		91	46 - 139	8	35
Methylene Chloride	5.0	U	10.0	9.36		ug/L		94	52 - 137	9	12
4-Methyl-2-pentanone (MIBK)	10	U	20.0	21.0		ug/L		105	53 - 147	9	16
Methyl tert-butyl ether	1.0	U	10.0	6.76		ug/L		68	67 - 125	2	12
Styrene	1.0	U	10.0	9.58		ug/L		96	74 - 125	6	14
1,1,2,2-Tetrachloroethane	1.0	U	10.0	9.26		ug/L		93	51 - 123	2	17
Tetrachloroethene	1.0	U	10.0	10.1		ug/L		101	69 - 126	10	18
Toluene	1.0	U	10.0	9.28		ug/L		93	69 - 125	7	14
trans-1,2-Dichloroethene	1.0	U	10.0	10.3		ug/L		103	66 - 131	7	11
trans-1,3-Dichloropropene	1.0	U	10.0	7.87		ug/L		79	59 - 120	4	14
1,2,4-Trichlorobenzene	1.0	U	10.0	5.80		ug/L		58	26 - 138	0	35
1,1,1-Trichloroethane	1.0	U	10.0	9.96		ug/L		100	57 - 156	7	13
1,1,2-Trichloroethane	1.0	U	10.0	10.3		ug/L		103	68 - 127	5	11
Trichloroethene	1.0	U	10.0	9.89		ug/L		99	68 - 129	2	12
Trichlorofluoromethane	1.0	U	10.0	15.1		ug/L		151	28 - 172	13	26
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	10.0	11.9		ug/L		119	58 - 137	14	35
Vinyl chloride	0.81	J	10.0	9.25		ug/L		84	55 - 123	8	12
Xylenes, Total	2.0	U	20.0	17.9		ug/L		89	71 - 122	8	14

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*69 - 120*
Dibromofluoromethane (Surr)	*94*		*69 - 124*
1,2-Dichloroethane-d4 (Surr)	*83*		*61 - 138*

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

Lab Sample ID: 240-91441-E-2 MSD
Matrix: Water
Analysis Batch: 315091

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Toluene-d8 (Surr)	84		73 - 120

Lab Sample ID: MB 240-315290/6
Matrix: Water
Analysis Batch: 315290

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			02/19/18 14:37	1
Benzene	1.0	U	1.0	0.28	ug/L			02/19/18 14:37	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			02/19/18 14:37	1
Bromoform	1.0	U	1.0	0.43	ug/L			02/19/18 14:37	1
Bromomethane	1.0	U	1.0	0.42	ug/L			02/19/18 14:37	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			02/19/18 14:37	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			02/19/18 14:37	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			02/19/18 14:37	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			02/19/18 14:37	1
Chloroethane	1.0	U	1.0	0.41	ug/L			02/19/18 14:37	1
Chloroform	1.0	U	1.0	0.31	ug/L			02/19/18 14:37	1
Chloromethane	1.0	U	1.0	0.43	ug/L			02/19/18 14:37	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			02/19/18 14:37	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			02/19/18 14:37	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			02/19/18 14:37	1
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			02/19/18 14:37	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			02/19/18 14:37	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			02/19/18 14:37	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			02/19/18 14:37	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			02/19/18 14:37	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			02/19/18 14:37	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			02/19/18 14:37	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			02/19/18 14:37	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			02/19/18 14:37	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			02/19/18 14:37	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			02/19/18 14:37	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			02/19/18 14:37	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			02/19/18 14:37	1
2-Hexanone	10	U	10	1.2	ug/L			02/19/18 14:37	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			02/19/18 14:37	1
Methyl acetate	10	U	10	1.4	ug/L			02/19/18 14:37	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			02/19/18 14:37	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			02/19/18 14:37	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			02/19/18 14:37	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			02/19/18 14:37	1
Styrene	1.0	U	1.0	0.23	ug/L			02/19/18 14:37	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			02/19/18 14:37	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			02/19/18 14:37	1
Toluene	1.0	U	1.0	0.23	ug/L			02/19/18 14:37	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			02/19/18 14:37	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			02/19/18 14:37	1

