

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

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TestAmerica Job ID: 240-108818-1

Client Project/Site: Ford LTP Livonia MI - E203728

For:

ARCADIS U.S., Inc.
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Attn: Kristoffer Hinskey



Authorized for release by:
3/18/2019 11:36:45 AM

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



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Definitions/Glossary

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

TestAmerica Job ID: 240-108818-1

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.
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

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

Case Narrative

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

TestAmerica Job ID: 240-108818-1

Job ID: 240-108818-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford LTP Livonia MI - E203728

Report Number: 240-108818-1

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 3/2/2019 9:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.2° C and 2.0° C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples MW-38-022719 (240-108818-1), MW-49-022719 (240-108818-2), MW-50-022719 (240-108818-3), MW-7-022719 (240-108818-4), MW-25-022719 (240-108818-5), MW-63-022819 (240-108818-6), MW-64-022819 (240-108818-7), MW-47-022819 (240-108818-8), MW-57-022819 (240-108818-9), MW-29-022819 (240-108818-10), MW-26-022819 (240-108818-11), MW-19-022819 (240-108818-12), MW-67-022819 (240-108818-13), MW-65-022819 (240-108818-14), MW-32-022819 (240-108818-15), MW-39-022819 (240-108818-16), DUP-01 (240-108818-17), DUP-02 (240-108818-18), DUP-03 (240-108818-19) and TRIP BLANK (240-108818-20) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 03/05/2019, 03/06/2019 and 03/07/2019.

4-Methyl-2-pentanone (MIBK) and Methyl acetate failed the recovery criteria high for LCS 240-370294/4. 2-Hexanone, 4-Methyl-2-pentanone (MIBK) and Methyl acetate failed the recovery criteria high for LCS 240-370494/4. Chloromethane, Cyclohexane, Diethyl ether, Methyl acetate and Vinyl chloride failed the recovery criteria high for LCS 240-370674/4. Refer to the QC report for details.

Samples MW-49-022719 (240-108818-2)[2500X], MW-50-022719 (240-108818-3)[6.67X], MW-47-022819 (240-108818-8)[2.5X], MW-67-022819 (240-108818-13)[2.5X], MW-65-022819 (240-108818-14)[2.5X] and DUP-02 (240-108818-18)[2.5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Case Narrative

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

TestAmerica Job ID: 240-108818-1

Job ID: 240-108818-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

The laboratory control sample (LCS) for analytical batch 240-370294 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-7-022719 (240-108818-4), MW-25-022719 (240-108818-5), MW-63-022819 (240-108818-6) and (LCS 240-370294/4).

The laboratory control sample (LCS) for analytical batch 240-370494 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-64-022819 (240-108818-7), MW-57-022819 (240-108818-9), MW-29-022819 (240-108818-10), MW-26-022819 (240-108818-11), MW-19-022819 (240-108818-12), MW-67-022819 (240-108818-13), MW-65-022819 (240-108818-14), MW-32-022819 (240-108818-15), MW-39-022819 (240-108818-16), DUP-01 (240-108818-17), DUP-02 (240-108818-18) and (LCS 240-370494/4).

The continuing calibration verification (CCV) associated with batch 370674 recovered above the upper control limit for Vinyl Chloride and 1,2-Dichloropropane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: DUP-03 (240-108818-19) and TRIP BLANK (240-108818-20).

The laboratory control sample (LCS) for 370674 recovered outside control limits for one or multiple analytes. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported: DUP-03 (240-108818-19), TRIP BLANK (240-108818-20) and (LCS 240-370674/4).

The continuing calibration verification (CCV) associated with batch 370676 recovered above the upper control limit for Chloroform. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following samples are impacted: MW-50-022719 (240-108818-3) and MW-47-022819 (240-108818-8).

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-38-022719 (240-108818-1), MW-49-022719 (240-108818-2), MW-50-022719 (240-108818-3), MW-7-022719 (240-108818-4), MW-25-022719 (240-108818-5), MW-63-022819 (240-108818-6), MW-64-022819 (240-108818-7), MW-47-022819 (240-108818-8), MW-57-022819 (240-108818-9), MW-29-022819 (240-108818-10), MW-26-022819 (240-108818-11), MW-19-022819 (240-108818-12), MW-67-022819 (240-108818-13), MW-65-022819 (240-108818-14), MW-32-022819 (240-108818-15), MW-39-022819 (240-108818-16), DUP-01 (240-108818-17), DUP-02 (240-108818-18) and DUP-03 (240-108818-19) were analyzed for volatile organic compounds (GCMS SIM) in accordance with EPA SW-846 Method 8260B SIM. The samples were analyzed on 03/06/2019 and 03/07/2019.

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

Method Summary

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

TestAmerica Job ID: 240-108818-1

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

Protocol References:

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

Laboratory References:

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

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Sample Summary

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

TestAmerica Job ID: 240-108818-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-108818-1	MW-38-022719	Water	02/27/19 16:30	03/02/19 09:45
240-108818-2	MW-49-022719	Water	02/27/19 18:30	03/02/19 09:45
240-108818-3	MW-50-022719	Water	02/27/19 17:25	03/02/19 09:45
240-108818-4	MW-7-022719	Water	02/27/19 18:36	03/02/19 09:45
240-108818-5	MW-25-022719	Water	02/27/19 16:35	03/02/19 09:45
240-108818-6	MW-63-022819	Water	02/28/19 09:10	03/02/19 09:45
240-108818-7	MW-64-022819	Water	02/28/19 11:15	03/02/19 09:45
240-108818-8	MW-47-022819	Water	02/28/19 13:30	03/02/19 09:45
240-108818-9	MW-57-022819	Water	02/28/19 15:20	03/02/19 09:45
240-108818-10	MW-29-022819	Water	02/28/19 12:14	03/02/19 09:45
240-108818-11	MW-26-022819	Water	02/28/19 09:52	03/02/19 09:45
240-108818-12	MW-19-022819	Water	02/28/19 14:52	03/02/19 09:45
240-108818-13	MW-67-022819	Water	02/28/19 16:40	03/02/19 09:45
240-108818-14	MW-65-022819	Water	02/28/19 15:05	03/02/19 09:45
240-108818-15	MW-32-022819	Water	02/28/19 09:50	03/02/19 09:45
240-108818-16	MW-39-022819	Water	02/28/19 11:40	03/02/19 09:45
240-108818-17	DUP-01	Water	02/28/19 00:00	03/02/19 09:45
240-108818-18	DUP-02	Water	02/28/19 00:00	03/02/19 09:45
240-108818-19	DUP-03	Water	02/28/19 00:00	03/02/19 09:45
240-108818-20	TRIP BLANK	Water	02/28/19 00:00	03/02/19 09:45

Detection Summary

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-38-022719

Lab Sample ID: 240-108818-1

No Detections.

Client Sample ID: MW-49-022719

Lab Sample ID: 240-108818-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	8.1		2.0	0.86	ug/L	1		8260B SIM	Total/NA
cis-1,2-Dichloroethene	37000		2500	400	ug/L	2500		8260B	Total/NA
Vinyl chloride	9100		2500	500	ug/L	2500		8260B	Total/NA

Client Sample ID: MW-50-022719

Lab Sample ID: 240-108818-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	3.6		2.0	0.86	ug/L	1		8260B SIM	Total/NA
cis-1,2-Dichloroethene	20		6.7	1.1	ug/L	6.67		8260B	Total/NA
Vinyl chloride	170		6.7	1.3	ug/L	6.67		8260B	Total/NA

Client Sample ID: MW-7-022719

Lab Sample ID: 240-108818-4

No Detections.

Client Sample ID: MW-25-022719

Lab Sample ID: 240-108818-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	4.5		2.0	0.86	ug/L	1		8260B SIM	Total/NA

Client Sample ID: MW-63-022819

Lab Sample ID: 240-108818-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.8		1.0	0.16	ug/L	1		8260B	Total/NA

Client Sample ID: MW-64-022819

Lab Sample ID: 240-108818-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.23	J	1.0	0.16	ug/L	1		8260B	Total/NA
Vinyl chloride	3.4		1.0	0.20	ug/L	1		8260B	Total/NA

Client Sample ID: MW-47-022819

Lab Sample ID: 240-108818-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	32		2.5	0.40	ug/L	2.5		8260B	Total/NA
1,1-Dichloroethane	4.0		2.5	0.43	ug/L	2.5		8260B	Total/NA
trans-1,2-Dichloroethene	5.4		2.5	0.48	ug/L	2.5		8260B	Total/NA
1,1,1-Trichloroethane	2.2	J	2.5	0.60	ug/L	2.5		8260B	Total/NA
Vinyl chloride	44		2.5	0.50	ug/L	2.5		8260B	Total/NA

Client Sample ID: MW-57-022819

Lab Sample ID: 240-108818-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	3.1		2.0	0.86	ug/L	1		8260B SIM	Total/NA
Acetone	12		10	5.4	ug/L	1		8260B	Total/NA
2-Butanone (MEK)	2.7	J	10	1.2	ug/L	1		8260B	Total/NA
Vinyl chloride	0.88	J	1.0	0.20	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-29-022819

Lab Sample ID: 240-108818-10

No Detections.

Client Sample ID: MW-26-022819

Lab Sample ID: 240-108818-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	0.23	J	1.0	0.17	ug/L	1		8260B	Total/NA

Client Sample ID: MW-19-022819

Lab Sample ID: 240-108818-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	170		2.0	0.86	ug/L	1		8260B SIM	Total/NA
cis-1,2-Dichloroethene	1.3		1.0	0.16	ug/L	1		8260B	Total/NA
1,1-Dichloroethane	5.8		1.0	0.17	ug/L	1		8260B	Total/NA
1,2-Dichloroethane	0.47	J	1.0	0.21	ug/L	1		8260B	Total/NA
Trichloroethene	0.66	J	1.0	0.10	ug/L	1		8260B	Total/NA
Vinyl chloride	1.9		1.0	0.20	ug/L	1		8260B	Total/NA

Client Sample ID: MW-67-022819

Lab Sample ID: 240-108818-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	5.6		2.5	0.40	ug/L	2.5		8260B	Total/NA
1,1-Dichloroethane	0.49	J	2.5	0.43	ug/L	2.5		8260B	Total/NA
trans-1,2-Dichloroethene	1.4	J	2.5	0.48	ug/L	2.5		8260B	Total/NA
1,1,1-Trichloroethane	0.78	J	2.5	0.60	ug/L	2.5		8260B	Total/NA
Trichloroethene	41		2.5	0.25	ug/L	2.5		8260B	Total/NA
Vinyl chloride	1.7	J	2.5	0.50	ug/L	2.5		8260B	Total/NA

Client Sample ID: MW-65-022819

Lab Sample ID: 240-108818-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	2.6		2.0	0.86	ug/L	1		8260B SIM	Total/NA
cis-1,2-Dichloroethene	5.9		2.5	0.40	ug/L	2.5		8260B	Total/NA
Vinyl chloride	34		2.5	0.50	ug/L	2.5		8260B	Total/NA

Client Sample ID: MW-32-022819

Lab Sample ID: 240-108818-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.48	J	1.0	0.16	ug/L	1		8260B	Total/NA
Vinyl chloride	0.39	J	1.0	0.20	ug/L	1		8260B	Total/NA

Client Sample ID: MW-39-022819

Lab Sample ID: 240-108818-16

No Detections.

Client Sample ID: DUP-01

Lab Sample ID: 240-108818-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	150		2.0	0.86	ug/L	1		8260B SIM	Total/NA
cis-1,2-Dichloroethene	1.3		1.0	0.16	ug/L	1		8260B	Total/NA
1,1-Dichloroethane	5.7		1.0	0.17	ug/L	1		8260B	Total/NA
1,2-Dichloroethane	0.45	J	1.0	0.21	ug/L	1		8260B	Total/NA
Trichloroethene	0.64	J	1.0	0.10	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: DUP-01 (Continued)

Lab Sample ID: 240-108818-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	1.8		1.0	0.20	ug/L	1		8260B	Total/NA

Client Sample ID: DUP-02

Lab Sample ID: 240-108818-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	2.3		2.0	0.86	ug/L	1		8260B SIM	Total/NA
cis-1,2-Dichloroethene	6.2		2.5	0.40	ug/L	2.5		8260B	Total/NA
1,1-Dichloroethane	0.54	J	2.5	0.43	ug/L	2.5		8260B	Total/NA
Vinyl chloride	33		2.5	0.50	ug/L	2.5		8260B	Total/NA

Client Sample ID: DUP-03

Lab Sample ID: 240-108818-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	2.0		2.0	0.86	ug/L	1		8260B SIM	Total/NA
Acetone	11		10	5.4	ug/L	1		8260B	Total/NA
2-Butanone (MEK)	1.6	J	10	1.2	ug/L	1		8260B	Total/NA
Vinyl chloride	0.77	J*	1.0	0.20	ug/L	1		8260B	Total/NA

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-108818-20

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-38-022719

Lab Sample ID: 240-108818-1

Date Collected: 02/27/19 16:30

Matrix: Water

Date Received: 03/02/19 09:45

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	0.86	ug/L			03/06/19 22:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	89		63 - 125					03/06/19 22:02	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	5.4	ug/L			03/06/19 17:50	1
Benzene	1.0	U	1.0	0.13	ug/L			03/06/19 17:50	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/06/19 17:50	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/06/19 17:50	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/06/19 17:50	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/06/19 17:50	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/06/19 17:50	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/06/19 17:50	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/06/19 17:50	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/06/19 17:50	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/06/19 17:50	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/06/19 17:50	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/06/19 17:50	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/06/19 17:50	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/06/19 17:50	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/06/19 17:50	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/06/19 17:50	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/06/19 17:50	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/06/19 17:50	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/06/19 17:50	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/06/19 17:50	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/06/19 17:50	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/06/19 17:50	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/06/19 17:50	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/06/19 17:50	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/06/19 17:50	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/06/19 17:50	1
2-Hexanone	10	U	10	0.54	ug/L			03/06/19 17:50	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/06/19 17:50	1
Methyl acetate	10	U	10	1.7	ug/L			03/06/19 17:50	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/06/19 17:50	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/06/19 17:50	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/06/19 17:50	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/06/19 17:50	1
Styrene	1.0	U	1.0	0.10	ug/L			03/06/19 17:50	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/06/19 17:50	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/06/19 17:50	1
Toluene	1.0	U	1.0	0.14	ug/L			03/06/19 17:50	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/06/19 17:50	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/06/19 17:50	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/06/19 17:50	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/06/19 17:50	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/06/19 17:50	1

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-38-022719

Lab Sample ID: 240-108818-1

Date Collected: 02/27/19 16:30

Matrix: Water

Date Received: 03/02/19 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/06/19 17:50	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/06/19 17:50	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/06/19 17:50	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/06/19 17:50	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/06/19 17:50	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/06/19 17:50	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/06/19 17:50	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/06/19 17:50	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/06/19 17:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	67		59 - 120					03/06/19 17:50	1
Dibromofluoromethane (Surr)	103		75 - 128					03/06/19 17:50	1
1,2-Dichloroethane-d4 (Surr)	100		70 - 121					03/06/19 17:50	1
Toluene-d8 (Surr)	74		70 - 123					03/06/19 17:50	1

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-49-022719

Lab Sample ID: 240-108818-2

Date Collected: 02/27/19 18:30

Matrix: Water

Date Received: 03/02/19 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	8.1		2.0	0.86	ug/L			03/06/19 22:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	79		63 - 125					03/06/19 22:27	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25000	U	25000	14000	ug/L			03/06/19 18:12	2500
Benzene	2500	U	2500	330	ug/L			03/06/19 18:12	2500
Bromodichloromethane	2500	U	2500	430	ug/L			03/06/19 18:12	2500
Bromoform	2500	U	2500	1900	ug/L			03/06/19 18:12	2500
Bromomethane	2500	U	2500	1100	ug/L			03/06/19 18:12	2500
2-Butanone (MEK)	25000	U	25000	2900	ug/L			03/06/19 18:12	2500
Carbon disulfide	13000	U	13000	700	ug/L			03/06/19 18:12	2500
Carbon tetrachloride	2500	U	2500	650	ug/L			03/06/19 18:12	2500
Chlorobenzene	2500	U	2500	350	ug/L			03/06/19 18:12	2500
Chloroethane	2500	U	2500	2100	ug/L			03/06/19 18:12	2500
Chloroform	2500	U	2500	330	ug/L			03/06/19 18:12	2500
Chloromethane	2500	U	2500	500	ug/L			03/06/19 18:12	2500
cis-1,2-Dichloroethene	37000		2500	400	ug/L			03/06/19 18:12	2500
cis-1,3-Dichloropropene	2500	U	2500	1500	ug/L			03/06/19 18:12	2500
Cyclohexane	2500	U	2500	600	ug/L			03/06/19 18:12	2500
Dibromochloromethane	2500	U	2500	980	ug/L			03/06/19 18:12	2500
1,2-Dibromo-3-Chloropropane	2500	U	2500	2300	ug/L			03/06/19 18:12	2500
1,2-Dibromoethane	2500	U	2500	300	ug/L			03/06/19 18:12	2500
1,2-Dichlorobenzene	2500	U	2500	380	ug/L			03/06/19 18:12	2500
1,3-Dichlorobenzene	2500	U	2500	380	ug/L			03/06/19 18:12	2500
1,4-Dichlorobenzene	2500	U	2500	400	ug/L			03/06/19 18:12	2500
Dichlorodifluoromethane	2500	U	2500	880	ug/L			03/06/19 18:12	2500
1,1-Dichloroethane	2500	U	2500	430	ug/L			03/06/19 18:12	2500
1,2-Dichloroethane	2500	U	2500	530	ug/L			03/06/19 18:12	2500
1,1-Dichloroethene	2500	U	2500	480	ug/L			03/06/19 18:12	2500
1,2-Dichloropropane	2500	U	2500	380	ug/L			03/06/19 18:12	2500
Ethylbenzene	2500	U	2500	280	ug/L			03/06/19 18:12	2500
2-Hexanone	25000	U	25000	1400	ug/L			03/06/19 18:12	2500
Isopropylbenzene	2500	U	2500	230	ug/L			03/06/19 18:12	2500
Methyl acetate	25000	U	25000	4300	ug/L			03/06/19 18:12	2500
Methylcyclohexane	2500	U	2500	830	ug/L			03/06/19 18:12	2500
Methylene Chloride	13000	U	13000	6600	ug/L			03/06/19 18:12	2500
4-Methyl-2-pentanone (MIBK)	25000	U	25000	1100	ug/L			03/06/19 18:12	2500
Methyl tert-butyl ether	2500	U	2500	180	ug/L			03/06/19 18:12	2500
Styrene	2500	U	2500	250	ug/L			03/06/19 18:12	2500
1,1,2,2-Tetrachloroethane	2500	U	2500	330	ug/L			03/06/19 18:12	2500
Tetrachloroethene	2500	U	2500	380	ug/L			03/06/19 18:12	2500
Toluene	2500	U	2500	350	ug/L			03/06/19 18:12	2500
trans-1,2-Dichloroethene	2500	U	2500	480	ug/L			03/06/19 18:12	2500
trans-1,3-Dichloropropene	2500	U	2500	1700	ug/L			03/06/19 18:12	2500
1,2,4-Trichlorobenzene	2500	U	2500	650	ug/L			03/06/19 18:12	2500
1,1,1-Trichloroethane	2500	U	2500	600	ug/L			03/06/19 18:12	2500
1,1,2-Trichloroethane	2500	U	2500	230	ug/L			03/06/19 18:12	2500

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-49-022719

Lab Sample ID: 240-108818-2

Date Collected: 02/27/19 18:30

Matrix: Water

Date Received: 03/02/19 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	2500	U	2500	250	ug/L			03/06/19 18:12	2500
Trichlorofluoromethane	2500	U	2500	1100	ug/L			03/06/19 18:12	2500
1,1,2-Trichloro-1,2,2-trifluoroethane	2500	U	2500	1000	ug/L			03/06/19 18:12	2500
1,2,3-Trimethylbenzene	13000	U	13000	350	ug/L			03/06/19 18:12	2500
1,2,4-Trimethylbenzene	2500	U	2500	180	ug/L			03/06/19 18:12	2500
1,3,5-Trimethylbenzene	2500	U	2500	300	ug/L			03/06/19 18:12	2500
Vinyl chloride	9100		2500	500	ug/L			03/06/19 18:12	2500
Xylenes, Total	5000	U	5000	380	ug/L			03/06/19 18:12	2500
Diethyl ether	5000	U	5000	480	ug/L			03/06/19 18:12	2500

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	70		59 - 120		03/06/19 18:12	2500
Dibromofluoromethane (Surr)	108		75 - 128		03/06/19 18:12	2500
1,2-Dichloroethane-d4 (Surr)	103		70 - 121		03/06/19 18:12	2500
Toluene-d8 (Surr)	74		70 - 123		03/06/19 18:12	2500

