

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton  
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North Canton, OH 44720  
Tel: (330)497-9396

TestAmerica Job ID: 240-95546-1

Client Project/Site: Ford LTP Livonia MI - E203728  
Revision: 1

For:

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

Attn: Kristoffer Hinskey



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Authorized for release by:  
6/1/2018 2:03:12 PM

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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

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

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# Definitions/Glossary

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

TestAmerica Job ID: 240-95546-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.
*	LCS or LCSD is outside acceptance 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: 240-95546-1

**Job ID: 240-95546-1**

**Laboratory: TestAmerica Canton**

**Narrative**

## CASE NARRATIVE

**Client: ARCADIS U.S., Inc.**

**Project: Ford LTP Livonia MI - E203728**

**Report Number: 240-95546-1**

### Revision

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

This report was revised on 6/1/2018 to correct QC data for sample 8.

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

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

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

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

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

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

### RECEIPT

The samples were received on 5/12/2018 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 1.9° C, 2.1° C, 2.3° C and 3.9° C.

### VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples MW-53\_050918 (240-95546-1), MW-54\_050918 (240-95546-2), MW-57\_050918 (240-95546-3), MW-56\_050918 (240-95546-4), MW-25\_050918 (240-95546-5), MW-62\_050918 (240-95546-6), MW-50\_050918 (240-95546-7), MW-63\_050918 (240-95546-8), MW-37\_051018 (240-95546-9), MW-69\_051018 (240-95546-10), MW-55\_051018 (240-95546-11), MW-64\_051018 (240-95546-12), DUP-02\_051018 (240-95546-13) and TRIP BLANK (240-95546-14) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 05/22/2018, 05/23/2018 and 05/24/2018.

1,2,4-Trichlorobenzene was detected in method blank MB 240-328190/6 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

# Case Narrative

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

TestAmerica Job ID: 240-95546-1

## Job ID: 240-95546-1 (Continued)

### Laboratory: TestAmerica Canton (Continued)

4-Bromofluorobenzene (Surr) failed the surrogate recovery criteria low for MW-63\_050918 (240-95546-8). Refer to the QC report for details.

1,1,2-Trichloroethane, 1,1-Dichloroethane and Toluene failed the recovery criteria high for LCS 240-328190/4.

1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, Chloroform, Toluene and trans-1,3-Dichloropropene failed the recovery criteria high for LCS 240-328363/4. Refer to the QC report for details.

Sample MW-50\_050918 (240-95546-7)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 327952 recovered above the upper control limit for multiple analytes. 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-53\_050918 (240-95546-1), MW-54\_050918 (240-95546-2), MW-57\_050918 (240-95546-3), MW-56\_050918 (240-95546-4), MW-25\_050918 (240-95546-5) and MW-62\_050918 (240-95546-6).

Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 328190 recovered above the upper control limit for Toluene. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following samples are impacted: MW-50\_050918 (240-95546-7), MW-63\_050918 (240-95546-8), MW-37\_051018 (240-95546-9), MW-69\_051018 (240-95546-10), MW-55\_051018 (240-95546-11), DUP-02\_051018 (240-95546-13) and TRIP BLANK (240-95546-14).

Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 240-328363 recovered above the upper control limit for multiple analytes. 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-64\_051018 (240-95546-12) and (CCVIS 240-328363/2).

Method(s) 8260B: The laboratory control sample (LCS) for 328190 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-50\_050918 (240-95546-7), MW-63\_050918 (240-95546-8), MW-37\_051018 (240-95546-9), MW-69\_051018 (240-95546-10), MW-55\_051018 (240-95546-11), DUP-02\_051018 (240-95546-13), TRIP BLANK (240-95546-14) and (LCS 240-328190/4).

Method(s) 8260B: The laboratory control sample (LCS) for analytical batch 240-328363 recovered outside control limits for multiple analytes. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported: MW-64\_051018 (240-95546-12) and (LCS 240-328363/4).

Method(s) 8260B: The method blank for preparation batch 328190 contained 1,2,4-Trichlorobenzene above the reporting limit (RL). None of the samples associated with this method blank contained the target compound; therefore, re-extraction and/or re-analysis of samples were not performed. MW-50\_050918 (240-95546-7), MW-63\_050918 (240-95546-8), MW-37\_051018 (240-95546-9), MW-69\_051018 (240-95546-10), MW-55\_051018 (240-95546-11), DUP-02\_051018 (240-95546-13) and TRIP BLANK (240-95546-14)

Method(s) 8260B: There was an MS/MSD analyzed in batch 328363 but could not be reported because the associated sample needed reanalyzed in a different batch: MW-64\_051018 (240-95546-12).

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-53\_050918 (240-95546-1), MW-54\_050918 (240-95546-2), MW-57\_050918 (240-95546-3), MW-56\_050918 (240-95546-4), MW-25\_050918 (240-95546-5), MW-62\_050918 (240-95546-6), MW-50\_050918 (240-95546-7), MW-63\_050918 (240-95546-8), MW-37\_051018 (240-95546-9), MW-69\_051018 (240-95546-10), MW-55\_051018 (240-95546-11), MW-64\_051018 (240-95546-12) and DUP-02\_051018 (240-95546-13) were analyzed for volatile organic compounds (GCMS SIM) in accordance with EPA SW-846 Method 8260B SIM. The samples were analyzed on 05/17/2018 and 05/18/2018.