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

Lab Sample ID: MB 240-315290/6
Matrix: Water
Analysis Batch: 315290

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			02/19/18 14:37	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			02/19/18 14:37	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			02/19/18 14:37	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			02/19/18 14:37	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			02/19/18 14:37	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			02/19/18 14:37	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			02/19/18 14:37	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			02/19/18 14:37	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			02/19/18 14:37	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			02/19/18 14:37	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			02/19/18 14:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*78*		*69 - 120*		*02/19/18 14:37*	*1*
Dibromofluoromethane (Surr)	*102*		*69 - 124*		*02/19/18 14:37*	*1*
1,2-Dichloroethane-d4 (Surr)	*91*		*61 - 138*		*02/19/18 14:37*	*1*
Toluene-d8 (Surr)	*82*		*73 - 120*		*02/19/18 14:37*	*1*

Lab Sample ID: LCS 240-315290/4
Matrix: Water
Analysis Batch: 315290

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	20.9		ug/L		104	35 - 131
Benzene	10.0	10.4		ug/L		104	79 - 120
Bromodichloromethane	10.0	11.5		ug/L		115	79 - 125
Bromoform	10.0	13.3		ug/L		133	55 - 145
Bromomethane	10.0	14.1		ug/L		141	17 - 158
2-Butanone (MEK)	20.0	31.5	*	ug/L		158	43 - 149
Carbon disulfide	10.0	11.0		ug/L		110	49 - 141
Carbon tetrachloride	10.0	13.8		ug/L		138	55 - 171
Chlorobenzene	10.0	11.5		ug/L		115	80 - 120
Chloroethane	10.0	11.0		ug/L		110	10 - 149
Chloroform	10.0	11.3		ug/L		113	80 - 120
Chloromethane	10.0	8.67		ug/L		87	59 - 124
cis-1,2-Dichloroethene	10.0	11.0		ug/L		110	77 - 120
cis-1,3-Dichloropropene	10.0	9.55		ug/L		95	75 - 120
Cyclohexane	10.0	13.0		ug/L		130	66 - 135
Dibromochloromethane	10.0	13.5	*	ug/L		135	64 - 129
1,2-Dibromo-3-Chloropropane	10.0	9.97		ug/L		100	50 - 130
1,2-Dibromoethane	10.0	12.1	*	ug/L		121	80 - 120
1,2-Dichlorobenzene	10.0	9.78		ug/L		98	80 - 120
1,3-Dichlorobenzene	10.0	9.91		ug/L		99	80 - 120
1,4-Dichlorobenzene	10.0	9.88		ug/L		99	80 - 120
Dichlorodifluoromethane	10.0	11.8		ug/L		118	42 - 141
1,1-Dichloroethane	10.0	11.2		ug/L		112	74 - 120
1,2-Dichloroethane	10.0	11.7		ug/L		117	68 - 133
1,1-Dichloroethene	10.0	11.1		ug/L		111	65 - 127