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-50-022719

Lab Sample ID: 240-108818-3

Date Collected: 02/27/19 17:25

Matrix: Water

Date Received: 03/02/19 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	3.6		2.0	0.86	ug/L			03/06/19 22:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		63 - 125					03/06/19 22:52	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	67	U	67	36	ug/L			03/07/19 14:11	6.67
Benzene	6.7	U	6.7	0.87	ug/L			03/07/19 14:11	6.67
Bromodichloromethane	6.7	U	6.7	1.1	ug/L			03/07/19 14:11	6.67
Bromoform	6.7	U	6.7	5.1	ug/L			03/07/19 14:11	6.67
Bromomethane	6.7	U	6.7	2.8	ug/L			03/07/19 14:11	6.67
2-Butanone (MEK)	67	U	67	7.7	ug/L			03/07/19 14:11	6.67
Carbon disulfide	33	U	33	1.9	ug/L			03/07/19 14:11	6.67
Carbon tetrachloride	6.7	U	6.7	1.7	ug/L			03/07/19 14:11	6.67
Chlorobenzene	6.7	U	6.7	0.93	ug/L			03/07/19 14:11	6.67
Chloroethane	6.7	U	6.7	5.5	ug/L			03/07/19 14:11	6.67
Chloroform	6.7	U	6.7	0.87	ug/L			03/07/19 14:11	6.67
Chloromethane	6.7	U	6.7	1.3	ug/L			03/07/19 14:11	6.67
cis-1,2-Dichloroethene	20		6.7	1.1	ug/L			03/07/19 14:11	6.67
cis-1,3-Dichloropropene	6.7	U	6.7	4.1	ug/L			03/07/19 14:11	6.67
Cyclohexane	6.7	U	6.7	1.6	ug/L			03/07/19 14:11	6.67
Dibromochloromethane	6.7	U	6.7	2.6	ug/L			03/07/19 14:11	6.67
1,2-Dibromo-3-Chloropropane	6.7	U	6.7	6.1	ug/L			03/07/19 14:11	6.67
1,2-Dibromoethane	6.7	U	6.7	0.80	ug/L			03/07/19 14:11	6.67
1,2-Dichlorobenzene	6.7	U	6.7	1.0	ug/L			03/07/19 14:11	6.67
1,3-Dichlorobenzene	6.7	U	6.7	1.0	ug/L			03/07/19 14:11	6.67
1,4-Dichlorobenzene	6.7	U	6.7	1.1	ug/L			03/07/19 14:11	6.67
Dichlorodifluoromethane	6.7	U	6.7	2.3	ug/L			03/07/19 14:11	6.67
1,1-Dichloroethane	6.7	U	6.7	1.1	ug/L			03/07/19 14:11	6.67
1,2-Dichloroethane	6.7	U	6.7	1.4	ug/L			03/07/19 14:11	6.67
1,1-Dichloroethene	6.7	U	6.7	1.3	ug/L			03/07/19 14:11	6.67
1,2-Dichloropropane	6.7	U	6.7	1.0	ug/L			03/07/19 14:11	6.67
Ethylbenzene	6.7	U	6.7	0.73	ug/L			03/07/19 14:11	6.67
2-Hexanone	67	U	67	3.6	ug/L			03/07/19 14:11	6.67
Isopropylbenzene	6.7	U	6.7	0.60	ug/L			03/07/19 14:11	6.67
Methyl acetate	67	U	67	11	ug/L			03/07/19 14:11	6.67
Methylcyclohexane	6.7	U	6.7	2.2	ug/L			03/07/19 14:11	6.67
Methylene Chloride	33	U	33	17	ug/L			03/07/19 14:11	6.67
4-Methyl-2-pentanone (MIBK)	67	U	67	2.8	ug/L			03/07/19 14:11	6.67
Methyl tert-butyl ether	6.7	U	6.7	0.47	ug/L			03/07/19 14:11	6.67
Styrene	6.7	U	6.7	0.67	ug/L			03/07/19 14:11	6.67
1,1,2,2-Tetrachloroethane	6.7	U	6.7	0.87	ug/L			03/07/19 14:11	6.67
Tetrachloroethene	6.7	U	6.7	1.0	ug/L			03/07/19 14:11	6.67
Toluene	6.7	U	6.7	0.93	ug/L			03/07/19 14:11	6.67
trans-1,2-Dichloroethene	6.7	U	6.7	1.3	ug/L			03/07/19 14:11	6.67
trans-1,3-Dichloropropene	6.7	U	6.7	4.5	ug/L			03/07/19 14:11	6.67
1,2,4-Trichlorobenzene	6.7	U	6.7	1.7	ug/L			03/07/19 14:11	6.67
1,1,1-Trichloroethane	6.7	U	6.7	1.6	ug/L			03/07/19 14:11	6.67
1,1,2-Trichloroethane	6.7	U	6.7	0.60	ug/L			03/07/19 14:11	6.67

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-50-022719

Lab Sample ID: 240-108818-3

Date Collected: 02/27/19 17:25

Matrix: Water

Date Received: 03/02/19 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	6.7	U	6.7	0.67	ug/L			03/07/19 14:11	6.67
Trichlorofluoromethane	6.7	U	6.7	3.0	ug/L			03/07/19 14:11	6.67
1,1,2-Trichloro-1,2,2-trifluoroethane	6.7	U	6.7	2.7	ug/L			03/07/19 14:11	6.67
1,2,3-Trimethylbenzene	33	U	33	0.93	ug/L			03/07/19 14:11	6.67
1,2,4-Trimethylbenzene	6.7	U	6.7	0.47	ug/L			03/07/19 14:11	6.67
1,3,5-Trimethylbenzene	6.7	U	6.7	0.80	ug/L			03/07/19 14:11	6.67
Vinyl chloride	170		6.7	1.3	ug/L			03/07/19 14:11	6.67
Xylenes, Total	13	U	13	1.0	ug/L			03/07/19 14:11	6.67
Diethyl ether	13	U	13	1.3	ug/L			03/07/19 14:11	6.67
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	69		59 - 120					03/07/19 14:11	6.67
Dibromofluoromethane (Surr)	102		75 - 128					03/07/19 14:11	6.67
1,2-Dichloroethane-d4 (Surr)	100		70 - 121					03/07/19 14:11	6.67
Toluene-d8 (Surr)	75		70 - 123					03/07/19 14:11	6.67

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-7-022719

Lab Sample ID: 240-108818-4

Date Collected: 02/27/19 18:36

Matrix: Water

Date Received: 03/02/19 09:45

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	0.86	ug/L			03/07/19 15:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	81		63 - 125					03/07/19 15:31	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	5.4	ug/L			03/05/19 21:30	1
Benzene	1.0	U	1.0	0.13	ug/L			03/05/19 21:30	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/05/19 21:30	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/05/19 21:30	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/05/19 21:30	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/05/19 21:30	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/05/19 21:30	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/05/19 21:30	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/05/19 21:30	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/05/19 21:30	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/05/19 21:30	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/05/19 21:30	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/05/19 21:30	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/05/19 21:30	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/05/19 21:30	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/05/19 21:30	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/05/19 21:30	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/05/19 21:30	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/05/19 21:30	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/05/19 21:30	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/05/19 21:30	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/05/19 21:30	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/05/19 21:30	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/05/19 21:30	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/05/19 21:30	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/05/19 21:30	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/05/19 21:30	1
2-Hexanone	10	U	10	0.54	ug/L			03/05/19 21:30	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/05/19 21:30	1
Methyl acetate	10	U *	10	1.7	ug/L			03/05/19 21:30	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/05/19 21:30	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/05/19 21:30	1
4-Methyl-2-pentanone (MIBK)	10	U *	10	0.42	ug/L			03/05/19 21:30	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/05/19 21:30	1
Styrene	1.0	U	1.0	0.10	ug/L			03/05/19 21:30	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/05/19 21:30	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/05/19 21:30	1
Toluene	1.0	U	1.0	0.14	ug/L			03/05/19 21:30	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/05/19 21:30	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/05/19 21:30	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/05/19 21:30	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/05/19 21:30	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/05/19 21:30	1

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-7-022719

Lab Sample ID: 240-108818-4

Date Collected: 02/27/19 18:36

Matrix: Water

Date Received: 03/02/19 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/05/19 21:30	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/05/19 21:30	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/05/19 21:30	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/05/19 21:30	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/05/19 21:30	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/05/19 21:30	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/05/19 21:30	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/05/19 21:30	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/05/19 21:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		59 - 120					03/05/19 21:30	1
Dibromofluoromethane (Surr)	104		75 - 128					03/05/19 21:30	1
1,2-Dichloroethane-d4 (Surr)	118		70 - 121					03/05/19 21:30	1
Toluene-d8 (Surr)	90		70 - 123					03/05/19 21:30	1

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-25-022719

Lab Sample ID: 240-108818-5

Date Collected: 02/27/19 16:35

Matrix: Water

Date Received: 03/02/19 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	4.5		2.0	0.86	ug/L			03/07/19 15:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	81		63 - 125					03/07/19 15:56	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	5.4	ug/L			03/05/19 21:54	1
Benzene	1.0	U	1.0	0.13	ug/L			03/05/19 21:54	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/05/19 21:54	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/05/19 21:54	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/05/19 21:54	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/05/19 21:54	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/05/19 21:54	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/05/19 21:54	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/05/19 21:54	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/05/19 21:54	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/05/19 21:54	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/05/19 21:54	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/05/19 21:54	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/05/19 21:54	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/05/19 21:54	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/05/19 21:54	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/05/19 21:54	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/05/19 21:54	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/05/19 21:54	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/05/19 21:54	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/05/19 21:54	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/05/19 21:54	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/05/19 21:54	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/05/19 21:54	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/05/19 21:54	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/05/19 21:54	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/05/19 21:54	1
2-Hexanone	10	U	10	0.54	ug/L			03/05/19 21:54	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/05/19 21:54	1
Methyl acetate	10	U *	10	1.7	ug/L			03/05/19 21:54	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/05/19 21:54	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/05/19 21:54	1
4-Methyl-2-pentanone (MIBK)	10	U *	10	0.42	ug/L			03/05/19 21:54	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/05/19 21:54	1
Styrene	1.0	U	1.0	0.10	ug/L			03/05/19 21:54	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/05/19 21:54	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/05/19 21:54	1
Toluene	1.0	U	1.0	0.14	ug/L			03/05/19 21:54	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/05/19 21:54	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/05/19 21:54	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/05/19 21:54	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/05/19 21:54	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/05/19 21:54	1

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-25-022719

Lab Sample ID: 240-108818-5

Date Collected: 02/27/19 16:35

Matrix: Water

Date Received: 03/02/19 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/05/19 21:54	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/05/19 21:54	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/05/19 21:54	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/05/19 21:54	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/05/19 21:54	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/05/19 21:54	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/05/19 21:54	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/05/19 21:54	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/05/19 21:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		59 - 120		03/05/19 21:54	1
Dibromofluoromethane (Surr)	103		75 - 128		03/05/19 21:54	1
1,2-Dichloroethane-d4 (Surr)	117		70 - 121		03/05/19 21:54	1
Toluene-d8 (Surr)	89		70 - 123		03/05/19 21:54	1

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-63-022819

Lab Sample ID: 240-108818-6

Date Collected: 02/28/19 09:10

Matrix: Water

Date Received: 03/02/19 09:45

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	0.86	ug/L			03/07/19 16:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	81		63 - 125					03/07/19 16:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	5.4	ug/L			03/05/19 22:18	1
Benzene	1.0	U	1.0	0.13	ug/L			03/05/19 22:18	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/05/19 22:18	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/05/19 22:18	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/05/19 22:18	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/05/19 22:18	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/05/19 22:18	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/05/19 22:18	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/05/19 22:18	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/05/19 22:18	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/05/19 22:18	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/05/19 22:18	1
cis-1,2-Dichloroethene	1.8		1.0	0.16	ug/L			03/05/19 22:18	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/05/19 22:18	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/05/19 22:18	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/05/19 22:18	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/05/19 22:18	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/05/19 22:18	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/05/19 22:18	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/05/19 22:18	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/05/19 22:18	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/05/19 22:18	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/05/19 22:18	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/05/19 22:18	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/05/19 22:18	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/05/19 22:18	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/05/19 22:18	1
2-Hexanone	10	U	10	0.54	ug/L			03/05/19 22:18	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/05/19 22:18	1
Methyl acetate	10	U *	10	1.7	ug/L			03/05/19 22:18	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/05/19 22:18	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/05/19 22:18	1
4-Methyl-2-pentanone (MIBK)	10	U *	10	0.42	ug/L			03/05/19 22:18	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/05/19 22:18	1
Styrene	1.0	U	1.0	0.10	ug/L			03/05/19 22:18	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/05/19 22:18	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/05/19 22:18	1
Toluene	1.0	U	1.0	0.14	ug/L			03/05/19 22:18	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/05/19 22:18	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/05/19 22:18	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/05/19 22:18	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/05/19 22:18	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/05/19 22:18	1

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-63-022819

Lab Sample ID: 240-108818-6

Date Collected: 02/28/19 09:10

Matrix: Water

Date Received: 03/02/19 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/05/19 22:18	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/05/19 22:18	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/05/19 22:18	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/05/19 22:18	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/05/19 22:18	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/05/19 22:18	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/05/19 22:18	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/05/19 22:18	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/05/19 22:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		59 - 120		03/05/19 22:18	1
Dibromofluoromethane (Surr)	103		75 - 128		03/05/19 22:18	1
1,2-Dichloroethane-d4 (Surr)	117		70 - 121		03/05/19 22:18	1
Toluene-d8 (Surr)	90		70 - 123		03/05/19 22:18	1

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-64-022819

Lab Sample ID: 240-108818-7

Date Collected: 02/28/19 11:15

Matrix: Water

Date Received: 03/02/19 09:45

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	0.86	ug/L			03/07/19 16:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	81		63 - 125					03/07/19 16:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	5.4	ug/L			03/06/19 16:06	1
Benzene	1.0	U	1.0	0.13	ug/L			03/06/19 16:06	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/06/19 16:06	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/06/19 16:06	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/06/19 16:06	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/06/19 16:06	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/06/19 16:06	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/06/19 16:06	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/06/19 16:06	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/06/19 16:06	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/06/19 16:06	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/06/19 16:06	1
cis-1,2-Dichloroethene	0.23	J	1.0	0.16	ug/L			03/06/19 16:06	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/06/19 16:06	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/06/19 16:06	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/06/19 16:06	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/06/19 16:06	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/06/19 16:06	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/06/19 16:06	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/06/19 16:06	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/06/19 16:06	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/06/19 16:06	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/06/19 16:06	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/06/19 16:06	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/06/19 16:06	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/06/19 16:06	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/06/19 16:06	1
2-Hexanone	10	U *	10	0.54	ug/L			03/06/19 16:06	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/06/19 16:06	1
Methyl acetate	10	U *	10	1.7	ug/L			03/06/19 16:06	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/06/19 16:06	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/06/19 16:06	1
4-Methyl-2-pentanone (MIBK)	10	U *	10	0.42	ug/L			03/06/19 16:06	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/06/19 16:06	1
Styrene	1.0	U	1.0	0.10	ug/L			03/06/19 16:06	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/06/19 16:06	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/06/19 16:06	1
Toluene	1.0	U	1.0	0.14	ug/L			03/06/19 16:06	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/06/19 16:06	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/06/19 16:06	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/06/19 16:06	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/06/19 16:06	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/06/19 16:06	1

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-64-022819

Lab Sample ID: 240-108818-7

Date Collected: 02/28/19 11:15

Matrix: Water

Date Received: 03/02/19 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/06/19 16:06	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/06/19 16:06	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/06/19 16:06	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/06/19 16:06	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/06/19 16:06	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/06/19 16:06	1
Vinyl chloride	3.4		1.0	0.20	ug/L			03/06/19 16:06	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/06/19 16:06	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/06/19 16:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		59 - 120					03/06/19 16:06	1
Dibromofluoromethane (Surr)	102		75 - 128					03/06/19 16:06	1
1,2-Dichloroethane-d4 (Surr)	117		70 - 121					03/06/19 16:06	1
Toluene-d8 (Surr)	91		70 - 123					03/06/19 16:06	1

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-47-022819

Lab Sample ID: 240-108818-8

Date Collected: 02/28/19 13:30

Matrix: Water

Date Received: 03/02/19 09:45

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	0.86	ug/L			03/07/19 17:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	80		63 - 125					03/07/19 17:11	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	14	ug/L			03/07/19 14:33	2.5
Benzene	2.5	U	2.5	0.33	ug/L			03/07/19 14:33	2.5
Bromodichloromethane	2.5	U	2.5	0.43	ug/L			03/07/19 14:33	2.5
Bromoform	2.5	U	2.5	1.9	ug/L			03/07/19 14:33	2.5
Bromomethane	2.5	U	2.5	1.1	ug/L			03/07/19 14:33	2.5
2-Butanone (MEK)	25	U	25	2.9	ug/L			03/07/19 14:33	2.5
Carbon disulfide	13	U	13	0.70	ug/L			03/07/19 14:33	2.5
Carbon tetrachloride	2.5	U	2.5	0.65	ug/L			03/07/19 14:33	2.5
Chlorobenzene	2.5	U	2.5	0.35	ug/L			03/07/19 14:33	2.5
Chloroethane	2.5	U	2.5	2.1	ug/L			03/07/19 14:33	2.5
Chloroform	2.5	U	2.5	0.33	ug/L			03/07/19 14:33	2.5
Chloromethane	2.5	U	2.5	0.50	ug/L			03/07/19 14:33	2.5
cis-1,2-Dichloroethene	32		2.5	0.40	ug/L			03/07/19 14:33	2.5
cis-1,3-Dichloropropene	2.5	U	2.5	1.5	ug/L			03/07/19 14:33	2.5
Cyclohexane	2.5	U	2.5	0.60	ug/L			03/07/19 14:33	2.5
Dibromochloromethane	2.5	U	2.5	0.98	ug/L			03/07/19 14:33	2.5
1,2-Dibromo-3-Chloropropane	2.5	U	2.5	2.3	ug/L			03/07/19 14:33	2.5
1,2-Dibromoethane	2.5	U	2.5	0.30	ug/L			03/07/19 14:33	2.5
1,2-Dichlorobenzene	2.5	U	2.5	0.38	ug/L			03/07/19 14:33	2.5
1,3-Dichlorobenzene	2.5	U	2.5	0.38	ug/L			03/07/19 14:33	2.5
1,4-Dichlorobenzene	2.5	U	2.5	0.40	ug/L			03/07/19 14:33	2.5
Dichlorodifluoromethane	2.5	U	2.5	0.88	ug/L			03/07/19 14:33	2.5
1,1-Dichloroethane	4.0		2.5	0.43	ug/L			03/07/19 14:33	2.5
1,2-Dichloroethane	2.5	U	2.5	0.53	ug/L			03/07/19 14:33	2.5
1,1-Dichloroethene	2.5	U	2.5	0.48	ug/L			03/07/19 14:33	2.5
1,2-Dichloropropane	2.5	U	2.5	0.38	ug/L			03/07/19 14:33	2.5
Ethylbenzene	2.5	U	2.5	0.28	ug/L			03/07/19 14:33	2.5
2-Hexanone	25	U	25	1.4	ug/L			03/07/19 14:33	2.5
Isopropylbenzene	2.5	U	2.5	0.23	ug/L			03/07/19 14:33	2.5
Methyl acetate	25	U	25	4.3	ug/L			03/07/19 14:33	2.5
Methylcyclohexane	2.5	U	2.5	0.83	ug/L			03/07/19 14:33	2.5
Methylene Chloride	13	U	13	6.6	ug/L			03/07/19 14:33	2.5
4-Methyl-2-pentanone (MIBK)	25	U	25	1.1	ug/L			03/07/19 14:33	2.5
Methyl tert-butyl ether	2.5	U	2.5	0.18	ug/L			03/07/19 14:33	2.5
Styrene	2.5	U	2.5	0.25	ug/L			03/07/19 14:33	2.5
1,1,2,2-Tetrachloroethane	2.5	U	2.5	0.33	ug/L			03/07/19 14:33	2.5
Tetrachloroethene	2.5	U	2.5	0.38	ug/L			03/07/19 14:33	2.5
Toluene	2.5	U	2.5	0.35	ug/L			03/07/19 14:33	2.5
trans-1,2-Dichloroethene	5.4		2.5	0.48	ug/L			03/07/19 14:33	2.5
trans-1,3-Dichloropropene	2.5	U	2.5	1.7	ug/L			03/07/19 14:33	2.5
1,2,4-Trichlorobenzene	2.5	U	2.5	0.65	ug/L			03/07/19 14:33	2.5
1,1,1-Trichloroethane	2.2 J		2.5	0.60	ug/L			03/07/19 14:33	2.5
1,1,2-Trichloroethane	2.5	U	2.5	0.23	ug/L			03/07/19 14:33	2.5

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-47-022819

Lab Sample ID: 240-108818-8

Date Collected: 02/28/19 13:30

Matrix: Water

Date Received: 03/02/19 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	2.5	U	2.5	0.25	ug/L			03/07/19 14:33	2.5
Trichlorofluoromethane	2.5	U	2.5	1.1	ug/L			03/07/19 14:33	2.5
1,1,2-Trichloro-1,2,2-trifluoroethane	2.5	U	2.5	1.0	ug/L			03/07/19 14:33	2.5
1,2,3-Trimethylbenzene	13	U	13	0.35	ug/L			03/07/19 14:33	2.5
1,2,4-Trimethylbenzene	2.5	U	2.5	0.18	ug/L			03/07/19 14:33	2.5
1,3,5-Trimethylbenzene	2.5	U	2.5	0.30	ug/L			03/07/19 14:33	2.5
Vinyl chloride	44		2.5	0.50	ug/L			03/07/19 14:33	2.5
Xylenes, Total	5.0	U	5.0	0.38	ug/L			03/07/19 14:33	2.5
Diethyl ether	5.0	U	5.0	0.48	ug/L			03/07/19 14:33	2.5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	64		59 - 120		03/07/19 14:33	2.5
Dibromofluoromethane (Surr)	94		75 - 128		03/07/19 14:33	2.5
1,2-Dichloroethane-d4 (Surr)	94		70 - 121		03/07/19 14:33	2.5
Toluene-d8 (Surr)	70		70 - 123		03/07/19 14:33	2.5

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-57-022819

Lab Sample ID: 240-108818-9

Date Collected: 02/28/19 15:20

Matrix: Water

Date Received: 03/02/19 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	3.1		2.0	0.86	ug/L			03/07/19 18:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		63 - 125					03/07/19 18:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	12		10	5.4	ug/L			03/06/19 16:30	1
Benzene	1.0	U	1.0	0.13	ug/L			03/06/19 16:30	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/06/19 16:30	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/06/19 16:30	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/06/19 16:30	1
2-Butanone (MEK)	2.7	J	10	1.2	ug/L			03/06/19 16:30	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/06/19 16:30	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/06/19 16:30	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/06/19 16:30	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/06/19 16:30	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/06/19 16:30	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/06/19 16:30	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/06/19 16:30	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/06/19 16:30	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/06/19 16:30	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/06/19 16:30	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/06/19 16:30	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/06/19 16:30	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/06/19 16:30	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/06/19 16:30	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/06/19 16:30	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/06/19 16:30	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/06/19 16:30	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/06/19 16:30	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/06/19 16:30	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/06/19 16:30	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/06/19 16:30	1
2-Hexanone	10	U *	10	0.54	ug/L			03/06/19 16:30	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/06/19 16:30	1
Methyl acetate	10	U *	10	1.7	ug/L			03/06/19 16:30	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/06/19 16:30	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/06/19 16:30	1
4-Methyl-2-pentanone (MIBK)	10	U *	10	0.42	ug/L			03/06/19 16:30	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/06/19 16:30	1
Styrene	1.0	U	1.0	0.10	ug/L			03/06/19 16:30	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/06/19 16:30	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/06/19 16:30	1
Toluene	1.0	U	1.0	0.14	ug/L			03/06/19 16:30	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/06/19 16:30	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/06/19 16:30	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/06/19 16:30	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/06/19 16:30	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/06/19 16:30	1

