

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

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TestAmerica Job ID: 240-108876-1

Client Project/Site: Ford LTP Livonia MI - E203728

For:

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



Authorized for release by:
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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

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.
*	LCS or LCSD is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
X	Surrogate is outside control limits

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: 240-108876-1

Job ID: 240-108876-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford LTP Livonia MI - E203728

Report Number: 240-108876-1

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 3/5/2019 8:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 0.4° C and 1.6° C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples MW-30_030219 (240-108876-1), MW-31_030219 (240-108876-2), MW-34_030219 (240-108876-3), MW-15-61D_030219 (240-108876-4), MW-42_030219 (240-108876-5), MW-41_030219 (240-108876-6), MW-52_030219 (240-108876-7), MW-35_030219 (240-108876-8), MW-43_030219 (240-108876-9) and TRIP BLANK (240-108876-10) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 03/11/2019, 03/12/2019 and 03/13/2019.

Tetrachloroethene and Trichloroethene were detected in method blank MB 240-371207/6 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Toluene-d8 (Surr) failed the surrogate recovery criteria high for LCS 240-371376/4. Refer to the QC report for details.

Chloromethane and Cyclohexane failed the recovery criteria high for LCS 240-371206/4. Several analytes failed the recovery criteria high for LCS 240-371376/4. Refer to the QC report for details.

2-Hexanone failed the recovery criteria high for the MS of sample MW-30_030219MS (240-108876-1) in batch 240-371066.

Case Narrative

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

TestAmerica Job ID: 240-108876-1

Job ID: 240-108876-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

Diethyl ether failed the recovery criteria high for the MS of sample MW-31_030219MS (240-108876-2) in batch 240-371206.

Several analytes failed the recovery criteria high for the MSD of sample MW-31_030219MSD (240-108876-2) in batch 240-371206. 1,1,2-Trichloro-1,2,2-trifluoroethane exceeded the RPD limit. Refer to the QC report for details.

Surrogate recovery for the following LCS was outside the upper control limit: (LCS 240-371376/4). The associated samples did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

The continuing calibration verification (CCV) associated with batch 371376 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 sample is impacted: TRIP BLANK (240-108876-10).

The continuing calibration verification (CCV) associated with batch 371206 recovered above the upper control limit for Vinyl Chloride and/or 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: MW-31_030219 (240-108876-2) and MW-34_030219 (240-108876-3).

The laboratory control sample (LCS) for 371376 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: TRIP BLANK (240-108876-10) and (LCS 240-371376/4).

The laboratory control sample (LCS) for 371206 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-31_030219 (240-108876-2), MW-34_030219 (240-108876-3) and (LCS 240-371206/4).

No MS/MSD in batch 371376 due to analyte carry over: TRIP BLANK (240-108876-10).

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-30_030219 (240-108876-1), MW-31_030219 (240-108876-2), MW-34_030219 (240-108876-3), MW-15-61D_030219 (240-108876-4), MW-42_030219 (240-108876-5), MW-41_030219 (240-108876-6), MW-52_030219 (240-108876-7), MW-35_030219 (240-108876-8) and MW-43_030219 (240-108876-9) were analyzed for volatile organic compounds (GCMS SIM) in accordance with EPA SW-846 Method 8260B SIM. The samples were analyzed on 03/11/2019.

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: 240-108876-1

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

Protocol References:

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

Laboratory References:

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



Sample Summary

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

TestAmerica Job ID: 240-108876-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-108876-1	MW-30_030219	Water	03/02/19 10:53	03/05/19 08:15
240-108876-2	MW-31_030219	Water	03/02/19 09:22	03/05/19 08:15
240-108876-3	MW-34_030219	Water	03/02/19 12:35	03/05/19 08:15
240-108876-4	MW-15-61D_030219	Water	03/02/19 09:25	03/05/19 08:15
240-108876-5	MW-42_030219	Water	03/02/19 10:40	03/05/19 08:15
240-108876-6	MW-41_030219	Water	03/02/19 11:45	03/05/19 08:15
240-108876-7	MW-52_030219	Water	03/02/19 10:05	03/05/19 08:15
240-108876-8	MW-35_030219	Water	03/02/19 13:50	03/05/19 08:15
240-108876-9	MW-43_030219	Water	03/02/19 12:00	03/05/19 08:15
240-108876-10	TRIP BLANK	Water	03/02/19 00:00	03/05/19 08:15



Detection Summary

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

TestAmerica Job ID: 240-108876-1

Client Sample ID: MW-30_030219

Lab Sample ID: 240-108876-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	15		2.0	0.86	ug/L	1		8260B SIM	Total/NA
1,3-Dichlorobenzene	0.18	J	1.0	0.15	ug/L	1		8260B	Total/NA

Client Sample ID: MW-31_030219

Lab Sample ID: 240-108876-2

No Detections.

Client Sample ID: MW-34_030219

Lab Sample ID: 240-108876-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	6.9		2.0	0.86	ug/L	1		8260B SIM	Total/NA
cis-1,2-Dichloroethene	0.32	J	1.0	0.16	ug/L	1		8260B	Total/NA
1,3-Dichlorobenzene	0.32	J	1.0	0.15	ug/L	1		8260B	Total/NA
Vinyl chloride	0.85	J	1.0	0.20	ug/L	1		8260B	Total/NA

Client Sample ID: MW-15-61D_030219

Lab Sample ID: 240-108876-4

No Detections.

Client Sample ID: MW-42_030219

Lab Sample ID: 240-108876-5

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
Trichloroethene	0.13	J	1.0	0.10	ug/L	1		8260B	Total/NA
Vinyl chloride	0.70	J	1.0	0.20	ug/L	1		8260B	Total/NA

Client Sample ID: MW-41_030219

Lab Sample ID: 240-108876-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	1.4	J	2.0	0.86	ug/L	1		8260B SIM	Total/NA
cis-1,2-Dichloroethene	3.1		1.0	0.16	ug/L	1		8260B	Total/NA
1,1-Dichloroethane	0.20	J	1.0	0.17	ug/L	1		8260B	Total/NA
trans-1,2-Dichloroethene	0.42	J	1.0	0.19	ug/L	1		8260B	Total/NA
Vinyl chloride	3.2		1.0	0.20	ug/L	1		8260B	Total/NA

Client Sample ID: MW-52_030219

Lab Sample ID: 240-108876-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	1.9	J	2.0	0.86	ug/L	1		8260B SIM	Total/NA
Vinyl chloride	3.9		1.0	0.20	ug/L	1		8260B	Total/NA

Client Sample ID: MW-35_030219

Lab Sample ID: 240-108876-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	5.8		2.0	0.86	ug/L	1		8260B SIM	Total/NA
Carbon disulfide	0.32	J	5.0	0.28	ug/L	1		8260B	Total/NA
Toluene	0.14	J	1.0	0.14	ug/L	1		8260B	Total/NA
trans-1,2-Dichloroethene	0.19	J	1.0	0.19	ug/L	1		8260B	Total/NA
1,2,4-Trichlorobenzene	0.26	J	1.0	0.26	ug/L	1		8260B	Total/NA
Trichloroethene	0.11	J	1.0	0.10	ug/L	1		8260B	Total/NA
Vinyl chloride	4.1		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: 240-108876-1

Client Sample ID: MW-43_030219

Lab Sample ID: 240-108876-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	3.3		2.0	0.86	ug/L	1		8260B SIM	Total/NA
Vinyl chloride	3.4		1.0	0.20	ug/L	1		8260B	Total/NA

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-108876-10

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: 240-108876-1

Client Sample ID: MW-30_030219

Lab Sample ID: 240-108876-1

Date Collected: 03/02/19 10:53

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	15		2.0	0.86	ug/L			03/11/19 14:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	83		63 - 125					03/11/19 14:34	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			03/11/19 21:22	1
Benzene	1.0	U	1.0	0.13	ug/L			03/11/19 21:22	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/11/19 21:22	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/11/19 21:22	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/11/19 21:22	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/11/19 21:22	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/11/19 21:22	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/11/19 21:22	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/11/19 21:22	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/11/19 21:22	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/11/19 21:22	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/11/19 21:22	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/11/19 21:22	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/11/19 21:22	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/11/19 21:22	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/11/19 21:22	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/11/19 21:22	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/11/19 21:22	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/11/19 21:22	1
1,3-Dichlorobenzene	0.18	J	1.0	0.15	ug/L			03/11/19 21:22	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/11/19 21:22	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/11/19 21:22	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/11/19 21:22	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/11/19 21:22	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/11/19 21:22	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/11/19 21:22	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/11/19 21:22	1
2-Hexanone	10	U F1	10	0.54	ug/L			03/11/19 21:22	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/11/19 21:22	1
Methyl acetate	10	U	10	1.7	ug/L			03/11/19 21:22	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/11/19 21:22	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/11/19 21:22	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/11/19 21:22	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/11/19 21:22	1
Styrene	1.0	U	1.0	0.10	ug/L			03/11/19 21:22	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/11/19 21:22	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/11/19 21:22	1
Toluene	1.0	U	1.0	0.14	ug/L			03/11/19 21:22	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/11/19 21:22	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/11/19 21:22	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/11/19 21:22	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/11/19 21:22	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/11/19 21:22	1

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-108876-1

Client Sample ID: MW-30_030219

Lab Sample ID: 240-108876-1

Date Collected: 03/02/19 10:53

Matrix: Water

Date Received: 03/05/19 08:15

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			03/11/19 21:22	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/11/19 21:22	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/11/19 21:22	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/11/19 21:22	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/11/19 21:22	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/11/19 21:22	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/11/19 21:22	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/11/19 21:22	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/11/19 21:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		59 - 120					03/11/19 21:22	1
Dibromofluoromethane (Surr)	104		75 - 128					03/11/19 21:22	1
1,2-Dichloroethane-d4 (Surr)	121		70 - 121					03/11/19 21:22	1
Toluene-d8 (Surr)	96		70 - 123					03/11/19 21:22	1

Client Sample Results

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

TestAmerica Job ID: 240-108876-1

Client Sample ID: MW-31_030219

Lab Sample ID: 240-108876-2

Date Collected: 03/02/19 09:22

Matrix: Water

Date Received: 03/05/19 08:15

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			03/11/19 15:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	85		63 - 125					03/11/19 15:49	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			03/12/19 16:25	1
Benzene	1.0	U	1.0	0.13	ug/L			03/12/19 16:25	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/12/19 16:25	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/12/19 16:25	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/12/19 16:25	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/12/19 16:25	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/12/19 16:25	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/12/19 16:25	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/12/19 16:25	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/12/19 16:25	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/12/19 16:25	1
Chloromethane	1.0	U F1 *	1.0	0.20	ug/L			03/12/19 16:25	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/12/19 16:25	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/12/19 16:25	1
Cyclohexane	1.0	U F1 *	1.0	0.24	ug/L			03/12/19 16:25	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/12/19 16:25	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/12/19 16:25	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/12/19 16:25	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/12/19 16:25	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/12/19 16:25	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/12/19 16:25	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/12/19 16:25	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/12/19 16:25	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/12/19 16:25	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 16:25	1
1,2-Dichloropropane	1.0	U F1	1.0	0.15	ug/L			03/12/19 16:25	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/12/19 16:25	1
2-Hexanone	10	U F1	10	0.54	ug/L			03/12/19 16:25	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/12/19 16:25	1
Methyl acetate	10	U F1	10	1.7	ug/L			03/12/19 16:25	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/12/19 16:25	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/12/19 16:25	1
4-Methyl-2-pentanone (MIBK)	10	U F1	10	0.42	ug/L			03/12/19 16:25	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/12/19 16:25	1
Styrene	1.0	U	1.0	0.10	ug/L			03/12/19 16:25	1
1,1,2,2-Tetrachloroethane	1.0	U F1	1.0	0.13	ug/L			03/12/19 16:25	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/12/19 16:25	1
Toluene	1.0	U	1.0	0.14	ug/L			03/12/19 16:25	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 16:25	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/12/19 16:25	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/12/19 16:25	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/12/19 16:25	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/12/19 16:25	1

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-108876-1

Client Sample ID: MW-31_030219

Lab Sample ID: 240-108876-2

Date Collected: 03/02/19 09:22

Matrix: Water

Date Received: 03/05/19 08:15

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			03/12/19 16:25	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/12/19 16:25	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U F2	1.0	0.41	ug/L			03/12/19 16:25	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/12/19 16:25	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/12/19 16:25	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/12/19 16:25	1
Vinyl chloride	1.0	U F1	1.0	0.20	ug/L			03/12/19 16:25	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/12/19 16:25	1
Diethyl ether	2.0	U F1	2.0	0.19	ug/L			03/12/19 16:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	76		59 - 120		03/12/19 16:25	1
Dibromofluoromethane (Surr)	90		75 - 128		03/12/19 16:25	1
1,2-Dichloroethane-d4 (Surr)	98		70 - 121		03/12/19 16:25	1
Toluene-d8 (Surr)	88		70 - 123		03/12/19 16:25	1

Client Sample Results

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

TestAmerica Job ID: 240-108876-1

Client Sample ID: MW-34_030219

Lab Sample ID: 240-108876-3

Date Collected: 03/02/19 12:35

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	6.9		2.0	0.86	ug/L			03/11/19 17:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	82		63 - 125					03/11/19 17:04	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			03/12/19 17:30	1
Benzene	1.0	U	1.0	0.13	ug/L			03/12/19 17:30	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/12/19 17:30	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/12/19 17:30	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/12/19 17:30	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/12/19 17:30	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/12/19 17:30	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/12/19 17:30	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/12/19 17:30	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/12/19 17:30	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/12/19 17:30	1
Chloromethane	1.0	U*	1.0	0.20	ug/L			03/12/19 17:30	1
cis-1,2-Dichloroethene	0.32	J	1.0	0.16	ug/L			03/12/19 17:30	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/12/19 17:30	1
Cyclohexane	1.0	U*	1.0	0.24	ug/L			03/12/19 17:30	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/12/19 17:30	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/12/19 17:30	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/12/19 17:30	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/12/19 17:30	1
1,3-Dichlorobenzene	0.32	J	1.0	0.15	ug/L			03/12/19 17:30	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/12/19 17:30	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/12/19 17:30	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/12/19 17:30	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/12/19 17:30	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 17:30	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/12/19 17:30	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/12/19 17:30	1
2-Hexanone	10	U	10	0.54	ug/L			03/12/19 17:30	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/12/19 17:30	1
Methyl acetate	10	U	10	1.7	ug/L			03/12/19 17:30	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/12/19 17:30	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/12/19 17:30	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/12/19 17:30	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/12/19 17:30	1
Styrene	1.0	U	1.0	0.10	ug/L			03/12/19 17:30	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/12/19 17:30	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/12/19 17:30	1
Toluene	1.0	U	1.0	0.14	ug/L			03/12/19 17:30	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 17:30	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/12/19 17:30	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/12/19 17:30	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/12/19 17:30	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/12/19 17:30	1

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-108876-1

Client Sample ID: MW-34_030219

Lab Sample ID: 240-108876-3

Date Collected: 03/02/19 12:35

Matrix: Water

Date Received: 03/05/19 08:15

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			03/12/19 17:30	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/12/19 17:30	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/12/19 17:30	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/12/19 17:30	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/12/19 17:30	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/12/19 17:30	1
Vinyl chloride	0.85	J	1.0	0.20	ug/L			03/12/19 17:30	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/12/19 17:30	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/12/19 17:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		59 - 120					03/12/19 17:30	1
Dibromofluoromethane (Surr)	113		75 - 128					03/12/19 17:30	1
1,2-Dichloroethane-d4 (Surr)	119		70 - 121					03/12/19 17:30	1
Toluene-d8 (Surr)	112		70 - 123					03/12/19 17:30	1