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

Lab Sample ID: LCS 240-315290/4
Matrix: Water
Analysis Batch: 315290

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	10.0	11.0		ug/L		110	78 - 127
Diethyl ether	10.0	14.0	*	ug/L		140	72 - 125
Ethylbenzene	10.0	11.2		ug/L		112	80 - 120
2-Hexanone	20.0	28.5		ug/L		143	28 - 169
Isopropylbenzene	10.0	10.6		ug/L		106	80 - 128
Methyl acetate	20.0	27.1		ug/L		136	63 - 137
Methylcyclohexane	10.0	10.6		ug/L		106	63 - 141
Methylene Chloride	10.0	11.5		ug/L		115	64 - 140
4-Methyl-2-pentanone (MIBK)	20.0	23.3		ug/L		116	53 - 144
Methyl tert-butyl ether	10.0	7.75		ug/L		77	73 - 120
Styrene	10.0	11.4		ug/L		114	80 - 121
1,1,2,2-Tetrachloroethane	10.0	11.1		ug/L		111	58 - 122
Tetrachloroethene	10.0	11.9		ug/L		119	80 - 122
Toluene	10.0	11.2		ug/L		112	78 - 120
trans-1,2-Dichloroethene	10.0	11.8		ug/L		118	74 - 124
trans-1,3-Dichloropropene	10.0	9.81		ug/L		98	67 - 120
1,2,4-Trichlorobenzene	10.0	6.20		ug/L		62	34 - 141
1,1,1-Trichloroethane	10.0	11.7		ug/L		117	64 - 147
1,1,2-Trichloroethane	10.0	12.1		ug/L		121	76 - 121
Trichloroethene	10.0	11.6		ug/L		116	76 - 124
Trichlorofluoromethane	10.0	16.6		ug/L		166	27 - 176
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	14.1		ug/L		141	65 - 144
1,2,4-Trimethylbenzene	10.0	9.90		ug/L		99	80 - 120
1,3,5-Trimethylbenzene	10.0	10.3		ug/L		103	79 - 120
Vinyl chloride	10.0	9.21		ug/L		92	65 - 124
Xylenes, Total	20.0	21.6		ug/L		108	80 - 120
1,4-Dioxane	200	125		ug/L		63	35 - 134

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*69 - 120*
Dibromofluoromethane (Surr)	*92*		*69 - 124*
1,2-Dichloroethane-d4 (Surr)	*84*		*61 - 138*
Toluene-d8 (Surr)	*86*		*73 - 120*

Lab Sample ID: 240-91479-3 MS
Matrix: Water
Analysis Batch: 315290

Client Sample ID: MW-71_021218
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	10	U	20.0	18.1		ug/L		91	19 - 133
Benzene	1.0	U	10.0	9.88		ug/L		99	69 - 127
Bromodichloromethane	1.0	U	10.0	10.8		ug/L		108	75 - 128
Bromoform	1.0	U	10.0	12.0		ug/L		120	61 - 135
Bromomethane	1.0	U F1	10.0	17.6	F1	ug/L		176	10 - 148
2-Butanone (MEK)	10	U *	20.0	21.8		ug/L		109	34 - 153
Carbon disulfide	5.0	U	10.0	11.6		ug/L		116	46 - 143
Carbon tetrachloride	1.0	U	10.0	13.7		ug/L		137	53 - 175