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-57-022819

Lab Sample ID: 240-108818-9

Date Collected: 02/28/19 15:20

Matrix: Water

Date Received: 03/02/19 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/06/19 16:30	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/06/19 16:30	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/06/19 16:30	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/06/19 16:30	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/06/19 16:30	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/06/19 16:30	1
Vinyl chloride	0.88	J	1.0	0.20	ug/L			03/06/19 16:30	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/06/19 16:30	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/06/19 16:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		59 - 120					03/06/19 16:30	1
Dibromofluoromethane (Surr)	103		75 - 128					03/06/19 16:30	1
1,2-Dichloroethane-d4 (Surr)	118		70 - 121					03/06/19 16:30	1
Toluene-d8 (Surr)	91		70 - 123					03/06/19 16:30	1

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-29-022819

Lab Sample ID: 240-108818-10

Date Collected: 02/28/19 12:14

Matrix: Water

Date Received: 03/02/19 09:45

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	0.86	ug/L			03/07/19 18:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	82		63 - 125					03/07/19 18:51	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	5.4	ug/L			03/06/19 17:00	1
Benzene	1.0	U	1.0	0.13	ug/L			03/06/19 17:00	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/06/19 17:00	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/06/19 17:00	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/06/19 17:00	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/06/19 17:00	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/06/19 17:00	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/06/19 17:00	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/06/19 17:00	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/06/19 17:00	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/06/19 17:00	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/06/19 17:00	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/06/19 17:00	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/06/19 17:00	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/06/19 17:00	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/06/19 17:00	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/06/19 17:00	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/06/19 17:00	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/06/19 17:00	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/06/19 17:00	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/06/19 17:00	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/06/19 17:00	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/06/19 17:00	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/06/19 17:00	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/06/19 17:00	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/06/19 17:00	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/06/19 17:00	1
2-Hexanone	10	U *	10	0.54	ug/L			03/06/19 17:00	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/06/19 17:00	1
Methyl acetate	10	U *	10	1.7	ug/L			03/06/19 17:00	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/06/19 17:00	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/06/19 17:00	1
4-Methyl-2-pentanone (MIBK)	10	U *	10	0.42	ug/L			03/06/19 17:00	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/06/19 17:00	1
Styrene	1.0	U	1.0	0.10	ug/L			03/06/19 17:00	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/06/19 17:00	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/06/19 17:00	1
Toluene	1.0	U	1.0	0.14	ug/L			03/06/19 17:00	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/06/19 17:00	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/06/19 17:00	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/06/19 17:00	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/06/19 17:00	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/06/19 17:00	1

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-29-022819

Lab Sample ID: 240-108818-10

Date Collected: 02/28/19 12:14

Matrix: Water

Date Received: 03/02/19 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/06/19 17:00	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/06/19 17:00	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/06/19 17:00	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/06/19 17:00	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/06/19 17:00	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/06/19 17:00	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/06/19 17:00	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/06/19 17:00	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/06/19 17:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		59 - 120		03/06/19 17:00	1
Dibromofluoromethane (Surr)	103		75 - 128		03/06/19 17:00	1
1,2-Dichloroethane-d4 (Surr)	118		70 - 121		03/06/19 17:00	1
Toluene-d8 (Surr)	89		70 - 123		03/06/19 17:00	1

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-26-022819

Lab Sample ID: 240-108818-11

Date Collected: 02/28/19 09:52

Matrix: Water

Date Received: 03/02/19 09:45

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	0.86	ug/L			03/07/19 19:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	82		63 - 125					03/07/19 19:16	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	5.4	ug/L			03/06/19 17:23	1
Benzene	1.0	U	1.0	0.13	ug/L			03/06/19 17:23	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/06/19 17:23	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/06/19 17:23	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/06/19 17:23	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/06/19 17:23	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/06/19 17:23	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/06/19 17:23	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/06/19 17:23	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/06/19 17:23	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/06/19 17:23	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/06/19 17:23	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/06/19 17:23	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/06/19 17:23	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/06/19 17:23	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/06/19 17:23	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/06/19 17:23	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/06/19 17:23	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/06/19 17:23	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/06/19 17:23	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/06/19 17:23	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/06/19 17:23	1
1,1-Dichloroethane	0.23	J	1.0	0.17	ug/L			03/06/19 17:23	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/06/19 17:23	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/06/19 17:23	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/06/19 17:23	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/06/19 17:23	1
2-Hexanone	10	U *	10	0.54	ug/L			03/06/19 17:23	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/06/19 17:23	1
Methyl acetate	10	U *	10	1.7	ug/L			03/06/19 17:23	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/06/19 17:23	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/06/19 17:23	1
4-Methyl-2-pentanone (MIBK)	10	U *	10	0.42	ug/L			03/06/19 17:23	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/06/19 17:23	1
Styrene	1.0	U	1.0	0.10	ug/L			03/06/19 17:23	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/06/19 17:23	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/06/19 17:23	1
Toluene	1.0	U	1.0	0.14	ug/L			03/06/19 17:23	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/06/19 17:23	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/06/19 17:23	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/06/19 17:23	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/06/19 17:23	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/06/19 17:23	1

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-26-022819

Lab Sample ID: 240-108818-11

Date Collected: 02/28/19 09:52

Matrix: Water

Date Received: 03/02/19 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/06/19 17:23	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/06/19 17:23	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/06/19 17:23	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/06/19 17:23	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/06/19 17:23	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/06/19 17:23	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/06/19 17:23	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/06/19 17:23	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/06/19 17:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		59 - 120					03/06/19 17:23	1
Dibromofluoromethane (Surr)	103		75 - 128					03/06/19 17:23	1
1,2-Dichloroethane-d4 (Surr)	114		70 - 121					03/06/19 17:23	1
Toluene-d8 (Surr)	88		70 - 123					03/06/19 17:23	1

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-19-022819

Lab Sample ID: 240-108818-12

Date Collected: 02/28/19 14:52

Matrix: Water

Date Received: 03/02/19 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	170		2.0	0.86	ug/L			03/07/19 19:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	83		63 - 125					03/07/19 19:41	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	5.4	ug/L			03/06/19 17:47	1
Benzene	1.0	U	1.0	0.13	ug/L			03/06/19 17:47	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/06/19 17:47	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/06/19 17:47	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/06/19 17:47	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/06/19 17:47	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/06/19 17:47	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/06/19 17:47	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/06/19 17:47	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/06/19 17:47	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/06/19 17:47	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/06/19 17:47	1
cis-1,2-Dichloroethene	1.3		1.0	0.16	ug/L			03/06/19 17:47	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/06/19 17:47	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/06/19 17:47	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/06/19 17:47	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/06/19 17:47	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/06/19 17:47	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/06/19 17:47	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/06/19 17:47	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/06/19 17:47	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/06/19 17:47	1
1,1-Dichloroethane	5.8		1.0	0.17	ug/L			03/06/19 17:47	1
1,2-Dichloroethane	0.47	J	1.0	0.21	ug/L			03/06/19 17:47	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/06/19 17:47	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/06/19 17:47	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/06/19 17:47	1
2-Hexanone	10	U *	10	0.54	ug/L			03/06/19 17:47	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/06/19 17:47	1
Methyl acetate	10	U *	10	1.7	ug/L			03/06/19 17:47	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/06/19 17:47	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/06/19 17:47	1
4-Methyl-2-pentanone (MIBK)	10	U *	10	0.42	ug/L			03/06/19 17:47	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/06/19 17:47	1
Styrene	1.0	U	1.0	0.10	ug/L			03/06/19 17:47	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/06/19 17:47	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/06/19 17:47	1
Toluene	1.0	U	1.0	0.14	ug/L			03/06/19 17:47	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/06/19 17:47	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/06/19 17:47	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/06/19 17:47	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/06/19 17:47	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/06/19 17:47	1

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-19-022819

Lab Sample ID: 240-108818-12

Date Collected: 02/28/19 14:52

Matrix: Water

Date Received: 03/02/19 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	0.66	J	1.0	0.10	ug/L			03/06/19 17:47	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/06/19 17:47	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/06/19 17:47	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/06/19 17:47	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/06/19 17:47	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/06/19 17:47	1
Vinyl chloride	1.9		1.0	0.20	ug/L			03/06/19 17:47	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/06/19 17:47	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/06/19 17:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		59 - 120					03/06/19 17:47	1
Dibromofluoromethane (Surr)	101		75 - 128					03/06/19 17:47	1
1,2-Dichloroethane-d4 (Surr)	115		70 - 121					03/06/19 17:47	1
Toluene-d8 (Surr)	90		70 - 123					03/06/19 17:47	1

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-67-022819

Lab Sample ID: 240-108818-13

Date Collected: 02/28/19 16:40

Matrix: Water

Date Received: 03/02/19 09:45

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	0.86	ug/L			03/07/19 20:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	80		63 - 125					03/07/19 20:07	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	14	ug/L			03/06/19 18:10	2.5
Benzene	2.5	U	2.5	0.33	ug/L			03/06/19 18:10	2.5
Bromodichloromethane	2.5	U	2.5	0.43	ug/L			03/06/19 18:10	2.5
Bromoform	2.5	U	2.5	1.9	ug/L			03/06/19 18:10	2.5
Bromomethane	2.5	U	2.5	1.1	ug/L			03/06/19 18:10	2.5
2-Butanone (MEK)	25	U	25	2.9	ug/L			03/06/19 18:10	2.5
Carbon disulfide	13	U	13	0.70	ug/L			03/06/19 18:10	2.5
Carbon tetrachloride	2.5	U	2.5	0.65	ug/L			03/06/19 18:10	2.5
Chlorobenzene	2.5	U	2.5	0.35	ug/L			03/06/19 18:10	2.5
Chloroethane	2.5	U	2.5	2.1	ug/L			03/06/19 18:10	2.5
Chloroform	2.5	U	2.5	0.33	ug/L			03/06/19 18:10	2.5
Chloromethane	2.5	U	2.5	0.50	ug/L			03/06/19 18:10	2.5
cis-1,2-Dichloroethene	5.6		2.5	0.40	ug/L			03/06/19 18:10	2.5
cis-1,3-Dichloropropene	2.5	U	2.5	1.5	ug/L			03/06/19 18:10	2.5
Cyclohexane	2.5	U	2.5	0.60	ug/L			03/06/19 18:10	2.5
Dibromochloromethane	2.5	U	2.5	0.98	ug/L			03/06/19 18:10	2.5
1,2-Dibromo-3-Chloropropane	2.5	U	2.5	2.3	ug/L			03/06/19 18:10	2.5
1,2-Dibromoethane	2.5	U	2.5	0.30	ug/L			03/06/19 18:10	2.5
1,2-Dichlorobenzene	2.5	U	2.5	0.38	ug/L			03/06/19 18:10	2.5
1,3-Dichlorobenzene	2.5	U	2.5	0.38	ug/L			03/06/19 18:10	2.5
1,4-Dichlorobenzene	2.5	U	2.5	0.40	ug/L			03/06/19 18:10	2.5
Dichlorodifluoromethane	2.5	U	2.5	0.88	ug/L			03/06/19 18:10	2.5
1,1-Dichloroethane	0.49 J		2.5	0.43	ug/L			03/06/19 18:10	2.5
1,2-Dichloroethane	2.5	U	2.5	0.53	ug/L			03/06/19 18:10	2.5
1,1-Dichloroethene	2.5	U	2.5	0.48	ug/L			03/06/19 18:10	2.5
1,2-Dichloropropane	2.5	U	2.5	0.38	ug/L			03/06/19 18:10	2.5
Ethylbenzene	2.5	U	2.5	0.28	ug/L			03/06/19 18:10	2.5
2-Hexanone	25	U *	25	1.4	ug/L			03/06/19 18:10	2.5
Isopropylbenzene	2.5	U	2.5	0.23	ug/L			03/06/19 18:10	2.5
Methyl acetate	25	U *	25	4.3	ug/L			03/06/19 18:10	2.5
Methylcyclohexane	2.5	U	2.5	0.83	ug/L			03/06/19 18:10	2.5
Methylene Chloride	13	U	13	6.6	ug/L			03/06/19 18:10	2.5
4-Methyl-2-pentanone (MIBK)	25	U *	25	1.1	ug/L			03/06/19 18:10	2.5
Methyl tert-butyl ether	2.5	U	2.5	0.18	ug/L			03/06/19 18:10	2.5
Styrene	2.5	U	2.5	0.25	ug/L			03/06/19 18:10	2.5
1,1,1,2-Tetrachloroethane	2.5	U	2.5	0.33	ug/L			03/06/19 18:10	2.5
Tetrachloroethene	2.5	U	2.5	0.38	ug/L			03/06/19 18:10	2.5
Toluene	2.5	U	2.5	0.35	ug/L			03/06/19 18:10	2.5
trans-1,2-Dichloroethene	1.4 J		2.5	0.48	ug/L			03/06/19 18:10	2.5
trans-1,3-Dichloropropene	2.5	U	2.5	1.7	ug/L			03/06/19 18:10	2.5
1,2,4-Trichlorobenzene	2.5	U	2.5	0.65	ug/L			03/06/19 18:10	2.5
1,1,1-Trichloroethane	0.78 J		2.5	0.60	ug/L			03/06/19 18:10	2.5
1,1,2-Trichloroethane	2.5	U	2.5	0.23	ug/L			03/06/19 18:10	2.5

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-67-022819

Lab Sample ID: 240-108818-13

Date Collected: 02/28/19 16:40

Matrix: Water

Date Received: 03/02/19 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	41		2.5	0.25	ug/L			03/06/19 18:10	2.5
Trichlorofluoromethane	2.5	U	2.5	1.1	ug/L			03/06/19 18:10	2.5
1,1,2-Trichloro-1,2,2-trifluoroethane	2.5	U	2.5	1.0	ug/L			03/06/19 18:10	2.5
1,2,3-Trimethylbenzene	13	U	13	0.35	ug/L			03/06/19 18:10	2.5
1,2,4-Trimethylbenzene	2.5	U	2.5	0.18	ug/L			03/06/19 18:10	2.5
1,3,5-Trimethylbenzene	2.5	U	2.5	0.30	ug/L			03/06/19 18:10	2.5
Vinyl chloride	1.7	J	2.5	0.50	ug/L			03/06/19 18:10	2.5
Xylenes, Total	5.0	U	5.0	0.38	ug/L			03/06/19 18:10	2.5
Diethyl ether	5.0	U	5.0	0.48	ug/L			03/06/19 18:10	2.5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		59 - 120					03/06/19 18:10	2.5
Dibromofluoromethane (Surr)	103		75 - 128					03/06/19 18:10	2.5
1,2-Dichloroethane-d4 (Surr)	113		70 - 121					03/06/19 18:10	2.5
Toluene-d8 (Surr)	89		70 - 123					03/06/19 18:10	2.5

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-65-022819

Lab Sample ID: 240-108818-14

Date Collected: 02/28/19 15:05

Matrix: Water

Date Received: 03/02/19 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.6		2.0	0.86	ug/L			03/07/19 20:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	83		63 - 125					03/07/19 20:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	14	ug/L			03/06/19 18:34	2.5
Benzene	2.5	U	2.5	0.33	ug/L			03/06/19 18:34	2.5
Bromodichloromethane	2.5	U	2.5	0.43	ug/L			03/06/19 18:34	2.5
Bromoform	2.5	U	2.5	1.9	ug/L			03/06/19 18:34	2.5
Bromomethane	2.5	U	2.5	1.1	ug/L			03/06/19 18:34	2.5
2-Butanone (MEK)	25	U	25	2.9	ug/L			03/06/19 18:34	2.5
Carbon disulfide	13	U	13	0.70	ug/L			03/06/19 18:34	2.5
Carbon tetrachloride	2.5	U	2.5	0.65	ug/L			03/06/19 18:34	2.5
Chlorobenzene	2.5	U	2.5	0.35	ug/L			03/06/19 18:34	2.5
Chloroethane	2.5	U	2.5	2.1	ug/L			03/06/19 18:34	2.5
Chloroform	2.5	U	2.5	0.33	ug/L			03/06/19 18:34	2.5
Chloromethane	2.5	U	2.5	0.50	ug/L			03/06/19 18:34	2.5
cis-1,2-Dichloroethene	5.9		2.5	0.40	ug/L			03/06/19 18:34	2.5
cis-1,3-Dichloropropene	2.5	U	2.5	1.5	ug/L			03/06/19 18:34	2.5
Cyclohexane	2.5	U	2.5	0.60	ug/L			03/06/19 18:34	2.5
Dibromochloromethane	2.5	U	2.5	0.98	ug/L			03/06/19 18:34	2.5
1,2-Dibromo-3-Chloropropane	2.5	U	2.5	2.3	ug/L			03/06/19 18:34	2.5
1,2-Dibromoethane	2.5	U	2.5	0.30	ug/L			03/06/19 18:34	2.5
1,2-Dichlorobenzene	2.5	U	2.5	0.38	ug/L			03/06/19 18:34	2.5
1,3-Dichlorobenzene	2.5	U	2.5	0.38	ug/L			03/06/19 18:34	2.5
1,4-Dichlorobenzene	2.5	U	2.5	0.40	ug/L			03/06/19 18:34	2.5
Dichlorodifluoromethane	2.5	U	2.5	0.88	ug/L			03/06/19 18:34	2.5
1,1-Dichloroethane	2.5	U	2.5	0.43	ug/L			03/06/19 18:34	2.5
1,2-Dichloroethane	2.5	U	2.5	0.53	ug/L			03/06/19 18:34	2.5
1,1-Dichloroethene	2.5	U	2.5	0.48	ug/L			03/06/19 18:34	2.5
1,2-Dichloropropane	2.5	U	2.5	0.38	ug/L			03/06/19 18:34	2.5
Ethylbenzene	2.5	U	2.5	0.28	ug/L			03/06/19 18:34	2.5
2-Hexanone	25	U *	25	1.4	ug/L			03/06/19 18:34	2.5
Isopropylbenzene	2.5	U	2.5	0.23	ug/L			03/06/19 18:34	2.5
Methyl acetate	25	U *	25	4.3	ug/L			03/06/19 18:34	2.5
Methylcyclohexane	2.5	U	2.5	0.83	ug/L			03/06/19 18:34	2.5
Methylene Chloride	13	U	13	6.6	ug/L			03/06/19 18:34	2.5
4-Methyl-2-pentanone (MIBK)	25	U *	25	1.1	ug/L			03/06/19 18:34	2.5
Methyl tert-butyl ether	2.5	U	2.5	0.18	ug/L			03/06/19 18:34	2.5
Styrene	2.5	U	2.5	0.25	ug/L			03/06/19 18:34	2.5
1,1,2,2-Tetrachloroethane	2.5	U	2.5	0.33	ug/L			03/06/19 18:34	2.5
Tetrachloroethene	2.5	U	2.5	0.38	ug/L			03/06/19 18:34	2.5
Toluene	2.5	U	2.5	0.35	ug/L			03/06/19 18:34	2.5
trans-1,2-Dichloroethene	2.5	U	2.5	0.48	ug/L			03/06/19 18:34	2.5
trans-1,3-Dichloropropene	2.5	U	2.5	1.7	ug/L			03/06/19 18:34	2.5
1,2,4-Trichlorobenzene	2.5	U	2.5	0.65	ug/L			03/06/19 18:34	2.5
1,1,1-Trichloroethane	2.5	U	2.5	0.60	ug/L			03/06/19 18:34	2.5
1,1,2-Trichloroethane	2.5	U	2.5	0.23	ug/L			03/06/19 18:34	2.5

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-65-022819

Lab Sample ID: 240-108818-14

Date Collected: 02/28/19 15:05

Matrix: Water

Date Received: 03/02/19 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	2.5	U	2.5	0.25	ug/L			03/06/19 18:34	2.5
Trichlorofluoromethane	2.5	U	2.5	1.1	ug/L			03/06/19 18:34	2.5
1,1,2-Trichloro-1,2,2-trifluoroethane	2.5	U	2.5	1.0	ug/L			03/06/19 18:34	2.5
1,2,3-Trimethylbenzene	13	U	13	0.35	ug/L			03/06/19 18:34	2.5
1,2,4-Trimethylbenzene	2.5	U	2.5	0.18	ug/L			03/06/19 18:34	2.5
1,3,5-Trimethylbenzene	2.5	U	2.5	0.30	ug/L			03/06/19 18:34	2.5
Vinyl chloride	34		2.5	0.50	ug/L			03/06/19 18:34	2.5
Xylenes, Total	5.0	U	5.0	0.38	ug/L			03/06/19 18:34	2.5
Diethyl ether	5.0	U	5.0	0.48	ug/L			03/06/19 18:34	2.5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		59 - 120					03/06/19 18:34	2.5
Dibromofluoromethane (Surr)	104		75 - 128					03/06/19 18:34	2.5
1,2-Dichloroethane-d4 (Surr)	121		70 - 121					03/06/19 18:34	2.5
Toluene-d8 (Surr)	93		70 - 123					03/06/19 18:34	2.5

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-32-022819

Lab Sample ID: 240-108818-15

Date Collected: 02/28/19 09:50

Matrix: Water

Date Received: 03/02/19 09:45

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	0.86	ug/L			03/07/19 20:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	82		63 - 125					03/07/19 20:57	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	5.4	ug/L			03/06/19 18:58	1
Benzene	1.0	U	1.0	0.13	ug/L			03/06/19 18:58	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/06/19 18:58	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/06/19 18:58	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/06/19 18:58	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/06/19 18:58	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/06/19 18:58	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/06/19 18:58	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/06/19 18:58	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/06/19 18:58	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/06/19 18:58	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/06/19 18:58	1
cis-1,2-Dichloroethene	0.48	J	1.0	0.16	ug/L			03/06/19 18:58	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/06/19 18:58	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/06/19 18:58	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/06/19 18:58	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/06/19 18:58	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/06/19 18:58	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/06/19 18:58	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/06/19 18:58	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/06/19 18:58	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/06/19 18:58	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/06/19 18:58	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/06/19 18:58	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/06/19 18:58	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/06/19 18:58	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/06/19 18:58	1
2-Hexanone	10	U *	10	0.54	ug/L			03/06/19 18:58	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/06/19 18:58	1
Methyl acetate	10	U *	10	1.7	ug/L			03/06/19 18:58	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/06/19 18:58	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/06/19 18:58	1
4-Methyl-2-pentanone (MIBK)	10	U *	10	0.42	ug/L			03/06/19 18:58	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/06/19 18:58	1
Styrene	1.0	U	1.0	0.10	ug/L			03/06/19 18:58	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/06/19 18:58	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/06/19 18:58	1
Toluene	1.0	U	1.0	0.14	ug/L			03/06/19 18:58	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/06/19 18:58	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/06/19 18:58	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/06/19 18:58	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/06/19 18:58	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/06/19 18:58	1