1,4-Dioxane failed the recovery criteria low for the MS and MSD of sample 240-95545-4 in batch 240-327549. Refer to the QC report for details.

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

# Method Summary

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

TestAmerica Job ID: 240-95546-1

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: 240-95546-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-95546-1	MW-53_050918	Water	05/09/18 13:52	05/12/18 10:00
240-95546-2	MW-54_050918	Water	05/09/18 14:42	05/12/18 10:00
240-95546-3	MW-57_050918	Water	05/09/18 15:45	05/12/18 10:00
240-95546-4	MW-56_050918	Water	05/09/18 16:40	05/12/18 10:00
240-95546-5	MW-25_050918	Water	05/09/18 12:30	05/12/18 10:00
240-95546-6	MW-62_050918	Water	05/09/18 14:25	05/12/18 10:00
240-95546-7	MW-50_050918	Water	05/09/18 15:25	05/12/18 10:00
240-95546-8	MW-63_050918	Water	05/09/18 16:30	05/12/18 10:00
240-95546-9	MW-37_051018	Water	05/10/18 07:34	05/12/18 10:00
240-95546-10	MW-69_051018	Water	05/10/18 08:40	05/12/18 10:00
240-95546-11	MW-55_051018	Water	05/10/18 09:45	05/12/18 10:00
240-95546-12	MW-64_051018	Water	05/10/18 10:39	05/12/18 10:00
240-95546-13	DUP-02_051018	Water	05/10/18 00:00	05/12/18 10:00
240-95546-14	TRIP BLANK	Water	05/09/18 00:00	05/12/18 10:00

# Detection Summary

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

TestAmerica Job ID: 240-95546-1

## Client Sample ID: MW-53\_050918

## Lab Sample ID: 240-95546-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	1.4	J	2.0	0.24	ug/L	1		8260B SIM	Total/NA

## Client Sample ID: MW-54\_050918

## Lab Sample ID: 240-95546-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	1.7	J	2.0	0.24	ug/L	1		8260B SIM	Total/NA
Vinyl chloride	0.98	J	1.0	0.45	ug/L	1		8260B	Total/NA

## Client Sample ID: MW-57\_050918

## Lab Sample ID: 240-95546-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	3.9		2.0	0.24	ug/L	1		8260B SIM	Total/NA
Vinyl chloride	0.56	J	1.0	0.45	ug/L	1		8260B	Total/NA

## Client Sample ID: MW-56\_050918

## Lab Sample ID: 240-95546-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	2.7		2.0	0.24	ug/L	1		8260B SIM	Total/NA

## Client Sample ID: MW-25\_050918

## Lab Sample ID: 240-95546-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	0.99	J	2.0	0.24	ug/L	1		8260B SIM	Total/NA

## Client Sample ID: MW-62\_050918

## Lab Sample ID: 240-95546-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	1.5	J	2.0	0.24	ug/L	1		8260B SIM	Total/NA
cis-1,2-Dichloroethene	0.83	J	1.0	0.30	ug/L	1		8260B	Total/NA
Vinyl chloride	1.2		1.0	0.45	ug/L	1		8260B	Total/NA

## Client Sample ID: MW-50\_050918

## Lab Sample ID: 240-95546-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	2.8		2.0	0.24	ug/L	1		8260B SIM	Total/NA
cis-1,2-Dichloroethene	12		5.0	1.5	ug/L	5		8260B	Total/NA
Vinyl chloride	150		5.0	2.3	ug/L	5		8260B	Total/NA

## Client Sample ID: MW-63\_050918

## Lab Sample ID: 240-95546-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	2.5		1.0	0.30	ug/L	1		8260B	Total/NA

## Client Sample ID: MW-37\_051018

## Lab Sample ID: 240-95546-9

No Detections.

## Client Sample ID: MW-69\_051018

## Lab Sample ID: 240-95546-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	7.3		2.0	0.24	ug/L	1		8260B SIM	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: 240-95546-1

## Client Sample ID: MW-69\_051018 (Continued)

Lab Sample ID: 240-95546-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Vinyl chloride	3.3		1.0	0.45	ug/L	1			8260B	Total/NA

## Client Sample ID: MW-55\_051018

Lab Sample ID: 240-95546-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
1,4-Dioxane	1.2	J	2.0	0.24	ug/L	1			8260B SIM	Total/NA
Acetone	2.7	J	10	1.8	ug/L	1			8260B	Total/NA
Vinyl chloride	0.48	J	1.0	0.45	ug/L	1			8260B	Total/NA

## Client Sample ID: MW-64\_051018

Lab Sample ID: 240-95546-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Vinyl chloride	1.3		1.0	0.45	ug/L	1			8260B	Total/NA