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

Lab Sample ID: 240-91479-3 MS
Matrix: Water
Analysis Batch: 315290

Client Sample ID: MW-71_021218
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chlorobenzene	1.0	U	10.0	10.7		ug/L		107	76 - 120
Chloroethane	1.0	U	10.0	13.5		ug/L		135	10 - 141
Chloroform	1.0	U	10.0	10.3		ug/L		103	74 - 125
Chloromethane	1.0	U	10.0	9.20		ug/L		92	34 - 127
cis-1,2-Dichloroethene	0.37	J	10.0	10.9		ug/L		105	69 - 127
cis-1,3-Dichloropropene	1.0	U	10.0	8.56		ug/L		86	68 - 120
Cyclohexane	1.0	U	10.0	13.2		ug/L		132	56 - 135
Dibromochloromethane	1.0	U *	10.0	12.0		ug/L		120	62 - 131
1,2-Dibromo-3-Chloropropane	1.0	U	10.0	8.61		ug/L		86	48 - 130
1,2-Dibromoethane	1.0	U *	10.0	10.5		ug/L		105	73 - 121
1,2-Dichlorobenzene	1.0	U	10.0	9.72		ug/L		97	70 - 120
1,3-Dichlorobenzene	1.0	U	10.0	9.48		ug/L		95	71 - 120
1,4-Dichlorobenzene	1.0	U	10.0	9.43		ug/L		94	72 - 120
Dichlorodifluoromethane	1.0	U F1	10.0	13.9	F1	ug/L		139	45 - 130
1,1-Dichloroethane	1.0	U	10.0	10.1		ug/L		101	69 - 122
1,2-Dichloroethane	1.0	U	10.0	10.3		ug/L		103	64 - 138
1,1-Dichloroethene	1.0	U	10.0	11.2		ug/L		112	62 - 127
1,2-Dichloropropane	1.0	U	10.0	10.5		ug/L		105	72 - 131
Diethyl ether	2.0	U * F1	10.0	12.2		ug/L		122	65 - 124
Ethylbenzene	1.0	U	10.0	10.0		ug/L		100	72 - 121
2-Hexanone	10	U F2	20.0	21.2		ug/L		106	21 - 184
Isopropylbenzene	1.0	U	10.0	10.3		ug/L		103	70 - 132
Methyl acetate	10	U	20.0	19.6		ug/L		98	52 - 139
Methylcyclohexane	1.0	U	10.0	10.6		ug/L		106	46 - 139
Methylene Chloride	5.0	U	10.0	9.78		ug/L		98	52 - 137
4-Methyl-2-pentanone (MIBK)	10	U	20.0	18.4		ug/L		92	53 - 147
Methyl tert-butyl ether	1.0	U F1	10.0	6.49	F1	ug/L		65	67 - 125
Styrene	1.0	U	10.0	10.6		ug/L		106	74 - 125
1,1,2,2-Tetrachloroethane	1.0	U	10.0	8.59		ug/L		86	51 - 123
Tetrachloroethene	1.0	U	10.0	11.9		ug/L		119	69 - 126
Toluene	1.0	U	10.0	10.3		ug/L		103	69 - 125
trans-1,2-Dichloroethene	1.0	U	10.0	11.4		ug/L		114	66 - 131
trans-1,3-Dichloropropene	1.0	U	10.0	8.36		ug/L		84	59 - 120
1,2,4-Trichlorobenzene	1.0	U	10.0	7.90		ug/L		79	26 - 138
1,1,1-Trichloroethane	1.0	U	10.0	11.3		ug/L		113	57 - 156
1,1,2-Trichloroethane	1.0	U	10.0	11.2		ug/L		112	68 - 127
Trichloroethene	1.0	U	10.0	10.6		ug/L		106	68 - 129
Trichlorofluoromethane	1.0	U F1	10.0	18.4	F1	ug/L		184	28 - 172
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U F1	10.0	15.4	F1	ug/L		154	58 - 137
1,2,4-Trimethylbenzene	1.0	U	10.0	9.27		ug/L		93	64 - 120
1,3,5-Trimethylbenzene	1.0	U	10.0	9.58		ug/L		96	67 - 120
Vinyl chloride	0.59	J	10.0	10.8		ug/L		102	55 - 123
Xylenes, Total	2.0	U	20.0	20.6		ug/L		103	71 - 122
1,4-Dioxane	50	U	200	155		ug/L		77	13 - 155

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*69 - 120*

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

Lab Sample ID: 240-91479-3 MS
Matrix: Water
Analysis Batch: 315290

Client Sample ID: MW-71_021218
Prep Type: Total/NA

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*89*		*69 - 124*
1,2-Dichloroethane-d4 (Surr)	*83*		*61 - 138*
Toluene-d8 (Surr)	*84*		*73 - 120*