Client Sample Results

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

TestAmerica Job ID: 240-108876-1

Client Sample ID: MW-15-61D_030219

Lab Sample ID: 240-108876-4

Date Collected: 03/02/19 09:25

Matrix: Water

Date Received: 03/05/19 08:15

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			03/11/19 17:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	78		63 - 125					03/11/19 17:29	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			03/12/19 14:05	1
Benzene	1.0	U	1.0	0.13	ug/L			03/12/19 14:05	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/12/19 14:05	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/12/19 14:05	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/12/19 14:05	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/12/19 14:05	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/12/19 14:05	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/12/19 14:05	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/12/19 14:05	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/12/19 14:05	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/12/19 14:05	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/12/19 14:05	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/12/19 14:05	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/12/19 14:05	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/12/19 14:05	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/12/19 14:05	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/12/19 14:05	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/12/19 14:05	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/12/19 14:05	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/12/19 14:05	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/12/19 14:05	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/12/19 14:05	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/12/19 14:05	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/12/19 14:05	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 14:05	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/12/19 14:05	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/12/19 14:05	1
2-Hexanone	10	U	10	0.54	ug/L			03/12/19 14:05	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/12/19 14:05	1
Methyl acetate	10	U	10	1.7	ug/L			03/12/19 14:05	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/12/19 14:05	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/12/19 14:05	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/12/19 14:05	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/12/19 14:05	1
Styrene	1.0	U	1.0	0.10	ug/L			03/12/19 14:05	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/12/19 14:05	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/12/19 14:05	1
Toluene	1.0	U	1.0	0.14	ug/L			03/12/19 14:05	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 14:05	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/12/19 14:05	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/12/19 14:05	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/12/19 14:05	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/12/19 14:05	1

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-108876-1

Client Sample ID: MW-15-61D_030219

Lab Sample ID: 240-108876-4

Date Collected: 03/02/19 09:25

Matrix: Water

Date Received: 03/05/19 08:15

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			03/12/19 14:05	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/12/19 14:05	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/12/19 14:05	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/12/19 14:05	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/12/19 14:05	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/12/19 14:05	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/12/19 14:05	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/12/19 14:05	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/12/19 14:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	71		59 - 120					03/12/19 14:05	1
Dibromofluoromethane (Surr)	98		75 - 128					03/12/19 14:05	1
1,2-Dichloroethane-d4 (Surr)	95		70 - 121					03/12/19 14:05	1
Toluene-d8 (Surr)	82		70 - 123					03/12/19 14:05	1

Client Sample Results

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

TestAmerica Job ID: 240-108876-1

Client Sample ID: MW-42_030219

Lab Sample ID: 240-108876-5

Date Collected: 03/02/19 10:40

Matrix: Water

Date Received: 03/05/19 08:15

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			03/11/19 18:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	81		63 - 125					03/11/19 18:45	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			03/13/19 11:29	1
Benzene	1.0	U	1.0	0.13	ug/L			03/13/19 11:29	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/13/19 11:29	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/13/19 11:29	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/13/19 11:29	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/13/19 11:29	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/13/19 11:29	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/13/19 11:29	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/13/19 11:29	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/13/19 11:29	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/13/19 11:29	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/13/19 11:29	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/13/19 11:29	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/13/19 11:29	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/13/19 11:29	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/13/19 11:29	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/13/19 11:29	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/13/19 11:29	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/13/19 11:29	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/13/19 11:29	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/13/19 11:29	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/13/19 11:29	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/13/19 11:29	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/13/19 11:29	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/13/19 11:29	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/13/19 11:29	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/13/19 11:29	1
2-Hexanone	10	U	10	0.54	ug/L			03/13/19 11:29	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/13/19 11:29	1
Methyl acetate	10	U	10	1.7	ug/L			03/13/19 11:29	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/13/19 11:29	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/13/19 11:29	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/13/19 11:29	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/13/19 11:29	1
Styrene	1.0	U	1.0	0.10	ug/L			03/13/19 11:29	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/13/19 11:29	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/13/19 11:29	1
Toluene	1.0	U	1.0	0.14	ug/L			03/13/19 11:29	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/13/19 11:29	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/13/19 11:29	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/13/19 11:29	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/13/19 11:29	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/13/19 11:29	1

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-108876-1

Client Sample ID: MW-42_030219

Lab Sample ID: 240-108876-5

Date Collected: 03/02/19 10:40

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	0.13	J	1.0	0.10	ug/L			03/13/19 11:29	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/13/19 11:29	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/13/19 11:29	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/13/19 11:29	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/13/19 11:29	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/13/19 11:29	1
Vinyl chloride	0.70	J	1.0	0.20	ug/L			03/13/19 11:29	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/13/19 11:29	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/13/19 11:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	70		59 - 120					03/13/19 11:29	1
Dibromofluoromethane (Surr)	96		75 - 128					03/13/19 11:29	1
1,2-Dichloroethane-d4 (Surr)	92		70 - 121					03/13/19 11:29	1
Toluene-d8 (Surr)	80		70 - 123					03/13/19 11:29	1

Client Sample Results

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

TestAmerica Job ID: 240-108876-1

Client Sample ID: MW-41_030219

Lab Sample ID: 240-108876-6

Date Collected: 03/02/19 11:45

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	1.4	J	2.0	0.86	ug/L			03/11/19 19:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	79		63 - 125					03/11/19 19:10	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			03/13/19 11:51	1
Benzene	1.0	U	1.0	0.13	ug/L			03/13/19 11:51	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/13/19 11:51	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/13/19 11:51	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/13/19 11:51	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/13/19 11:51	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/13/19 11:51	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/13/19 11:51	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/13/19 11:51	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/13/19 11:51	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/13/19 11:51	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/13/19 11:51	1
cis-1,2-Dichloroethene	3.1		1.0	0.16	ug/L			03/13/19 11:51	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/13/19 11:51	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/13/19 11:51	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/13/19 11:51	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/13/19 11:51	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/13/19 11:51	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/13/19 11:51	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/13/19 11:51	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/13/19 11:51	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/13/19 11:51	1
1,1-Dichloroethane	0.20	J	1.0	0.17	ug/L			03/13/19 11:51	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/13/19 11:51	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/13/19 11:51	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/13/19 11:51	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/13/19 11:51	1
2-Hexanone	10	U	10	0.54	ug/L			03/13/19 11:51	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/13/19 11:51	1
Methyl acetate	10	U	10	1.7	ug/L			03/13/19 11:51	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/13/19 11:51	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/13/19 11:51	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/13/19 11:51	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/13/19 11:51	1
Styrene	1.0	U	1.0	0.10	ug/L			03/13/19 11:51	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/13/19 11:51	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/13/19 11:51	1
Toluene	1.0	U	1.0	0.14	ug/L			03/13/19 11:51	1
trans-1,2-Dichloroethene	0.42	J	1.0	0.19	ug/L			03/13/19 11:51	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/13/19 11:51	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/13/19 11:51	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/13/19 11:51	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/13/19 11:51	1

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-108876-1

Client Sample ID: MW-41_030219

Lab Sample ID: 240-108876-6

Date Collected: 03/02/19 11:45

Matrix: Water

Date Received: 03/05/19 08:15

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			03/13/19 11:51	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/13/19 11:51	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/13/19 11:51	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/13/19 11:51	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/13/19 11:51	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/13/19 11:51	1
Vinyl chloride	3.2		1.0	0.20	ug/L			03/13/19 11:51	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/13/19 11:51	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/13/19 11:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	75		59 - 120		03/13/19 11:51	1
Dibromofluoromethane (Surr)	102		75 - 128		03/13/19 11:51	1
1,2-Dichloroethane-d4 (Surr)	99		70 - 121		03/13/19 11:51	1
Toluene-d8 (Surr)	85		70 - 123		03/13/19 11:51	1

Client Sample Results

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

TestAmerica Job ID: 240-108876-1

Client Sample ID: MW-52_030219

Lab Sample ID: 240-108876-7

Date Collected: 03/02/19 10:05

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	1.9	J	2.0	0.86	ug/L			03/11/19 19:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	80		63 - 125					03/11/19 19:35	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			03/13/19 12:13	1
Benzene	1.0	U	1.0	0.13	ug/L			03/13/19 12:13	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/13/19 12:13	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/13/19 12:13	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/13/19 12:13	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/13/19 12:13	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/13/19 12:13	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/13/19 12:13	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/13/19 12:13	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/13/19 12:13	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/13/19 12:13	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/13/19 12:13	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/13/19 12:13	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/13/19 12:13	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/13/19 12:13	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/13/19 12:13	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/13/19 12:13	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/13/19 12:13	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/13/19 12:13	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/13/19 12:13	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/13/19 12:13	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/13/19 12:13	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/13/19 12:13	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/13/19 12:13	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/13/19 12:13	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/13/19 12:13	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/13/19 12:13	1
2-Hexanone	10	U	10	0.54	ug/L			03/13/19 12:13	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/13/19 12:13	1
Methyl acetate	10	U	10	1.7	ug/L			03/13/19 12:13	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/13/19 12:13	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/13/19 12:13	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/13/19 12:13	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/13/19 12:13	1
Styrene	1.0	U	1.0	0.10	ug/L			03/13/19 12:13	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/13/19 12:13	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/13/19 12:13	1
Toluene	1.0	U	1.0	0.14	ug/L			03/13/19 12:13	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/13/19 12:13	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/13/19 12:13	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/13/19 12:13	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/13/19 12:13	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/13/19 12:13	1

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-108876-1

Client Sample ID: MW-52_030219

Lab Sample ID: 240-108876-7

Date Collected: 03/02/19 10:05

Matrix: Water

Date Received: 03/05/19 08:15

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			03/13/19 12:13	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/13/19 12:13	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/13/19 12:13	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/13/19 12:13	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/13/19 12:13	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/13/19 12:13	1
Vinyl chloride	3.9		1.0	0.20	ug/L			03/13/19 12:13	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/13/19 12:13	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/13/19 12:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	68		59 - 120					03/13/19 12:13	1
Dibromofluoromethane (Surr)	94		75 - 128					03/13/19 12:13	1
1,2-Dichloroethane-d4 (Surr)	89		70 - 121					03/13/19 12:13	1
Toluene-d8 (Surr)	80		70 - 123					03/13/19 12:13	1

Client Sample Results

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

TestAmerica Job ID: 240-108876-1

Client Sample ID: MW-35_030219

Lab Sample ID: 240-108876-8

Date Collected: 03/02/19 13:50

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	5.8		2.0	0.86	ug/L			03/11/19 20:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	80		63 - 125					03/11/19 20:50	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			03/13/19 13:18	1
Benzene	1.0	U	1.0	0.13	ug/L			03/13/19 13:18	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/13/19 13:18	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/13/19 13:18	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/13/19 13:18	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/13/19 13:18	1
Carbon disulfide	0.32	J	5.0	0.28	ug/L			03/13/19 13:18	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/13/19 13:18	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/13/19 13:18	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/13/19 13:18	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/13/19 13:18	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/13/19 13:18	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/13/19 13:18	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/13/19 13:18	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/13/19 13:18	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/13/19 13:18	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/13/19 13:18	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/13/19 13:18	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/13/19 13:18	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/13/19 13:18	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/13/19 13:18	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/13/19 13:18	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/13/19 13:18	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/13/19 13:18	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/13/19 13:18	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/13/19 13:18	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/13/19 13:18	1
2-Hexanone	10	U	10	0.54	ug/L			03/13/19 13:18	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/13/19 13:18	1
Methyl acetate	10	U	10	1.7	ug/L			03/13/19 13:18	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/13/19 13:18	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/13/19 13:18	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/13/19 13:18	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/13/19 13:18	1
Styrene	1.0	U	1.0	0.10	ug/L			03/13/19 13:18	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/13/19 13:18	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/13/19 13:18	1
Toluene	0.14	J	1.0	0.14	ug/L			03/13/19 13:18	1
trans-1,2-Dichloroethene	0.19	J	1.0	0.19	ug/L			03/13/19 13:18	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/13/19 13:18	1
1,2,4-Trichlorobenzene	0.26	J	1.0	0.26	ug/L			03/13/19 13:18	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/13/19 13:18	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/13/19 13:18	1

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-108876-1

Client Sample ID: MW-35_030219

Lab Sample ID: 240-108876-8

Date Collected: 03/02/19 13:50

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	0.11	J	1.0	0.10	ug/L			03/13/19 13:18	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/13/19 13:18	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/13/19 13:18	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/13/19 13:18	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/13/19 13:18	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/13/19 13:18	1
Vinyl chloride	4.1		1.0	0.20	ug/L			03/13/19 13:18	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/13/19 13:18	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/13/19 13:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	77		59 - 120		03/13/19 13:18	1
Dibromofluoromethane (Surr)	101		75 - 128		03/13/19 13:18	1
1,2-Dichloroethane-d4 (Surr)	95		70 - 121		03/13/19 13:18	1
Toluene-d8 (Surr)	88		70 - 123		03/13/19 13:18	1

Client Sample Results

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

TestAmerica Job ID: 240-108876-1

Client Sample ID: MW-43_030219

Lab Sample ID: 240-108876-9

Date Collected: 03/02/19 12:00

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	3.3		2.0	0.86	ug/L			03/11/19 21:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	81		63 - 125					03/11/19 21:15	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			03/13/19 13:40	1
Benzene	1.0	U	1.0	0.13	ug/L			03/13/19 13:40	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/13/19 13:40	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/13/19 13:40	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/13/19 13:40	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/13/19 13:40	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/13/19 13:40	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/13/19 13:40	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/13/19 13:40	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/13/19 13:40	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/13/19 13:40	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/13/19 13:40	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/13/19 13:40	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/13/19 13:40	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/13/19 13:40	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/13/19 13:40	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/13/19 13:40	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/13/19 13:40	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/13/19 13:40	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/13/19 13:40	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/13/19 13:40	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/13/19 13:40	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/13/19 13:40	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/13/19 13:40	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/13/19 13:40	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/13/19 13:40	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/13/19 13:40	1
2-Hexanone	10	U	10	0.54	ug/L			03/13/19 13:40	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/13/19 13:40	1
Methyl acetate	10	U	10	1.7	ug/L			03/13/19 13:40	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/13/19 13:40	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/13/19 13:40	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/13/19 13:40	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/13/19 13:40	1
Styrene	1.0	U	1.0	0.10	ug/L			03/13/19 13:40	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/13/19 13:40	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/13/19 13:40	1
Toluene	1.0	U	1.0	0.14	ug/L			03/13/19 13:40	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/13/19 13:40	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/13/19 13:40	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/13/19 13:40	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/13/19 13:40	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/13/19 13:40	1

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-108876-1

Client Sample ID: MW-43_030219

Lab Sample ID: 240-108876-9

Date Collected: 03/02/19 12:00

Matrix: Water

Date Received: 03/05/19 08:15

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			03/13/19 13:40	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/13/19 13:40	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/13/19 13:40	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/13/19 13:40	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/13/19 13:40	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/13/19 13:40	1
Vinyl chloride	3.4		1.0	0.20	ug/L			03/13/19 13:40	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/13/19 13:40	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/13/19 13:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	71		59 - 120					03/13/19 13:40	1
Dibromofluoromethane (Surr)	94		75 - 128					03/13/19 13:40	1
1,2-Dichloroethane-d4 (Surr)	90		70 - 121					03/13/19 13:40	1
Toluene-d8 (Surr)	81		70 - 123					03/13/19 13:40	1

Client Sample Results

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

TestAmerica Job ID: 240-108876-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-108876-10