## Client Sample ID: DUP-02\_051018

Lab Sample ID: 240-95546-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
1,4-Dioxane	7.6		2.0	0.24	ug/L	1			8260B SIM	Total/NA
Vinyl chloride	2.9		1.0	0.45	ug/L	1			8260B	Total/NA

## Client Sample ID: TRIP BLANK

Lab Sample ID: 240-95546-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Acetone	3.8	J	10	1.8	ug/L	1			8260B	Total/NA

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: 240-95546-1

**Client Sample ID: MW-53\_050918**

**Lab Sample ID: 240-95546-1**

**Date Collected: 05/09/18 13:52**

**Matrix: Water**

**Date Received: 05/12/18 10:00**

**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	0.24	ug/L			05/17/18 17:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	89		63 - 125					05/17/18 17:54	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			05/22/18 17:07	1
Benzene	1.0	U	1.0	0.28	ug/L			05/22/18 17:07	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			05/22/18 17:07	1
Bromoform	1.0	U	1.0	0.43	ug/L			05/22/18 17:07	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/22/18 17:07	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/22/18 17:07	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			05/22/18 17:07	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			05/22/18 17:07	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			05/22/18 17:07	1
Chloroethane	1.0	U	1.0	0.41	ug/L			05/22/18 17:07	1
Chloroform	1.0	U	1.0	0.31	ug/L			05/22/18 17:07	1
Chloromethane	1.0	U	1.0	0.43	ug/L			05/22/18 17:07	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/22/18 17:07	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			05/22/18 17:07	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			05/22/18 17:07	1
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			05/22/18 17:07	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			05/22/18 17:07	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			05/22/18 17:07	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			05/22/18 17:07	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			05/22/18 17:07	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			05/22/18 17:07	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			05/22/18 17:07	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/22/18 17:07	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/22/18 17:07	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			05/22/18 17:07	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			05/22/18 17:07	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			05/22/18 17:07	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			05/22/18 17:07	1
2-Hexanone	10	U	10	1.2	ug/L			05/22/18 17:07	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			05/22/18 17:07	1
Methyl acetate	10	U	10	1.4	ug/L			05/22/18 17:07	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			05/22/18 17:07	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			05/22/18 17:07	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			05/22/18 17:07	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			05/22/18 17:07	1
Styrene	1.0	U	1.0	0.23	ug/L			05/22/18 17:07	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			05/22/18 17:07	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			05/22/18 17:07	1
Toluene	1.0	U	1.0	0.23	ug/L			05/22/18 17:07	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			05/22/18 17:07	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			05/22/18 17:07	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			05/22/18 17:07	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			05/22/18 17:07	1

TestAmerica Canton

# Client Sample Results

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

TestAmerica Job ID: 240-95546-1

**Client Sample ID: MW-53\_050918**  
**Date Collected: 05/09/18 13:52**  
**Date Received: 05/12/18 10:00**

**Lab Sample ID: 240-95546-1**  
**Matrix: Water**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			05/22/18 17:07	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			05/22/18 17:07	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			05/22/18 17:07	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/22/18 17:07	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			05/22/18 17:07	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/22/18 17:07	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/22/18 17:07	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/22/18 17:07	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			05/22/18 17:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	73		69 - 120		05/22/18 17:07	1
Dibromofluoromethane (Surr)	102		69 - 124		05/22/18 17:07	1
1,2-Dichloroethane-d4 (Surr)	106		61 - 138		05/22/18 17:07	1
Toluene-d8 (Surr)	112		73 - 120		05/22/18 17:07	1

# Client Sample Results

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

TestAmerica Job ID: 240-95546-1

**Client Sample ID: MW-54\_050918**

**Lab Sample ID: 240-95546-2**

**Date Collected: 05/09/18 14:42**

**Matrix: Water**

**Date Received: 05/12/18 10:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	1.7	J	2.0	0.24	ug/L			05/17/18 19:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		63 - 125					05/17/18 19:34	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			05/22/18 17:30	1
Benzene	1.0	U	1.0	0.28	ug/L			05/22/18 17:30	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			05/22/18 17:30	1
Bromoform	1.0	U	1.0	0.43	ug/L			05/22/18 17:30	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/22/18 17:30	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/22/18 17:30	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			05/22/18 17:30	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			05/22/18 17:30	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			05/22/18 17:30	1
Chloroethane	1.0	U	1.0	0.41	ug/L			05/22/18 17:30	1
Chloroform	1.0	U	1.0	0.31	ug/L			05/22/18 17:30	1
Chloromethane	1.0	U	1.0	0.43	ug/L			05/22/18 17:30	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/22/18 17:30	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			05/22/18 17:30	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			05/22/18 17:30	1
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			05/22/18 17:30	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			05/22/18 17:30	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			05/22/18 17:30	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			05/22/18 17:30	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			05/22/18 17:30	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			05/22/18 17:30	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			05/22/18 17:30	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/22/18 17:30	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/22/18 17:30	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			05/22/18 17:30	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			05/22/18 17:30	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			05/22/18 17:30	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			05/22/18 17:30	1
2-Hexanone	10	U	10	1.2	ug/L			05/22/18 17:30	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			05/22/18 17:30	1
Methyl acetate	10	U	10	1.4	ug/L			05/22/18 17:30	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			05/22/18 17:30	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			05/22/18 17:30	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			05/22/18 17:30	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			05/22/18 17:30	1
Styrene	1.0	U	1.0	0.23	ug/L			05/22/18 17:30	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			05/22/18 17:30	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			05/22/18 17:30	1
Toluene	1.0	U	1.0	0.23	ug/L			05/22/18 17:30	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			05/22/18 17:30	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			05/22/18 17:30	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			05/22/18 17:30	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			05/22/18 17:30	1