Lab Sample ID: 240-91479-3 MSD
Matrix: Water
Analysis Batch: 315290

Client Sample ID: MW-71_021218
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	10	U	20.0	20.9		ug/L		105	19 - 133	14	35
Benzene	1.0	U	10.0	9.94		ug/L		99	69 - 127	1	10
Bromodichloromethane	1.0	U	10.0	10.6		ug/L		106	75 - 128	2	13
Bromoform	1.0	U	10.0	12.0		ug/L		120	61 - 135	0	13
Bromomethane	1.0	U F1	10.0	15.3	F1	ug/L		153	10 - 148	14	35
2-Butanone (MEK)	10	U *	20.0	25.6		ug/L		128	34 - 153	16	23
Carbon disulfide	5.0	U	10.0	11.0		ug/L		110	46 - 143	5	18
Carbon tetrachloride	1.0	U	10.0	13.0		ug/L		130	53 - 175	5	17
Chlorobenzene	1.0	U	10.0	10.5		ug/L		105	76 - 120	2	12
Chloroethane	1.0	U	10.0	12.7		ug/L		127	10 - 141	6	35
Chloroform	1.0	U	10.0	10.5		ug/L		105	74 - 125	2	11
Chloromethane	1.0	U	10.0	8.62		ug/L		86	34 - 127	6	25
cis-1,2-Dichloroethene	0.37	J	10.0	11.1		ug/L		107	69 - 127	2	11
cis-1,3-Dichloropropene	1.0	U	10.0	8.18		ug/L		82	68 - 120	5	13
Cyclohexane	1.0	U	10.0	12.5		ug/L		125	56 - 135	5	35
Dibromochloromethane	1.0	U *	10.0	12.3		ug/L		123	62 - 131	2	15
1,2-Dibromo-3-Chloropropane	1.0	U	10.0	9.30		ug/L		93	48 - 130	8	31
1,2-Dibromoethane	1.0	U *	10.0	10.8		ug/L		108	73 - 121	3	12
1,2-Dichlorobenzene	1.0	U	10.0	9.51		ug/L		95	70 - 120	2	19
1,3-Dichlorobenzene	1.0	U	10.0	9.36		ug/L		94	71 - 120	1	18
1,4-Dichlorobenzene	1.0	U	10.0	9.42		ug/L		94	72 - 120	0	17
Dichlorodifluoromethane	1.0	U F1	10.0	13.0		ug/L		130	45 - 130	6	34
1,1-Dichloroethane	1.0	U	10.0	10.4		ug/L		104	69 - 122	3	11
1,2-Dichloroethane	1.0	U	10.0	10.5		ug/L		105	64 - 138	2	11
1,1-Dichloroethene	1.0	U	10.0	11.0		ug/L		110	62 - 127	2	14
1,2-Dichloropropane	1.0	U	10.0	10.1		ug/L		101	72 - 131	4	12
Diethyl ether	2.0	U * F1	10.0	12.9	F1	ug/L		129	65 - 124	6	11
Ethylbenzene	1.0	U	10.0	10.3		ug/L		103	72 - 121	2	15
2-Hexanone	10	U F2	20.0	24.9	F2	ug/L		124	21 - 184	16	12
Isopropylbenzene	1.0	U	10.0	10.0		ug/L		100	70 - 132	2	16
Methyl acetate	10	U	20.0	21.8		ug/L		109	52 - 139	10	14
Methylcyclohexane	1.0	U	10.0	10.2		ug/L		102	46 - 139	4	35
Methylene Chloride	5.0	U	10.0	10.2		ug/L		102	52 - 137	4	12
4-Methyl-2-pentanone (MIBK)	10	U	20.0	20.0		ug/L		100	53 - 147	8	16
Methyl tert-butyl ether	1.0	U F1	10.0	6.94		ug/L		69	67 - 125	7	12
Styrene	1.0	U	10.0	10.7		ug/L		107	74 - 125	0	14
1,1,2,2-Tetrachloroethane	1.0	U	10.0	9.34		ug/L		93	51 - 123	8	17
Tetrachloroethene	1.0	U	10.0	11.7		ug/L		117	69 - 126	1	18
Toluene	1.0	U	10.0	10.2		ug/L		102	69 - 125	2	14