Date Collected: 03/02/19 00:00

Matrix: Water

Date Received: 03/05/19 08:15

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			03/13/19 12:25	1
Benzene	1.0	U	1.0	0.13	ug/L			03/13/19 12:25	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/13/19 12:25	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/13/19 12:25	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/13/19 12:25	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/13/19 12:25	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/13/19 12:25	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/13/19 12:25	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/13/19 12:25	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/13/19 12:25	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/13/19 12:25	1
Chloromethane	1.0	U *	1.0	0.20	ug/L			03/13/19 12:25	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/13/19 12:25	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/13/19 12:25	1
Cyclohexane	1.0	U *	1.0	0.24	ug/L			03/13/19 12:25	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/13/19 12:25	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/13/19 12:25	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/13/19 12:25	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/13/19 12:25	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/13/19 12:25	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/13/19 12:25	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/13/19 12:25	1
1,1-Dichloroethane	1.0	U *	1.0	0.17	ug/L			03/13/19 12:25	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/13/19 12:25	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/13/19 12:25	1
1,2-Dichloropropane	1.0	U *	1.0	0.15	ug/L			03/13/19 12:25	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/13/19 12:25	1
2-Hexanone	10	U *	10	0.54	ug/L			03/13/19 12:25	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/13/19 12:25	1
Methyl acetate	10	U *	10	1.7	ug/L			03/13/19 12:25	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/13/19 12:25	1
Methylene Chloride	5.0	U *	5.0	2.6	ug/L			03/13/19 12:25	1
4-Methyl-2-pentanone (MIBK)	10	U *	10	0.42	ug/L			03/13/19 12:25	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/13/19 12:25	1
Styrene	1.0	U	1.0	0.10	ug/L			03/13/19 12:25	1
1,1,2,2-Tetrachloroethane	1.0	U *	1.0	0.13	ug/L			03/13/19 12:25	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/13/19 12:25	1
Toluene	1.0	U	1.0	0.14	ug/L			03/13/19 12:25	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/13/19 12:25	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/13/19 12:25	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/13/19 12:25	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/13/19 12:25	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/13/19 12:25	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/13/19 12:25	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/13/19 12:25	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/13/19 12:25	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/13/19 12:25	1
1,2,4-Trimethylbenzene	1.0	U *	1.0	0.070	ug/L			03/13/19 12:25	1
1,3,5-Trimethylbenzene	1.0	U *	1.0	0.12	ug/L			03/13/19 12:25	1

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-108876-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-108876-10

Date Collected: 03/02/19 00:00

Matrix: Water

Date Received: 03/05/19 08:15

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			03/13/19 12:25	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/13/19 12:25	1
Diethyl ether	2.0	U *	2.0	0.19	ug/L			03/13/19 12:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		59 - 120					03/13/19 12:25	1
Dibromofluoromethane (Surr)	105		75 - 128					03/13/19 12:25	1
1,2-Dichloroethane-d4 (Surr)	117		70 - 121					03/13/19 12:25	1
Toluene-d8 (Surr)	99		70 - 123					03/13/19 12:25	1

Surrogate Summary

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

TestAmerica Job ID: 240-108876-1

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)
240-108876-1	MW-30_030219	86	104	121	96
240-108876-1 MS	MW-30_030219	111	90	102	106
240-108876-1 MSD	MW-30_030219	108	88	99	103
240-108876-2	MW-31_030219	76	90	98	88
240-108876-2 MS	MW-31_030219	105	94	105	115
240-108876-2 MSD	MW-31_030219	110	102	110	118
240-108876-3	MW-34_030219	96	113	119	112
240-108876-4	MW-15-61D_030219	71	98	95	82
240-108876-4 MS	MW-15-61D_030219	85	94	85	86
240-108876-4 MSD	MW-15-61D_030219	83	91	82	85
240-108876-5	MW-42_030219	70	96	92	80
240-108876-6	MW-41_030219	75	102	99	85
240-108876-7	MW-52_030219	68	94	89	80
240-108876-7 MS	MW-52_030219	87	101	89	90
240-108876-7 MSD	MW-52_030219	85	97	86	89
240-108876-8	MW-35_030219	77	101	95	88
240-108876-9	MW-43_030219	71	94	90	81
240-108876-10	TRIP BLANK	83	105	117	99
LCS 240-371066/4	Lab Control Sample	107	89	97	103
LCS 240-371206/4	Lab Control Sample	102	96	105	114
LCS 240-371207/4	Lab Control Sample	82	87	79	83
LCS 240-371376/4	Lab Control Sample	111	98	109	124 X
LCS 240-371378/4	Lab Control Sample	78	88	78	83
MB 240-371066/6	Method Blank	90	100	115	99
MB 240-371206/6	Method Blank	102	106	120	115
MB 240-371207/6	Method Blank	73	94	92	83
MB 240-371376/6	Method Blank	95	108	117	113
MB 240-371378/6	Method Blank	70	91	88	80

Surrogate Legend

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

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		DCA (63-125)
240-108876-1	MW-30_030219	83
240-108876-1 MS	MW-30_030219	85
240-108876-1 MSD	MW-30_030219	81
240-108876-2	MW-31_030219	85
240-108876-2 MS	MW-31_030219	85
240-108876-2 MSD	MW-31_030219	83
240-108876-3	MW-34_030219	82
240-108876-4	MW-15-61D_030219	78

TestAmerica Canton

Surrogate Summary

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

TestAmerica Job ID: 240-108876-1

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA (63-125)
240-108876-4 MS	MW-15-61D_030219	81
240-108876-4 MSD	MW-15-61D_030219	83
240-108876-5	MW-42_030219	81
240-108876-6	MW-41_030219	79
240-108876-7	MW-52_030219	80
240-108876-7 MS	MW-52_030219	80
240-108876-7 MSD	MW-52_030219	84
240-108876-8	MW-35_030219	80
240-108876-9	MW-43_030219	81
LCS 240-371078/4	Lab Control Sample	79
MB 240-371078/5	Method Blank	82

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 240-371078/6	Lab Control Sample	78

Surrogate Legend

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

QC Sample Results

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

TestAmerica Job ID: 240-108876-1

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

Lab Sample ID: MB 240-371066/6

Matrix: Water

Analysis Batch: 371066

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			03/11/19 13:44	1
Benzene	1.0	U	1.0	0.13	ug/L			03/11/19 13:44	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/11/19 13:44	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/11/19 13:44	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/11/19 13:44	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/11/19 13:44	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/11/19 13:44	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/11/19 13:44	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/11/19 13:44	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/11/19 13:44	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/11/19 13:44	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/11/19 13:44	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/11/19 13:44	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/11/19 13:44	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/11/19 13:44	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/11/19 13:44	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/11/19 13:44	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/11/19 13:44	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/11/19 13:44	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/11/19 13:44	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/11/19 13:44	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/11/19 13:44	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/11/19 13:44	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/11/19 13:44	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/11/19 13:44	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/11/19 13:44	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/11/19 13:44	1
2-Hexanone	10	U	10	0.54	ug/L			03/11/19 13:44	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/11/19 13:44	1
Methyl acetate	10	U	10	1.7	ug/L			03/11/19 13:44	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/11/19 13:44	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/11/19 13:44	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/11/19 13:44	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/11/19 13:44	1
Styrene	1.0	U	1.0	0.10	ug/L			03/11/19 13:44	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/11/19 13:44	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/11/19 13:44	1
Toluene	1.0	U	1.0	0.14	ug/L			03/11/19 13:44	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/11/19 13:44	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/11/19 13:44	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/11/19 13:44	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/11/19 13:44	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/11/19 13:44	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/11/19 13:44	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/11/19 13:44	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/11/19 13:44	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/11/19 13:44	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/11/19 13:44	1

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108876-1

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

Lab Sample ID: MB 240-371066/6
Matrix: Water
Analysis Batch: 371066

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			03/11/19 13:44	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/11/19 13:44	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/11/19 13:44	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/11/19 13:44	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		59 - 120		03/11/19 13:44	1
Dibromofluoromethane (Surr)	100		75 - 128		03/11/19 13:44	1
1,2-Dichloroethane-d4 (Surr)	115		70 - 121		03/11/19 13:44	1
Toluene-d8 (Surr)	99		70 - 123		03/11/19 13:44	1

Lab Sample ID: LCS 240-371066/4
Matrix: Water
Analysis Batch: 371066

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	16.7		ug/L		83	21 - 162
Benzene	10.0	9.48		ug/L		95	80 - 123
Bromodichloromethane	10.0	8.33		ug/L		83	77 - 125
Bromoform	10.0	7.83		ug/L		78	49 - 141
Bromomethane	10.0	6.97		ug/L		70	41 - 175
2-Butanone (MEK)	20.0	21.1		ug/L		105	39 - 163
Carbon disulfide	10.0	9.51		ug/L		95	60 - 138
Carbon tetrachloride	10.0	8.11		ug/L		81	63 - 140
Chlorobenzene	10.0	8.69		ug/L		87	80 - 121
Chloroethane	10.0	7.22		ug/L		72	33 - 173
Chloroform	10.0	8.96		ug/L		90	79 - 127
Chloromethane	10.0	12.2		ug/L		122	54 - 143
cis-1,2-Dichloroethene	10.0	8.39		ug/L		84	76 - 128
cis-1,3-Dichloropropene	10.0	8.80		ug/L		88	64 - 132
Cyclohexane	10.0	11.0		ug/L		110	58 - 145
Dibromochloromethane	10.0	8.15		ug/L		82	70 - 132
1,2-Dibromo-3-Chloropropane	10.0	6.96		ug/L		70	46 - 132
1,2-Dibromoethane	10.0	8.75		ug/L		87	77 - 123
1,2-Dichlorobenzene	10.0	8.70		ug/L		87	78 - 120
1,3-Dichlorobenzene	10.0	8.74		ug/L		87	78 - 120
1,4-Dichlorobenzene	10.0	8.55		ug/L		85	78 - 120
Dichlorodifluoromethane	10.0	9.94		ug/L		99	29 - 148
1,1-Dichloroethane	10.0	9.96		ug/L		100	75 - 133
1,2-Dichloroethane	10.0	8.98		ug/L		90	71 - 135
1,1-Dichloroethene	10.0	9.07		ug/L		91	65 - 139
1,2-Dichloropropane	10.0	10.5		ug/L		105	78 - 133
Ethylbenzene	10.0	8.91		ug/L		89	80 - 120
2-Hexanone	20.0	21.3		ug/L		107	43 - 148
Isopropylbenzene	10.0	8.72		ug/L		87	74 - 120
Methyl acetate	20.0	23.3		ug/L		116	52 - 145
Methylcyclohexane	10.0	8.74		ug/L		87	60 - 125
Methylene Chloride	10.0	11.1		ug/L		111	70 - 134

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108876-1

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

Lab Sample ID: LCS 240-371066/4

Matrix: Water

Analysis Batch: 371066

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	20.3		ug/L		101	49 - 143
Methyl tert-butyl ether	10.0	8.04		ug/L		80	51 - 133
Styrene	10.0	8.76		ug/L		88	79 - 120
1,1,2,2-Tetrachloroethane	10.0	10.1		ug/L		101	65 - 139
Tetrachloroethene	10.0	8.61		ug/L		86	74 - 130
Toluene	10.0	9.80		ug/L		98	78 - 129
trans-1,2-Dichloroethene	10.0	8.97		ug/L		90	78 - 133
trans-1,3-Dichloropropene	10.0	8.83		ug/L		88	55 - 128
1,2,4-Trichlorobenzene	10.0	7.06		ug/L		71	42 - 133
1,1,1-Trichloroethane	10.0	8.50		ug/L		85	69 - 134
1,1,2-Trichloroethane	10.0	9.90		ug/L		99	78 - 133
Trichloroethene	10.0	7.64		ug/L		76	76 - 125
Trichlorofluoromethane	10.0	8.42		ug/L		84	51 - 164
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	8.06		ug/L		81	50 - 156
1,2,4-Trimethylbenzene	10.0	9.17		ug/L		92	74 - 120
1,3,5-Trimethylbenzene	10.0	9.25		ug/L		92	75 - 121
Vinyl chloride	10.0	9.96		ug/L		100	58 - 143
Xylenes, Total	20.0	17.9		ug/L		89	80 - 120
Diethyl ether	10.0	11.1		ug/L		111	70 - 146

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		59 - 120
Dibromofluoromethane (Surr)	89		75 - 128
1,2-Dichloroethane-d4 (Surr)	97		70 - 121
Toluene-d8 (Surr)	103		70 - 123

Lab Sample ID: 240-108876-1 MS

Matrix: Water

Analysis Batch: 371066

Client Sample ID: MW-30_030219

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	24.9		ug/L		125	10 - 168
Benzene	1.0	U	10.0	9.74		ug/L		97	71 - 122
Bromodichloromethane	1.0	U	10.0	8.63		ug/L		86	64 - 125
Bromoform	1.0	U	10.0	8.58		ug/L		86	44 - 129
Bromomethane	1.0	U	10.0	6.48		ug/L		65	19 - 187
2-Butanone (MEK)	10	U	20.0	25.6		ug/L		128	37 - 156
Carbon disulfide	5.0	U	10.0	9.22		ug/L		92	43 - 144
Carbon tetrachloride	1.0	U	10.0	7.92		ug/L		79	41 - 143
Chlorobenzene	1.0	U	10.0	9.35		ug/L		93	70 - 123
Chloroethane	1.0	U	10.0	6.83		ug/L		68	11 - 189
Chloroform	1.0	U	10.0	9.25		ug/L		92	68 - 130
Chloromethane	1.0	U	10.0	12.1		ug/L		121	31 - 154
cis-1,2-Dichloroethene	1.0	U	10.0	8.96		ug/L		90	64 - 130
cis-1,3-Dichloropropene	1.0	U	10.0	8.29		ug/L		83	48 - 127
Cyclohexane	1.0	U	10.0	9.89		ug/L		99	42 - 135
Dibromochloromethane	1.0	U	10.0	8.74		ug/L		87	60 - 129

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108876-1

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

Lab Sample ID: 240-108876-1 MS

Matrix: Water

Analysis Batch: 371066

Client Sample ID: MW-30_030219

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier		Added	Result				
1,2-Dibromo-3-Chloropropane	1.0	U	10.0	7.82		ug/L		78	38 - 124
1,2-Dibromoethane	1.0	U	10.0	9.94		ug/L		99	71 - 123
1,2-Dichlorobenzene	1.0	U	10.0	8.90		ug/L		89	64 - 120
1,3-Dichlorobenzene	0.18	J	10.0	8.95		ug/L		88	62 - 120
1,4-Dichlorobenzene	1.0	U	10.0	8.61		ug/L		86	63 - 120
Dichlorodifluoromethane	1.0	U	10.0	9.19		ug/L		92	28 - 136
1,1-Dichloroethane	1.0	U	10.0	10.4		ug/L		104	63 - 136
1,2-Dichloroethane	1.0	U	10.0	9.73		ug/L		97	65 - 135
1,1-Dichloroethene	1.0	U	10.0	9.15		ug/L		91	53 - 140
1,2-Dichloropropane	1.0	U	10.0	10.8		ug/L		108	70 - 132
Ethylbenzene	1.0	U	10.0	9.15		ug/L		91	66 - 120
2-Hexanone	10	U F1	20.0	30.5	F1	ug/L		152	42 - 150
Isopropylbenzene	1.0	U	10.0	8.68		ug/L		87	59 - 120
Methyl acetate	10	U	20.0	27.1		ug/L		135	41 - 142
Methylcyclohexane	1.0	U	10.0	7.48		ug/L		75	37 - 123
Methylene Chloride	5.0	U	10.0	10.1		ug/L		101	61 - 130
4-Methyl-2-pentanone (MIBK)	10	U	20.0	25.4		ug/L		127	44 - 143
Methyl tert-butyl ether	1.0	U	10.0	8.76		ug/L		88	41 - 136
Styrene	1.0	U	10.0	9.35		ug/L		94	68 - 120
1,1,2,2-Tetrachloroethane	1.0	U	10.0	11.6		ug/L		116	60 - 137
Tetrachloroethene	1.0	U	10.0	8.89		ug/L		89	51 - 136
Toluene	1.0	U	10.0	10.4		ug/L		104	62 - 132
trans-1,2-Dichloroethene	1.0	U	10.0	9.16		ug/L		92	68 - 133
trans-1,3-Dichloropropene	1.0	U	10.0	9.36		ug/L		94	40 - 125
1,2,4-Trichlorobenzene	1.0	U	10.0	6.77		ug/L		68	30 - 126
1,1,1-Trichloroethane	1.0	U	10.0	8.24		ug/L		82	51 - 138
1,1,2-Trichloroethane	1.0	U	10.0	11.1		ug/L		111	76 - 132
Trichloroethene	1.0	U	10.0	7.74		ug/L		77	55 - 131
Trichlorofluoromethane	1.0	U	10.0	7.89		ug/L		79	37 - 174
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	10.0	7.47		ug/L		75	31 - 156
1,2,4-Trimethylbenzene	1.0	U	10.0	9.02		ug/L		90	62 - 120
1,3,5-Trimethylbenzene	1.0	U	10.0	8.92		ug/L		89	64 - 120
Vinyl chloride	1.0	U	10.0	9.54		ug/L		95	43 - 154
Xylenes, Total	2.0	U	20.0	18.8		ug/L		94	67 - 120
Diethyl ether	2.0	U	10.0	12.1		ug/L		121	65 - 134
		MS MS							
Surrogate	%Recovery	Qualifier	Limits						
4-Bromofluorobenzene (Surr)	111		59 - 120						
Dibromofluoromethane (Surr)	90		75 - 128						
1,2-Dichloroethane-d4 (Surr)	102		70 - 121						
Toluene-d8 (Surr)	106		70 - 123						