TestAmerica Canton

# Client Sample Results

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

TestAmerica Job ID: 240-95546-1

**Client Sample ID: MW-54\_050918**

**Lab Sample ID: 240-95546-2**

**Date Collected: 05/09/18 14:42**

**Matrix: Water**

**Date Received: 05/12/18 10:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			05/22/18 17:30	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			05/22/18 17:30	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			05/22/18 17:30	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/22/18 17:30	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			05/22/18 17:30	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/22/18 17:30	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/22/18 17:30	1
<b>Vinyl chloride</b>	<b>0.98</b>	<b>J</b>	1.0	0.45	ug/L			05/22/18 17:30	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			05/22/18 17:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	73		69 - 120		05/22/18 17:30	1
Dibromofluoromethane (Surr)	103		69 - 124		05/22/18 17:30	1
1,2-Dichloroethane-d4 (Surr)	107		61 - 138		05/22/18 17:30	1
Toluene-d8 (Surr)	114		73 - 120		05/22/18 17:30	1

# Client Sample Results

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

TestAmerica Job ID: 240-95546-1

**Client Sample ID: MW-57\_050918**

**Lab Sample ID: 240-95546-3**

**Date Collected: 05/09/18 15:45**

**Matrix: Water**

**Date Received: 05/12/18 10:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	3.9		2.0	0.24	ug/L			05/17/18 19:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		63 - 125					05/17/18 19:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			05/22/18 17:52	1
Benzene	1.0	U	1.0	0.28	ug/L			05/22/18 17:52	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			05/22/18 17:52	1
Bromoform	1.0	U	1.0	0.43	ug/L			05/22/18 17:52	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/22/18 17:52	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/22/18 17:52	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			05/22/18 17:52	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			05/22/18 17:52	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			05/22/18 17:52	1
Chloroethane	1.0	U	1.0	0.41	ug/L			05/22/18 17:52	1
Chloroform	1.0	U	1.0	0.31	ug/L			05/22/18 17:52	1
Chloromethane	1.0	U	1.0	0.43	ug/L			05/22/18 17:52	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/22/18 17:52	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			05/22/18 17:52	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			05/22/18 17:52	1
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			05/22/18 17:52	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			05/22/18 17:52	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			05/22/18 17:52	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			05/22/18 17:52	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			05/22/18 17:52	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			05/22/18 17:52	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			05/22/18 17:52	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/22/18 17:52	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/22/18 17:52	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			05/22/18 17:52	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			05/22/18 17:52	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			05/22/18 17:52	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			05/22/18 17:52	1
2-Hexanone	10	U	10	1.2	ug/L			05/22/18 17:52	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			05/22/18 17:52	1
Methyl acetate	10	U	10	1.4	ug/L			05/22/18 17:52	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			05/22/18 17:52	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			05/22/18 17:52	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			05/22/18 17:52	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			05/22/18 17:52	1
Styrene	1.0	U	1.0	0.23	ug/L			05/22/18 17:52	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			05/22/18 17:52	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			05/22/18 17:52	1
Toluene	1.0	U	1.0	0.23	ug/L			05/22/18 17:52	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			05/22/18 17:52	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			05/22/18 17:52	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			05/22/18 17:52	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			05/22/18 17:52	1

TestAmerica Canton

# Client Sample Results

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

TestAmerica Job ID: 240-95546-1

**Client Sample ID: MW-57\_050918**

**Lab Sample ID: 240-95546-3**

**Date Collected: 05/09/18 15:45**

**Matrix: Water**

**Date Received: 05/12/18 10:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			05/22/18 17:52	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			05/22/18 17:52	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			05/22/18 17:52	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/22/18 17:52	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			05/22/18 17:52	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/22/18 17:52	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/22/18 17:52	1
<b>Vinyl chloride</b>	<b>0.56</b>	<b>J</b>	1.0	0.45	ug/L			05/22/18 17:52	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			05/22/18 17:52	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	74		69 - 120					05/22/18 17:52	1
Dibromofluoromethane (Surr)	110		69 - 124					05/22/18 17:52	1
1,2-Dichloroethane-d4 (Surr)	107		61 - 138					05/22/18 17:52	1
Toluene-d8 (Surr)	115		73 - 120					05/22/18 17:52	1