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-32-022819

Lab Sample ID: 240-108818-15

Date Collected: 02/28/19 09:50

Matrix: Water

Date Received: 03/02/19 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/06/19 18:58	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/06/19 18:58	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/06/19 18:58	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/06/19 18:58	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/06/19 18:58	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/06/19 18:58	1
Vinyl chloride	0.39	J	1.0	0.20	ug/L			03/06/19 18:58	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/06/19 18:58	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/06/19 18:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		59 - 120					03/06/19 18:58	1
Dibromofluoromethane (Surr)	107		75 - 128					03/06/19 18:58	1
1,2-Dichloroethane-d4 (Surr)	121		70 - 121					03/06/19 18:58	1
Toluene-d8 (Surr)	91		70 - 123					03/06/19 18:58	1

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-39-022819

Lab Sample ID: 240-108818-16

Date Collected: 02/28/19 11:40

Matrix: Water

Date Received: 03/02/19 09:45

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	0.86	ug/L			03/07/19 16:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	84		63 - 125					03/07/19 16:06	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	5.4	ug/L			03/06/19 19:22	1
Benzene	1.0	U	1.0	0.13	ug/L			03/06/19 19:22	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/06/19 19:22	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/06/19 19:22	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/06/19 19:22	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/06/19 19:22	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/06/19 19:22	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/06/19 19:22	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/06/19 19:22	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/06/19 19:22	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/06/19 19:22	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/06/19 19:22	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/06/19 19:22	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/06/19 19:22	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/06/19 19:22	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/06/19 19:22	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/06/19 19:22	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/06/19 19:22	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/06/19 19:22	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/06/19 19:22	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/06/19 19:22	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/06/19 19:22	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/06/19 19:22	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/06/19 19:22	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/06/19 19:22	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/06/19 19:22	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/06/19 19:22	1
2-Hexanone	10	U *	10	0.54	ug/L			03/06/19 19:22	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/06/19 19:22	1
Methyl acetate	10	U *	10	1.7	ug/L			03/06/19 19:22	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/06/19 19:22	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/06/19 19:22	1
4-Methyl-2-pentanone (MIBK)	10	U *	10	0.42	ug/L			03/06/19 19:22	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/06/19 19:22	1
Styrene	1.0	U	1.0	0.10	ug/L			03/06/19 19:22	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/06/19 19:22	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/06/19 19:22	1
Toluene	1.0	U	1.0	0.14	ug/L			03/06/19 19:22	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/06/19 19:22	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/06/19 19:22	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/06/19 19:22	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/06/19 19:22	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/06/19 19:22	1

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-39-022819

Lab Sample ID: 240-108818-16

Date Collected: 02/28/19 11:40

Matrix: Water

Date Received: 03/02/19 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/06/19 19:22	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/06/19 19:22	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/06/19 19:22	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/06/19 19:22	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/06/19 19:22	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/06/19 19:22	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/06/19 19:22	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/06/19 19:22	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/06/19 19:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		59 - 120					03/06/19 19:22	1
Dibromofluoromethane (Surr)	104		75 - 128					03/06/19 19:22	1
1,2-Dichloroethane-d4 (Surr)	118		70 - 121					03/06/19 19:22	1
Toluene-d8 (Surr)	90		70 - 123					03/06/19 19:22	1

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: DUP-01

Date Collected: 02/28/19 00:00

Date Received: 03/02/19 09:45

Lab Sample ID: 240-108818-17

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	150		2.0	0.86	ug/L			03/07/19 16:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	87		63 - 125					03/07/19 16:31	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	5.4	ug/L			03/06/19 19:46	1
Benzene	1.0	U	1.0	0.13	ug/L			03/06/19 19:46	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/06/19 19:46	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/06/19 19:46	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/06/19 19:46	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/06/19 19:46	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/06/19 19:46	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/06/19 19:46	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/06/19 19:46	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/06/19 19:46	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/06/19 19:46	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/06/19 19:46	1
cis-1,2-Dichloroethene	1.3		1.0	0.16	ug/L			03/06/19 19:46	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/06/19 19:46	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/06/19 19:46	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/06/19 19:46	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/06/19 19:46	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/06/19 19:46	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/06/19 19:46	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/06/19 19:46	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/06/19 19:46	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/06/19 19:46	1
1,1-Dichloroethane	5.7		1.0	0.17	ug/L			03/06/19 19:46	1
1,2-Dichloroethane	0.45	J	1.0	0.21	ug/L			03/06/19 19:46	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/06/19 19:46	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/06/19 19:46	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/06/19 19:46	1
2-Hexanone	10	U *	10	0.54	ug/L			03/06/19 19:46	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/06/19 19:46	1
Methyl acetate	10	U *	10	1.7	ug/L			03/06/19 19:46	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/06/19 19:46	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/06/19 19:46	1
4-Methyl-2-pentanone (MIBK)	10	U *	10	0.42	ug/L			03/06/19 19:46	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/06/19 19:46	1
Styrene	1.0	U	1.0	0.10	ug/L			03/06/19 19:46	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/06/19 19:46	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/06/19 19:46	1
Toluene	1.0	U	1.0	0.14	ug/L			03/06/19 19:46	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/06/19 19:46	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/06/19 19:46	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/06/19 19:46	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/06/19 19:46	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/06/19 19:46	1

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: DUP-01

Lab Sample ID: 240-108818-17

Date Collected: 02/28/19 00:00

Matrix: Water

Date Received: 03/02/19 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	0.64	J	1.0	0.10	ug/L			03/06/19 19:46	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/06/19 19:46	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/06/19 19:46	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/06/19 19:46	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/06/19 19:46	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/06/19 19:46	1
Vinyl chloride	1.8		1.0	0.20	ug/L			03/06/19 19:46	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/06/19 19:46	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/06/19 19:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		59 - 120					03/06/19 19:46	1
Dibromofluoromethane (Surr)	103		75 - 128					03/06/19 19:46	1
1,2-Dichloroethane-d4 (Surr)	116		70 - 121					03/06/19 19:46	1
Toluene-d8 (Surr)	91		70 - 123					03/06/19 19:46	1

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: DUP-02

Date Collected: 02/28/19 00:00

Date Received: 03/02/19 09:45

Lab Sample ID: 240-108818-18

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.3		2.0	0.86	ug/L			03/07/19 16:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		63 - 125					03/07/19 16:57	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	14	ug/L			03/06/19 20:09	2.5
Benzene	2.5	U	2.5	0.33	ug/L			03/06/19 20:09	2.5
Bromodichloromethane	2.5	U	2.5	0.43	ug/L			03/06/19 20:09	2.5
Bromoform	2.5	U	2.5	1.9	ug/L			03/06/19 20:09	2.5
Bromomethane	2.5	U	2.5	1.1	ug/L			03/06/19 20:09	2.5
2-Butanone (MEK)	25	U	25	2.9	ug/L			03/06/19 20:09	2.5
Carbon disulfide	13	U	13	0.70	ug/L			03/06/19 20:09	2.5
Carbon tetrachloride	2.5	U	2.5	0.65	ug/L			03/06/19 20:09	2.5
Chlorobenzene	2.5	U	2.5	0.35	ug/L			03/06/19 20:09	2.5
Chloroethane	2.5	U	2.5	2.1	ug/L			03/06/19 20:09	2.5
Chloroform	2.5	U	2.5	0.33	ug/L			03/06/19 20:09	2.5
Chloromethane	2.5	U	2.5	0.50	ug/L			03/06/19 20:09	2.5
cis-1,2-Dichloroethene	6.2		2.5	0.40	ug/L			03/06/19 20:09	2.5
cis-1,3-Dichloropropene	2.5	U	2.5	1.5	ug/L			03/06/19 20:09	2.5
Cyclohexane	2.5	U	2.5	0.60	ug/L			03/06/19 20:09	2.5
Dibromochloromethane	2.5	U	2.5	0.98	ug/L			03/06/19 20:09	2.5
1,2-Dibromo-3-Chloropropane	2.5	U	2.5	2.3	ug/L			03/06/19 20:09	2.5
1,2-Dibromoethane	2.5	U	2.5	0.30	ug/L			03/06/19 20:09	2.5
1,2-Dichlorobenzene	2.5	U	2.5	0.38	ug/L			03/06/19 20:09	2.5
1,3-Dichlorobenzene	2.5	U	2.5	0.38	ug/L			03/06/19 20:09	2.5
1,4-Dichlorobenzene	2.5	U	2.5	0.40	ug/L			03/06/19 20:09	2.5
Dichlorodifluoromethane	2.5	U	2.5	0.88	ug/L			03/06/19 20:09	2.5
1,1-Dichloroethane	0.54	J	2.5	0.43	ug/L			03/06/19 20:09	2.5
1,2-Dichloroethane	2.5	U	2.5	0.53	ug/L			03/06/19 20:09	2.5
1,1-Dichloroethene	2.5	U	2.5	0.48	ug/L			03/06/19 20:09	2.5
1,2-Dichloropropane	2.5	U	2.5	0.38	ug/L			03/06/19 20:09	2.5
Ethylbenzene	2.5	U	2.5	0.28	ug/L			03/06/19 20:09	2.5
2-Hexanone	25	U *	25	1.4	ug/L			03/06/19 20:09	2.5
Isopropylbenzene	2.5	U	2.5	0.23	ug/L			03/06/19 20:09	2.5
Methyl acetate	25	U *	25	4.3	ug/L			03/06/19 20:09	2.5
Methylcyclohexane	2.5	U	2.5	0.83	ug/L			03/06/19 20:09	2.5
Methylene Chloride	13	U	13	6.6	ug/L			03/06/19 20:09	2.5
4-Methyl-2-pentanone (MIBK)	25	U *	25	1.1	ug/L			03/06/19 20:09	2.5
Methyl tert-butyl ether	2.5	U	2.5	0.18	ug/L			03/06/19 20:09	2.5
Styrene	2.5	U	2.5	0.25	ug/L			03/06/19 20:09	2.5
1,1,2,2-Tetrachloroethane	2.5	U	2.5	0.33	ug/L			03/06/19 20:09	2.5
Tetrachloroethene	2.5	U	2.5	0.38	ug/L			03/06/19 20:09	2.5
Toluene	2.5	U	2.5	0.35	ug/L			03/06/19 20:09	2.5
trans-1,2-Dichloroethene	2.5	U	2.5	0.48	ug/L			03/06/19 20:09	2.5
trans-1,3-Dichloropropene	2.5	U	2.5	1.7	ug/L			03/06/19 20:09	2.5
1,2,4-Trichlorobenzene	2.5	U	2.5	0.65	ug/L			03/06/19 20:09	2.5
1,1,1-Trichloroethane	2.5	U	2.5	0.60	ug/L			03/06/19 20:09	2.5
1,1,2-Trichloroethane	2.5	U	2.5	0.23	ug/L			03/06/19 20:09	2.5

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: DUP-02

Lab Sample ID: 240-108818-18

Date Collected: 02/28/19 00:00

Matrix: Water

Date Received: 03/02/19 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	2.5	U	2.5	0.25	ug/L			03/06/19 20:09	2.5
Trichlorofluoromethane	2.5	U	2.5	1.1	ug/L			03/06/19 20:09	2.5
1,1,2-Trichloro-1,2,2-trifluoroethane	2.5	U	2.5	1.0	ug/L			03/06/19 20:09	2.5
1,2,3-Trimethylbenzene	13	U	13	0.35	ug/L			03/06/19 20:09	2.5
1,2,4-Trimethylbenzene	2.5	U	2.5	0.18	ug/L			03/06/19 20:09	2.5
1,3,5-Trimethylbenzene	2.5	U	2.5	0.30	ug/L			03/06/19 20:09	2.5
Vinyl chloride	33		2.5	0.50	ug/L			03/06/19 20:09	2.5
Xylenes, Total	5.0	U	5.0	0.38	ug/L			03/06/19 20:09	2.5
Diethyl ether	5.0	U	5.0	0.48	ug/L			03/06/19 20:09	2.5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		59 - 120					03/06/19 20:09	2.5
Dibromofluoromethane (Surr)	104		75 - 128					03/06/19 20:09	2.5
1,2-Dichloroethane-d4 (Surr)	116		70 - 121					03/06/19 20:09	2.5
Toluene-d8 (Surr)	89		70 - 123					03/06/19 20:09	2.5

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: DUP-03

Date Collected: 02/28/19 00:00

Date Received: 03/02/19 09:45

Lab Sample ID: 240-108818-19

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		2.0	0.86	ug/L			03/07/19 17:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		63 - 125					03/07/19 17:22	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	11		10	5.4	ug/L			03/07/19 19:11	1
Benzene	1.0	U	1.0	0.13	ug/L			03/07/19 19:11	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/07/19 19:11	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/07/19 19:11	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/07/19 19:11	1
2-Butanone (MEK)	1.6	J	10	1.2	ug/L			03/07/19 19:11	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/07/19 19:11	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/07/19 19:11	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/07/19 19:11	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/07/19 19:11	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/07/19 19:11	1
Chloromethane	1.0	U *	1.0	0.20	ug/L			03/07/19 19:11	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/07/19 19:11	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/07/19 19:11	1
Cyclohexane	1.0	U *	1.0	0.24	ug/L			03/07/19 19:11	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/07/19 19:11	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/07/19 19:11	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/07/19 19:11	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/07/19 19:11	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/07/19 19:11	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/07/19 19:11	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/07/19 19:11	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/07/19 19:11	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/07/19 19:11	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/07/19 19:11	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/07/19 19:11	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/07/19 19:11	1
2-Hexanone	10	U	10	0.54	ug/L			03/07/19 19:11	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/07/19 19:11	1
Methyl acetate	10	U *	10	1.7	ug/L			03/07/19 19:11	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/07/19 19:11	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/07/19 19:11	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/07/19 19:11	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/07/19 19:11	1
Styrene	1.0	U	1.0	0.10	ug/L			03/07/19 19:11	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/07/19 19:11	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/07/19 19:11	1
Toluene	1.0	U	1.0	0.14	ug/L			03/07/19 19:11	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/07/19 19:11	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/07/19 19:11	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/07/19 19:11	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/07/19 19:11	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/07/19 19:11	1

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: DUP-03

Lab Sample ID: 240-108818-19

Date Collected: 02/28/19 00:00

Matrix: Water

Date Received: 03/02/19 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/07/19 19:11	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/07/19 19:11	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/07/19 19:11	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/07/19 19:11	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/07/19 19:11	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/07/19 19:11	1
Vinyl chloride	0.77	J *	1.0	0.20	ug/L			03/07/19 19:11	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/07/19 19:11	1
Diethyl ether	2.0	U *	2.0	0.19	ug/L			03/07/19 19:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		59 - 120					03/07/19 19:11	1
Dibromofluoromethane (Surr)	100		75 - 128					03/07/19 19:11	1
1,2-Dichloroethane-d4 (Surr)	114		70 - 121					03/07/19 19:11	1
Toluene-d8 (Surr)	111		70 - 123					03/07/19 19:11	1

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-108818-20

Date Collected: 02/28/19 00:00

Matrix: Water

Date Received: 03/02/19 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	5.4	ug/L			03/07/19 19:33	1
Benzene	1.0	U	1.0	0.13	ug/L			03/07/19 19:33	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/07/19 19:33	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/07/19 19:33	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/07/19 19:33	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/07/19 19:33	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/07/19 19:33	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/07/19 19:33	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/07/19 19:33	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/07/19 19:33	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/07/19 19:33	1
Chloromethane	1.0	U *	1.0	0.20	ug/L			03/07/19 19:33	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/07/19 19:33	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/07/19 19:33	1
Cyclohexane	1.0	U *	1.0	0.24	ug/L			03/07/19 19:33	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/07/19 19:33	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/07/19 19:33	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/07/19 19:33	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/07/19 19:33	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/07/19 19:33	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/07/19 19:33	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/07/19 19:33	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/07/19 19:33	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/07/19 19:33	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/07/19 19:33	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/07/19 19:33	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/07/19 19:33	1
2-Hexanone	10	U	10	0.54	ug/L			03/07/19 19:33	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/07/19 19:33	1
Methyl acetate	10	U *	10	1.7	ug/L			03/07/19 19:33	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/07/19 19:33	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/07/19 19:33	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/07/19 19:33	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/07/19 19:33	1
Styrene	1.0	U	1.0	0.10	ug/L			03/07/19 19:33	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/07/19 19:33	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/07/19 19:33	1
Toluene	1.0	U	1.0	0.14	ug/L			03/07/19 19:33	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/07/19 19:33	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/07/19 19:33	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/07/19 19:33	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/07/19 19:33	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/07/19 19:33	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/07/19 19:33	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/07/19 19:33	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/07/19 19:33	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/07/19 19:33	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/07/19 19:33	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/07/19 19:33	1

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-108818-20

Date Collected: 02/28/19 00:00

Matrix: Water

Date Received: 03/02/19 09:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U *	1.0	0.20	ug/L			03/07/19 19:33	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/07/19 19:33	1
Diethyl ether	2.0	U *	2.0	0.19	ug/L			03/07/19 19:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		59 - 120					03/07/19 19:33	1
Dibromofluoromethane (Surr)	109		75 - 128					03/07/19 19:33	1
1,2-Dichloroethane-d4 (Surr)	115		70 - 121					03/07/19 19:33	1
Toluene-d8 (Surr)	109		70 - 123					03/07/19 19:33	1

Surrogate Summary

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

TestAmerica Job ID: 240-108818-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		BFB (59-120)	DBFM (75-128)	DCA (70-121)	TOL (70-123)
240-108666-E-1 MS	Matrix Spike	109	90	99	100
240-108666-F-1 MSD	Matrix Spike Duplicate	105	90	97	98
240-108688-D-2 MS	Matrix Spike	80	99	91	80
240-108688-D-2 MSD	Matrix Spike Duplicate	82	102	94	81
240-108787-B-3 MS	Matrix Spike	103	87	101	112
240-108787-B-3 MSD	Matrix Spike Duplicate	91	80	90	101
240-108818-1	MW-38-022719	67	103	100	74
240-108818-2	MW-49-022719	70	108	103	74
240-108818-3	MW-50-022719	69	102	100	75
240-108818-4	MW-7-022719	85	104	118	90
240-108818-5	MW-25-022719	86	103	117	89
240-108818-6	MW-63-022819	86	103	117	90
240-108818-7	MW-64-022819	88	102	117	91
240-108818-8	MW-47-022819	64	94	94	70
240-108818-9	MW-57-022819	89	103	118	91
240-108818-10	MW-29-022819	87	103	118	89
240-108818-11	MW-26-022819	87	103	114	88
240-108818-12	MW-19-022819	86	101	115	90
240-108818-13	MW-67-022819	86	103	113	89
240-108818-14	MW-65-022819	86	104	121	93
240-108818-15	MW-32-022819	86	107	121	91
240-108818-16	MW-39-022819	86	104	118	90
240-108818-17	DUP-01	87	103	116	91
240-108818-18	DUP-02	84	104	116	89
240-108818-19	DUP-03	95	100	114	111
240-108818-20	TRIP BLANK	98	109	115	109
240-108850-B-3 MS	Matrix Spike	83	104	93	80
240-108850-B-3 MSD	Matrix Spike Duplicate	82	104	95	80
240-108920-A-1 MSD	Matrix Spike Duplicate	107	91	98	99
240-108920-F-1 MS	Matrix Spike	108	91	100	98
LCS 240-370294/4	Lab Control Sample	108	89	98	99
LCS 240-370486/4	Lab Control Sample	81	99	92	80
LCS 240-370494/4	Lab Control Sample	110	90	99	98
LCS 240-370674/4	Lab Control Sample	109	101	109	116
LCS 240-370676/4	Lab Control Sample	79	100	92	79
MB 240-370294/6	Method Blank	88	101	111	93
MB 240-370486/6	Method Blank	72	100	99	77
MB 240-370494/6	Method Blank	86	100	114	92
MB 240-370674/6	Method Blank	97	104	115	112
MB 240-370676/6	Method Blank	70	101	98	75

Surrogate Legend

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

Surrogate Summary

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

TestAmerica Job ID: 240-108818-1

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA (63-125)
240-108737-D-4 MS	Matrix Spike	83
240-108737-D-4 MSD	Matrix Spike Duplicate	84
240-108818-1	MW-38-022719	89
240-108818-2	MW-49-022719	79
240-108818-3	MW-50-022719	86
240-108818-4	MW-7-022719	81
240-108818-5	MW-25-022719	81
240-108818-6	MW-63-022819	81
240-108818-7	MW-64-022819	81
240-108818-8	MW-47-022819	80
240-108818-8 MS	MW-47-022819	82
240-108818-8 MSD	MW-47-022819	84
240-108818-9	MW-57-022819	86
240-108818-10	MW-29-022819	82
240-108818-11	MW-26-022819	82
240-108818-12	MW-19-022819	83
240-108818-13	MW-67-022819	80
240-108818-14	MW-65-022819	83
240-108818-15	MW-32-022819	82
240-108818-16	MW-39-022819	84
240-108818-17	DUP-01	87
240-108818-18	DUP-02	94
240-108818-19	DUP-03	97
240-108850-A-4 MS	Matrix Spike	98
240-108850-A-4 MSD	Matrix Spike Duplicate	95
LCS 240-370526/4	Lab Control Sample	83
LCS 240-370673/4	Lab Control Sample	82
LCS 240-370737/4	Lab Control Sample	85
MB 240-370526/5	Method Blank	87
MB 240-370673/5	Method Blank	84
MB 240-370737/5	Method Blank	89