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108876-1

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

Lab Sample ID: 240-108876-1 MSD

Matrix: Water

Analysis Batch: 371066

Client Sample ID: MW-30_030219

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	22.7		ug/L		114	10 - 168	9	35
Benzene	1.0	U	10.0	9.93		ug/L		99	71 - 122	2	22
Bromodichloromethane	1.0	U	10.0	8.72		ug/L		87	64 - 125	1	27
Bromoform	1.0	U	10.0	8.09		ug/L		81	44 - 129	6	28
Bromomethane	1.0	U	10.0	6.70		ug/L		67	19 - 187	3	35
2-Butanone (MEK)	10	U	20.0	24.6		ug/L		123	37 - 156	4	35
Carbon disulfide	5.0	U	10.0	9.03		ug/L		90	43 - 144	2	33
Carbon tetrachloride	1.0	U	10.0	7.62		ug/L		76	41 - 143	4	30
Chlorobenzene	1.0	U	10.0	9.08		ug/L		91	70 - 123	3	23
Chloroethane	1.0	U	10.0	7.20		ug/L		72	11 - 189	5	35
Chloroform	1.0	U	10.0	9.26		ug/L		93	68 - 130	0	23
Chloromethane	1.0	U	10.0	12.5		ug/L		125	31 - 154	3	35
cis-1,2-Dichloroethene	1.0	U	10.0	8.99		ug/L		90	64 - 130	0	21
cis-1,3-Dichloropropene	1.0	U	10.0	8.32		ug/L		83	48 - 127	0	30
Cyclohexane	1.0	U	10.0	9.97		ug/L		100	42 - 135	1	35
Dibromochloromethane	1.0	U	10.0	8.57		ug/L		86	60 - 129	2	26
1,2-Dibromo-3-Chloropropane	1.0	U	10.0	8.12		ug/L		81	38 - 124	4	35
1,2-Dibromoethane	1.0	U	10.0	9.90		ug/L		99	71 - 123	0	27
1,2-Dichlorobenzene	1.0	U	10.0	8.97		ug/L		90	64 - 120	1	30
1,3-Dichlorobenzene	0.18	J	10.0	8.89		ug/L		87	62 - 120	1	31
1,4-Dichlorobenzene	1.0	U	10.0	8.65		ug/L		87	63 - 120	1	28
Dichlorodifluoromethane	1.0	U	10.0	9.08		ug/L		91	28 - 136	1	35
1,1-Dichloroethane	1.0	U	10.0	10.3		ug/L		103	63 - 136	1	23
1,2-Dichloroethane	1.0	U	10.0	9.65		ug/L		96	65 - 135	1	24
1,1-Dichloroethene	1.0	U	10.0	9.04		ug/L		90	53 - 140	1	35
1,2-Dichloropropane	1.0	U	10.0	11.0		ug/L		110	70 - 132	2	26
Ethylbenzene	1.0	U	10.0	8.98		ug/L		90	66 - 120	2	24
2-Hexanone	10	U F1	20.0	29.7		ug/L		149	42 - 150	2	35
Isopropylbenzene	1.0	U	10.0	8.56		ug/L		86	59 - 120	1	31
Methyl acetate	10	U	20.0	27.3		ug/L		137	41 - 142	1	35
Methylcyclohexane	1.0	U	10.0	7.53		ug/L		75	37 - 123	1	35
Methylene Chloride	5.0	U	10.0	9.98		ug/L		100	61 - 130	1	29
4-Methyl-2-pentanone (MIBK)	10	U	20.0	25.9		ug/L		129	44 - 143	2	35
Methyl tert-butyl ether	1.0	U	10.0	8.89		ug/L		89	41 - 136	1	29
Styrene	1.0	U	10.0	9.13		ug/L		91	68 - 120	2	26
1,1,2,2-Tetrachloroethane	1.0	U	10.0	11.5		ug/L		115	60 - 137	0	31
Tetrachloroethene	1.0	U	10.0	8.56		ug/L		86	51 - 136	4	23
Toluene	1.0	U	10.0	10.1		ug/L		101	62 - 132	3	23
trans-1,2-Dichloroethene	1.0	U	10.0	9.16		ug/L		92	68 - 133	0	24
trans-1,3-Dichloropropene	1.0	U	10.0	9.43		ug/L		94	40 - 125	1	27
1,2,4-Trichlorobenzene	1.0	U	10.0	7.01		ug/L		70	30 - 126	3	35
1,1,1-Trichloroethane	1.0	U	10.0	8.29		ug/L		83	51 - 138	1	27
1,1,2-Trichloroethane	1.0	U	10.0	11.0		ug/L		110	76 - 132	1	25
Trichloroethene	1.0	U	10.0	7.84		ug/L		78	55 - 131	1	23
Trichlorofluoromethane	1.0	U	10.0	8.01		ug/L		80	37 - 174	1	35
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	10.0	7.50		ug/L		75	31 - 156	0	35
1,2,4-Trimethylbenzene	1.0	U	10.0	9.04		ug/L		90	62 - 120	0	27

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108876-1

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

Lab Sample ID: 240-108876-1 MSD

Matrix: Water

Analysis Batch: 371066

Client Sample ID: MW-30_030219

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trimethylbenzene	1.0	U	10.0	8.88		ug/L		89	64 - 120	0	23
Vinyl chloride	1.0	U	10.0	9.64		ug/L		96	43 - 154	1	29
Xylenes, Total	2.0	U	20.0	18.3		ug/L		92	67 - 120	3	25
Diethyl ether	2.0	U	10.0	12.3		ug/L		123	65 - 134	2	33

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
4-Bromofluorobenzene (Surr)	108		59 - 120
Dibromofluoromethane (Surr)	88		75 - 128
1,2-Dichloroethane-d4 (Surr)	99		70 - 121
Toluene-d8 (Surr)	103		70 - 123

Lab Sample ID: MB 240-371206/6

Matrix: Water

Analysis Batch: 371206

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			03/12/19 10:30	1
Benzene	1.0	U	1.0	0.13	ug/L			03/12/19 10:30	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/12/19 10:30	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/12/19 10:30	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/12/19 10:30	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/12/19 10:30	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/12/19 10:30	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/12/19 10:30	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/12/19 10:30	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/12/19 10:30	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/12/19 10:30	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/12/19 10:30	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/12/19 10:30	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/12/19 10:30	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/12/19 10:30	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/12/19 10:30	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/12/19 10:30	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/12/19 10:30	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/12/19 10:30	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/12/19 10:30	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/12/19 10:30	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/12/19 10:30	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/12/19 10:30	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/12/19 10:30	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 10:30	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/12/19 10:30	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/12/19 10:30	1
2-Hexanone	10	U	10	0.54	ug/L			03/12/19 10:30	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/12/19 10:30	1
Methyl acetate	10	U	10	1.7	ug/L			03/12/19 10:30	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/12/19 10:30	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/12/19 10:30	1

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108876-1

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

Lab Sample ID: MB 240-371206/6
Matrix: Water
Analysis Batch: 371206

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/12/19 10:30	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/12/19 10:30	1
Styrene	1.0	U	1.0	0.10	ug/L			03/12/19 10:30	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/12/19 10:30	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/12/19 10:30	1
Toluene	1.0	U	1.0	0.14	ug/L			03/12/19 10:30	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 10:30	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/12/19 10:30	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/12/19 10:30	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/12/19 10:30	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/12/19 10:30	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/12/19 10:30	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/12/19 10:30	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/12/19 10:30	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/12/19 10:30	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/12/19 10:30	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/12/19 10:30	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/12/19 10:30	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/12/19 10:30	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/12/19 10:30	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		59 - 120		03/12/19 10:30	1
Dibromofluoromethane (Surr)	106		75 - 128		03/12/19 10:30	1
1,2-Dichloroethane-d4 (Surr)	120		70 - 121		03/12/19 10:30	1
Toluene-d8 (Surr)	115		70 - 123		03/12/19 10:30	1

Lab Sample ID: LCS 240-371206/4
Matrix: Water
Analysis Batch: 371206

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	25.1		ug/L		125	21 - 162
Benzene	10.0	10.7		ug/L		107	80 - 123
Bromodichloromethane	10.0	9.50		ug/L		95	77 - 125
Bromoform	10.0	6.83		ug/L		68	49 - 141
Bromomethane	10.0	10.4		ug/L		104	41 - 175
2-Butanone (MEK)	20.0	26.8		ug/L		134	39 - 163
Carbon disulfide	10.0	10.8		ug/L		108	60 - 138
Carbon tetrachloride	10.0	8.82		ug/L		88	63 - 140
Chlorobenzene	10.0	8.82		ug/L		88	80 - 121
Chloroethane	10.0	14.6		ug/L		146	33 - 173
Chloroform	10.0	10.1		ug/L		101	79 - 127
Chloromethane	10.0	20.7	*	ug/L		207	54 - 143
cis-1,2-Dichloroethene	10.0	9.40		ug/L		94	76 - 128
cis-1,3-Dichloropropene	10.0	10.1		ug/L		101	64 - 132
Cyclohexane	10.0	14.9	*	ug/L		149	58 - 145
Dibromochloromethane	10.0	8.90		ug/L		89	70 - 132

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108876-1

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

Lab Sample ID: LCS 240-371206/4

Matrix: Water

Analysis Batch: 371206

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromo-3-Chloropropane	10.0	7.38		ug/L		74	46 - 132
1,2-Dibromoethane	10.0	9.08		ug/L		91	77 - 123
1,2-Dichlorobenzene	10.0	8.49		ug/L		85	78 - 120
1,3-Dichlorobenzene	10.0	8.39		ug/L		84	78 - 120
1,4-Dichlorobenzene	10.0	8.46		ug/L		85	78 - 120
Dichlorodifluoromethane	10.0	9.46		ug/L		95	29 - 148
1,1-Dichloroethane	10.0	12.0		ug/L		120	75 - 133
1,2-Dichloroethane	10.0	10.3		ug/L		103	71 - 135
1,1-Dichloroethene	10.0	10.7		ug/L		107	65 - 139
1,2-Dichloropropane	10.0	12.8		ug/L		128	78 - 133
Ethylbenzene	10.0	9.12		ug/L		91	80 - 120
2-Hexanone	20.0	27.4		ug/L		137	43 - 148
Isopropylbenzene	10.0	9.41		ug/L		94	74 - 120
Methyl acetate	20.0	28.1		ug/L		141	52 - 145
Methylcyclohexane	10.0	10.3		ug/L		103	60 - 125
Methylene Chloride	10.0	10.6		ug/L		106	70 - 134
4-Methyl-2-pentanone (MIBK)	20.0	26.0		ug/L		130	49 - 143
Methyl tert-butyl ether	10.0	10.3		ug/L		103	51 - 133
Styrene	10.0	9.07		ug/L		91	79 - 120
1,1,2,2-Tetrachloroethane	10.0	12.8		ug/L		128	65 - 139
Tetrachloroethene	10.0	7.57		ug/L		76	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	10.1		ug/L		101	55 - 128
1,2,4-Trichlorobenzene	10.0	5.98		ug/L		60	42 - 133
1,1,1-Trichloroethane	10.0	8.66		ug/L		87	69 - 134
1,1,2-Trichloroethane	10.0	10.0		ug/L		100	78 - 133
Trichloroethene	10.0	7.62		ug/L		76	76 - 125
Trichlorofluoromethane	10.0	9.94		ug/L		99	51 - 164
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	7.68		ug/L		77	50 - 156
1,2,4-Trimethylbenzene	10.0	10.4		ug/L		104	74 - 120
1,3,5-Trimethylbenzene	10.0	10.8		ug/L		108	75 - 121
Vinyl chloride	10.0	14.0		ug/L		140	58 - 143
Xylenes, Total	20.0	19.1		ug/L		96	80 - 120
Diethyl ether	10.0	14.4		ug/L		144	70 - 146

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		59 - 120
Dibromofluoromethane (Surr)	96		75 - 128
1,2-Dichloroethane-d4 (Surr)	105		70 - 121
Toluene-d8 (Surr)	114		70 - 123

QC Sample Results

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

TestAmerica Job ID: 240-108876-1

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

Lab Sample ID: 240-108876-2 MS

Matrix: Water

Analysis Batch: 371206

Client Sample ID: MW-31_030219

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	%Rec. Limits
				Result	Qualifier				
Acetone	10	U	20.0	25.9		ug/L		130	10 - 168
Benzene	1.0	U	10.0	10.5		ug/L		105	71 - 122
Bromodichloromethane	1.0	U	10.0	9.59		ug/L		96	64 - 125
Bromoform	1.0	U	10.0	7.13		ug/L		71	44 - 129
Bromomethane	1.0	U	10.0	10.1		ug/L		101	19 - 187
2-Butanone (MEK)	10	U	20.0	25.7		ug/L		129	37 - 156
Carbon disulfide	5.0	U	10.0	10.0		ug/L		100	43 - 144
Carbon tetrachloride	1.0	U	10.0	7.20		ug/L		72	41 - 143
Chlorobenzene	1.0	U	10.0	8.96		ug/L		90	70 - 123
Chloroethane	1.0	U	10.0	12.8		ug/L		128	11 - 189
Chloroform	1.0	U	10.0	10.1		ug/L		101	68 - 130
Chloromethane	1.0	U F1 *	10.0	13.7		ug/L		137	31 - 154
cis-1,2-Dichloroethene	1.0	U	10.0	9.66		ug/L		97	64 - 130
cis-1,3-Dichloropropene	1.0	U	10.0	9.27		ug/L		93	48 - 127
Cyclohexane	1.0	U F1 *	10.0	10.5		ug/L		105	42 - 135
Dibromochloromethane	1.0	U	10.0	9.11		ug/L		91	60 - 129
1,2-Dibromo-3-Chloropropane	1.0	U	10.0	8.79		ug/L		88	38 - 124
1,2-Dibromoethane	1.0	U	10.0	8.46		ug/L		85	71 - 123
1,2-Dichlorobenzene	1.0	U	10.0	8.71		ug/L		87	64 - 120
1,3-Dichlorobenzene	1.0	U	10.0	8.52		ug/L		85	62 - 120
1,4-Dichlorobenzene	1.0	U	10.0	8.29		ug/L		83	63 - 120
Dichlorodifluoromethane	1.0	U	10.0	7.96		ug/L		80	28 - 136
1,1-Dichloroethane	1.0	U	10.0	11.8		ug/L		118	63 - 136
1,2-Dichloroethane	1.0	U	10.0	9.66		ug/L		97	65 - 135
1,1-Dichloroethene	1.0	U	10.0	9.38		ug/L		94	53 - 140
1,2-Dichloropropane	1.0	U F1	10.0	12.1		ug/L		121	70 - 132
Ethylbenzene	1.0	U	10.0	8.50		ug/L		85	66 - 120
2-Hexanone	10	U F1	20.0	29.5		ug/L		147	42 - 150
Isopropylbenzene	1.0	U	10.0	8.65		ug/L		87	59 - 120
Methyl acetate	10	U F1	20.0	27.9		ug/L		139	41 - 142
Methylcyclohexane	1.0	U	10.0	7.09		ug/L		71	37 - 123
Methylene Chloride	5.0	U	10.0	10.4		ug/L		104	61 - 130
4-Methyl-2-pentanone (MIBK)	10	U F1	20.0	26.4		ug/L		132	44 - 143
Methyl tert-butyl ether	1.0	U	10.0	10.1		ug/L		101	41 - 136
Styrene	1.0	U	10.0	8.77		ug/L		88	68 - 120
1,1,2,2-Tetrachloroethane	1.0	U F1	10.0	13.5		ug/L		135	60 - 137
Tetrachloroethene	1.0	U	10.0	6.80		ug/L		68	51 - 136
Toluene	1.0	U	10.0	10.3		ug/L		103	62 - 132
trans-1,2-Dichloroethene	1.0	U	10.0	9.71		ug/L		97	68 - 133
trans-1,3-Dichloropropene	1.0	U	10.0	9.69		ug/L		97	40 - 125
1,2,4-Trichlorobenzene	1.0	U	10.0	6.30		ug/L		63	30 - 126
1,1,1-Trichloroethane	1.0	U	10.0	8.11		ug/L		81	51 - 138
1,1,2-Trichloroethane	1.0	U	10.0	9.75		ug/L		98	76 - 132
Trichloroethene	1.0	U	10.0	7.03		ug/L		70	55 - 131
Trichlorofluoromethane	1.0	U	10.0	8.54		ug/L		85	37 - 174
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U F2	10.0	5.49		ug/L		55	31 - 156
1,2,4-Trimethylbenzene	1.0	U	10.0	9.51		ug/L		95	62 - 120