# Client Sample Results

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

TestAmerica Job ID: 240-95546-1

**Client Sample ID: MW-56\_050918**

**Lab Sample ID: 240-95546-4**

**Date Collected: 05/09/18 16:40**

**Matrix: Water**

**Date Received: 05/12/18 10:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.7		2.0	0.24	ug/L			05/17/18 20:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		63 - 125					05/17/18 20:24	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			05/22/18 18:15	1
Benzene	1.0	U	1.0	0.28	ug/L			05/22/18 18:15	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			05/22/18 18:15	1
Bromoform	1.0	U	1.0	0.43	ug/L			05/22/18 18:15	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/22/18 18:15	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/22/18 18:15	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			05/22/18 18:15	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			05/22/18 18:15	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			05/22/18 18:15	1
Chloroethane	1.0	U	1.0	0.41	ug/L			05/22/18 18:15	1
Chloroform	1.0	U	1.0	0.31	ug/L			05/22/18 18:15	1
Chloromethane	1.0	U	1.0	0.43	ug/L			05/22/18 18:15	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/22/18 18:15	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			05/22/18 18:15	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			05/22/18 18:15	1
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			05/22/18 18:15	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			05/22/18 18:15	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			05/22/18 18:15	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			05/22/18 18:15	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			05/22/18 18:15	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			05/22/18 18:15	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			05/22/18 18:15	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/22/18 18:15	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/22/18 18:15	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			05/22/18 18:15	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			05/22/18 18:15	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			05/22/18 18:15	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			05/22/18 18:15	1
2-Hexanone	10	U	10	1.2	ug/L			05/22/18 18:15	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			05/22/18 18:15	1
Methyl acetate	10	U	10	1.4	ug/L			05/22/18 18:15	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			05/22/18 18:15	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			05/22/18 18:15	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			05/22/18 18:15	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			05/22/18 18:15	1
Styrene	1.0	U	1.0	0.23	ug/L			05/22/18 18:15	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			05/22/18 18:15	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			05/22/18 18:15	1
Toluene	1.0	U	1.0	0.23	ug/L			05/22/18 18:15	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			05/22/18 18:15	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			05/22/18 18:15	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			05/22/18 18:15	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			05/22/18 18:15	1

TestAmerica Canton



# Client Sample Results

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

TestAmerica Job ID: 240-95546-1

**Client Sample ID: MW-56\_050918**

**Lab Sample ID: 240-95546-4**

**Date Collected: 05/09/18 16:40**

**Matrix: Water**

**Date Received: 05/12/18 10:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			05/22/18 18:15	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			05/22/18 18:15	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			05/22/18 18:15	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/22/18 18:15	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			05/22/18 18:15	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/22/18 18:15	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/22/18 18:15	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/22/18 18:15	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			05/22/18 18:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	74		69 - 120		05/22/18 18:15	1
Dibromofluoromethane (Surr)	106		69 - 124		05/22/18 18:15	1
1,2-Dichloroethane-d4 (Surr)	106		61 - 138		05/22/18 18:15	1
Toluene-d8 (Surr)	114		73 - 120		05/22/18 18:15	1

# Client Sample Results

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

TestAmerica Job ID: 240-95546-1

**Client Sample ID: MW-25\_050918**

**Lab Sample ID: 240-95546-5**

**Date Collected: 05/09/18 12:30**

**Matrix: Water**

**Date Received: 05/12/18 10:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.99	J	2.0	0.24	ug/L			05/17/18 20:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		63 - 125					05/17/18 20:49	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			05/22/18 18:36	1
Benzene	1.0	U	1.0	0.28	ug/L			05/22/18 18:36	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			05/22/18 18:36	1
Bromoform	1.0	U	1.0	0.43	ug/L			05/22/18 18:36	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/22/18 18:36	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/22/18 18:36	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			05/22/18 18:36	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			05/22/18 18:36	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			05/22/18 18:36	1
Chloroethane	1.0	U	1.0	0.41	ug/L			05/22/18 18:36	1
Chloroform	1.0	U	1.0	0.31	ug/L			05/22/18 18:36	1
Chloromethane	1.0	U	1.0	0.43	ug/L			05/22/18 18:36	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/22/18 18:36	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			05/22/18 18:36	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			05/22/18 18:36	1
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			05/22/18 18:36	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			05/22/18 18:36	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			05/22/18 18:36	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			05/22/18 18:36	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			05/22/18 18:36	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			05/22/18 18:36	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			05/22/18 18:36	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/22/18 18:36	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/22/18 18:36	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			05/22/18 18:36	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			05/22/18 18:36	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			05/22/18 18:36	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			05/22/18 18:36	1
2-Hexanone	10	U	10	1.2	ug/L			05/22/18 18:36	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			05/22/18 18:36	1
Methyl acetate	10	U	10	1.4	ug/L			05/22/18 18:36	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			05/22/18 18:36	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			05/22/18 18:36	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			05/22/18 18:36	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			05/22/18 18:36	1
Styrene	1.0	U	1.0	0.23	ug/L			05/22/18 18:36	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			05/22/18 18:36	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			05/22/18 18:36	1
Toluene	1.0	U	1.0	0.23	ug/L			05/22/18 18:36	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			05/22/18 18:36	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			05/22/18 18:36	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			05/22/18 18:36	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			05/22/18 18:36	1