Surrogate Legend

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

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA (10-150)
MRL 240-370673/6	Lab Control Sample	84
MRL 240-370737/6	Lab Control Sample	95

Surrogate Legend

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

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108818-1

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

Lab Sample ID: MB 240-370294/6

Matrix: Water

Analysis Batch: 370294

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	5.4	ug/L			03/05/19 12:54	1
Benzene	1.0	U	1.0	0.13	ug/L			03/05/19 12:54	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/05/19 12:54	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/05/19 12:54	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/05/19 12:54	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/05/19 12:54	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/05/19 12:54	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/05/19 12:54	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/05/19 12:54	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/05/19 12:54	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/05/19 12:54	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/05/19 12:54	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/05/19 12:54	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/05/19 12:54	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/05/19 12:54	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/05/19 12:54	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/05/19 12:54	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/05/19 12:54	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/05/19 12:54	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/05/19 12:54	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/05/19 12:54	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/05/19 12:54	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/05/19 12:54	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/05/19 12:54	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/05/19 12:54	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/05/19 12:54	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/05/19 12:54	1
2-Hexanone	10	U	10	0.54	ug/L			03/05/19 12:54	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/05/19 12:54	1
Methyl acetate	10	U	10	1.7	ug/L			03/05/19 12:54	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/05/19 12:54	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/05/19 12:54	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/05/19 12:54	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/05/19 12:54	1
Styrene	1.0	U	1.0	0.10	ug/L			03/05/19 12:54	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/05/19 12:54	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/05/19 12:54	1
Toluene	1.0	U	1.0	0.14	ug/L			03/05/19 12:54	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/05/19 12:54	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/05/19 12:54	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/05/19 12:54	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/05/19 12:54	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/05/19 12:54	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/05/19 12:54	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/05/19 12:54	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/05/19 12:54	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/05/19 12:54	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/05/19 12:54	1

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108818-1

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

Lab Sample ID: MB 240-370294/6
Matrix: Water
Analysis Batch: 370294

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/05/19 12:54	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/05/19 12:54	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/05/19 12:54	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/05/19 12:54	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		59 - 120		03/05/19 12:54	1
Dibromofluoromethane (Surr)	101		75 - 128		03/05/19 12:54	1
1,2-Dichloroethane-d4 (Surr)	111		70 - 121		03/05/19 12:54	1
Toluene-d8 (Surr)	93		70 - 123		03/05/19 12:54	1

Lab Sample ID: LCS 240-370294/4
Matrix: Water
Analysis Batch: 370294

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	22.5		ug/L		112	21 - 162
Benzene	10.0	10.9		ug/L		109	80 - 123
Bromodichloromethane	10.0	9.09		ug/L		91	77 - 125
Bromoform	10.0	8.13		ug/L		81	49 - 141
Bromomethane	10.0	7.37		ug/L		74	41 - 175
2-Butanone (MEK)	20.0	29.0		ug/L		145	39 - 163
Carbon disulfide	10.0	10.1		ug/L		101	60 - 138
Carbon tetrachloride	10.0	8.17		ug/L		82	63 - 140
Chlorobenzene	10.0	9.30		ug/L		93	80 - 121
Chloroethane	10.0	8.04		ug/L		80	33 - 173
Chloroform	10.0	9.77		ug/L		98	79 - 127
Chloromethane	10.0	12.9		ug/L		129	54 - 143
cis-1,2-Dichloroethene	10.0	9.72		ug/L		97	76 - 128
cis-1,3-Dichloropropene	10.0	10.1		ug/L		101	64 - 132
Cyclohexane	10.0	12.2		ug/L		122	58 - 145
Dibromochloromethane	10.0	8.49		ug/L		85	70 - 132
1,2-Dibromo-3-Chloropropane	10.0	8.21		ug/L		82	46 - 132
1,2-Dibromoethane	10.0	9.99		ug/L		100	77 - 123
1,2-Dichlorobenzene	10.0	8.80		ug/L		88	78 - 120
1,3-Dichlorobenzene	10.0	8.72		ug/L		87	78 - 120
1,4-Dichlorobenzene	10.0	8.69		ug/L		87	78 - 120
Dichlorodifluoromethane	10.0	8.04		ug/L		80	29 - 148
1,1-Dichloroethane	10.0	11.4		ug/L		114	75 - 133
1,2-Dichloroethane	10.0	10.2		ug/L		102	71 - 135
1,1-Dichloroethene	10.0	9.96		ug/L		100	65 - 139
1,2-Dichloropropane	10.0	12.3		ug/L		123	78 - 133
Ethylbenzene	10.0	9.36		ug/L		94	80 - 120
2-Hexanone	20.0	29.3		ug/L		147	43 - 148
Isopropylbenzene	10.0	9.12		ug/L		91	74 - 120
Methyl acetate	20.0	32.7 *		ug/L		164	52 - 145
Methylcyclohexane	10.0	9.15		ug/L		91	60 - 125
Methylene Chloride	10.0	11.8		ug/L		118	70 - 134

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108818-1

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

Lab Sample ID: LCS 240-370294/4
Matrix: Water
Analysis Batch: 370294

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Methyl-2-pentanone (MIBK)	20.0	29.7	*	ug/L		148	49 - 143
Methyl tert-butyl ether	10.0	9.88		ug/L		99	51 - 133
Styrene	10.0	9.34		ug/L		93	79 - 120
1,1,2,2-Tetrachloroethane	10.0	11.4		ug/L		114	65 - 139
Tetrachloroethene	10.0	9.04		ug/L		90	74 - 130
Toluene	10.0	10.3		ug/L		103	78 - 129
trans-1,2-Dichloroethene	10.0	10.0		ug/L		100	78 - 133
trans-1,3-Dichloropropene	10.0	9.40		ug/L		94	55 - 128
1,2,4-Trichlorobenzene	10.0	7.51		ug/L		75	42 - 133
1,1,1-Trichloroethane	10.0	8.57		ug/L		86	69 - 134
1,1,2-Trichloroethane	10.0	10.8		ug/L		108	78 - 133
Trichloroethene	10.0	8.52		ug/L		85	76 - 125
Trichlorofluoromethane	10.0	7.81		ug/L		78	51 - 164
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	8.65		ug/L		87	50 - 156
1,2,4-Trimethylbenzene	10.0	9.22		ug/L		92	74 - 120
1,3,5-Trimethylbenzene	10.0	9.17		ug/L		92	75 - 121
Vinyl chloride	10.0	9.95		ug/L		100	58 - 143
Xylenes, Total	20.0	19.2		ug/L		96	80 - 120
Diethyl ether	10.0	13.8		ug/L		138	70 - 146

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		59 - 120
Dibromofluoromethane (Surr)	89		75 - 128
1,2-Dichloroethane-d4 (Surr)	98		70 - 121
Toluene-d8 (Surr)	99		70 - 123

Lab Sample ID: 240-108666-E-1 MS
Matrix: Water
Analysis Batch: 370294

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	25.6		ug/L		128	10 - 168
Benzene	1.0	U	10.0	11.9		ug/L		119	71 - 122
Bromodichloromethane	1.0	U	10.0	10.0		ug/L		100	64 - 125
Bromoform	1.0	U	10.0	8.62		ug/L		86	44 - 129
Bromomethane	1.0	U	10.0	8.43		ug/L		84	19 - 187
2-Butanone (MEK)	10	U	20.0	28.3		ug/L		142	37 - 156
Carbon disulfide	5.0	U	10.0	11.7		ug/L		117	43 - 144
Carbon tetrachloride	1.0	U	10.0	9.04		ug/L		90	41 - 143
Chlorobenzene	1.0	U	10.0	9.97		ug/L		100	70 - 123
Chloroethane	1.0	U	10.0	9.39		ug/L		94	11 - 189
Chloroform	1.0	U	10.0	10.8		ug/L		108	68 - 130
Chloromethane	1.0	U	10.0	14.3		ug/L		143	31 - 154
cis-1,2-Dichloroethene	1.0	U	10.0	10.4		ug/L		104	64 - 130
cis-1,3-Dichloropropene	1.0	U	10.0	10.0		ug/L		100	48 - 127
Dibromochloromethane	1.0	U	10.0	9.21		ug/L		92	60 - 129
1,2-Dibromo-3-Chloropropane	1.0	U	10.0	8.04		ug/L		80	38 - 124

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108818-1

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

Lab Sample ID: 240-108666-E-1 MS

Matrix: Water

Analysis Batch: 370294

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
1,2-Dibromoethane	1.0	U	10.0	10.3		ug/L		103	71 - 123
Dichlorodifluoromethane	1.0	U	10.0	9.54		ug/L		95	28 - 136
1,1-Dichloroethane	1.0	U	10.0	12.4		ug/L		124	63 - 136
1,2-Dichloroethane	1.0	U	10.0	10.9		ug/L		109	65 - 135
1,1-Dichloroethene	1.0	U	10.0	10.9		ug/L		109	53 - 140
1,2-Dichloropropane	1.0	U F1	10.0	13.3	F1	ug/L		133	70 - 132
Ethylbenzene	1.0	U	10.0	10.5		ug/L		105	66 - 120
2-Hexanone	10	U	20.0	29.7		ug/L		149	42 - 150
Methylene Chloride	5.0	U	10.0	12.0		ug/L		120	61 - 130
4-Methyl-2-pentanone (MIBK)	10	U *	20.0	27.9		ug/L		140	44 - 143
Styrene	1.0	U	10.0	10.3		ug/L		103	68 - 120
1,1,2,2-Tetrachloroethane	1.0	U	10.0	11.4		ug/L		114	60 - 137
Tetrachloroethene	1.0	U	10.0	9.62		ug/L		96	51 - 136
Toluene	1.0	U	10.0	11.4		ug/L		114	62 - 132
trans-1,2-Dichloroethene	1.0	U	10.0	11.1		ug/L		111	68 - 133
trans-1,3-Dichloropropene	1.0	U	10.0	10.1		ug/L		101	40 - 125
1,1,1-Trichloroethane	1.0	U	10.0	9.68		ug/L		97	51 - 138
1,1,2-Trichloroethane	1.0	U	10.0	11.8		ug/L		118	76 - 132
Trichloroethene	1.0	U	10.0	9.17		ug/L		92	55 - 131
Trichlorofluoromethane	1.0	U	10.0	9.57		ug/L		96	37 - 174
Vinyl chloride	1.0	U	10.0	11.4		ug/L		114	43 - 154
Xylenes, Total	2.0	U	20.0	20.9		ug/L		105	67 - 120

Surrogate	MS %Recovery	MS Qualifier	MS Limits
4-Bromofluorobenzene (Surr)	109		59 - 120
Dibromofluoromethane (Surr)	90		75 - 128
1,2-Dichloroethane-d4 (Surr)	99		70 - 121
Toluene-d8 (Surr)	100		70 - 123

Lab Sample ID: 240-108666-F-1 MSD

Matrix: Water

Analysis Batch: 370294

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	24.8		ug/L		124	10 - 168	3	35
Benzene	1.0	U	10.0	11.5		ug/L		115	71 - 122	4	22
Bromodichloromethane	1.0	U	10.0	9.55		ug/L		96	64 - 125	5	27
Bromoform	1.0	U	10.0	7.97		ug/L		80	44 - 129	8	28
Bromomethane	1.0	U	10.0	8.10		ug/L		81	19 - 187	4	35
2-Butanone (MEK)	10	U	20.0	25.9		ug/L		129	37 - 156	9	35
Carbon disulfide	5.0	U	10.0	10.9		ug/L		109	43 - 144	7	33
Carbon tetrachloride	1.0	U	10.0	8.54		ug/L		85	41 - 143	6	30
Chlorobenzene	1.0	U	10.0	9.37		ug/L		94	70 - 123	6	23
Chloroethane	1.0	U	10.0	8.81		ug/L		88	11 - 189	6	35
Chloroform	1.0	U	10.0	10.4		ug/L		104	68 - 130	4	23
Chloromethane	1.0	U	10.0	14.5		ug/L		145	31 - 154	2	35
cis-1,2-Dichloroethene	1.0	U	10.0	10.2		ug/L		102	64 - 130	3	21
cis-1,3-Dichloropropene	1.0	U	10.0	9.67		ug/L		97	48 - 127	4	30

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108818-1

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

Lab Sample ID: 240-108666-F-1 MSD

Matrix: Water

Analysis Batch: 370294

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
Dibromochloromethane	1.0	U	10.0	8.34		ug/L		83	60 - 129	10	26
1,2-Dibromo-3-Chloropropane	1.0	U	10.0	7.57		ug/L		76	38 - 124	6	35
1,2-Dibromoethane	1.0	U	10.0	9.39		ug/L		94	71 - 123	9	27
Dichlorodifluoromethane	1.0	U	10.0	9.11		ug/L		91	28 - 136	5	35
1,1-Dichloroethane	1.0	U	10.0	12.1		ug/L		121	63 - 136	2	23
1,2-Dichloroethane	1.0	U	10.0	10.3		ug/L		103	65 - 135	6	24
1,1-Dichloroethene	1.0	U	10.0	10.5		ug/L		105	53 - 140	4	35
1,2-Dichloropropane	1.0	U F1	10.0	12.9		ug/L		129	70 - 132	3	26
Ethylbenzene	1.0	U	10.0	9.55		ug/L		95	66 - 120	9	24
2-Hexanone	10	U	20.0	27.2		ug/L		136	42 - 150	9	35
Methylene Chloride	5.0	U	10.0	11.5		ug/L		115	61 - 130	4	29
4-Methyl-2-pentanone (MIBK)	10	U *	20.0	26.5		ug/L		133	44 - 143	5	35
Styrene	1.0	U	10.0	9.53		ug/L		95	68 - 120	8	26
1,1,2,2-Tetrachloroethane	1.0	U	10.0	10.8		ug/L		108	60 - 137	6	31
Tetrachloroethene	1.0	U	10.0	8.88		ug/L		89	51 - 136	8	23
Toluene	1.0	U	10.0	10.6		ug/L		106	62 - 132	8	23
trans-1,2-Dichloroethene	1.0	U	10.0	10.5		ug/L		105	68 - 133	5	24
trans-1,3-Dichloropropene	1.0	U	10.0	9.32		ug/L		93	40 - 125	8	27
1,1,1-Trichloroethane	1.0	U	10.0	9.31		ug/L		93	51 - 138	4	27
1,1,2-Trichloroethane	1.0	U	10.0	10.8		ug/L		108	76 - 132	9	25
Trichloroethene	1.0	U	10.0	8.85		ug/L		89	55 - 131	4	23
Trichlorofluoromethane	1.0	U	10.0	8.85		ug/L		88	37 - 174	8	35
Vinyl chloride	1.0	U	10.0	11.6		ug/L		116	43 - 154	2	29
Xylenes, Total	2.0	U	20.0	19.3		ug/L		96	67 - 120	8	25

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
4-Bromofluorobenzene (Surr)	105		59 - 120
Dibromofluoromethane (Surr)	90		75 - 128
1,2-Dichloroethane-d4 (Surr)	97		70 - 121
Toluene-d8 (Surr)	98		70 - 123

Lab Sample ID: MB 240-370486/6

Matrix: Water

Analysis Batch: 370486

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	5.4	ug/L			03/06/19 11:34	1
Benzene	1.0	U	1.0	0.13	ug/L			03/06/19 11:34	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/06/19 11:34	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/06/19 11:34	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/06/19 11:34	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/06/19 11:34	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/06/19 11:34	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/06/19 11:34	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/06/19 11:34	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/06/19 11:34	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/06/19 11:34	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/06/19 11:34	1

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108818-1

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

Lab Sample ID: MB 240-370486/6
Matrix: Water
Analysis Batch: 370486

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/06/19 11:34	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/06/19 11:34	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/06/19 11:34	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/06/19 11:34	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/06/19 11:34	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/06/19 11:34	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/06/19 11:34	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/06/19 11:34	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/06/19 11:34	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/06/19 11:34	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/06/19 11:34	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/06/19 11:34	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/06/19 11:34	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/06/19 11:34	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/06/19 11:34	1
2-Hexanone	10	U	10	0.54	ug/L			03/06/19 11:34	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/06/19 11:34	1
Methyl acetate	10	U	10	1.7	ug/L			03/06/19 11:34	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/06/19 11:34	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/06/19 11:34	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/06/19 11:34	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/06/19 11:34	1
Styrene	1.0	U	1.0	0.10	ug/L			03/06/19 11:34	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/06/19 11:34	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/06/19 11:34	1
Toluene	1.0	U	1.0	0.14	ug/L			03/06/19 11:34	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/06/19 11:34	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/06/19 11:34	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/06/19 11:34	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/06/19 11:34	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/06/19 11:34	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/06/19 11:34	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/06/19 11:34	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/06/19 11:34	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/06/19 11:34	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/06/19 11:34	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/06/19 11:34	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/06/19 11:34	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/06/19 11:34	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/06/19 11:34	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	72		59 - 120		03/06/19 11:34	1
Dibromofluoromethane (Surr)	100		75 - 128		03/06/19 11:34	1
1,2-Dichloroethane-d4 (Surr)	99		70 - 121		03/06/19 11:34	1
Toluene-d8 (Surr)	77		70 - 123		03/06/19 11:34	1

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108818-1

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

Lab Sample ID: LCS 240-370486/4

Matrix: Water

Analysis Batch: 370486

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	18.1		ug/L		90	21 - 162
Benzene	10.0	11.4		ug/L		114	80 - 123
Bromodichloromethane	10.0	9.48		ug/L		95	77 - 125
Bromoform	10.0	5.83		ug/L		58	49 - 141
Bromomethane	10.0	10.2		ug/L		102	41 - 175
2-Butanone (MEK)	20.0	17.0		ug/L		85	39 - 163
Carbon disulfide	10.0	8.60		ug/L		86	60 - 138
Carbon tetrachloride	10.0	10.7		ug/L		107	63 - 140
Chlorobenzene	10.0	9.50		ug/L		95	80 - 121
Chloroethane	10.0	9.93		ug/L		99	33 - 173
Chloroform	10.0	11.9		ug/L		119	79 - 127
Chloromethane	10.0	9.23		ug/L		92	54 - 143
cis-1,2-Dichloroethene	10.0	11.5		ug/L		115	76 - 128
cis-1,3-Dichloropropene	10.0	8.23		ug/L		82	64 - 132
Cyclohexane	10.0	10.8		ug/L		108	58 - 145
Dibromochloromethane	10.0	7.61		ug/L		76	70 - 132
1,2-Dibromo-3-Chloropropane	10.0	5.00		ug/L		50	46 - 132
1,2-Dibromoethane	10.0	7.82		ug/L		78	77 - 123
1,2-Dichlorobenzene	10.0	9.00		ug/L		90	78 - 120
1,3-Dichlorobenzene	10.0	8.60		ug/L		86	78 - 120
1,4-Dichlorobenzene	10.0	8.60		ug/L		86	78 - 120
Dichlorodifluoromethane	10.0	9.80		ug/L		98	29 - 148
1,1-Dichloroethane	10.0	11.2		ug/L		112	75 - 133
1,2-Dichloroethane	10.0	11.1		ug/L		111	71 - 135
1,1-Dichloroethene	10.0	9.94		ug/L		99	65 - 139
1,2-Dichloropropane	10.0	10.4		ug/L		104	78 - 133
Ethylbenzene	10.0	9.18		ug/L		92	80 - 120
2-Hexanone	20.0	12.1		ug/L		60	43 - 148
Isopropylbenzene	10.0	9.44		ug/L		94	74 - 120
Methyl acetate	20.0	16.1		ug/L		81	52 - 145
Methylcyclohexane	10.0	10.7		ug/L		107	60 - 125
Methylene Chloride	10.0	10.5		ug/L		105	70 - 134
4-Methyl-2-pentanone (MIBK)	20.0	13.7		ug/L		69	49 - 143
Methyl tert-butyl ether	10.0	8.12		ug/L		81	51 - 133
Styrene	10.0	8.80		ug/L		88	79 - 120
1,1,2,2-Tetrachloroethane	10.0	6.66		ug/L		67	65 - 139
Tetrachloroethene	10.0	10.2		ug/L		102	74 - 130
Toluene	10.0	9.40		ug/L		94	78 - 129
trans-1,2-Dichloroethene	10.0	12.1		ug/L		121	78 - 133
trans-1,3-Dichloropropene	10.0	5.89		ug/L		59	55 - 128
1,2,4-Trichlorobenzene	10.0	8.38		ug/L		84	42 - 133
1,1,1-Trichloroethane	10.0	12.2		ug/L		122	69 - 134
1,1,2-Trichloroethane	10.0	8.87		ug/L		89	78 - 133
Trichloroethene	10.0	11.6		ug/L		116	76 - 125
Trichlorofluoromethane	10.0	11.7		ug/L		117	51 - 164
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	12.7		ug/L		127	50 - 156
1,2,4-Trimethylbenzene	10.0	8.34		ug/L		83	74 - 120

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108818-1

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

Lab Sample ID: LCS 240-370486/4
Matrix: Water
Analysis Batch: 370486

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trimethylbenzene	10.0	8.20		ug/L		82	75 - 121
Vinyl chloride	10.0	11.1		ug/L		111	58 - 143
Xylenes, Total	20.0	18.4		ug/L		92	80 - 120
Diethyl ether	10.0	10.0		ug/L		100	70 - 146

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	81		59 - 120
Dibromofluoromethane (Surr)	99		75 - 128
1,2-Dichloroethane-d4 (Surr)	92		70 - 121
Toluene-d8 (Surr)	80		70 - 123