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108876-1

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

Lab Sample ID: 240-108876-2 MS

Matrix: Water

Analysis Batch: 371206

Client Sample ID: MW-31_030219

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trimethylbenzene	1.0	U	10.0	9.71		ug/L		97	64 - 120
Vinyl chloride	1.0	U F1	10.0	12.4		ug/L		124	43 - 154
Xylenes, Total	2.0	U	20.0	19.0		ug/L		95	67 - 120
Diethyl ether	2.0	U F1	10.0	14.9	F1	ug/L		149	65 - 134

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		59 - 120
Dibromofluoromethane (Surr)	94		75 - 128
1,2-Dichloroethane-d4 (Surr)	105		70 - 121
Toluene-d8 (Surr)	115		70 - 123

Lab Sample ID: 240-108876-2 MSD

Matrix: Water

Analysis Batch: 371206

Client Sample ID: MW-31_030219

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	27.1		ug/L		135	10 - 168	4	35
Benzene	1.0	U	10.0	11.4		ug/L		114	71 - 122	8	22
Bromodichloromethane	1.0	U	10.0	10.2		ug/L		102	64 - 125	6	27
Bromoform	1.0	U	10.0	7.60		ug/L		76	44 - 129	6	28
Bromomethane	1.0	U	10.0	11.9		ug/L		119	19 - 187	17	35
2-Butanone (MEK)	10	U	20.0	27.5		ug/L		137	37 - 156	7	35
Carbon disulfide	5.0	U	10.0	12.4		ug/L		124	43 - 144	21	33
Carbon tetrachloride	1.0	U	10.0	9.13		ug/L		91	41 - 143	24	30
Chlorobenzene	1.0	U	10.0	9.61		ug/L		96	70 - 123	7	23
Chloroethane	1.0	U	10.0	16.9		ug/L		169	11 - 189	28	35
Chloroform	1.0	U	10.0	11.1		ug/L		111	68 - 130	9	23
Chloromethane	1.0	U F1 *	10.0	17.1	F1	ug/L		171	31 - 154	22	35
cis-1,2-Dichloroethene	1.0	U	10.0	10.6		ug/L		106	64 - 130	9	21
cis-1,3-Dichloropropene	1.0	U	10.0	10.2		ug/L		102	48 - 127	9	30
Cyclohexane	1.0	U F1 *	10.0	14.8	F1	ug/L		148	42 - 135	34	35
Dibromochloromethane	1.0	U	10.0	9.82		ug/L		98	60 - 129	8	26
1,2-Dibromo-3-Chloropropane	1.0	U	10.0	8.13		ug/L		81	38 - 124	8	35
1,2-Dibromoethane	1.0	U	10.0	10.0		ug/L		100	71 - 123	17	27
1,2-Dichlorobenzene	1.0	U	10.0	9.06		ug/L		91	64 - 120	4	30
1,3-Dichlorobenzene	1.0	U	10.0	8.96		ug/L		90	62 - 120	5	31
1,4-Dichlorobenzene	1.0	U	10.0	8.81		ug/L		88	63 - 120	6	28
Dichlorodifluoromethane	1.0	U	10.0	11.0		ug/L		110	28 - 136	32	35
1,1-Dichloroethane	1.0	U	10.0	13.3		ug/L		133	63 - 136	12	23
1,2-Dichloroethane	1.0	U	10.0	11.3		ug/L		113	65 - 135	15	24
1,1-Dichloroethene	1.0	U	10.0	11.5		ug/L		115	53 - 140	20	35
1,2-Dichloropropane	1.0	U F1	10.0	13.6	F1	ug/L		136	70 - 132	11	26
Ethylbenzene	1.0	U	10.0	9.59		ug/L		96	66 - 120	12	24
2-Hexanone	10	U F1	20.0	30.7	F1	ug/L		154	42 - 150	4	35
Isopropylbenzene	1.0	U	10.0	9.79		ug/L		98	59 - 120	12	31
Methyl acetate	10	U F1	20.0	29.9	F1	ug/L		150	41 - 142	7	35
Methylcyclohexane	1.0	U	10.0	9.51		ug/L		95	37 - 123	29	35
Methylene Chloride	5.0	U	10.0	12.3		ug/L		123	61 - 130	17	29

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108876-1

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

Lab Sample ID: 240-108876-2 MSD

Matrix: Water

Analysis Batch: 371206

Client Sample ID: MW-31_030219

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4-Methyl-2-pentanone (MIBK)	10	U F1	20.0	28.7	F1	ug/L		144	44 - 143	8	35
Methyl tert-butyl ether	1.0	U	10.0	11.6		ug/L		116	41 - 136	14	29
Styrene	1.0	U	10.0	9.52		ug/L		95	68 - 120	8	26
1,1,2,2-Tetrachloroethane	1.0	U F1	10.0	14.1	F1	ug/L		141	60 - 137	5	31
Tetrachloroethene	1.0	U	10.0	7.92		ug/L		79	51 - 136	15	23
Toluene	1.0	U	10.0	11.6		ug/L		116	62 - 132	12	23
trans-1,2-Dichloroethene	1.0	U	10.0	10.6		ug/L		106	68 - 133	9	24
trans-1,3-Dichloropropene	1.0	U	10.0	10.5		ug/L		105	40 - 125	8	27
1,2,4-Trichlorobenzene	1.0	U	10.0	6.52		ug/L		65	30 - 126	3	35
1,1,1-Trichloroethane	1.0	U	10.0	9.49		ug/L		95	51 - 138	16	27
1,1,2-Trichloroethane	1.0	U	10.0	10.6		ug/L		106	76 - 132	9	25
Trichloroethene	1.0	U	10.0	8.02		ug/L		80	55 - 131	13	23
Trichlorofluoromethane	1.0	U	10.0	11.2		ug/L		112	37 - 174	27	35
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U F2	10.0	7.89	F2	ug/L		79	31 - 156	36	35
1,2,4-Trimethylbenzene	1.0	U	10.0	10.9		ug/L		109	62 - 120	14	27
1,3,5-Trimethylbenzene	1.0	U	10.0	11.0		ug/L		110	64 - 120	12	23
Vinyl chloride	1.0	U F1	10.0	16.3	F1	ug/L		163	43 - 154	27	29
Xylenes, Total	2.0	U	20.0	20.6		ug/L		103	67 - 120	8	25
Diethyl ether	2.0	U F1	10.0	16.2	F1	ug/L		162	65 - 134	8	33

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
4-Bromofluorobenzene (Surr)	110		59 - 120
Dibromofluoromethane (Surr)	102		75 - 128
1,2-Dichloroethane-d4 (Surr)	110		70 - 121
Toluene-d8 (Surr)	118		70 - 123

Lab Sample ID: MB 240-371207/6

Matrix: Water

Analysis Batch: 371207

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			03/12/19 10:01	1
Benzene	1.0	U	1.0	0.13	ug/L			03/12/19 10:01	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/12/19 10:01	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/12/19 10:01	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/12/19 10:01	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/12/19 10:01	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/12/19 10:01	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/12/19 10:01	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/12/19 10:01	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/12/19 10:01	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/12/19 10:01	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/12/19 10:01	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/12/19 10:01	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/12/19 10:01	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/12/19 10:01	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/12/19 10:01	1

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108876-1

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

Lab Sample ID: MB 240-371207/6
Matrix: Water
Analysis Batch: 371207

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/12/19 10:01	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/12/19 10:01	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/12/19 10:01	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/12/19 10:01	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/12/19 10:01	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/12/19 10:01	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/12/19 10:01	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/12/19 10:01	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 10:01	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/12/19 10:01	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/12/19 10:01	1
2-Hexanone	10	U	10	0.54	ug/L			03/12/19 10:01	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/12/19 10:01	1
Methyl acetate	10	U	10	1.7	ug/L			03/12/19 10:01	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/12/19 10:01	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/12/19 10:01	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/12/19 10:01	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/12/19 10:01	1
Styrene	1.0	U	1.0	0.10	ug/L			03/12/19 10:01	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/12/19 10:01	1
Tetrachloroethene	0.193	J	1.0	0.15	ug/L			03/12/19 10:01	1
Toluene	1.0	U	1.0	0.14	ug/L			03/12/19 10:01	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 10:01	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/12/19 10:01	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/12/19 10:01	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/12/19 10:01	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/12/19 10:01	1
Trichloroethene	0.124	J	1.0	0.10	ug/L			03/12/19 10:01	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/12/19 10:01	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/12/19 10:01	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/12/19 10:01	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/12/19 10:01	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/12/19 10:01	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/12/19 10:01	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/12/19 10:01	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/12/19 10:01	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	73		59 - 120		03/12/19 10:01	1
Dibromofluoromethane (Surr)	94		75 - 128		03/12/19 10:01	1
1,2-Dichloroethane-d4 (Surr)	92		70 - 121		03/12/19 10:01	1
Toluene-d8 (Surr)	83		70 - 123		03/12/19 10:01	1

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108876-1

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

Lab Sample ID: LCS 240-371207/4

Matrix: Water

Analysis Batch: 371207

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	14.0		ug/L		70	21 - 162
Benzene	10.0	10.0		ug/L		100	80 - 123
Bromodichloromethane	10.0	8.38		ug/L		84	77 - 125
Bromoform	10.0	5.99		ug/L		60	49 - 141
Bromomethane	10.0	7.38		ug/L		74	41 - 175
2-Butanone (MEK)	20.0	14.1		ug/L		70	39 - 163
Carbon disulfide	10.0	7.30		ug/L		73	60 - 138
Carbon tetrachloride	10.0	9.84		ug/L		98	63 - 140
Chlorobenzene	10.0	10.4		ug/L		104	80 - 121
Chloroethane	10.0	7.61		ug/L		76	33 - 173
Chloroform	10.0	10.6		ug/L		106	79 - 127
Chloromethane	10.0	7.99		ug/L		80	54 - 143
cis-1,2-Dichloroethene	10.0	10.5		ug/L		105	76 - 128
cis-1,3-Dichloropropene	10.0	7.64		ug/L		76	64 - 132
Cyclohexane	10.0	9.24		ug/L		92	58 - 145
Dibromochloromethane	10.0	8.12		ug/L		81	70 - 132
1,2-Dibromo-3-Chloropropane	10.0	4.88		ug/L		49	46 - 132
1,2-Dibromoethane	10.0	8.29		ug/L		83	77 - 123
1,2-Dichlorobenzene	10.0	10.0		ug/L		100	78 - 120
1,3-Dichlorobenzene	10.0	9.92		ug/L		99	78 - 120
1,4-Dichlorobenzene	10.0	9.94		ug/L		99	78 - 120
Dichlorodifluoromethane	10.0	8.57		ug/L		86	29 - 148
1,1-Dichloroethane	10.0	9.92		ug/L		99	75 - 133
1,2-Dichloroethane	10.0	9.62		ug/L		96	71 - 135
1,1-Dichloroethene	10.0	8.57		ug/L		86	65 - 139
1,2-Dichloropropane	10.0	9.37		ug/L		94	78 - 133
Ethylbenzene	10.0	10.0		ug/L		100	80 - 120
2-Hexanone	20.0	11.7		ug/L		59	43 - 148
Isopropylbenzene	10.0	10.2		ug/L		102	74 - 120
Methyl acetate	20.0	13.0		ug/L		65	52 - 145
Methylcyclohexane	10.0	9.13		ug/L		91	60 - 125
Methylene Chloride	10.0	9.38		ug/L		94	70 - 134
4-Methyl-2-pentanone (MIBK)	20.0	11.2		ug/L		56	49 - 143
Methyl tert-butyl ether	10.0	7.01		ug/L		70	51 - 133
Styrene	10.0	9.59		ug/L		96	79 - 120
1,1,2,2-Tetrachloroethane	10.0	7.50		ug/L		75	65 - 139
Tetrachloroethene	10.0	11.4		ug/L		114	74 - 130
Toluene	10.0	10.2		ug/L		102	78 - 129
trans-1,2-Dichloroethene	10.0	11.0		ug/L		110	78 - 133
trans-1,3-Dichloropropene	10.0	6.52		ug/L		65	55 - 128
1,2,4-Trichlorobenzene	10.0	8.93		ug/L		89	42 - 133
1,1,1-Trichloroethane	10.0	11.0		ug/L		110	69 - 134
1,1,2-Trichloroethane	10.0	9.41		ug/L		94	78 - 133
Trichloroethene	10.0	10.3		ug/L		103	76 - 125
Trichlorofluoromethane	10.0	9.04		ug/L		90	51 - 164
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	10.3		ug/L		103	50 - 156
1,2,4-Trimethylbenzene	10.0	9.67		ug/L		97	74 - 120

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108876-1

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

Lab Sample ID: LCS 240-371207/4
Matrix: Water
Analysis Batch: 371207

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	9.74		ug/L		97	75 - 121
Vinyl chloride	10.0	8.19		ug/L		82	58 - 143
Xylenes, Total	20.0	20.0		ug/L		100	80 - 120
Diethyl ether	10.0	8.66		ug/L		87	70 - 146

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	82		59 - 120
Dibromofluoromethane (Surr)	87		75 - 128
1,2-Dichloroethane-d4 (Surr)	79		70 - 121
Toluene-d8 (Surr)	83		70 - 123