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

Lab Sample ID: 240-91479-3 MSD
Matrix: Water
Analysis Batch: 315290

Client Sample ID: MW-71_021218
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
trans-1,2-Dichloroethene	1.0	U	10.0	11.1		ug/L		111	66 - 131	2	11
trans-1,3-Dichloropropene	1.0	U	10.0	8.70		ug/L		87	59 - 120	4	14
1,2,4-Trichlorobenzene	1.0	U	10.0	8.30		ug/L		83	26 - 138	5	35
1,1,1-Trichloroethane	1.0	U	10.0	11.2		ug/L		112	57 - 156	0	13
1,1,2-Trichloroethane	1.0	U	10.0	10.8		ug/L		108	68 - 127	4	11
Trichloroethene	1.0	U	10.0	10.3		ug/L		103	68 - 129	3	12
Trichlorofluoromethane	1.0	U F1	10.0	17.2		ug/L		172	28 - 172	7	26
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U F1	10.0	14.6	F1	ug/L		146	58 - 137	5	35
1,2,4-Trimethylbenzene	1.0	U	10.0	9.45		ug/L		95	64 - 120	2	22
1,3,5-Trimethylbenzene	1.0	U	10.0	9.41		ug/L		94	67 - 120	2	25
Vinyl chloride	0.59	J	10.0	9.94		ug/L		94	55 - 123	8	12
Xylenes, Total	2.0	U	20.0	20.1		ug/L		100	71 - 122	3	14
1,4-Dioxane	50	U	200	172		ug/L		86	13 - 155	11	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*69 - 120*
Dibromofluoromethane (Surr)	*93*		*69 - 124*
1,2-Dichloroethane-d4 (Surr)	*85*		*61 - 138*
Toluene-d8 (Surr)	*86*		*73 - 120*

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

Lab Sample ID: MB 240-315270/5
Matrix: Water
Analysis Batch: 315270

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			02/19/18 11:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*63 - 125*		*02/19/18 11:14*	*1*

Lab Sample ID: LCS 240-315270/4
Matrix: Water
Analysis Batch: 315270

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	8.86		ug/L		89	59 - 131		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*104*		*63 - 125*

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

Lab Sample ID: 240-91428-C-6 MS
Matrix: Water
Analysis Batch: 315270

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	0.41	J	10.0	10.5		ug/L		101	52 - 129

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*63 - 125*

Lab Sample ID: 240-91428-C-6 MSD
Matrix: Water
Analysis Batch: 315270

Client Sample ID: Matrix Spike Duplicate
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	0.41	J	10.0	9.34		ug/L		89	52 - 129	12	13

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*63 - 125*

Lab Sample ID: MB 240-315654/5
Matrix: Water
Analysis Batch: 315654

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			02/21/18 14:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*63 - 125*		*02/21/18 14:48*	*1*

Lab Sample ID: LCS 240-315654/4
Matrix: Water
Analysis Batch: 315654

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	8.72		ug/L		87	59 - 131

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*90*		*63 - 125*

Lab Sample ID: 240-91479-3 MS
Matrix: Water
Analysis Batch: 315654

Client Sample ID: MW-71_021218
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	0.57	J	10.0	8.84		ug/L		83	52 - 129

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*63 - 125*

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

Lab Sample ID: 240-91479-3 MSD
Matrix: Water
Analysis Batch: 315654

Client Sample ID: MW-71_021218
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	0.57	J	10.0	9.80		ug/L		92	52 - 129	10	13

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*90*		*63 - 125*

GC/MS VOA

Analysis Batch: 315091

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-91479-1	MW-51_020818	Total/NA	Water	8260B	
240-91479-2	MW-46_021218	Total/NA	Water	8260B	
240-91479-4	MW-7_021218	Total/NA	Water	8260B	
240-91479-5	MW-67_021218	Total/NA	Water	8260B	
240-91479-6	TRIP BLANK	Total/NA	Water	8260B	
240-91479-7	MW-32_021218	Total/NA	Water	8260B	
240-91479-8	MW-37_021218	Total/NA	Water	8260B	
240-91479-9	MW-50_021218	Total/NA	Water	8260B	
MB 240-315091/7	Method Blank	Total/NA	Water	8260B	
LCS 240-315091/5	Lab Control Sample	Total/NA	Water	8260B	
240-91441-D-2 MS	Matrix Spike	Total/NA	Water	8260B	
240-91441-E-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 315270