Lab Sample ID: 240-108688-D-2 MS
Matrix: Water
Analysis Batch: 370486

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	1000	U	2000	1920		ug/L		96	10 - 168
Benzene	100	U	1000	1190		ug/L		119	71 - 122
Bromodichloromethane	100	U	1000	964		ug/L		96	64 - 125
Bromoform	100	U	1000	541		ug/L		54	44 - 129
Bromomethane	100	U	1000	849		ug/L		85	19 - 187
2-Butanone (MEK)	1000	U	2000	1720		ug/L		86	37 - 156
Carbon disulfide	500	U	1000	797		ug/L		80	43 - 144
Carbon tetrachloride	100	U	1000	990		ug/L		99	41 - 143
Chlorobenzene	100	U	1000	972		ug/L		97	70 - 123
Chloroethane	100	U	1000	928		ug/L		93	11 - 189
Chloroform	100	U	1000	1230		ug/L		123	68 - 130
Chloromethane	100	U	1000	965		ug/L		96	31 - 154
cis-1,2-Dichloroethene	150		1000	1350		ug/L		120	64 - 130
cis-1,3-Dichloropropene	100	U	1000	796		ug/L		80	48 - 127
Cyclohexane	100	U	1000	824		ug/L		82	42 - 135
Dibromochloromethane	100	U	1000	742		ug/L		74	60 - 129
1,2-Dibromo-3-Chloropropane	100	U	1000	454		ug/L		45	38 - 124
1,2-Dibromoethane	100	U	1000	800		ug/L		80	71 - 123
1,2-Dichlorobenzene	100	U	1000	883		ug/L		88	64 - 120
1,3-Dichlorobenzene	100	U	1000	850		ug/L		85	62 - 120
1,4-Dichlorobenzene	100	U	1000	859		ug/L		86	63 - 120
Dichlorodifluoromethane	100	U	1000	628		ug/L		63	28 - 136
1,1-Dichloroethane	100	U	1000	1140		ug/L		114	63 - 136
1,2-Dichloroethane	100	U	1000	1170		ug/L		117	65 - 135
1,1-Dichloroethene	100	U	1000	994		ug/L		99	53 - 140
1,2-Dichloropropane	100	U	1000	1090		ug/L		109	70 - 132
Ethylbenzene	100	U	1000	904		ug/L		90	66 - 120
2-Hexanone	1000	U	2000	1130		ug/L		57	42 - 150
Isopropylbenzene	100	U	1000	890		ug/L		89	59 - 120
Methyl acetate	1000	U	2000	1650		ug/L		83	41 - 142
Methylcyclohexane	100	U	1000	767		ug/L		77	37 - 123
Methylene Chloride	500	U	1000	1120		ug/L		112	61 - 130

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108818-1

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

Lab Sample ID: 240-108688-D-2 MSD

Matrix: Water

Analysis Batch: 370486

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
1,2-Dibromo-3-Chloropropane	100	U	1000	390		ug/L		39	38 - 124	15	35
1,2-Dibromoethane	100	U	1000	719		ug/L		72	71 - 123	11	27
1,2-Dichlorobenzene	100	U	1000	809		ug/L		81	64 - 120	9	30
1,3-Dichlorobenzene	100	U	1000	765		ug/L		77	62 - 120	11	31
1,4-Dichlorobenzene	100	U	1000	764		ug/L		76	63 - 120	12	28
Dichlorodifluoromethane	100	U	1000	842		ug/L		84	28 - 136	29	35
1,1-Dichloroethane	100	U	1000	1060		ug/L		106	63 - 136	7	23
1,2-Dichloroethane	100	U	1000	1060		ug/L		106	65 - 135	10	24
1,1-Dichloroethene	100	U	1000	866		ug/L		87	53 - 140	14	35
1,2-Dichloropropane	100	U	1000	989		ug/L		99	70 - 132	10	26
Ethylbenzene	100	U	1000	794		ug/L		79	66 - 120	13	24
2-Hexanone	1000	U	2000	1020		ug/L		51	42 - 150	10	35
Isopropylbenzene	100	U	1000	771		ug/L		77	59 - 120	14	31
Methyl acetate	1000	U	2000	1490		ug/L		74	41 - 142	10	35
Methylcyclohexane	100	U	1000	807		ug/L		81	37 - 123	5	35
Methylene Chloride	500	U	1000	997		ug/L		100	61 - 130	11	29
4-Methyl-2-pentanone (MIBK)	1000	U	2000	1210		ug/L		61	44 - 143	10	35
Methyl tert-butyl ether	100	U	1000	722		ug/L		72	41 - 136	8	29
Styrene	100	U	1000	781		ug/L		78	68 - 120	13	26
1,1,2,2-Tetrachloroethane	100	U	1000	629		ug/L		63	60 - 137	8	31
Tetrachloroethene	100	U	1000	870		ug/L		87	51 - 136	12	23
Toluene	100	U	1000	841		ug/L		84	62 - 132	13	23
trans-1,2-Dichloroethene	22	J	1000	1120		ug/L		110	68 - 133	11	24
trans-1,3-Dichloropropene	100	U	1000	492		ug/L		49	40 - 125	10	27
1,2,4-Trichlorobenzene	100	U	1000	714		ug/L		71	30 - 126	3	35
1,1,1-Trichloroethane	100	U	1000	1050		ug/L		105	51 - 138	12	27
1,1,2-Trichloroethane	100	U	1000	845		ug/L		84	76 - 132	10	25
Trichloroethene	15	J	1000	1040		ug/L		102	55 - 131	12	23
Trichlorofluoromethane	100	U	1000	997		ug/L		100	37 - 174	3	35
1,1,2-Trichloro-1,2,2-trifluoroethane	100	U	1000	946		ug/L		95	31 - 156	0	35
1,2,4-Trimethylbenzene	100	U	1000	718		ug/L		72	62 - 120	12	27
1,3,5-Trimethylbenzene	100	U	1000	702		ug/L		70	64 - 120	12	23
Vinyl chloride	750		1000	1490		ug/L		73	43 - 154	10	29
Xylenes, Total	200	U	2000	1580		ug/L		79	67 - 120	15	25
Diethyl ether	200	U	1000	957		ug/L		96	65 - 134	7	33

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	82		59 - 120
Dibromofluoromethane (Surr)	102		75 - 128
1,2-Dichloroethane-d4 (Surr)	94		70 - 121
Toluene-d8 (Surr)	81		70 - 123

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108818-1

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

Lab Sample ID: MB 240-370494/6

Matrix: Water

Analysis Batch: 370494

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	5.4	ug/L			03/06/19 13:47	1
Benzene	1.0	U	1.0	0.13	ug/L			03/06/19 13:47	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/06/19 13:47	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/06/19 13:47	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/06/19 13:47	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/06/19 13:47	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/06/19 13:47	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/06/19 13:47	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/06/19 13:47	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/06/19 13:47	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/06/19 13:47	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/06/19 13:47	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/06/19 13:47	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/06/19 13:47	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/06/19 13:47	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/06/19 13:47	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/06/19 13:47	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/06/19 13:47	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/06/19 13:47	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/06/19 13:47	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/06/19 13:47	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/06/19 13:47	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/06/19 13:47	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/06/19 13:47	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/06/19 13:47	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/06/19 13:47	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/06/19 13:47	1
2-Hexanone	10	U	10	0.54	ug/L			03/06/19 13:47	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/06/19 13:47	1
Methyl acetate	10	U	10	1.7	ug/L			03/06/19 13:47	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/06/19 13:47	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/06/19 13:47	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/06/19 13:47	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/06/19 13:47	1
Styrene	1.0	U	1.0	0.10	ug/L			03/06/19 13:47	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/06/19 13:47	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/06/19 13:47	1
Toluene	1.0	U	1.0	0.14	ug/L			03/06/19 13:47	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/06/19 13:47	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/06/19 13:47	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/06/19 13:47	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/06/19 13:47	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/06/19 13:47	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/06/19 13:47	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/06/19 13:47	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/06/19 13:47	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/06/19 13:47	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/06/19 13:47	1

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108818-1

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

Lab Sample ID: MB 240-370494/6
Matrix: Water
Analysis Batch: 370494

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/06/19 13:47	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/06/19 13:47	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/06/19 13:47	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/06/19 13:47	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		59 - 120		03/06/19 13:47	1
Dibromofluoromethane (Surr)	100		75 - 128		03/06/19 13:47	1
1,2-Dichloroethane-d4 (Surr)	114		70 - 121		03/06/19 13:47	1
Toluene-d8 (Surr)	92		70 - 123		03/06/19 13:47	1

Lab Sample ID: LCS 240-370494/4
Matrix: Water
Analysis Batch: 370494

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	23.8		ug/L		119	21 - 162
Benzene	10.0	11.4		ug/L		114	80 - 123
Bromodichloromethane	10.0	9.44		ug/L		94	77 - 125
Bromoform	10.0	8.38		ug/L		84	49 - 141
Bromomethane	10.0	7.34		ug/L		73	41 - 175
2-Butanone (MEK)	20.0	30.1		ug/L		150	39 - 163
Carbon disulfide	10.0	10.5		ug/L		105	60 - 138
Carbon tetrachloride	10.0	8.41		ug/L		84	63 - 140
Chlorobenzene	10.0	9.41		ug/L		94	80 - 121
Chloroethane	10.0	7.96		ug/L		80	33 - 173
Chloroform	10.0	10.1		ug/L		101	79 - 127
Chloromethane	10.0	13.0		ug/L		130	54 - 143
cis-1,2-Dichloroethene	10.0	10.0		ug/L		100	76 - 128
cis-1,3-Dichloropropene	10.0	10.4		ug/L		104	64 - 132
Cyclohexane	10.0	12.9		ug/L		129	58 - 145
Dibromochloromethane	10.0	8.77		ug/L		88	70 - 132
1,2-Dibromo-3-Chloropropane	10.0	8.11		ug/L		81	46 - 132
1,2-Dibromoethane	10.0	10.2		ug/L		102	77 - 123
1,2-Dichlorobenzene	10.0	9.13		ug/L		91	78 - 120
1,3-Dichlorobenzene	10.0	8.87		ug/L		89	78 - 120
1,4-Dichlorobenzene	10.0	8.92		ug/L		89	78 - 120
Dichlorodifluoromethane	10.0	8.37		ug/L		84	29 - 148
1,1-Dichloroethane	10.0	11.7		ug/L		117	75 - 133
1,2-Dichloroethane	10.0	10.5		ug/L		105	71 - 135
1,1-Dichloroethene	10.0	10.2		ug/L		102	65 - 139
1,2-Dichloropropane	10.0	12.7		ug/L		127	78 - 133
Ethylbenzene	10.0	9.61		ug/L		96	80 - 120
2-Hexanone	20.0	30.0	*	ug/L		150	43 - 148
Isopropylbenzene	10.0	9.33		ug/L		93	74 - 120
Methyl acetate	20.0	33.3	*	ug/L		166	52 - 145
Methylcyclohexane	10.0	9.93		ug/L		99	60 - 125
Methylene Chloride	10.0	11.4		ug/L		114	70 - 134

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108818-1

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

Lab Sample ID: LCS 240-370494/4
Matrix: Water
Analysis Batch: 370494

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Methyl-2-pentanone (MIBK)	20.0	29.6	*	ug/L		148	49 - 143
Methyl tert-butyl ether	10.0	9.99		ug/L		100	51 - 133
Styrene	10.0	9.51		ug/L		95	79 - 120
1,1,2,2-Tetrachloroethane	10.0	11.8		ug/L		118	65 - 139
Tetrachloroethene	10.0	9.17		ug/L		92	74 - 130
Toluene	10.0	10.6		ug/L		106	78 - 129
trans-1,2-Dichloroethene	10.0	10.3		ug/L		103	78 - 133
trans-1,3-Dichloropropene	10.0	9.87		ug/L		99	55 - 128
1,2,4-Trichlorobenzene	10.0	7.60		ug/L		76	42 - 133
1,1,1-Trichloroethane	10.0	8.88		ug/L		89	69 - 134
1,1,2-Trichloroethane	10.0	11.1		ug/L		111	78 - 133
Trichloroethene	10.0	8.89		ug/L		89	76 - 125
Trichlorofluoromethane	10.0	8.31		ug/L		83	51 - 164
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	8.99		ug/L		90	50 - 156
1,2,4-Trimethylbenzene	10.0	9.44		ug/L		94	74 - 120
1,3,5-Trimethylbenzene	10.0	9.39		ug/L		94	75 - 121
Vinyl chloride	10.0	10.3		ug/L		103	58 - 143
Xylenes, Total	20.0	19.3		ug/L		96	80 - 120
Diethyl ether	10.0	13.8		ug/L		138	70 - 146

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	110		59 - 120
Dibromofluoromethane (Surr)	90		75 - 128
1,2-Dichloroethane-d4 (Surr)	99		70 - 121
Toluene-d8 (Surr)	98		70 - 123

Lab Sample ID: 240-108920-A-1 MSD
Matrix: Water
Analysis Batch: 370494

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
cis-1,2-Dichloroethene	1.0	U	10.0	10.3		ug/L		103	64 - 130	0	21
1,1-Dichloroethene	1.0	U	10.0	10.3		ug/L		103	53 - 140	2	35
Tetrachloroethene	1.0	U	10.0	8.79		ug/L		88	51 - 136	1	23
trans-1,2-Dichloroethene	1.0	U	10.0	10.5		ug/L		105	68 - 133	2	24
Trichloroethene	1.0	U	10.0	8.72		ug/L		87	55 - 131	1	23
Vinyl chloride	1.0	U	10.0	11.5		ug/L		115	43 - 154	1	29

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		59 - 120
Dibromofluoromethane (Surr)	91		75 - 128
1,2-Dichloroethane-d4 (Surr)	98		70 - 121
Toluene-d8 (Surr)	99		70 - 123

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QC Sample Results

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

TestAmerica Job ID: 240-108818-1

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

Lab Sample ID: 240-108920-F-1 MS

Matrix: Water

Analysis Batch: 370494

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS MS		Unit	D	%Rec	%Rec.
	Result	Qualifier		Result	Qualifier				
cis-1,2-Dichloroethene	1.0	U	10.0	10.3		ug/L		103	64 - 130
1,1-Dichloroethene	1.0	U	10.0	10.6		ug/L		106	53 - 140
Tetrachloroethene	1.0	U	10.0	8.89		ug/L		89	51 - 136
trans-1,2-Dichloroethene	1.0	U	10.0	10.7		ug/L		107	68 - 133
Trichloroethene	1.0	U	10.0	8.77		ug/L		88	55 - 131
Vinyl chloride	1.0	U	10.0	11.4		ug/L		114	43 - 154

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	108		59 - 120
Dibromofluoromethane (Surr)	91		75 - 128
1,2-Dichloroethane-d4 (Surr)	100		70 - 121
Toluene-d8 (Surr)	98		70 - 123

Lab Sample ID: MB 240-370674/6

Matrix: Water

Analysis Batch: 370674

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acetone	10	U	10	5.4	ug/L			03/07/19 12:55	1
Benzene	1.0	U	1.0	0.13	ug/L			03/07/19 12:55	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/07/19 12:55	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/07/19 12:55	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/07/19 12:55	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/07/19 12:55	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/07/19 12:55	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/07/19 12:55	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/07/19 12:55	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/07/19 12:55	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/07/19 12:55	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/07/19 12:55	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/07/19 12:55	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/07/19 12:55	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/07/19 12:55	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/07/19 12:55	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/07/19 12:55	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/07/19 12:55	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/07/19 12:55	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/07/19 12:55	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/07/19 12:55	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/07/19 12:55	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/07/19 12:55	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/07/19 12:55	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/07/19 12:55	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/07/19 12:55	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/07/19 12:55	1
2-Hexanone	10	U	10	0.54	ug/L			03/07/19 12:55	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/07/19 12:55	1
Methyl acetate	10	U	10	1.7	ug/L			03/07/19 12:55	1

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QC Sample Results

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

TestAmerica Job ID: 240-108818-1

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

Lab Sample ID: MB 240-370674/6
Matrix: Water
Analysis Batch: 370674

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/07/19 12:55	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/07/19 12:55	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/07/19 12:55	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/07/19 12:55	1
Styrene	1.0	U	1.0	0.10	ug/L			03/07/19 12:55	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/07/19 12:55	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/07/19 12:55	1
Toluene	1.0	U	1.0	0.14	ug/L			03/07/19 12:55	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/07/19 12:55	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/07/19 12:55	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/07/19 12:55	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/07/19 12:55	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/07/19 12:55	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/07/19 12:55	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/07/19 12:55	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/07/19 12:55	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/07/19 12:55	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/07/19 12:55	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/07/19 12:55	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/07/19 12:55	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/07/19 12:55	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/07/19 12:55	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	97		59 - 120		03/07/19 12:55	1
Dibromofluoromethane (Surr)	104		75 - 128		03/07/19 12:55	1
1,2-Dichloroethane-d4 (Surr)	115		70 - 121		03/07/19 12:55	1
Toluene-d8 (Surr)	112		70 - 123		03/07/19 12:55	1

Lab Sample ID: LCS 240-370674/4
Matrix: Water
Analysis Batch: 370674

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	10.0	11.0		ug/L		110	80 - 123
Bromodichloromethane	10.0	9.73		ug/L		97	77 - 125
Bromoform	10.0	7.35		ug/L		74	49 - 141
Bromomethane	10.0	11.1		ug/L		111	41 - 175
2-Butanone (MEK)	20.0	27.0		ug/L		135	39 - 163
Carbon disulfide	10.0	11.7		ug/L		117	60 - 138
Carbon tetrachloride	10.0	8.74		ug/L		87	63 - 140
Chlorobenzene	10.0	9.28		ug/L		93	80 - 121
Chloroethane	10.0	15.3		ug/L		153	33 - 173
Chloroform	10.0	10.7		ug/L		107	79 - 127
Chloromethane	10.0	16.1	*	ug/L		161	54 - 143
cis-1,2-Dichloroethene	10.0	10.3		ug/L		103	76 - 128
cis-1,3-Dichloropropene	10.0	10.8		ug/L		108	64 - 132

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QC Sample Results

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

TestAmerica Job ID: 240-108818-1

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

Lab Sample ID: LCS 240-370674/4
Matrix: Water
Analysis Batch: 370674

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyclohexane	10.0	14.8	*	ug/L		148	58 - 145
Dibromochloromethane	10.0	9.13		ug/L		91	70 - 132
1,2-Dibromo-3-Chloropropane	10.0	9.05		ug/L		91	46 - 132
1,2-Dibromoethane	10.0	9.61		ug/L		96	77 - 123
1,2-Dichlorobenzene	10.0	9.02		ug/L		90	78 - 120
1,3-Dichlorobenzene	10.0	9.21		ug/L		92	78 - 120
1,4-Dichlorobenzene	10.0	9.14		ug/L		91	78 - 120
Dichlorodifluoromethane	10.0	9.77		ug/L		98	29 - 148
1,1-Dichloroethane	10.0	12.6		ug/L		126	75 - 133
1,2-Dichloroethane	10.0	9.90		ug/L		99	71 - 135
1,1-Dichloroethene	10.0	11.2		ug/L		112	65 - 139
1,2-Dichloropropane	10.0	13.0		ug/L		130	78 - 133
Ethylbenzene	10.0	9.97		ug/L		100	80 - 120
2-Hexanone	20.0	28.3		ug/L		142	43 - 148
Isopropylbenzene	10.0	10.0		ug/L		100	74 - 120
Methyl acetate	20.0	29.2	*	ug/L		146	52 - 145
Methylcyclohexane	10.0	10.4		ug/L		104	60 - 125
Methylene Chloride	10.0	10.7		ug/L		107	70 - 134
4-Methyl-2-pentanone (MIBK)	20.0	26.6		ug/L		133	49 - 143
Methyl tert-butyl ether	10.0	11.4		ug/L		114	51 - 133
Styrene	10.0	9.65		ug/L		97	79 - 120
1,1,2,2-Tetrachloroethane	10.0	13.8		ug/L		138	65 - 139
Tetrachloroethene	10.0	8.10		ug/L		81	74 - 130
Toluene	10.0	11.4		ug/L		114	78 - 129
trans-1,2-Dichloroethene	10.0	10.5		ug/L		105	78 - 133
trans-1,3-Dichloropropene	10.0	10.2		ug/L		102	55 - 128
1,2,4-Trichlorobenzene	10.0	7.00		ug/L		70	42 - 133
1,1,1-Trichloroethane	10.0	8.97		ug/L		90	69 - 134
1,1,2-Trichloroethane	10.0	10.5		ug/L		105	78 - 133
Trichloroethene	10.0	8.07		ug/L		81	76 - 125
Trichlorofluoromethane	10.0	9.88		ug/L		99	51 - 164
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	8.04		ug/L		80	50 - 156
1,2,4-Trimethylbenzene	10.0	11.5		ug/L		115	74 - 120
1,3,5-Trimethylbenzene	10.0	11.7		ug/L		117	75 - 121
Vinyl chloride	10.0	14.6	*	ug/L		146	58 - 143
Xylenes, Total	20.0	20.5		ug/L		103	80 - 120
Diethyl ether	10.0	15.1	*	ug/L		151	70 - 146

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	109		59 - 120
Dibromofluoromethane (Surr)	101		75 - 128
1,2-Dichloroethane-d4 (Surr)	109		70 - 121
Toluene-d8 (Surr)	116		70 - 123