Lab Sample ID: 240-108876-4 MS
Matrix: Water
Analysis Batch: 371207

Client Sample ID: MW-15-61D_030219
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	17.9		ug/L		89	10 - 168
Benzene	1.0	U	10.0	9.42		ug/L		94	71 - 122
Bromodichloromethane	1.0	U	10.0	7.61		ug/L		76	64 - 125
Bromoform	1.0	U	10.0	5.63		ug/L		56	44 - 129
Bromomethane	1.0	U	10.0	7.29		ug/L		73	19 - 187
2-Butanone (MEK)	10	U	20.0	12.3		ug/L		62	37 - 156
Carbon disulfide	5.0	U	10.0	8.89		ug/L		89	43 - 144
Carbon tetrachloride	1.0	U	10.0	8.06		ug/L		81	41 - 143
Chlorobenzene	1.0	U	10.0	9.33		ug/L		93	70 - 123
Chloroethane	1.0	U	10.0	7.90		ug/L		79	11 - 189
Chloroform	1.0	U	10.0	9.99		ug/L		100	68 - 130
Chloromethane	1.0	U	10.0	3.39		ug/L		34	31 - 154
cis-1,2-Dichloroethene	1.0	U	10.0	9.90		ug/L		99	64 - 130
cis-1,3-Dichloropropene	1.0	U	10.0	5.98		ug/L		60	48 - 127
Cyclohexane	1.0	U	10.0	6.37		ug/L		64	42 - 135
Dibromochloromethane	1.0	U	10.0	7.20		ug/L		72	60 - 129
1,2-Dibromo-3-Chloropropane	1.0	U	10.0	4.48		ug/L		45	38 - 124
1,2-Dibromoethane	1.0	U	10.0	7.45		ug/L		75	71 - 123
1,2-Dichlorobenzene	1.0	U	10.0	9.07		ug/L		91	64 - 120
1,3-Dichlorobenzene	1.0	U	10.0	8.67		ug/L		87	62 - 120
1,4-Dichlorobenzene	1.0	U	10.0	8.80		ug/L		88	63 - 120
Dichlorodifluoromethane	1.0	U	10.0	7.94		ug/L		79	28 - 136
1,1-Dichloroethane	1.0	U	10.0	9.40		ug/L		94	63 - 136
1,2-Dichloroethane	1.0	U	10.0	8.95		ug/L		89	65 - 135
1,1-Dichloroethene	1.0	U	10.0	8.00		ug/L		80	53 - 140
1,2-Dichloropropane	1.0	U	10.0	8.53		ug/L		85	70 - 132
Ethylbenzene	1.0	U	10.0	8.78		ug/L		88	66 - 120
2-Hexanone	10	U	20.0	10.7		ug/L		53	42 - 150
Isopropylbenzene	1.0	U	10.0	8.70		ug/L		87	59 - 120
Methyl acetate	10	U	20.0	12.3		ug/L		61	41 - 142
Methylcyclohexane	1.0	U	10.0	5.85		ug/L		58	37 - 123
Methylene Chloride	5.0	U	10.0	8.50		ug/L		85	61 - 130

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108876-1

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

Lab Sample ID: 240-108876-4 MS

Matrix: Water

Analysis Batch: 371207

Client Sample ID: MW-15-61D_030219

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Methyl-2-pentanone (MIBK)	10	U	20.0	10.0		ug/L		50	44 - 143
Methyl tert-butyl ether	1.0	U	10.0	6.39		ug/L		64	41 - 136
Styrene	1.0	U	10.0	8.64		ug/L		86	68 - 120
1,1,2,2-Tetrachloroethane	1.0	U	10.0	6.77		ug/L		68	60 - 137
Tetrachloroethene	1.0	U	10.0	9.30		ug/L		93	51 - 136
Toluene	1.0	U	10.0	9.16		ug/L		92	62 - 132
trans-1,2-Dichloroethene	1.0	U	10.0	10.2		ug/L		102	68 - 133
trans-1,3-Dichloropropene	1.0	U	10.0	5.13		ug/L		51	40 - 125
1,2,4-Trichlorobenzene	1.0	U	10.0	7.46		ug/L		75	30 - 126
1,1,1-Trichloroethane	1.0	U	10.0	9.78		ug/L		98	51 - 138
1,1,2-Trichloroethane	1.0	U	10.0	8.58		ug/L		86	76 - 132
Trichloroethene	1.0	U	10.0	9.17		ug/L		92	55 - 131
Trichlorofluoromethane	1.0	U	10.0	8.89		ug/L		89	37 - 174
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	10.0	7.47		ug/L		75	31 - 156
1,2,4-Trimethylbenzene	1.0	U	10.0	8.31		ug/L		83	62 - 120
1,3,5-Trimethylbenzene	1.0	U	10.0	8.16		ug/L		82	64 - 120
Vinyl chloride	1.0	U	10.0	9.09		ug/L		91	43 - 154
Xylenes, Total	2.0	U	20.0	17.9		ug/L		90	67 - 120
Diethyl ether	2.0	U	10.0	8.11		ug/L		81	65 - 134

Surrogate	MS %Recovery	MS Qualifier	MS Limits
4-Bromofluorobenzene (Surr)	85		59 - 120
Dibromofluoromethane (Surr)	94		75 - 128
1,2-Dichloroethane-d4 (Surr)	85		70 - 121
Toluene-d8 (Surr)	86		70 - 123

Lab Sample ID: 240-108876-4 MSD

Matrix: Water

Analysis Batch: 371207

Client Sample ID: MW-15-61D_030219

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	17.9		ug/L		90	10 - 168	0	35
Benzene	1.0	U	10.0	9.28		ug/L		93	71 - 122	2	22
Bromodichloromethane	1.0	U	10.0	7.65		ug/L		77	64 - 125	1	27
Bromoform	1.0	U	10.0	5.67		ug/L		57	44 - 129	1	28
Bromomethane	1.0	U	10.0	6.37		ug/L		64	19 - 187	13	35
2-Butanone (MEK)	10	U	20.0	12.4		ug/L		62	37 - 156	0	35
Carbon disulfide	5.0	U	10.0	8.75		ug/L		87	43 - 144	2	33
Carbon tetrachloride	1.0	U	10.0	8.70		ug/L		87	41 - 143	8	30
Chlorobenzene	1.0	U	10.0	9.48		ug/L		95	70 - 123	2	23
Chloroethane	1.0	U	10.0	7.08		ug/L		71	11 - 189	11	35
Chloroform	1.0	U	10.0	9.83		ug/L		98	68 - 130	2	23
Chloromethane	1.0	U	10.0	3.84		ug/L		38	31 - 154	12	35
cis-1,2-Dichloroethene	1.0	U	10.0	9.75		ug/L		97	64 - 130	2	21
cis-1,3-Dichloropropene	1.0	U	10.0	6.23		ug/L		62	48 - 127	4	30
Cyclohexane	1.0	U	10.0	7.84		ug/L		78	42 - 135	21	35
Dibromochloromethane	1.0	U	10.0	7.37		ug/L		74	60 - 129	2	26

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108876-1

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

Lab Sample ID: 240-108876-4 MSD

Client Sample ID: MW-15-61D_030219

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 371207

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromo-3-Chloropropane	1.0	U	10.0	4.45		ug/L		45	38 - 124	1	35
1,2-Dibromoethane	1.0	U	10.0	7.42		ug/L		74	71 - 123	0	27
1,2-Dichlorobenzene	1.0	U	10.0	9.33		ug/L		93	64 - 120	3	30
1,3-Dichlorobenzene	1.0	U	10.0	9.10		ug/L		91	62 - 120	5	31
1,4-Dichlorobenzene	1.0	U	10.0	9.14		ug/L		91	63 - 120	4	28
Dichlorodifluoromethane	1.0	U	10.0	8.59		ug/L		86	28 - 136	8	35
1,1-Dichloroethane	1.0	U	10.0	9.36		ug/L		94	63 - 136	0	23
1,2-Dichloroethane	1.0	U	10.0	8.94		ug/L		89	65 - 135	0	24
1,1-Dichloroethene	1.0	U	10.0	8.20		ug/L		82	53 - 140	3	35
1,2-Dichloropropane	1.0	U	10.0	8.64		ug/L		86	70 - 132	1	26
Ethylbenzene	1.0	U	10.0	9.16		ug/L		92	66 - 120	4	24
2-Hexanone	10	U	20.0	10.6		ug/L		53	42 - 150	0	35
Isopropylbenzene	1.0	U	10.0	9.30		ug/L		93	59 - 120	7	31
Methyl acetate	10	U	20.0	11.7		ug/L		59	41 - 142	5	35
Methylcyclohexane	1.0	U	10.0	7.84		ug/L		78	37 - 123	29	35
Methylene Chloride	5.0	U	10.0	8.20		ug/L		82	61 - 130	4	29
4-Methyl-2-pentanone (MIBK)	10	U	20.0	9.89	J	ug/L		49	44 - 143	1	35
Methyl tert-butyl ether	1.0	U	10.0	6.22		ug/L		62	41 - 136	3	29
Styrene	1.0	U	10.0	8.68		ug/L		87	68 - 120	0	26
1,1,2,2-Tetrachloroethane	1.0	U	10.0	6.86		ug/L		69	60 - 137	1	31
Tetrachloroethene	1.0	U	10.0	10.1		ug/L		101	51 - 136	9	23
Toluene	1.0	U	10.0	9.26		ug/L		93	62 - 132	1	23
trans-1,2-Dichloroethene	1.0	U	10.0	10.1		ug/L		101	68 - 133	1	24
trans-1,3-Dichloropropene	1.0	U	10.0	5.34		ug/L		53	40 - 125	4	27
1,2,4-Trichlorobenzene	1.0	U	10.0	7.98		ug/L		80	30 - 126	7	35
1,1,1-Trichloroethane	1.0	U	10.0	9.99		ug/L		100	51 - 138	2	27
1,1,2-Trichloroethane	1.0	U	10.0	8.58		ug/L		86	76 - 132	0	25
Trichloroethene	1.0	U	10.0	9.34		ug/L		93	55 - 131	2	23
Trichlorofluoromethane	1.0	U	10.0	8.81		ug/L		88	37 - 174	1	35
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	10.0	8.96		ug/L		90	31 - 156	18	35
1,2,4-Trimethylbenzene	1.0	U	10.0	8.96		ug/L		90	62 - 120	7	27
1,3,5-Trimethylbenzene	1.0	U	10.0	8.89		ug/L		89	64 - 120	9	23
Vinyl chloride	1.0	U	10.0	8.53		ug/L		85	43 - 154	6	29
Xylenes, Total	2.0	U	20.0	18.4		ug/L		92	67 - 120	2	25
Diethyl ether	2.0	U	10.0	7.85		ug/L		79	65 - 134	3	33

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	83		59 - 120
Dibromofluoromethane (Surr)	91		75 - 128
1,2-Dichloroethane-d4 (Surr)	82		70 - 121
Toluene-d8 (Surr)	85		70 - 123

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108876-1

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

Lab Sample ID: MB 240-371376/6

Matrix: Water

Analysis Batch: 371376

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			03/13/19 11:40	1
Benzene	1.0	U	1.0	0.13	ug/L			03/13/19 11:40	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/13/19 11:40	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/13/19 11:40	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/13/19 11:40	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/13/19 11:40	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/13/19 11:40	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/13/19 11:40	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/13/19 11:40	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/13/19 11:40	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/13/19 11:40	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/13/19 11:40	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/13/19 11:40	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/13/19 11:40	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/13/19 11:40	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/13/19 11:40	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/13/19 11:40	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/13/19 11:40	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/13/19 11:40	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/13/19 11:40	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/13/19 11:40	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/13/19 11:40	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/13/19 11:40	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/13/19 11:40	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/13/19 11:40	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/13/19 11:40	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/13/19 11:40	1
2-Hexanone	10	U	10	0.54	ug/L			03/13/19 11:40	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/13/19 11:40	1
Methyl acetate	10	U	10	1.7	ug/L			03/13/19 11:40	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/13/19 11:40	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/13/19 11:40	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/13/19 11:40	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/13/19 11:40	1
Styrene	1.0	U	1.0	0.10	ug/L			03/13/19 11:40	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/13/19 11:40	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/13/19 11:40	1
Toluene	1.0	U	1.0	0.14	ug/L			03/13/19 11:40	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/13/19 11:40	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/13/19 11:40	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/13/19 11:40	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/13/19 11:40	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/13/19 11:40	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/13/19 11:40	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/13/19 11:40	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/13/19 11:40	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/13/19 11:40	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/13/19 11:40	1

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108876-1

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

Lab Sample ID: MB 240-371376/6
Matrix: Water
Analysis Batch: 371376

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			03/13/19 11:40	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/13/19 11:40	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/13/19 11:40	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/13/19 11:40	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		59 - 120		03/13/19 11:40	1
Dibromofluoromethane (Surr)	108		75 - 128		03/13/19 11:40	1
1,2-Dichloroethane-d4 (Surr)	117		70 - 121		03/13/19 11:40	1
Toluene-d8 (Surr)	113		70 - 123		03/13/19 11:40	1

Lab Sample ID: LCS 240-371376/4
Matrix: Water
Analysis Batch: 371376

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	28.6		ug/L		143	21 - 162
Benzene	10.0	12.1		ug/L		121	80 - 123
Bromodichloromethane	10.0	10.9		ug/L		109	77 - 125
Bromoform	10.0	8.39		ug/L		84	49 - 141
Bromomethane	10.0	12.0		ug/L		120	41 - 175
2-Butanone (MEK)	20.0	32.4		ug/L		162	39 - 163
Carbon disulfide	10.0	12.6		ug/L		126	60 - 138
Carbon tetrachloride	10.0	9.59		ug/L		96	63 - 140
Chlorobenzene	10.0	10.5		ug/L		105	80 - 121
Chloroethane	10.0	16.1		ug/L		161	33 - 173
Chloroform	10.0	11.7		ug/L		117	79 - 127
Chloromethane	10.0	17.0	*	ug/L		170	54 - 143
cis-1,2-Dichloroethene	10.0	10.7		ug/L		107	76 - 128
cis-1,3-Dichloropropene	10.0	11.9		ug/L		119	64 - 132
Cyclohexane	10.0	15.8	*	ug/L		158	58 - 145
Dibromochloromethane	10.0	10.8		ug/L		108	70 - 132
1,2-Dibromo-3-Chloropropane	10.0	10.4		ug/L		104	46 - 132
1,2-Dibromoethane	10.0	10.8		ug/L		108	77 - 123
1,2-Dichlorobenzene	10.0	10.4		ug/L		104	78 - 120
1,3-Dichlorobenzene	10.0	9.98		ug/L		100	78 - 120
1,4-Dichlorobenzene	10.0	10.1		ug/L		101	78 - 120
Dichlorodifluoromethane	10.0	10.3		ug/L		103	29 - 148
1,1-Dichloroethane	10.0	13.8	*	ug/L		138	75 - 133
1,2-Dichloroethane	10.0	11.5		ug/L		115	71 - 135
1,1-Dichloroethene	10.0	11.9		ug/L		119	65 - 139
1,2-Dichloropropane	10.0	15.1	*	ug/L		151	78 - 133
Ethylbenzene	10.0	10.9		ug/L		109	80 - 120
2-Hexanone	20.0	35.0	*	ug/L		175	43 - 148
Isopropylbenzene	10.0	11.3		ug/L		113	74 - 120
Methyl acetate	20.0	32.9	*	ug/L		164	52 - 145
Methylcyclohexane	10.0	11.5		ug/L		115	60 - 125
Methylene Chloride	10.0	14.2	*	ug/L		142	70 - 134

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QC Sample Results

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

TestAmerica Job ID: 240-108876-1

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

Lab Sample ID: LCS 240-371376/4

Matrix: Water

Analysis Batch: 371376

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	30.8	*	ug/L		154	49 - 143
Methyl tert-butyl ether	10.0	11.7		ug/L		117	51 - 133
Styrene	10.0	10.7		ug/L		107	79 - 120
1,1,2,2-Tetrachloroethane	10.0	15.5	*	ug/L		155	65 - 139
Tetrachloroethene	10.0	8.56		ug/L		86	74 - 130
Toluene	10.0	12.4		ug/L		124	78 - 129
trans-1,2-Dichloroethene	10.0	11.1		ug/L		111	78 - 133
trans-1,3-Dichloropropene	10.0	11.9		ug/L		119	55 - 128
1,2,4-Trichlorobenzene	10.0	7.67		ug/L		77	42 - 133
1,1,1-Trichloroethane	10.0	9.91		ug/L		99	69 - 134
1,1,2-Trichloroethane	10.0	12.1		ug/L		121	78 - 133
Trichloroethene	10.0	8.52		ug/L		85	76 - 125
Trichlorofluoromethane	10.0	11.0		ug/L		110	51 - 164
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	8.15		ug/L		81	50 - 156
1,2,4-Trimethylbenzene	10.0	12.9	*	ug/L		129	74 - 120
1,3,5-Trimethylbenzene	10.0	12.8	*	ug/L		128	75 - 121
Vinyl chloride	10.0	15.7	*	ug/L		157	58 - 143
Xylenes, Total	20.0	23.3		ug/L		117	80 - 120
Diethyl ether	10.0	16.6	*	ug/L		166	70 - 146