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-91479-1	MW-51_020818	Total/NA	Water	8260B SIM	
240-91479-2	MW-46_021218	Total/NA	Water	8260B SIM	
240-91479-4	MW-7_021218	Total/NA	Water	8260B SIM	
240-91479-5	MW-67_021218	Total/NA	Water	8260B SIM	
240-91479-7	MW-32_021218	Total/NA	Water	8260B SIM	
240-91479-8	MW-37_021218	Total/NA	Water	8260B SIM	
240-91479-9	MW-50_021218	Total/NA	Water	8260B SIM	
240-91479-10	MW-68_021218	Total/NA	Water	8260B SIM	
MB 240-315270/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-315270/4	Lab Control Sample	Total/NA	Water	8260B SIM	
240-91428-C-6 MS	Matrix Spike	Total/NA	Water	8260B SIM	
240-91428-C-6 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B SIM	

Analysis Batch: 315290

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-91479-3	MW-71_021218	Total/NA	Water	8260B	
240-91479-10	MW-68_021218	Total/NA	Water	8260B	
MB 240-315290/6	Method Blank	Total/NA	Water	8260B	
LCS 240-315290/4	Lab Control Sample	Total/NA	Water	8260B	
240-91479-3 MS	MW-71_021218	Total/NA	Water	8260B	
240-91479-3 MSD	MW-71_021218	Total/NA	Water	8260B	

Analysis Batch: 315654

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-91479-3	MW-71_021218	Total/NA	Water	8260B SIM	
MB 240-315654/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-315654/4	Lab Control Sample	Total/NA	Water	8260B SIM	
240-91479-3 MS	MW-71_021218	Total/NA	Water	8260B SIM	
240-91479-3 MSD	MW-71_021218	Total/NA	Water	8260B SIM	

Client Sample ID: MW-51_020818
Lab Sample ID: 240-91479-1
Date Collected: 02/08/18 16:55
Matrix: Water
Date Received: 02/14/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	315091	02/16/18 20:47	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	315270	02/19/18 17:33	SAM	TAL CAN

Client Sample ID: MW-46_021218
Lab Sample ID: 240-91479-2
Date Collected: 02/12/18 11:52
Matrix: Water
Date Received: 02/14/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	315091	02/16/18 21:11	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	315270	02/19/18 17:59	SAM	TAL CAN

Client Sample ID: MW-71_021218
Lab Sample ID: 240-91479-3
Date Collected: 02/12/18 13:12
Matrix: Water
Date Received: 02/14/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	315290	02/19/18 15:00	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	315654	02/21/18 15:40	SAM	TAL CAN

Client Sample ID: MW-7_021218
Lab Sample ID: 240-91479-4
Date Collected: 02/12/18 15:22
Matrix: Water
Date Received: 02/14/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	315091	02/16/18 21:34	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	315270	02/19/18 18:24	SAM	TAL CAN

Client Sample ID: MW-67_021218
Lab Sample ID: 240-91479-5
Date Collected: 02/12/18 16:47
Matrix: Water
Date Received: 02/14/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		3.33	315091	02/16/18 21:57	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	315270	02/19/18 18:49	SAM	TAL CAN

Client Sample ID: TRIP BLANK
Lab Sample ID: 240-91479-6
Date Collected: 02/12/18 00:00
Matrix: Water
Date Received: 02/14/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	315091	02/16/18 22:20	LRW	TAL CAN

Lab Chronicle

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

TestAmerica Job ID: 240-91479-1

Client Sample ID: MW-32_021218
Date Collected: 02/12/18 10:15
Date Received: 02/14/18 09:00

Lab Sample ID: 240-91479-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	315091	02/16/18 22:43	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	315270	02/19/18 19:15	SAM	TAL CAN

Client Sample ID: MW-37_021218
Date Collected: 02/12/18 12:17
Date Received: 02/14/18 09:00

Lab Sample ID: 240-91479-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	315091	02/16/18 23:30	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	315270	02/19/18 19:40	SAM	TAL CAN