TestAmerica Canton

# Client Sample Results

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

TestAmerica Job ID: 240-95546-1

**Client Sample ID: MW-25\_050918**

**Lab Sample ID: 240-95546-5**

**Date Collected: 05/09/18 12:30**

**Matrix: Water**

**Date Received: 05/12/18 10:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			05/22/18 18:36	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			05/22/18 18:36	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			05/22/18 18:36	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/22/18 18:36	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			05/22/18 18:36	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/22/18 18:36	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/22/18 18:36	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/22/18 18:36	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			05/22/18 18:36	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	75		69 - 120					05/22/18 18:36	1
Dibromofluoromethane (Surr)	108		69 - 124					05/22/18 18:36	1
1,2-Dichloroethane-d4 (Surr)	108		61 - 138					05/22/18 18:36	1
Toluene-d8 (Surr)	116		73 - 120					05/22/18 18:36	1

# Client Sample Results

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

TestAmerica Job ID: 240-95546-1

**Client Sample ID: MW-62\_050918**

**Lab Sample ID: 240-95546-6**

**Date Collected: 05/09/18 14:25**

**Matrix: Water**

**Date Received: 05/12/18 10:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	1.5	J	2.0	0.24	ug/L			05/17/18 21:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		63 - 125					05/17/18 21:14	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			05/22/18 18:58	1
Benzene	1.0	U	1.0	0.28	ug/L			05/22/18 18:58	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			05/22/18 18:58	1
Bromoform	1.0	U	1.0	0.43	ug/L			05/22/18 18:58	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/22/18 18:58	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/22/18 18:58	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			05/22/18 18:58	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			05/22/18 18:58	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			05/22/18 18:58	1
Chloroethane	1.0	U	1.0	0.41	ug/L			05/22/18 18:58	1
Chloroform	1.0	U	1.0	0.31	ug/L			05/22/18 18:58	1
Chloromethane	1.0	U	1.0	0.43	ug/L			05/22/18 18:58	1
<b>cis-1,2-Dichloroethene</b>	<b>0.83</b>	<b>J</b>	1.0	0.30	ug/L			05/22/18 18:58	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			05/22/18 18:58	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			05/22/18 18:58	1
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			05/22/18 18:58	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			05/22/18 18:58	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			05/22/18 18:58	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			05/22/18 18:58	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			05/22/18 18:58	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			05/22/18 18:58	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			05/22/18 18:58	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/22/18 18:58	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/22/18 18:58	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			05/22/18 18:58	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			05/22/18 18:58	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			05/22/18 18:58	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			05/22/18 18:58	1
2-Hexanone	10	U	10	1.2	ug/L			05/22/18 18:58	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			05/22/18 18:58	1
Methyl acetate	10	U	10	1.4	ug/L			05/22/18 18:58	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			05/22/18 18:58	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			05/22/18 18:58	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			05/22/18 18:58	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			05/22/18 18:58	1
Styrene	1.0	U	1.0	0.23	ug/L			05/22/18 18:58	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			05/22/18 18:58	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			05/22/18 18:58	1
Toluene	1.0	U	1.0	0.23	ug/L			05/22/18 18:58	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			05/22/18 18:58	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			05/22/18 18:58	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			05/22/18 18:58	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			05/22/18 18:58	1

TestAmerica Canton

# Client Sample Results

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

TestAmerica Job ID: 240-95546-1

**Client Sample ID: MW-62\_050918**

**Lab Sample ID: 240-95546-6**

**Date Collected: 05/09/18 14:25**

**Matrix: Water**

**Date Received: 05/12/18 10:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			05/22/18 18:58	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			05/22/18 18:58	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			05/22/18 18:58	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/22/18 18:58	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			05/22/18 18:58	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/22/18 18:58	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/22/18 18:58	1
<b>Vinyl chloride</b>	<b>1.2</b>		1.0	0.45	ug/L			05/22/18 18:58	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			05/22/18 18:58	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	75		69 - 120					05/22/18 18:58	1
Dibromofluoromethane (Surr)	107		69 - 124					05/22/18 18:58	1
1,2-Dichloroethane-d4 (Surr)	106		61 - 138					05/22/18 18:58	1
Toluene-d8 (Surr)	115		73 - 120					05/22/18 18:58	1