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	111		59 - 120
Dibromofluoromethane (Surr)	98		75 - 128
1,2-Dichloroethane-d4 (Surr)	109		70 - 121
Toluene-d8 (Surr)	124	X	70 - 123

Lab Sample ID: MB 240-371378/6

Matrix: Water

Analysis Batch: 371378

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			03/13/19 10:15	1
Benzene	1.0	U	1.0	0.13	ug/L			03/13/19 10:15	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/13/19 10:15	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/13/19 10:15	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/13/19 10:15	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/13/19 10:15	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/13/19 10:15	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/13/19 10:15	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/13/19 10:15	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/13/19 10:15	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/13/19 10:15	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/13/19 10:15	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/13/19 10:15	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/13/19 10:15	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/13/19 10:15	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/13/19 10:15	1

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108876-1

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

Lab Sample ID: MB 240-371378/6
Matrix: Water
Analysis Batch: 371378

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/13/19 10:15	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/13/19 10:15	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/13/19 10:15	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/13/19 10:15	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/13/19 10:15	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/13/19 10:15	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/13/19 10:15	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/13/19 10:15	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/13/19 10:15	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/13/19 10:15	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/13/19 10:15	1
2-Hexanone	10	U	10	0.54	ug/L			03/13/19 10:15	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/13/19 10:15	1
Methyl acetate	10	U	10	1.7	ug/L			03/13/19 10:15	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/13/19 10:15	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/13/19 10:15	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/13/19 10:15	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/13/19 10:15	1
Styrene	1.0	U	1.0	0.10	ug/L			03/13/19 10:15	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/13/19 10:15	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/13/19 10:15	1
Toluene	1.0	U	1.0	0.14	ug/L			03/13/19 10:15	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/13/19 10:15	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/13/19 10:15	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/13/19 10:15	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/13/19 10:15	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/13/19 10:15	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/13/19 10:15	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/13/19 10:15	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/13/19 10:15	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/13/19 10:15	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/13/19 10:15	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/13/19 10:15	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/13/19 10:15	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/13/19 10:15	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/13/19 10:15	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	70		59 - 120		03/13/19 10:15	1
Dibromofluoromethane (Surr)	91		75 - 128		03/13/19 10:15	1
1,2-Dichloroethane-d4 (Surr)	88		70 - 121		03/13/19 10:15	1
Toluene-d8 (Surr)	80		70 - 123		03/13/19 10:15	1

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108876-1

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

Lab Sample ID: LCS 240-371378/4

Matrix: Water

Analysis Batch: 371378

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	14.7		ug/L		73	21 - 162
Benzene	10.0	10.4		ug/L		104	80 - 123
Bromodichloromethane	10.0	8.75		ug/L		87	77 - 125
Bromoform	10.0	5.87		ug/L		59	49 - 141
Bromomethane	10.0	7.01		ug/L		70	41 - 175
2-Butanone (MEK)	20.0	13.2		ug/L		66	39 - 163
Carbon disulfide	10.0	7.50		ug/L		75	60 - 138
Carbon tetrachloride	10.0	10.2		ug/L		102	63 - 140
Chlorobenzene	10.0	10.5		ug/L		105	80 - 121
Chloroethane	10.0	7.66		ug/L		77	33 - 173
Chloroform	10.0	10.9		ug/L		109	79 - 127
Chloromethane	10.0	8.54		ug/L		85	54 - 143
cis-1,2-Dichloroethene	10.0	10.7		ug/L		107	76 - 128
cis-1,3-Dichloropropene	10.0	7.70		ug/L		77	64 - 132
Cyclohexane	10.0	9.27		ug/L		93	58 - 145
Dibromochloromethane	10.0	8.30		ug/L		83	70 - 132
1,2-Dibromo-3-Chloropropane	10.0	5.06		ug/L		51	46 - 132
1,2-Dibromoethane	10.0	8.44		ug/L		84	77 - 123
1,2-Dichlorobenzene	10.0	10.4		ug/L		104	78 - 120
1,3-Dichlorobenzene	10.0	10.2		ug/L		102	78 - 120
1,4-Dichlorobenzene	10.0	10.2		ug/L		102	78 - 120
Dichlorodifluoromethane	10.0	9.56		ug/L		96	29 - 148
1,1-Dichloroethane	10.0	10.4		ug/L		104	75 - 133
1,2-Dichloroethane	10.0	9.91		ug/L		99	71 - 135
1,1-Dichloroethene	10.0	8.93		ug/L		89	65 - 139
1,2-Dichloropropane	10.0	9.62		ug/L		96	78 - 133
Ethylbenzene	10.0	10.0		ug/L		100	80 - 120
2-Hexanone	20.0	10.9		ug/L		54	43 - 148
Isopropylbenzene	10.0	10.3		ug/L		103	74 - 120
Methyl acetate	20.0	13.2		ug/L		66	52 - 145
Methylcyclohexane	10.0	9.50		ug/L		95	60 - 125
Methylene Chloride	10.0	11.5		ug/L		115	70 - 134
4-Methyl-2-pentanone (MIBK)	20.0	11.1		ug/L		55	49 - 143
Methyl tert-butyl ether	10.0	6.96		ug/L		70	51 - 133
Styrene	10.0	9.79		ug/L		98	79 - 120
1,1,2,2-Tetrachloroethane	10.0	7.51		ug/L		75	65 - 139
Tetrachloroethene	10.0	11.4		ug/L		114	74 - 130
Toluene	10.0	10.5		ug/L		105	78 - 129
trans-1,2-Dichloroethene	10.0	11.1		ug/L		111	78 - 133
trans-1,3-Dichloropropene	10.0	6.50		ug/L		65	55 - 128
1,2,4-Trichlorobenzene	10.0	9.22		ug/L		92	42 - 133
1,1,1-Trichloroethane	10.0	11.2		ug/L		112	69 - 134
1,1,2-Trichloroethane	10.0	9.55		ug/L		96	78 - 133
Trichloroethene	10.0	10.4		ug/L		104	76 - 125
Trichlorofluoromethane	10.0	9.83		ug/L		98	51 - 164
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	10.4		ug/L		104	50 - 156
1,2,4-Trimethylbenzene	10.0	9.98		ug/L		100	74 - 120

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108876-1

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

Lab Sample ID: LCS 240-371378/4
Matrix: Water
Analysis Batch: 371378

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	9.99		ug/L		100	75 - 121
Vinyl chloride	10.0	8.49		ug/L		85	58 - 143
Xylenes, Total	20.0	20.4		ug/L		102	80 - 120
Diethyl ether	10.0	8.87		ug/L		89	70 - 146

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	78		59 - 120
Dibromofluoromethane (Surr)	88		75 - 128
1,2-Dichloroethane-d4 (Surr)	78		70 - 121
Toluene-d8 (Surr)	83		70 - 123

Lab Sample ID: 240-108876-7 MS
Matrix: Water
Analysis Batch: 371378

Client Sample ID: MW-52_030219
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	16.9		ug/L		85	10 - 168
Benzene	1.0	U	10.0	10.2		ug/L		102	71 - 122
Bromodichloromethane	1.0	U	10.0	8.19		ug/L		82	64 - 125
Bromoform	1.0	U	10.0	5.46		ug/L		55	44 - 129
Bromomethane	1.0	U	10.0	8.02		ug/L		80	19 - 187
2-Butanone (MEK)	10	U	20.0	12.6		ug/L		63	37 - 156
Carbon disulfide	5.0	U	10.0	7.38		ug/L		74	43 - 144
Carbon tetrachloride	1.0	U	10.0	8.71		ug/L		87	41 - 143
Chlorobenzene	1.0	U	10.0	10.3		ug/L		103	70 - 123
Chloroethane	1.0	U	10.0	7.55		ug/L		75	11 - 189
Chloroform	1.0	U	10.0	11.1		ug/L		111	68 - 130
Chloromethane	1.0	U	10.0	7.07		ug/L		71	31 - 154
cis-1,2-Dichloroethene	1.0	U	10.0	10.9		ug/L		109	64 - 130
cis-1,3-Dichloropropene	1.0	U	10.0	6.55		ug/L		66	48 - 127
Cyclohexane	1.0	U	10.0	7.38		ug/L		74	42 - 135
Dibromochloromethane	1.0	U	10.0	7.65		ug/L		76	60 - 129
1,2-Dibromo-3-Chloropropane	1.0	U	10.0	4.47		ug/L		45	38 - 124
1,2-Dibromoethane	1.0	U	10.0	8.02		ug/L		80	71 - 123
1,2-Dichlorobenzene	1.0	U	10.0	10.1		ug/L		101	64 - 120
1,3-Dichlorobenzene	1.0	U	10.0	9.82		ug/L		98	62 - 120
1,4-Dichlorobenzene	1.0	U	10.0	9.76		ug/L		98	63 - 120
Dichlorodifluoromethane	1.0	U	10.0	10.2		ug/L		102	28 - 136
1,1-Dichloroethane	1.0	U	10.0	10.5		ug/L		105	63 - 136
1,2-Dichloroethane	1.0	U	10.0	9.80		ug/L		98	65 - 135
1,1-Dichloroethene	1.0	U	10.0	8.58		ug/L		86	53 - 140
1,2-Dichloropropane	1.0	U	10.0	9.46		ug/L		95	70 - 132
Ethylbenzene	1.0	U	10.0	9.89		ug/L		99	66 - 120
2-Hexanone	10	U	20.0	11.5		ug/L		57	42 - 150
Isopropylbenzene	1.0	U	10.0	9.76		ug/L		98	59 - 120
Methyl acetate	10	U	20.0	13.3		ug/L		66	41 - 142
Methylcyclohexane	1.0	U	10.0	7.41		ug/L		74	37 - 123
Methylene Chloride	5.0	U	10.0	9.82		ug/L		98	61 - 130

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108876-1

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

Lab Sample ID: 240-108876-7 MS

Matrix: Water

Analysis Batch: 371378

Client Sample ID: MW-52_030219

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Methyl-2-pentanone (MIBK)	10	U	20.0	10.8		ug/L		54	44 - 143
Methyl tert-butyl ether	1.0	U	10.0	6.77		ug/L		68	41 - 136
Styrene	1.0	U	10.0	9.53		ug/L		95	68 - 120
1,1,2,2-Tetrachloroethane	1.0	U	10.0	7.27		ug/L		73	60 - 137
Tetrachloroethene	1.0	U	10.0	10.6		ug/L		106	51 - 136
Toluene	1.0	U	10.0	10.1		ug/L		101	62 - 132
trans-1,2-Dichloroethene	1.0	U	10.0	11.3		ug/L		113	68 - 133
trans-1,3-Dichloropropene	1.0	U	10.0	5.42		ug/L		54	40 - 125
1,2,4-Trichlorobenzene	1.0	U	10.0	8.59		ug/L		86	30 - 126
1,1,1-Trichloroethane	1.0	U	10.0	10.5		ug/L		105	51 - 138
1,1,2-Trichloroethane	1.0	U	10.0	9.41		ug/L		94	76 - 132
Trichloroethene	1.0	U	10.0	10.2		ug/L		102	55 - 131
Trichlorofluoromethane	1.0	U	10.0	10.2		ug/L		102	37 - 174
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	10.0	8.27		ug/L		83	31 - 156
1,2,4-Trimethylbenzene	1.0	U	10.0	9.52		ug/L		95	62 - 120
1,3,5-Trimethylbenzene	1.0	U	10.0	9.44		ug/L		94	64 - 120
Vinyl chloride	3.9		10.0	13.4		ug/L		95	43 - 154
Xylenes, Total	2.0	U	20.0	19.7		ug/L		99	67 - 120
Diethyl ether	2.0	U	10.0	8.79		ug/L		88	65 - 134

Surrogate	MS %Recovery	MS Qualifier	MS Limits
4-Bromofluorobenzene (Surr)	87		59 - 120
Dibromofluoromethane (Surr)	101		75 - 128
1,2-Dichloroethane-d4 (Surr)	89		70 - 121
Toluene-d8 (Surr)	90		70 - 123

Lab Sample ID: 240-108876-7 MSD

Matrix: Water

Analysis Batch: 371378

Client Sample ID: MW-52_030219

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	15.4		ug/L		77	10 - 168	10	35
Benzene	1.0	U	10.0	9.44		ug/L		94	71 - 122	8	22
Bromodichloromethane	1.0	U	10.0	7.39		ug/L		74	64 - 125	10	27
Bromoform	1.0	U	10.0	5.28		ug/L		53	44 - 129	3	28
Bromomethane	1.0	U	10.0	8.82		ug/L		88	19 - 187	9	35
2-Butanone (MEK)	10	U	20.0	11.8		ug/L		59	37 - 156	7	35
Carbon disulfide	5.0	U	10.0	7.51		ug/L		75	43 - 144	2	33
Carbon tetrachloride	1.0	U	10.0	9.26		ug/L		93	41 - 143	6	30
Chlorobenzene	1.0	U	10.0	9.49		ug/L		95	70 - 123	9	23
Chloroethane	1.0	U	10.0	8.20		ug/L		82	11 - 189	8	35
Chloroform	1.0	U	10.0	10.2		ug/L		102	68 - 130	8	23
Chloromethane	1.0	U	10.0	6.71		ug/L		67	31 - 154	5	35
cis-1,2-Dichloroethene	1.0	U	10.0	10.0		ug/L		100	64 - 130	8	21
cis-1,3-Dichloropropene	1.0	U	10.0	6.01		ug/L		60	48 - 127	9	30
Cyclohexane	1.0	U	10.0	8.96		ug/L		90	42 - 135	19	35
Dibromochloromethane	1.0	U	10.0	7.02		ug/L		70	60 - 129	9	26

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108876-1

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

Lab Sample ID: 240-108876-7 MSD

Matrix: Water

Analysis Batch: 371378

Client Sample ID: MW-52_030219

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	1.0	U	10.0	4.55		ug/L		46	38 - 124	2	35
1,2-Dibromoethane	1.0	U	10.0	7.56		ug/L		76	71 - 123	6	27
1,2-Dichlorobenzene	1.0	U	10.0	9.60		ug/L		96	64 - 120	5	30
1,3-Dichlorobenzene	1.0	U	10.0	9.11		ug/L		91	62 - 120	7	31
1,4-Dichlorobenzene	1.0	U	10.0	9.14		ug/L		91	63 - 120	7	28
Dichlorodifluoromethane	1.0	U	10.0	9.79		ug/L		98	28 - 136	4	35
1,1-Dichloroethane	1.0	U	10.0	9.43		ug/L		94	63 - 136	10	23
1,2-Dichloroethane	1.0	U	10.0	8.70		ug/L		87	65 - 135	12	24
1,1-Dichloroethene	1.0	U	10.0	8.55		ug/L		85	53 - 140	0	35
1,2-Dichloropropane	1.0	U	10.0	8.59		ug/L		86	70 - 132	10	26
Ethylbenzene	1.0	U	10.0	9.07		ug/L		91	66 - 120	9	24
2-Hexanone	10	U	20.0	10.9		ug/L		55	42 - 150	5	35
Isopropylbenzene	1.0	U	10.0	9.49		ug/L		95	59 - 120	3	31
Methyl acetate	10	U	20.0	11.7		ug/L		59	41 - 142	12	35
Methylcyclohexane	1.0	U	10.0	8.81		ug/L		88	37 - 123	17	35
Methylene Chloride	5.0	U	10.0	8.82		ug/L		88	61 - 130	11	29
4-Methyl-2-pentanone (MIBK)	10	U	20.0	10.1		ug/L		51	44 - 143	6	35
Methyl tert-butyl ether	1.0	U	10.0	6.45		ug/L		64	41 - 136	5	29
Styrene	1.0	U	10.0	8.72		ug/L		87	68 - 120	9	26
1,1,2,2-Tetrachloroethane	1.0	U	10.0	6.94		ug/L		69	60 - 137	5	31
Tetrachloroethene	1.0	U	10.0	10.3		ug/L		103	51 - 136	2	23
Toluene	1.0	U	10.0	9.37		ug/L		94	62 - 132	7	23
trans-1,2-Dichloroethene	1.0	U	10.0	10.6		ug/L		106	68 - 133	6	24
trans-1,3-Dichloropropene	1.0	U	10.0	5.18		ug/L		52	40 - 125	5	27
1,2,4-Trichlorobenzene	1.0	U	10.0	8.25		ug/L		83	30 - 126	4	35
1,1,1-Trichloroethane	1.0	U	10.0	10.4		ug/L		104	51 - 138	1	27
1,1,2-Trichloroethane	1.0	U	10.0	8.58		ug/L		86	76 - 132	9	25
Trichloroethene	1.0	U	10.0	9.39		ug/L		94	55 - 131	8	23
Trichlorofluoromethane	1.0	U	10.0	10.4		ug/L		104	37 - 174	1	35
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	10.0	10.4		ug/L		104	31 - 156	23	35
1,2,4-Trimethylbenzene	1.0	U	10.0	9.02		ug/L		90	62 - 120	5	27
1,3,5-Trimethylbenzene	1.0	U	10.0	8.94		ug/L		89	64 - 120	6	23
Vinyl chloride	3.9		10.0	13.6		ug/L		97	43 - 154	1	29
Xylenes, Total	2.0	U	20.0	18.6		ug/L		93	67 - 120	6	25
Diethyl ether	2.0	U	10.0	7.99		ug/L		80	65 - 134	10	33