QC Sample Results

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

TestAmerica Job ID: 240-108818-1

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

Lab Sample ID: 240-108787-B-3 MS

Matrix: Water

Analysis Batch: 370674

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier	Added	Result	Qualifier				
Acetone	50	U	100	130		ug/L		130	10 - 168
Benzene	5.0	U	50.0	52.1		ug/L		104	71 - 122
Bromodichloromethane	5.0	U	50.0	49.4		ug/L		99	64 - 125
Bromoform	5.0	U	50.0	36.8		ug/L		74	44 - 129
Bromomethane	5.0	U	50.0	50.5		ug/L		101	19 - 187
2-Butanone (MEK)	50	U F1	100	160	F1	ug/L		160	37 - 156
Carbon disulfide	25	U	50.0	46.2		ug/L		92	43 - 144
Carbon tetrachloride	5.0	U	50.0	38.1		ug/L		76	41 - 143
Chlorobenzene	5.0	U	50.0	46.4		ug/L		93	70 - 123
Chloroethane	5.0	U	50.0	67.1		ug/L		134	11 - 189
Chloroform	5.0	U	50.0	48.0		ug/L		96	68 - 130
Chloromethane	5.0	U F1 *	50.0	84.6	F1	ug/L		169	31 - 154
cis-1,2-Dichloroethene	5.0	U	50.0	47.3		ug/L		95	64 - 130
cis-1,3-Dichloropropene	5.0	U	50.0	57.8		ug/L		116	48 - 127
Dibromochloromethane	5.0	U	50.0	47.3		ug/L		95	60 - 129
1,2-Dibromo-3-Chloropropane	5.0	U	50.0	47.2		ug/L		94	38 - 124
1,2-Dibromoethane	5.0	U	50.0	52.8		ug/L		106	71 - 123
1,2-Dichlorobenzene	5.0	U	50.0	45.7		ug/L		91	64 - 120
Dichlorodifluoromethane	5.0	U	50.0	40.2		ug/L		80	28 - 136
1,1-Dichloroethane	2.5	J	50.0	58.7		ug/L		112	63 - 136
1,2-Dichloroethane	5.0	U	50.0	50.2		ug/L		100	65 - 135
1,1-Dichloroethene	5.0	U	50.0	45.0		ug/L		90	53 - 140
1,2-Dichloropropane	5.0	U F1	50.0	68.4	F1	ug/L		137	70 - 132
Ethylbenzene	2.5	J	50.0	49.5		ug/L		94	66 - 120
2-Hexanone	50	U F1	100	159	F1	ug/L		159	42 - 150
Isopropylbenzene	2.5	J	50.0	46.3		ug/L		88	59 - 120
Methylene Chloride	25	U	50.0	46.5		ug/L		93	61 - 130
4-Methyl-2-pentanone (MIBK)	50	U F1	100	149	F1	ug/L		149	44 - 143
Methyl tert-butyl ether	5.0	U	50.0	49.2		ug/L		98	41 - 136
Styrene	5.0	U	50.0	46.4		ug/L		93	68 - 120
1,1,2,2-Tetrachloroethane	5.0	U F1	50.0	69.4	F1	ug/L		139	60 - 137
Tetrachloroethene	5.0	U	50.0	35.3		ug/L		71	51 - 136
Toluene	1.8	J	50.0	54.5		ug/L		105	62 - 132
trans-1,2-Dichloroethene	5.0	U	50.0	45.3		ug/L		91	68 - 133
trans-1,3-Dichloropropene	5.0	U	50.0	54.7		ug/L		109	40 - 125
1,1,1-Trichloroethane	5.0	U	50.0	41.3		ug/L		83	51 - 138
1,1,2-Trichloroethane	5.0	U F1	50.0	71.7	F1	ug/L		143	76 - 132
Trichloroethene	0.76	J	50.0	37.5		ug/L		73	55 - 131
Trichlorofluoromethane	5.0	U	50.0	41.8		ug/L		84	37 - 174
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U	50.0	32.5		ug/L		65	31 - 156
1,2,4-Trimethylbenzene	120	F1	50.0	165		ug/L		99	62 - 120
Vinyl chloride	5.0	U *	50.0	64.9		ug/L		130	43 - 154
Xylenes, Total	29		100	130		ug/L		101	67 - 120
Diethyl ether	10	U F1 *	50.0	70.2	F1	ug/L		140	65 - 134

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	103		59 - 120

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108818-1

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

Lab Sample ID: 240-108787-B-3 MS

Matrix: Water

Analysis Batch: 370674

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Surrogate	MS %Recovery	MS Qualifier	Limits
Dibromofluoromethane (Surr)	87		75 - 128
1,2-Dichloroethane-d4 (Surr)	101		70 - 121
Toluene-d8 (Surr)	112		70 - 123

Lab Sample ID: 240-108787-B-3 MSD

Matrix: Water

Analysis Batch: 370674

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	50	U	100	135		ug/L		135	10 - 168	4	35
Benzene	5.0	U	50.0	52.8		ug/L		106	71 - 122	1	22
Bromodichloromethane	5.0	U	50.0	49.9		ug/L		100	64 - 125	1	27
Bromoform	5.0	U	50.0	35.9		ug/L		72	44 - 129	3	28
Bromomethane	5.0	U	50.0	47.8		ug/L		96	19 - 187	6	35
2-Butanone (MEK)	50	U F1	100	147		ug/L		147	37 - 156	9	35
Carbon disulfide	25	U	50.0	50.2		ug/L		100	43 - 144	8	33
Carbon tetrachloride	5.0	U	50.0	42.8		ug/L		86	41 - 143	12	30
Chlorobenzene	5.0	U	50.0	47.4		ug/L		95	70 - 123	2	23
Chloroethane	5.0	U	50.0	68.2		ug/L		136	11 - 189	2	35
Chloroform	5.0	U	50.0	49.8		ug/L		100	68 - 130	4	23
Chloromethane	5.0	U F1 *	50.0	82.0	F1	ug/L		164	31 - 154	3	35
cis-1,2-Dichloroethene	5.0	U	50.0	45.7		ug/L		91	64 - 130	3	21
cis-1,3-Dichloropropene	5.0	U	50.0	55.9		ug/L		112	48 - 127	3	30
Dibromochloromethane	5.0	U	50.0	46.1		ug/L		92	60 - 129	3	26
1,2-Dibromo-3-Chloropropane	5.0	U	50.0	48.9		ug/L		98	38 - 124	4	35
1,2-Dibromoethane	5.0	U	50.0	49.8		ug/L		100	71 - 123	6	27
1,2-Dichlorobenzene	5.0	U	50.0	47.6		ug/L		95	64 - 120	4	30
Dichlorodifluoromethane	5.0	U	50.0	44.3		ug/L		89	28 - 136	10	35
1,1-Dichloroethane	2.5	J	50.0	60.8		ug/L		116	63 - 136	3	23
1,2-Dichloroethane	5.0	U	50.0	50.8		ug/L		102	65 - 135	1	24
1,1-Dichloroethene	5.0	U	50.0	48.7		ug/L		97	53 - 140	8	35
1,2-Dichloropropane	5.0	U F1	50.0	67.7	F1	ug/L		135	70 - 132	1	26
Ethylbenzene	2.5	J	50.0	51.2		ug/L		98	66 - 120	4	24
2-Hexanone	50	U F1	100	146		ug/L		146	42 - 150	9	35
Isopropylbenzene	2.5	J	50.0	51.5		ug/L		98	59 - 120	11	31
Methylene Chloride	25	U	50.0	45.8		ug/L		92	61 - 130	2	29
4-Methyl-2-pentanone (MIBK)	50	U F1	100	142		ug/L		142	44 - 143	5	35
Methyl tert-butyl ether	5.0	U	50.0	49.3		ug/L		99	41 - 136	0	29
Styrene	5.0	U	50.0	47.7		ug/L		95	68 - 120	3	26
1,1,1,2-Tetrachloroethane	5.0	U F1	50.0	69.3	F1	ug/L		139	60 - 137	0	31
Tetrachloroethene	5.0	U	50.0	39.8		ug/L		80	51 - 136	12	23
Toluene	1.8	J	50.0	56.0		ug/L		108	62 - 132	3	23
trans-1,2-Dichloroethene	5.0	U	50.0	48.8		ug/L		98	68 - 133	7	24
trans-1,3-Dichloropropene	5.0	U	50.0	56.4		ug/L		113	40 - 125	3	27
1,1,1-Trichloroethane	5.0	U	50.0	42.8		ug/L		86	51 - 138	4	27
1,1,2-Trichloroethane	5.0	U F1	50.0	68.3	F1	ug/L		137	76 - 132	5	25
Trichloroethene	0.76	J	50.0	40.2		ug/L		79	55 - 131	7	23
Trichlorofluoromethane	5.0	U	50.0	45.2		ug/L		90	37 - 174	8	35

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108818-1

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

Lab Sample ID: 240-108787-B-3 MSD

Matrix: Water

Analysis Batch: 370674

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
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U	50.0	37.8		ug/L		76	31 - 156	15	35
1,2,4-Trimethylbenzene	120	F1	50.0	179	F1	ug/L		127	62 - 120	8	27
Vinyl chloride	5.0	U *	50.0	63.0		ug/L		126	43 - 154	3	29
Xylenes, Total	29		100	133		ug/L		103	67 - 120	2	25
Diethyl ether	10	U F1 *	50.0	69.2	F1	ug/L		138	65 - 134	1	33
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
4-Bromofluorobenzene (Surr)	91		59 - 120								
Dibromofluoromethane (Surr)	80		75 - 128								
1,2-Dichloroethane-d4 (Surr)	90		70 - 121								
Toluene-d8 (Surr)	101		70 - 123								

Lab Sample ID: MB 240-370676/6

Matrix: Water

Analysis Batch: 370676

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	5.4	ug/L			03/07/19 12:21	1
Benzene	1.0	U	1.0	0.13	ug/L			03/07/19 12:21	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/07/19 12:21	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/07/19 12:21	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/07/19 12:21	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/07/19 12:21	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/07/19 12:21	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/07/19 12:21	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/07/19 12:21	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/07/19 12:21	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/07/19 12:21	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/07/19 12:21	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/07/19 12:21	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/07/19 12:21	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/07/19 12:21	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/07/19 12:21	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/07/19 12:21	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/07/19 12:21	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/07/19 12:21	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/07/19 12:21	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/07/19 12:21	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/07/19 12:21	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/07/19 12:21	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/07/19 12:21	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/07/19 12:21	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/07/19 12:21	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/07/19 12:21	1
2-Hexanone	10	U	10	0.54	ug/L			03/07/19 12:21	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/07/19 12:21	1
Methyl acetate	10	U	10	1.7	ug/L			03/07/19 12:21	1

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108818-1

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

Lab Sample ID: MB 240-370676/6

Matrix: Water

Analysis Batch: 370676

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/07/19 12:21	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/07/19 12:21	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/07/19 12:21	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/07/19 12:21	1
Styrene	1.0	U	1.0	0.10	ug/L			03/07/19 12:21	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/07/19 12:21	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/07/19 12:21	1
Toluene	1.0	U	1.0	0.14	ug/L			03/07/19 12:21	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/07/19 12:21	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/07/19 12:21	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/07/19 12:21	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/07/19 12:21	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/07/19 12:21	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/07/19 12:21	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/07/19 12:21	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/07/19 12:21	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/07/19 12:21	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/07/19 12:21	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/07/19 12:21	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/07/19 12:21	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/07/19 12:21	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/07/19 12:21	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	70		59 - 120		03/07/19 12:21	1
Dibromofluoromethane (Surr)	101		75 - 128		03/07/19 12:21	1
1,2-Dichloroethane-d4 (Surr)	98		70 - 121		03/07/19 12:21	1
Toluene-d8 (Surr)	75		70 - 123		03/07/19 12:21	1

Lab Sample ID: LCS 240-370676/4

Matrix: Water

Analysis Batch: 370676

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	10.0	11.7		ug/L		117	80 - 123
Bromodichloromethane	10.0	9.84		ug/L		98	77 - 125
Bromoform	10.0	5.63		ug/L		56	49 - 141
Bromomethane	10.0	9.01		ug/L		90	41 - 175
2-Butanone (MEK)	20.0	16.0		ug/L		80	39 - 163
Carbon disulfide	10.0	8.19		ug/L		82	60 - 138
Carbon tetrachloride	10.0	11.0		ug/L		110	63 - 140
Chlorobenzene	10.0	9.58		ug/L		96	80 - 121
Chloroethane	10.0	9.06		ug/L		91	33 - 173
Chloroform	10.0	12.1		ug/L		121	79 - 127
Chloromethane	10.0	10.4		ug/L		104	54 - 143
cis-1,2-Dichloroethene	10.0	11.6		ug/L		116	76 - 128
cis-1,3-Dichloropropene	10.0	8.55		ug/L		85	64 - 132

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108818-1

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

Lab Sample ID: LCS 240-370676/4

Matrix: Water

Analysis Batch: 370676

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyclohexane	10.0	10.3		ug/L		103	58 - 145
Dibromochloromethane	10.0	7.64		ug/L		76	70 - 132
1,2-Dibromo-3-Chloropropane	10.0	4.81		ug/L		48	46 - 132
1,2-Dibromoethane	10.0	7.73		ug/L		77	77 - 123
1,2-Dichlorobenzene	10.0	8.92		ug/L		89	78 - 120
1,3-Dichlorobenzene	10.0	8.73		ug/L		87	78 - 120
1,4-Dichlorobenzene	10.0	8.85		ug/L		89	78 - 120
Dichlorodifluoromethane	10.0	11.7		ug/L		117	29 - 148
1,1-Dichloroethane	10.0	11.3		ug/L		113	75 - 133
1,2-Dichloroethane	10.0	11.1		ug/L		111	71 - 135
1,1-Dichloroethene	10.0	9.81		ug/L		98	65 - 139
1,2-Dichloropropane	10.0	10.9		ug/L		109	78 - 133
Ethylbenzene	10.0	9.11		ug/L		91	80 - 120
2-Hexanone	20.0	11.3		ug/L		56	43 - 148
Isopropylbenzene	10.0	9.26		ug/L		93	74 - 120
Methyl acetate	20.0	15.9		ug/L		79	52 - 145
Methylcyclohexane	10.0	10.6		ug/L		106	60 - 125
Methylene Chloride	10.0	10.3		ug/L		103	70 - 134
4-Methyl-2-pentanone (MIBK)	20.0	13.1		ug/L		66	49 - 143
Methyl tert-butyl ether	10.0	8.26		ug/L		83	51 - 133
Styrene	10.0	8.72		ug/L		87	79 - 120
1,1,2,2-Tetrachloroethane	10.0	6.78		ug/L		68	65 - 139
Tetrachloroethene	10.0	10.1		ug/L		101	74 - 130
Toluene	10.0	9.47		ug/L		95	78 - 129
trans-1,2-Dichloroethene	10.0	12.2		ug/L		122	78 - 133
trans-1,3-Dichloropropene	10.0	5.89		ug/L		59	55 - 128
1,2,4-Trichlorobenzene	10.0	8.12		ug/L		81	42 - 133
1,1,1-Trichloroethane	10.0	12.2		ug/L		122	69 - 134
1,1,2-Trichloroethane	10.0	8.87		ug/L		89	78 - 133
Trichloroethene	10.0	11.8		ug/L		118	76 - 125
Trichlorofluoromethane	10.0	11.6		ug/L		116	51 - 164
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	11.4		ug/L		114	50 - 156
1,2,4-Trimethylbenzene	10.0	8.57		ug/L		86	74 - 120
1,3,5-Trimethylbenzene	10.0	8.54		ug/L		85	75 - 121
Vinyl chloride	10.0	10.4		ug/L		104	58 - 143
Xylenes, Total	20.0	18.4		ug/L		92	80 - 120
Diethyl ether	10.0	9.99		ug/L		100	70 - 146

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	79		59 - 120
Dibromofluoromethane (Surr)	100		75 - 128
1,2-Dichloroethane-d4 (Surr)	92		70 - 121
Toluene-d8 (Surr)	79		70 - 123

QC Sample Results

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

TestAmerica Job ID: 240-108818-1

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

Lab Sample ID: 240-108850-B-3 MS

Matrix: Water

Analysis Batch: 370676

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier	Added	Result	Qualifier				
Acetone	33	U	66.6	61.0		ug/L		92	10 - 168
Benzene	2.5	J	33.3	39.2		ug/L		110	71 - 122
Bromodichloromethane	3.3	U	33.3	29.3		ug/L		88	64 - 125
Bromoform	3.3	U	33.3	14.9		ug/L		45	44 - 129
Bromomethane	3.3	U	33.3	28.3		ug/L		85	19 - 187
2-Butanone (MEK)	33	U	66.6	50.4		ug/L		76	37 - 156
Carbon disulfide	17	U	33.3	23.9		ug/L		72	43 - 144
Carbon tetrachloride	3.3	U	33.3	31.3		ug/L		94	41 - 143
Chlorobenzene	8.7		33.3	37.9		ug/L		88	70 - 123
Chloroethane	3.3	U	33.3	32.8		ug/L		98	11 - 189
Chloroform	3.3	U	33.3	39.7		ug/L		119	68 - 130
Chloromethane	3.3	U	33.3	32.9		ug/L		99	31 - 154
cis-1,2-Dichloroethene	6.1		33.3	43.1		ug/L		111	64 - 130
cis-1,3-Dichloropropene	3.3	U	33.3	23.5		ug/L		71	48 - 127
Dibromochloromethane	3.3	U	33.3	21.2		ug/L		64	60 - 129
1,2-Dichlorobenzene	3.3	U	33.3	26.5		ug/L		80	64 - 120
1,3-Dichlorobenzene	3.3	U	33.3	25.7		ug/L		77	62 - 120
1,4-Dichlorobenzene	3.3	U	33.3	25.3		ug/L		76	63 - 120
1,1-Dichloroethane	58		33.3	90.1		ug/L		97	63 - 136
1,2-Dichloroethane	1.1	J	33.3	37.1		ug/L		108	65 - 135
1,1-Dichloroethene	35		33.3	62.6		ug/L		84	53 - 140
1,2-Dichloropropane	3.3	U	33.3	34.0		ug/L		102	70 - 132
Ethylbenzene	3.3	U	33.3	27.5		ug/L		82	66 - 120
2-Hexanone	33	U	66.6	34.7		ug/L		52	42 - 150
Methylene Chloride	17	U	33.3	37.6		ug/L		113	61 - 130
4-Methyl-2-pentanone (MIBK)	33	U	66.6	40.8		ug/L		61	44 - 143
Styrene	3.3	U	33.3	26.9		ug/L		81	68 - 120
1,1,2,2-Tetrachloroethane	3.3	U	33.3	21.2		ug/L		64	60 - 137
Tetrachloroethene	0.88	J	33.3	30.4		ug/L		89	51 - 136
Toluene	3.3	U	33.3	28.5		ug/L		86	62 - 132
trans-1,2-Dichloroethene	3.3	U	33.3	38.5		ug/L		116	68 - 133
trans-1,3-Dichloropropene	3.3	U	33.3	16.0		ug/L		48	40 - 125
1,1,1-Trichloroethane	25		33.3	61.8		ug/L		111	51 - 138
1,1,2-Trichloroethane	1.8	J	33.3	30.4		ug/L		86	76 - 132
Trichloroethene	4.8		33.3	40.1		ug/L		106	55 - 131
Vinyl chloride	1.3	J	33.3	34.4		ug/L		99	43 - 154
Xylenes, Total	6.7	U	66.6	55.2		ug/L		83	67 - 120

Surrogate	MS %Recovery	MS Qualifier	MS Limits
4-Bromofluorobenzene (Surr)	83		59 - 120
Dibromofluoromethane (Surr)	104		75 - 128
1,2-Dichloroethane-d4 (Surr)	93		70 - 121
Toluene-d8 (Surr)	80		70 - 123

QC Sample Results

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

TestAmerica Job ID: 240-108818-1

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

Lab Sample ID: 240-108850-B-3 MSD

Matrix: Water

Analysis Batch: 370676

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	33	U	66.6	62.8		ug/L		94	10 - 168	3	35
Benzene	2.5	J	33.3	39.4		ug/L		111	71 - 122	0	22
Bromodichloromethane	3.3	U	33.3	29.7		ug/L		89	64 - 125	2	27
Bromoform	3.3	U	33.3	15.8		ug/L		47	44 - 129	5	28
Bromomethane	3.3	U	33.3	29.2		ug/L		88	19 - 187	3	35
2-Butanone (MEK)	33	U	66.6	52.8		ug/L		79	37 - 156	5	35
Carbon disulfide	17	U	33.3	25.3		ug/L		76	43 - 144	6	33
Carbon tetrachloride	3.3	U	33.3	33.6		ug/L		101	41 - 143	7	30
Chlorobenzene	8.7		33.3	38.8		ug/L		90	70 - 123	2	23
Chloroethane	3.3	U	33.3	32.2		ug/L		97	11 - 189	2	35
Chloroform	3.3	U	33.3	40.0		ug/L		120	68 - 130	1	23
Chloromethane	3.3	U	33.3	34.6		ug/L		104	31 - 154	5	35
cis-1,2-Dichloroethene	6.1		33.3	45.0		ug/L		117	64 - 130	4	21
cis-1,3-Dichloropropene	3.3	U	33.3	24.3		ug/L		73	48 - 127	3	30
Dibromochloromethane	3.3	U	33.3	22.2		ug/L		67	60 - 129	4	26
1,2-Dichlorobenzene	3.3	U	33.3	27.5		ug/L		83	64 - 120	4	30
1,3-Dichlorobenzene	3.3	U	33.3	26.6		ug/L		80	62 - 120	4	31
1,4-Dichlorobenzene	3.3	U	33.3	26.6		ug/L		80	63 - 120	5	28
1,1-Dichloroethane	58		33.3	92.8		ug/L		105	63 - 136	3	23
1,2-Dichloroethane	1.1	J	33.3	37.4		ug/L		109	65 - 135	1	24
1,1-Dichloroethene	35		33.3	63.8		ug/L		88	53 - 140	2	35
1,2-Dichloropropane	3.3	U	33.3	34.8		ug/L		105	70 - 132	2	26
Ethylbenzene	3.3	U	33.3	28.6		ug/L		86	66 - 120	4	24
2-Hexanone	33	U	66.6	35.8		ug/L		54	42 - 150	3	35
Methylene Chloride	17	U	33.3	38.0		ug/L		114	61 - 130	1	29
4-Methyl-2-pentanone (MIBK)	33	U	66.6	42.6		ug/L		64	44 - 143	4	35
Styrene	3.3	U	33.3	27.3		ug/L		82	68 - 120	2	26
1,1,2,2-Tetrachloroethane	3.3	U	33.3	21.5		ug/L		65	60 - 137	2	31
Tetrachloroethene	0.88	J	33.3	32.1		ug/L		94	51 - 136	5	23
Toluene	3.3	U	33.3	29.5		ug/L		89	62 - 132	3	23
trans-1,2-Dichloroethene	3.3	U	33.3	40.4		ug/L		121	68 - 133	5	24
trans-1,3-Dichloropropene	3.3	U	33.3	16.7		ug/L		50	40 - 125	4	27
1,1,1-Trichloroethane	25		33.3	64.1		ug/L		118	51 - 138	4	27
1,1,2-Trichloroethane	1.8	J	33.3	30.9		ug/L		87	76 - 132	1	25
Trichloroethene	4.8		33.3	41.2		ug/L		109	55 - 131	3	23
Vinyl chloride	1.3	J	33.3	34.3		ug/L		99	43 - 154	0	29
Xylenes, Total	6.7	U	66.6	56.6		ug/L		85	67 - 120	3	25

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
4-Bromofluorobenzene (Surr)	82		59 - 120
Dibromofluoromethane (Surr)	104		75 - 128
1,2-Dichloroethane-d4 (Surr)	95		70 - 121
Toluene-d8 (Surr)	80		70 - 123

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108818-1

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

Lab Sample ID: MB 240-370526/5
Matrix: Water
Analysis Batch: 370526

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	0.86	ug/L			03/06/19 12:53	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	87		63 - 125					03/06/19 12:53	1