# Client Sample Results

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

TestAmerica Job ID: 240-95546-1

**Client Sample ID: MW-50\_050918**

**Lab Sample ID: 240-95546-7**

**Date Collected: 05/09/18 15:25**

**Matrix: Water**

**Date Received: 05/12/18 10:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.8		2.0	0.24	ug/L			05/17/18 21:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		63 - 125					05/17/18 21:39	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	50	U	50	8.8	ug/L			05/23/18 13:32	5
Benzene	5.0	U	5.0	1.4	ug/L			05/23/18 13:32	5
Bromodichloromethane	5.0	U	5.0	1.5	ug/L			05/23/18 13:32	5
Bromoform	5.0	U	5.0	2.2	ug/L			05/23/18 13:32	5
Bromomethane	5.0	U	5.0	2.1	ug/L			05/23/18 13:32	5
2-Butanone (MEK)	50	U	50	5.1	ug/L			05/23/18 13:32	5
Carbon disulfide	25	U	25	1.7	ug/L			05/23/18 13:32	5
Carbon tetrachloride	5.0	U	5.0	1.8	ug/L			05/23/18 13:32	5
Chlorobenzene	5.0	U	5.0	1.6	ug/L			05/23/18 13:32	5
Chloroethane	5.0	U	5.0	2.1	ug/L			05/23/18 13:32	5
Chloroform	5.0	U	5.0	1.6	ug/L			05/23/18 13:32	5
Chloromethane	5.0	U	5.0	2.2	ug/L			05/23/18 13:32	5
cis-1,2-Dichloroethene	12		5.0	1.5	ug/L			05/23/18 13:32	5
cis-1,3-Dichloropropene	5.0	U	5.0	1.3	ug/L			05/23/18 13:32	5
Cyclohexane	5.0	U	5.0	2.2	ug/L			05/23/18 13:32	5
Dibromochloromethane	5.0	U	5.0	1.3	ug/L			05/23/18 13:32	5
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	2.4	ug/L			05/23/18 13:32	5
1,2-Dibromoethane	5.0	U	5.0	1.2	ug/L			05/23/18 13:32	5
1,2-Dichlorobenzene	5.0	U	5.0	1.3	ug/L			05/23/18 13:32	5
1,3-Dichlorobenzene	5.0	U	5.0	1.6	ug/L			05/23/18 13:32	5
1,4-Dichlorobenzene	5.0	U	5.0	1.2	ug/L			05/23/18 13:32	5
Dichlorodifluoromethane	5.0	U	5.0	2.5	ug/L			05/23/18 13:32	5
1,1-Dichloroethane	5.0	U *	5.0	1.3	ug/L			05/23/18 13:32	5
1,2-Dichloroethane	5.0	U	5.0	1.5	ug/L			05/23/18 13:32	5
1,1-Dichloroethene	5.0	U	5.0	1.4	ug/L			05/23/18 13:32	5
1,2-Dichloropropane	5.0	U	5.0	1.5	ug/L			05/23/18 13:32	5
Diethyl ether	10	U	10	1.8	ug/L			05/23/18 13:32	5
Ethylbenzene	5.0	U	5.0	1.3	ug/L			05/23/18 13:32	5
2-Hexanone	50	U	50	6.2	ug/L			05/23/18 13:32	5
Isopropylbenzene	5.0	U	5.0	1.1	ug/L			05/23/18 13:32	5
Methyl acetate	50	U	50	7.2	ug/L			05/23/18 13:32	5
Methylcyclohexane	5.0	U	5.0	2.3	ug/L			05/23/18 13:32	5
Methylene Chloride	25	U	25	2.7	ug/L			05/23/18 13:32	5
4-Methyl-2-pentanone (MIBK)	50	U	50	3.6	ug/L			05/23/18 13:32	5
Methyl tert-butyl ether	5.0	U	5.0	1.4	ug/L			05/23/18 13:32	5
Styrene	5.0	U	5.0	1.2	ug/L			05/23/18 13:32	5
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1.6	ug/L			05/23/18 13:32	5
Tetrachloroethene	5.0	U	5.0	1.5	ug/L			05/23/18 13:32	5
Toluene	5.0	U *	5.0	1.2	ug/L			05/23/18 13:32	5
trans-1,2-Dichloroethene	5.0	U	5.0	1.5	ug/L			05/23/18 13:32	5
trans-1,3-Dichloropropene	5.0	U	5.0	1.6	ug/L			05/23/18 13:32	5
1,2,4-Trichlorobenzene	5.0	U	5.0	1.4	ug/L			05/23/18 13:32	5
1,1,1-Trichloroethane	5.0	U	5.0	1.2	ug/L			05/23/18 13:32	5

TestAmerica Canton

# Client Sample Results

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

TestAmerica Job ID: 240-95546-1

**Client Sample ID: MW-50\_050918**

**Lab Sample ID: 240-95546-7**

**Date Collected: 05/09/18 15:25**

**Matrix: Water**

**Date Received: 05/12/18 10:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	5.0	U *	5.0	1.7	ug/L			05/23/18 13:32	5
Trichloroethene	5.0	U	5.0	1.7	ug/L			05/23/18 13:32	5
Trichlorofluoromethane	5.0	U	5.0	2.5	ug/L			05/23/18 13:32	5
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U	5.0	2.1	ug/L			05/23/18 13:32	5
1,2,3-Trimethylbenzene	25	U	25	1.1	ug/L			05/23/18 13:32	5
1,2,4-Trimethylbenzene	5.0	U	5.0	1.2	ug/L			05/23/18 13:32	5
1,3,5-Trimethylbenzene	5.0	U	5.0	1.2	ug/L			05/23/18 13:32	5
<b>Vinyl chloride</b>	<b>150</b>		5.0	2.3	ug/L			05/23/18 13:32	5
Xylenes, Total	10	U	10	1.2	ug/L			05/23/18 13:32	5
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	78		69 - 120					05/23/18 13:32	5
Dibromofluoromethane (Surr)	108		69 - 124					05/23/18 13:32	5
1,2-Dichloroethane-d4 (Surr)	107		61 - 138					05/23/18 13:32	5
Toluene-d8 (Surr)	119		73 - 120					05/23/18 13:32	5