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	85		59 - 120
Dibromofluoromethane (Surr)	97		75 - 128
1,2-Dichloroethane-d4 (Surr)	86		70 - 121
Toluene-d8 (Surr)	89		70 - 123

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108876-1

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

Lab Sample ID: MB 240-371078/5

Matrix: Water

Analysis Batch: 371078

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			03/11/19 13:44	1
Surrogate	%Recovery	MB Qualifier	Limits			D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	82		63 - 125					03/11/19 13:44	1

Lab Sample ID: LCS 240-371078/4

Matrix: Water

Analysis Batch: 371078

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	11.6		ug/L		116	59 - 131
Surrogate	%Recovery	LCS Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	79		63 - 125				

Lab Sample ID: MRL 240-371078/6

Matrix: Water

Analysis Batch: 371078

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	0.00112	J	ng/uL		112	10 - 150
Surrogate	%Recovery	MRL Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	78		10 - 150				

Lab Sample ID: 240-108876-1 MS

Matrix: Water

Analysis Batch: 371078

Client Sample ID: MW-30_030219

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	15		10.0	26.7		ug/L		117	52 - 129
Surrogate	%Recovery	MS Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	85		63 - 125						

Lab Sample ID: 240-108876-1 MSD

Matrix: Water

Analysis Batch: 371078

Client Sample ID: MW-30_030219

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	15		10.0	26.2		ug/L		112	52 - 129	2	13
Surrogate	%Recovery	MSD Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	81		63 - 125								

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108876-1

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

Lab Sample ID: 240-108876-2 MS

Matrix: Water

Analysis Batch: 371078

Client Sample ID: MW-31_030219

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	11.6		ug/L		116	52 - 129	
Surrogate	%Recovery	MS Qualifier	MS Limits							
1,2-Dichloroethane-d4 (Surr)	85		63 - 125							

Lab Sample ID: 240-108876-2 MSD

Matrix: Water

Analysis Batch: 371078

Client Sample ID: MW-31_030219

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	11.6		ug/L		116	52 - 129	0	13
Surrogate	%Recovery	MSD Qualifier	MSD Limits								
1,2-Dichloroethane-d4 (Surr)	83		63 - 125								

Lab Sample ID: 240-108876-4 MS

Matrix: Water

Analysis Batch: 371078

Client Sample ID: MW-15-61D_030219

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	11.4		ug/L		114	52 - 129
Surrogate	%Recovery	MS Qualifier	MS Limits						
1,2-Dichloroethane-d4 (Surr)	81		63 - 125						

Lab Sample ID: 240-108876-4 MSD

Matrix: Water

Analysis Batch: 371078

Client Sample ID: MW-15-61D_030219

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	3	13
Surrogate	%Recovery	MSD Qualifier	MSD Limits								
1,2-Dichloroethane-d4 (Surr)	83		63 - 125								

Lab Sample ID: 240-108876-7 MS

Matrix: Water

Analysis Batch: 371078

Client Sample ID: MW-52_030219

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	1.9	J	10.0	13.5		ug/L		116	52 - 129
Surrogate	%Recovery	MS Qualifier	MS Limits						
1,2-Dichloroethane-d4 (Surr)	80		63 - 125						

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-108876-1

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

Lab Sample ID: 240-108876-7 MSD
Matrix: Water
Analysis Batch: 371078

Client Sample ID: MW-52_030219
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	1.9	J	10.0	13.6		ug/L		118	52 - 129	1	13
Surrogate	%Recovery	MSD Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	84		63 - 125								

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QC Association Summary

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

TestAmerica Job ID: 240-108876-1

GC/MS VOA

Analysis Batch: 371066

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108876-1	MW-30_030219	Total/NA	Water	8260B	
MB 240-371066/6	Method Blank	Total/NA	Water	8260B	
LCS 240-371066/4	Lab Control Sample	Total/NA	Water	8260B	
240-108876-1 MS	MW-30_030219	Total/NA	Water	8260B	
240-108876-1 MSD	MW-30_030219	Total/NA	Water	8260B	

Analysis Batch: 371078

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108876-1	MW-30_030219	Total/NA	Water	8260B SIM	
240-108876-2	MW-31_030219	Total/NA	Water	8260B SIM	
240-108876-3	MW-34_030219	Total/NA	Water	8260B SIM	
240-108876-4	MW-15-61D_030219	Total/NA	Water	8260B SIM	
240-108876-5	MW-42_030219	Total/NA	Water	8260B SIM	
240-108876-6	MW-41_030219	Total/NA	Water	8260B SIM	
240-108876-7	MW-52_030219	Total/NA	Water	8260B SIM	
240-108876-8	MW-35_030219	Total/NA	Water	8260B SIM	
240-108876-9	MW-43_030219	Total/NA	Water	8260B SIM	
MB 240-371078/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-371078/4	Lab Control Sample	Total/NA	Water	8260B SIM	
MRL 240-371078/6	Lab Control Sample	Total/NA	Water	8260B SIM	
240-108876-1 MS	MW-30_030219	Total/NA	Water	8260B SIM	
240-108876-1 MSD	MW-30_030219	Total/NA	Water	8260B SIM	
240-108876-2 MS	MW-31_030219	Total/NA	Water	8260B SIM	
240-108876-2 MSD	MW-31_030219	Total/NA	Water	8260B SIM	
240-108876-4 MS	MW-15-61D_030219	Total/NA	Water	8260B SIM	
240-108876-4 MSD	MW-15-61D_030219	Total/NA	Water	8260B SIM	
240-108876-7 MS	MW-52_030219	Total/NA	Water	8260B SIM	
240-108876-7 MSD	MW-52_030219	Total/NA	Water	8260B SIM	

Analysis Batch: 371206

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108876-2	MW-31_030219	Total/NA	Water	8260B	
240-108876-3	MW-34_030219	Total/NA	Water	8260B	
MB 240-371206/6	Method Blank	Total/NA	Water	8260B	
LCS 240-371206/4	Lab Control Sample	Total/NA	Water	8260B	
240-108876-2 MS	MW-31_030219	Total/NA	Water	8260B	
240-108876-2 MSD	MW-31_030219	Total/NA	Water	8260B	

Analysis Batch: 371207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108876-4	MW-15-61D_030219	Total/NA	Water	8260B	
MB 240-371207/6	Method Blank	Total/NA	Water	8260B	
LCS 240-371207/4	Lab Control Sample	Total/NA	Water	8260B	
240-108876-4 MS	MW-15-61D_030219	Total/NA	Water	8260B	
240-108876-4 MSD	MW-15-61D_030219	Total/NA	Water	8260B	

Analysis Batch: 371376

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108876-10	TRIP BLANK	Total/NA	Water	8260B	
MB 240-371376/6	Method Blank	Total/NA	Water	8260B	
LCS 240-371376/4	Lab Control Sample	Total/NA	Water	8260B	

TestAmerica Canton

QC Association Summary

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

TestAmerica Job ID: 240-108876-1

Analysis Batch: 371378

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108876-5	MW-42_030219	Total/NA	Water	8260B	
240-108876-6	MW-41_030219	Total/NA	Water	8260B	
240-108876-7	MW-52_030219	Total/NA	Water	8260B	
240-108876-8	MW-35_030219	Total/NA	Water	8260B	
240-108876-9	MW-43_030219	Total/NA	Water	8260B	
MB 240-371378/6	Method Blank	Total/NA	Water	8260B	
LCS 240-371378/4	Lab Control Sample	Total/NA	Water	8260B	
240-108876-7 MS	MW-52_030219	Total/NA	Water	8260B	
240-108876-7 MSD	MW-52_030219	Total/NA	Water	8260B	

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Lab Chronicle

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

TestAmerica Job ID: 240-108876-1

Client Sample ID: MW-30_030219

Lab Sample ID: 240-108876-1

Date Collected: 03/02/19 10:53

Matrix: Water

Date Received: 03/05/19 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	371066	03/11/19 21:22	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	371078	03/11/19 14:34	SAM	TAL CAN

Client Sample ID: MW-31_030219

Lab Sample ID: 240-108876-2

Date Collected: 03/02/19 09:22

Matrix: Water

Date Received: 03/05/19 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	371206	03/12/19 16:25	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	371078	03/11/19 15:49	SAM	TAL CAN

Client Sample ID: MW-34_030219

Lab Sample ID: 240-108876-3

Date Collected: 03/02/19 12:35

Matrix: Water

Date Received: 03/05/19 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	371206	03/12/19 17:30	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	371078	03/11/19 17:04	SAM	TAL CAN

Client Sample ID: MW-15-61D_030219

Lab Sample ID: 240-108876-4

Date Collected: 03/02/19 09:25

Matrix: Water

Date Received: 03/05/19 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	371207	03/12/19 14:05	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	371078	03/11/19 17:29	SAM	TAL CAN

Client Sample ID: MW-42_030219

Lab Sample ID: 240-108876-5

Date Collected: 03/02/19 10:40

Matrix: Water

Date Received: 03/05/19 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	371378	03/13/19 11:29	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	371078	03/11/19 18:45	SAM	TAL CAN

Client Sample ID: MW-41_030219

Lab Sample ID: 240-108876-6

Date Collected: 03/02/19 11:45

Matrix: Water

Date Received: 03/05/19 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	371378	03/13/19 11:51	LEE	TAL CAN

TestAmerica Canton

Lab Chronicle

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

TestAmerica Job ID: 240-108876-1

Client Sample ID: MW-41_030219

Lab Sample ID: 240-108876-6

Date Collected: 03/02/19 11:45

Matrix: Water

Date Received: 03/05/19 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B SIM		1	371078	03/11/19 19:10	SAM	TAL CAN

Client Sample ID: MW-52_030219

Lab Sample ID: 240-108876-7

Date Collected: 03/02/19 10:05

Matrix: Water

Date Received: 03/05/19 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	371378	03/13/19 12:13	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	371078	03/11/19 19:35	SAM	TAL CAN

Client Sample ID: MW-35_030219

Lab Sample ID: 240-108876-8

Date Collected: 03/02/19 13:50

Matrix: Water

Date Received: 03/05/19 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	371378	03/13/19 13:18	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	371078	03/11/19 20:50	SAM	TAL CAN

Client Sample ID: MW-43_030219

Lab Sample ID: 240-108876-9

Date Collected: 03/02/19 12:00

Matrix: Water

Date Received: 03/05/19 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	371378	03/13/19 13:40	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	371078	03/11/19 21:15	SAM	TAL CAN

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-108876-10

Date Collected: 03/02/19 00:00

Matrix: Water

Date Received: 03/05/19 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	371376	03/13/19 12:25	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.

TestAmerica Job ID: 240-108876-1

Project/Site: Ford LTP Livonia MI - E203728

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 Canton

MICHIGAN
190

0.6/Co.4 1.8/1.6

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: Brighton — 10448 Citation Drive, Suite 200 / Brighton, MI 48116 / 810-225-2763

Client Contact		Regulatory program:		Lab Contact: Mike DeMonico		TestAmerica Laboratories, Inc.				
Company Name: Arcadis		<input type="checkbox"/> DW <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other		Site Contact: Angela DeGrandis		COC No: _____				
Address: 28550 Cabot Drive, Suite 500		Telephone: 248-994-2240		Telephone: 330-497-9396		For lab use only				
City/State/Zip: Novi, MI, 48377		Email: kris.toffler.hinskey@arcadis.com		Analysis Turnaround Time		/ of COCs				
Phone: 248-994-2240		Method of Shipment/Carrier:		TAT if different from below		Walk-in client				
Project Name: Ford LTP		Shipping/Tracking No:		10 day		Lab sampling				
Project Number: MI001454-0004-0001				<input type="checkbox"/> 3 weeks		Job/SDG No: _____				
PO # MI001454-0004-0001				<input type="checkbox"/> 2 weeks		Sample Specific Notes / Special Instructions:				
MI001454-0004-0003				<input type="checkbox"/> 1 week						
MI001454-0004-0003				<input type="checkbox"/> 2 days						
				<input type="checkbox"/> 1 day						
Sample Identification	Sample Date	Sample Time	Matrix				Filtered Sample (Y/N)	Composite / Grab	Containers & Preservatives	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
			Air	Aqueous	Sediment	Solid				
MW-30-030219	3/2/19	1053	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	HCl	<input type="checkbox"/>	MS / MSD
MW-31-030219	3/2/19	0922	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NaOH	<input type="checkbox"/>	MS / MSD
MW-34-030219	3/2/19	1235	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ZnAc	<input type="checkbox"/>	MS / MSD
MW-15-610-030219	3/2/19	0925	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other:	<input type="checkbox"/>	MS / MSD
MW-42-030219	3/2/19	1040	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,4-Dioxane 8260B SIM	<input type="checkbox"/>	MS / MSD
MW-41-030219	3/2/19	1145	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	VOCS 8260B	<input type="checkbox"/>	MS / MSD
MW-52-030219	3/2/19	1005	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	MS / MSD
MW-35-030219	3/2/19	1350	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	MS / MSD
MW-43-030219	3/2/19	1200	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	MS / MSD
TRIP BLANK	3/2/19		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	ANALYZE FOR VOCs ONLY



Special Instructions/QC Requirements & Comments:
Submit all results through Cadena at jim.tomalia@cadena.com. Cadena #E203728
Level IV Reporting.

Relinquished by: RACHEL BIELAK Paul Fendak	Company: ARCADIS	Date/Time: 3/2/19 15:30	Received by: MWI DOLB STORAGE	Company: ARCADIS	Date/Time: 3/2/19 15:30
Relinquished by: Catherine Infield	Company: ARCADIS	Date/Time: 3/4/19 14:10	Received by: MWI	Company: TESTAMERICA	Date/Time: 3/4/19 14:10
Relinquished by: [Signature]	Company: TESTAMERICA	Date/Time: 3/4/19 14:45	Received by: [Signature]	Company: [Signature]	Date/Time: 3/5/19 8:15

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Canton Facility _____
 Client Accadis Site Name _____ Cooler unpacked by: _____
 Cooler Received on 3/5/19 Opened on 3/5/19
 FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

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

TestAmerica Cooler # NA 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 1 Yes No
 -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
 -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
 -Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No
 If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# 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 # 831701 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: JR

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: _____