Client Sample ID: MW-50_021218
Date Collected: 02/12/18 16:05
Date Received: 02/14/18 09:00

Lab Sample ID: 240-91479-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	315091	02/16/18 23:53	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	315270	02/19/18 20:05	SAM	TAL CAN

Client Sample ID: MW-68_021218
Date Collected: 02/12/18 14:17
Date Received: 02/14/18 09:00

Lab Sample ID: 240-91479-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	315290	02/19/18 16:33	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	315270	02/19/18 20:30	SAM	TAL CAN

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: 240-91479-1

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	02-23-18 *
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	01-31-18 *
Kentucky (UST)	State Program	4	58	02-23-18 *
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	03-31-18 *
Ohio VAP	State Program	5	CL0024	09-06-19
Oregon	NELAP	10	4062	02-23-18 *
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.

3.2/2.9
1.8/1.5

Chain of Custody Record

MICHIGAN 190

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

TestAmerica Laboratories, Inc.

Client Contact	Regulatory program:	Client Project Manager: Kris Hinskey	Site Contact: Angela DeGrandis	Lab Contact: Denise Pohl	COC No: 1
Company Name: Arcadis	☐ DW ☐ NPDES ☐ RCRA ☐ Other	Telephone: 248-994-2240	Telephone: 734-320-0065	Telephone: 330-966-9789	of 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		
Project Name: Ford LTP		Method of Shipment/Carrier:			
Project Number: MI001386.0001.20000		Shipping/Tracking No:			
PO # MI001386.0001.20000					

240-91479 Chain of Custody

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	Analyses: VOCs 8260B	1,4-Dioxane 8260B SIM	Notes / Preservations:
MW-51_020818	2/8/18	16:55		X			X			X				X	N	G	X	X	
MW-46_021218	2/12/18	1152		X						6					N	G	X	X	
MW-71_021218	2/12/18	1312		X						18					N	G	X	X	MS/MSD
MW-7_021218	2/12/18	1522		X						6					N	G	X	X	
MW-67_021218	2/12/18	1647		X						6					N	G	X	X	
TRIPBLANK	—	—		X									1		-	-	X	X	
MW-32_021218	2/12/18	1015		X						6					N	G	X	X	
MW-37_021218	"	1217		X						6					"	"	X	X	
MW-50_021218	"	1605		X						6					"	"	X	X	
MW-68_021218	"	1417		X						6					"	"	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:

Level IV Reporting

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

Lab:

Relinquished by	Company	Date/Time	Received by	Company	Date/Time
DIVYA KAMATH/	ARCADIS	2/8/18/18:20	NOVI FRIDGE	ARCADIS	2/8/18 18:20
Novi Fridge	ARCADIS	2/12/18 800	Ashley Reid	ARCADIS	2/12/18 800
Ashley Reid	ARCADIS	2/13/18 0820	Received in Laboratory by:	VTC	2/13/18 1430

RECEIVED BY: KALAN BRIGGS / / ARCADIS
RELINQUISHED BY: KALAN BRIGGS / / ARCADIS 2/13/18

Relinquished by: TAL 2/13/18 1532
Rec'd: TA Canton 2/14/18 0900

2/26/2018

TestAmerica Canton Sample Receipt Form/Narrative **Login # : 91479**

Canton Facility

Client Arcadis Site Name

Cooler Received on 2/14/18 Opened on 2/14/18

Cooler unpacked by: Terry Burns

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

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

TestAmerica Cooler # Foam Box Client Cooler Box Other Multiple

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 -0.3 °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 each	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# HC730269
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 # B729461VB	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 Date by via Verbal Voice Mail Other

Concerning

16. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

COC = MW-67-021218 @ 1647, Label on 1x40 = MW-63-021218 @ 1647

Recd 6x40 Dup-02-021318 no time not on COC - will log

17. 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)

18. 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 **Login # : 91479**
Canton Facility

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
Client	8	3.2	2.9	ICE
1	1	1.8	1.5	1