Lab Sample ID: LCS 240-370526/4
Matrix: Water
Analysis Batch: 370526

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	11.9		ug/L		119	59 - 131
Surrogate	%Recovery	LCS Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	83		63 - 125				

Lab Sample ID: 240-108737-D-4 MS
Matrix: Water
Analysis Batch: 370526

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	2.0	U	10.0	11.1		ug/L		111	52 - 129
Surrogate	%Recovery	MS Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	83		63 - 125						

Lab Sample ID: 240-108737-D-4 MSD
Matrix: Water
Analysis Batch: 370526

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	2.0	U	10.0	11.9		ug/L		119	52 - 129	7	13
Surrogate	%Recovery	MSD Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	84		63 - 125								

Lab Sample ID: MB 240-370673/5
Matrix: Water
Analysis Batch: 370673

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	0.86	ug/L			03/07/19 11:22	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	84		63 - 125					03/07/19 11:22	1

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108818-1

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

Lab Sample ID: LCS 240-370673/4

Matrix: Water

Analysis Batch: 370673

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	11.8		ug/L		118	59 - 131
Surrogate	%Recovery	LCS Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	82		63 - 125				

Lab Sample ID: MRL 240-370673/6

Matrix: Water

Analysis Batch: 370673

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	0.00100	0.00116	J	ng/uL		116	10 - 150
Surrogate	%Recovery	MRL Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	84		10 - 150				

Lab Sample ID: 240-108818-8 MS

Matrix: Water

Analysis Batch: 370673

Client Sample ID: MW-47-022819

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	2.0	U	10.0	11.9		ug/L		119	52 - 129
Surrogate	%Recovery	MS Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	82		63 - 125						

Lab Sample ID: 240-108818-8 MSD

Matrix: Water

Analysis Batch: 370673

Client Sample ID: MW-47-022819

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane	2.0	U	10.0	11.7		ug/L		117	52 - 129	1	13
Surrogate	%Recovery	MSD Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	84		63 - 125								

Lab Sample ID: MB 240-370737/5

Matrix: Water

Analysis Batch: 370737

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	0.86	ug/L			03/07/19 15:14	1	
Surrogate	%Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac				
1,2-Dichloroethane-d4 (Surr)	89		63 - 125		03/07/19 15:14	1				

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108818-1

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

Lab Sample ID: LCS 240-370737/4

Matrix: Water

Analysis Batch: 370737

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	9.99		ug/L		100	59 - 131
Surrogate	%Recovery	LCS Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	85		63 - 125				

Lab Sample ID: MRL 240-370737/6

Matrix: Water

Analysis Batch: 370737

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	0.00100	0.00123	J	ng/uL		123	10 - 150
Surrogate	%Recovery	MRL Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	95		10 - 150				

Lab Sample ID: 240-108850-A-4 MS

Matrix: Water

Analysis Batch: 370737

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	100		10.0	109	4	ug/L		98	52 - 129
Surrogate	%Recovery	MS Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	98		63 - 125						

Lab Sample ID: 240-108850-A-4 MSD

Matrix: Water

Analysis Batch: 370737

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	100		10.0	112	4	ug/L		126	52 - 129	3	13
Surrogate	%Recovery	MSD Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	95		63 - 125								

QC Association Summary

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

TestAmerica Job ID: 240-108818-1

GC/MS VOA

Analysis Batch: 370294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108818-4	MW-7-022719	Total/NA	Water	8260B	
240-108818-5	MW-25-022719	Total/NA	Water	8260B	
240-108818-6	MW-63-022819	Total/NA	Water	8260B	
MB 240-370294/6	Method Blank	Total/NA	Water	8260B	
LCS 240-370294/4	Lab Control Sample	Total/NA	Water	8260B	
240-108666-E-1 MS	Matrix Spike	Total/NA	Water	8260B	
240-108666-F-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 370486

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108818-1	MW-38-022719	Total/NA	Water	8260B	
240-108818-2	MW-49-022719	Total/NA	Water	8260B	
MB 240-370486/6	Method Blank	Total/NA	Water	8260B	
LCS 240-370486/4	Lab Control Sample	Total/NA	Water	8260B	
240-108688-D-2 MS	Matrix Spike	Total/NA	Water	8260B	
240-108688-D-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 370494

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108818-7	MW-64-022819	Total/NA	Water	8260B	
240-108818-9	MW-57-022819	Total/NA	Water	8260B	
240-108818-10	MW-29-022819	Total/NA	Water	8260B	
240-108818-11	MW-26-022819	Total/NA	Water	8260B	
240-108818-12	MW-19-022819	Total/NA	Water	8260B	
240-108818-13	MW-67-022819	Total/NA	Water	8260B	
240-108818-14	MW-65-022819	Total/NA	Water	8260B	
240-108818-15	MW-32-022819	Total/NA	Water	8260B	
240-108818-16	MW-39-022819	Total/NA	Water	8260B	
240-108818-17	DUP-01	Total/NA	Water	8260B	
240-108818-18	DUP-02	Total/NA	Water	8260B	
MB 240-370494/6	Method Blank	Total/NA	Water	8260B	
LCS 240-370494/4	Lab Control Sample	Total/NA	Water	8260B	
240-108920-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
240-108920-F-1 MS	Matrix Spike	Total/NA	Water	8260B	

Analysis Batch: 370526

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108818-1	MW-38-022719	Total/NA	Water	8260B SIM	
240-108818-2	MW-49-022719	Total/NA	Water	8260B SIM	
240-108818-3	MW-50-022719	Total/NA	Water	8260B SIM	
MB 240-370526/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-370526/4	Lab Control Sample	Total/NA	Water	8260B SIM	
240-108737-D-4 MS	Matrix Spike	Total/NA	Water	8260B SIM	
240-108737-D-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B SIM	

Analysis Batch: 370673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108818-4	MW-7-022719	Total/NA	Water	8260B SIM	
240-108818-5	MW-25-022719	Total/NA	Water	8260B SIM	
240-108818-6	MW-63-022819	Total/NA	Water	8260B SIM	
240-108818-7	MW-64-022819	Total/NA	Water	8260B SIM	

TestAmerica Canton

QC Association Summary

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

TestAmerica Job ID: 240-108818-1

GC/MS VOA (Continued)

Analysis Batch: 370673 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108818-8	MW-47-022819	Total/NA	Water	8260B SIM	
240-108818-9	MW-57-022819	Total/NA	Water	8260B SIM	
240-108818-10	MW-29-022819	Total/NA	Water	8260B SIM	
240-108818-11	MW-26-022819	Total/NA	Water	8260B SIM	
240-108818-12	MW-19-022819	Total/NA	Water	8260B SIM	
240-108818-13	MW-67-022819	Total/NA	Water	8260B SIM	
240-108818-14	MW-65-022819	Total/NA	Water	8260B SIM	
240-108818-15	MW-32-022819	Total/NA	Water	8260B SIM	
MB 240-370673/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-370673/4	Lab Control Sample	Total/NA	Water	8260B SIM	
MRL 240-370673/6	Lab Control Sample	Total/NA	Water	8260B SIM	
240-108818-8 MS	MW-47-022819	Total/NA	Water	8260B SIM	
240-108818-8 MSD	MW-47-022819	Total/NA	Water	8260B SIM	

Analysis Batch: 370674

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108818-19	DUP-03	Total/NA	Water	8260B	
240-108818-20	TRIP BLANK	Total/NA	Water	8260B	
MB 240-370674/6	Method Blank	Total/NA	Water	8260B	
LCS 240-370674/4	Lab Control Sample	Total/NA	Water	8260B	
240-108787-B-3 MS	Matrix Spike	Total/NA	Water	8260B	
240-108787-B-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 370676

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108818-3	MW-50-022719	Total/NA	Water	8260B	
240-108818-8	MW-47-022819	Total/NA	Water	8260B	
MB 240-370676/6	Method Blank	Total/NA	Water	8260B	
LCS 240-370676/4	Lab Control Sample	Total/NA	Water	8260B	
240-108850-B-3 MS	Matrix Spike	Total/NA	Water	8260B	
240-108850-B-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 370737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108818-16	MW-39-022819	Total/NA	Water	8260B SIM	
240-108818-17	DUP-01	Total/NA	Water	8260B SIM	
240-108818-18	DUP-02	Total/NA	Water	8260B SIM	
240-108818-19	DUP-03	Total/NA	Water	8260B SIM	
MB 240-370737/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-370737/4	Lab Control Sample	Total/NA	Water	8260B SIM	
MRL 240-370737/6	Lab Control Sample	Total/NA	Water	8260B SIM	
240-108850-A-4 MS	Matrix Spike	Total/NA	Water	8260B SIM	
240-108850-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B SIM	

Lab Chronicle

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-38-022719

Lab Sample ID: 240-108818-1

Date Collected: 02/27/19 16:30

Matrix: Water

Date Received: 03/02/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	370486	03/06/19 17:50	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	370526	03/06/19 22:02	SAM	TAL CAN

Client Sample ID: MW-49-022719

Lab Sample ID: 240-108818-2

Date Collected: 02/27/19 18:30

Matrix: Water

Date Received: 03/02/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2500	370486	03/06/19 18:12	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	370526	03/06/19 22:27	SAM	TAL CAN

Client Sample ID: MW-50-022719

Lab Sample ID: 240-108818-3

Date Collected: 02/27/19 17:25

Matrix: Water

Date Received: 03/02/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		6.67	370676	03/07/19 14:11	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	370526	03/06/19 22:52	SAM	TAL CAN

Client Sample ID: MW-7-022719

Lab Sample ID: 240-108818-4

Date Collected: 02/27/19 18:36

Matrix: Water

Date Received: 03/02/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	370294	03/05/19 21:30	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	370673	03/07/19 15:31	SAM	TAL CAN

Client Sample ID: MW-25-022719

Lab Sample ID: 240-108818-5

Date Collected: 02/27/19 16:35

Matrix: Water

Date Received: 03/02/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	370294	03/05/19 21:54	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	370673	03/07/19 15:56	SAM	TAL CAN

Client Sample ID: MW-63-022819

Lab Sample ID: 240-108818-6

Date Collected: 02/28/19 09:10

Matrix: Water

Date Received: 03/02/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	370294	03/05/19 22:18	LRW	TAL CAN

TestAmerica Canton

Lab Chronicle

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-63-022819

Lab Sample ID: 240-108818-6

Date Collected: 02/28/19 09:10

Matrix: Water

Date Received: 03/02/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B SIM		1	370673	03/07/19 16:21	SAM	TAL CAN

Client Sample ID: MW-64-022819

Lab Sample ID: 240-108818-7

Date Collected: 02/28/19 11:15

Matrix: Water

Date Received: 03/02/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	370494	03/06/19 16:06	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	370673	03/07/19 16:46	SAM	TAL CAN

Client Sample ID: MW-47-022819

Lab Sample ID: 240-108818-8

Date Collected: 02/28/19 13:30

Matrix: Water

Date Received: 03/02/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2.5	370676	03/07/19 14:33	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	370673	03/07/19 17:11	SAM	TAL CAN

Client Sample ID: MW-57-022819

Lab Sample ID: 240-108818-9

Date Collected: 02/28/19 15:20

Matrix: Water

Date Received: 03/02/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	370494	03/06/19 16:30	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	370673	03/07/19 18:26	SAM	TAL CAN

Client Sample ID: MW-29-022819

Lab Sample ID: 240-108818-10

Date Collected: 02/28/19 12:14

Matrix: Water

Date Received: 03/02/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	370494	03/06/19 17:00	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	370673	03/07/19 18:51	SAM	TAL CAN

Client Sample ID: MW-26-022819

Lab Sample ID: 240-108818-11

Date Collected: 02/28/19 09:52

Matrix: Water

Date Received: 03/02/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	370494	03/06/19 17:23	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	370673	03/07/19 19:16	SAM	TAL CAN

TestAmerica Canton

Lab Chronicle

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: MW-19-022819

Lab Sample ID: 240-108818-12

Date Collected: 02/28/19 14:52

Matrix: Water

Date Received: 03/02/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	370494	03/06/19 17:47	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	370673	03/07/19 19:41	SAM	TAL CAN

Client Sample ID: MW-67-022819

Lab Sample ID: 240-108818-13

Date Collected: 02/28/19 16:40

Matrix: Water

Date Received: 03/02/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2.5	370494	03/06/19 18:10	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	370673	03/07/19 20:07	SAM	TAL CAN

Client Sample ID: MW-65-022819

Lab Sample ID: 240-108818-14

Date Collected: 02/28/19 15:05

Matrix: Water

Date Received: 03/02/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2.5	370494	03/06/19 18:34	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	370673	03/07/19 20:32	SAM	TAL CAN

Client Sample ID: MW-32-022819

Lab Sample ID: 240-108818-15

Date Collected: 02/28/19 09:50

Matrix: Water

Date Received: 03/02/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	370494	03/06/19 18:58	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	370673	03/07/19 20:57	SAM	TAL CAN

Client Sample ID: MW-39-022819

Lab Sample ID: 240-108818-16

Date Collected: 02/28/19 11:40

Matrix: Water

Date Received: 03/02/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	370494	03/06/19 19:22	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	370737	03/07/19 16:06	SAM	TAL CAN

Client Sample ID: DUP-01

Lab Sample ID: 240-108818-17

Date Collected: 02/28/19 00:00

Matrix: Water

Date Received: 03/02/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	370494	03/06/19 19:46	LRW	TAL CAN

TestAmerica Canton

Lab Chronicle

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

TestAmerica Job ID: 240-108818-1

Client Sample ID: DUP-01

Date Collected: 02/28/19 00:00

Date Received: 03/02/19 09:45

Lab Sample ID: 240-108818-17

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B SIM		1	370737	03/07/19 16:31	SAM	TAL CAN

Client Sample ID: DUP-02

Date Collected: 02/28/19 00:00

Date Received: 03/02/19 09:45

Lab Sample ID: 240-108818-18

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2.5	370494	03/06/19 20:09	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	370737	03/07/19 16:57	SAM	TAL CAN

Client Sample ID: DUP-03

Date Collected: 02/28/19 00:00

Date Received: 03/02/19 09:45

Lab Sample ID: 240-108818-19

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	370674	03/07/19 19:11	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	370737	03/07/19 17:22	SAM	TAL CAN

Client Sample ID: TRIP BLANK

Date Collected: 02/28/19 00:00

Date Received: 03/02/19 09:45

Lab Sample ID: 240-108818-20

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	370674	03/07/19 19:33	LEE	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: 240-108818-1


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	02-23-20
Connecticut	State Program	1	PH-0590	12-31-19
Florida	NELAP	4	E87225	06-30-19
Illinois	NELAP	5	200004	07-31-19
Kansas	NELAP	7	E-10336	04-30-19 *
Kentucky (UST)	State Program	4	58	02-23-20
Kentucky (WW)	State Program	4	98016	12-31-19
Minnesota	NELAP	5	039-999-348	12-31-19 *
Minnesota (Petrofund)	State Program	1	3506	07-31-19
Nevada	State Program	9	OH00048	07-31-19
New Jersey	NELAP	2	OH001	06-30-19
New York	NELAP	2	10975	03-31-19 *
Ohio VAP	State Program	5	CL0024	09-06-19
Oregon	NELAP	10	4062	02-23-20
Pennsylvania	NELAP	3	68-00340	08-31-19 *
Texas	NELAP	6	T104704517-18-10	08-31-19
USDA	Federal		P330-16-00404	12-28-19
Virginia	NELAP	3	460175	09-14-19
Washington	State Program	10	C971	01-12-20 *
West Virginia DEP	State Program	3	210	12-31-19

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

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

Client Contact Company Name: Arcadis Address: 28550 Cabot Drive, Suite 500 City/State/Zip: Novi, MI, 48377 Phone: 248-994-2240 Project Name: Ford LTP Project Number: M1001454-0004-0000T Method of Shipment/Carrier: <i>MIGOL/ESH. COOL-CCOO8</i> Shipping/Tracking No: <i>MI 001454.0006-CCOO3</i>		Regulatory program: <input type="checkbox"/> DW <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other	
Client Project Manager: Kris Hinskey Telephone: 248-994-2240 Email: kristoffer.hinskey@arcadis.com		Site Contact: Angela DeGrandis Telephone: 330-497-9396	
Company Name: Arcadis Address: 28550 Cabot Drive, Suite 500 City/State/Zip: Novi, MI, 48377 Phone: 248-994-2240 Project Name: Ford LTP Project Number: M1001454-0004-0000T Method of Shipment/Carrier: <i>MIGOL/ESH. COOL-CCOO8</i> Shipping/Tracking No: <i>MI 001454.0006-CCOO3</i>		TestAmerica Laboratories, Inc. COC No: <i>1</i> of <i>2</i> COCs For lab use only Walk-in client Lab sampling Job/SDG No.	
Sample Identification		Analyses	
Sample Date	Sample Time	Filtered Sample (Y/N)	Sample Specific Notes / Special Instructions:
<i>MW-28-022719</i>	<i>1630</i>	<i>N G 3 3</i>	 240-108818 Chain of Custody
<i>MW-44-022719</i>	<i>1830</i>	<i>N G 3 3</i>	
<i>MW-50-022719</i>	<i>1725</i>	<i>N G 3 3</i>	
<i>MW-7-022719</i>	<i>1836</i>	<i>N G 3 3</i>	
<i>MW-25-022719</i>	<i>1635</i>	<i>N G 3 3</i>	
<i>MW-63-022819</i>	<i>0910</i>	<i>N G 3 3</i>	
<i>MW-64-022819</i>	<i>1115</i>	<i>N G 3 3</i>	
<i>MW-47-022819</i>	<i>1330</i>	<i>N G 3 3</i>	
<i>MW-57-022819</i>	<i>1520</i>	<i>N G 3 3</i>	
<i>MW-29-022819</i>	<i>1214</i>	<i>N G 3 3</i>	
Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Irritable <input type="checkbox"/> Inflammable <input type="checkbox"/> Corrosive <input type="checkbox"/> Toxic <input type="checkbox"/> Volatile <input type="checkbox"/> Other		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Special Instructions/QC Requirements & Comments: Submit all results through Cadena at jim.tomalia@cadena.com, Cadena #E203728 Level IV Reporting.			
Relinquished by:	Company:	Received by:	Company:
<i>RACHEL BIELAK Paul Jankot</i>	<i>ARCADIS</i>	<i>ANVI COLD STORAGE</i>	<i>ARCADIS</i>
Relinquished by:	Company:	Received by:	Company:
<i>Keith O'Neil</i>	<i>ARCADIS</i>	<i>Jim Hord</i>	<i>ARCADIS</i>
Relinquished by:	Company:	Received in Laboratory by:	Company:
<i>Jim Hord</i>	<i>ARCADIS</i>	<i>ARCADIS</i>	<i>ARCADIS</i>
Date/Time:	Date/Time:	Date/Time:	Date/Time:
<i>2/28/19</i>	<i>1430</i>	<i>3-1-19</i>	<i>1540</i>
<i>2/28/19</i>	<i>1430</i>	<i>3-1-19</i>	<i>1540</i>
<i>2/28/19</i>	<i>1430</i>	<i>3-1-19</i>	<i>1540</i>



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

Client Contact Company Name: Arcadis Address: 28550 Cabot Drive, Suite 500 City/State/Zip: Novi, MI, 48377 Phone: 248-994-2240		Regulatory program: <input type="checkbox"/> DW <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other	
Client Project Manager: Kris Hinskey Telephone: 248-994-2240 Email: kristsoffer.hinskey@arcadis.com		Lab Contact: Mike DelMontico Telephone: 330-497-9396	
Project Name: Ford LTP Project Number: MI001454.0004.00007 MJA01454.0004.00003 PO# MI001454.0004.00001 MISC01454.0004.00003		Analyses Walk-in client <input type="checkbox"/> Lab sampling <input type="checkbox"/> Job/SDG No.	
Method of Shipment/Carrier: Shipping/Tracking No:		TAT, if different from below: 10 day <input type="checkbox"/> 3 weeks <input type="checkbox"/> <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day <input type="checkbox"/>	
Sample Date		Containers & Preservatives H2SO4 <input type="checkbox"/> HNO3 <input type="checkbox"/> HCl <input type="checkbox"/> NaOH <input type="checkbox"/> ZnAc <input type="checkbox"/> NaOH <input type="checkbox"/> Umpres <input type="checkbox"/> Other:	
Sample Time		Matrix Air <input type="checkbox"/> Aqueous <input type="checkbox"/> Sediment <input type="checkbox"/> Solid <input type="checkbox"/> Other:	
Sample Identification		Filtered Sample (Y/N) Composite=C/Grab=C VOCs 8260B 1,4-Dioxane 8260B SIM	
MW-26-022819	2/28/19 0952	X	NG 3 3
MW-19-022819	2/28/19 1452	X	NG 3 3
MW-67-022819	2/28/19 1640	X	NG 3 3
MW-65-022819	2/28/19 1505	X	NG 3 3
MW-32-022819	2/28/19 0950	X	NG 3 3
MW-39-022819	2/28/19 1440	X	NG 3 3
DUP-01		X	NG 3 3
DUP-02		X	NG 3 3
DUP-03		X	NG 3 3
TRIP BLANK		X	1
Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Irritable <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown			
Special Instructions/QC Requirements & Comments: Submit all results through Cadena at jim.tomalia@cadena.com, Cadena #E203728 Level IV Reporting.			
Relinquished by: RACHEL BIEK	Company: ARCADIS	Date/Time: 2/28/19 1930	Received by: NONI COLD STORAGE
Relinquished by: Caitie D'Neill	Company: ARCADIS	Date/Time: 03/01/19	Received by: JAC
Relinquished by: J. Winter	Company: JAC	Date/Time: 3-1-19 1540	Received in Laboratory by: JAC

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TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 108818


Client Arcadis Site Name _____
Cooler Received on 3-2-19 Opened on 3-2-19

Cooler unpacked by: [Signature]

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

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

TestAmerica Cooler # 7A Foam Box Client Cooler Box Other _____
Packing material used: Bubble Wrap Foam Plastic Bag None Other _____
COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt See Multiple Cooler Form
IR GUN# IR-8 (CF -0.2 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
IR GUN #36 (CF +0.7 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity _____ 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# HC861525
13. Were VOAs on the COC? Yes No
14. Were air bubbles >6 mm in any VOA vials? Yes No NA Larger than this. 
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ 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 _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: [Signature]

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