# Client Sample Results

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

TestAmerica Job ID: 240-95546-1

**Client Sample ID: MW-63\_050918**

**Lab Sample ID: 240-95546-8**

**Date Collected: 05/09/18 16:30**

**Matrix: Water**

**Date Received: 05/12/18 10:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.24	ug/L			05/17/18 22:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		63 - 125					05/17/18 22:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			05/23/18 13:54	1
Benzene	1.0	U	1.0	0.28	ug/L			05/23/18 13:54	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			05/23/18 13:54	1
Bromoform	1.0	U	1.0	0.43	ug/L			05/23/18 13:54	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/23/18 13:54	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/23/18 13:54	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			05/23/18 13:54	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			05/23/18 13:54	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			05/23/18 13:54	1
Chloroethane	1.0	U	1.0	0.41	ug/L			05/23/18 13:54	1
Chloroform	1.0	U	1.0	0.31	ug/L			05/23/18 13:54	1
Chloromethane	1.0	U	1.0	0.43	ug/L			05/23/18 13:54	1
<b>cis-1,2-Dichloroethene</b>	<b>2.5</b>		1.0	0.30	ug/L			05/23/18 13:54	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			05/23/18 13:54	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			05/23/18 13:54	1
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			05/23/18 13:54	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			05/23/18 13:54	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			05/23/18 13:54	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			05/23/18 13:54	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			05/23/18 13:54	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			05/23/18 13:54	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			05/23/18 13:54	1
1,1-Dichloroethane	1.0	U *	1.0	0.25	ug/L			05/23/18 13:54	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/23/18 13:54	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			05/23/18 13:54	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			05/23/18 13:54	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			05/23/18 13:54	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			05/23/18 13:54	1
2-Hexanone	10	U	10	1.2	ug/L			05/23/18 13:54	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			05/23/18 13:54	1
Methyl acetate	10	U	10	1.4	ug/L			05/23/18 13:54	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			05/23/18 13:54	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			05/23/18 13:54	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			05/23/18 13:54	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			05/23/18 13:54	1
Styrene	1.0	U	1.0	0.23	ug/L			05/23/18 13:54	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			05/23/18 13:54	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			05/23/18 13:54	1
Toluene	1.0	U *	1.0	0.23	ug/L			05/23/18 13:54	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			05/23/18 13:54	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			05/23/18 13:54	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			05/23/18 13:54	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			05/23/18 13:54	1

TestAmerica Canton



# Client Sample Results

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

TestAmerica Job ID: 240-95546-1

**Client Sample ID: MW-63\_050918**

**Lab Sample ID: 240-95546-8**

**Date Collected: 05/09/18 16:30**

**Matrix: Water**

**Date Received: 05/12/18 10:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U *	1.0	0.34	ug/L			05/23/18 13:54	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			05/23/18 13:54	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			05/23/18 13:54	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/23/18 13:54	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			05/23/18 13:54	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/23/18 13:54	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/23/18 13:54	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/23/18 13:54	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			05/23/18 13:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	68	X	69 - 120		05/22/18 19:44	1
4-Bromofluorobenzene (Surr)	75		69 - 120		05/23/18 13:54	1
Dibromofluoromethane (Surr)	99		69 - 124		05/22/18 19:44	1
Dibromofluoromethane (Surr)	105		69 - 124		05/23/18 13:54	1
1,2-Dichloroethane-d4 (Surr)	100		61 - 138		05/22/18 19:44	1
1,2-Dichloroethane-d4 (Surr)	110		61 - 138		05/23/18 13:54	1
Toluene-d8 (Surr)	106		73 - 120		05/22/18 19:44	1
Toluene-d8 (Surr)	111		73 - 120		05/23/18 13:54	1

# Client Sample Results

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

TestAmerica Job ID: 240-95546-1

**Client Sample ID: MW-37\_051018**

**Lab Sample ID: 240-95546-9**

**Date Collected: 05/10/18 07:34**

**Matrix: Water**

**Date Received: 05/12/18 10:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.24	ug/L			05/17/18 22:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		63 - 125					05/17/18 22:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			05/23/18 14:17	1
Benzene	1.0	U	1.0	0.28	ug/L			05/23/18 14:17	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			05/23/18 14:17	1
Bromoform	1.0	U	1.0	0.43	ug/L			05/23/18 14:17	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/23/18 14:17	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/23/18 14:17	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			05/23/18 14:17	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			05/23/18 14:17	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			05/23/18 14:17	1
Chloroethane	1.0	U	1.0	0.41	ug/L			05/23/18 14:17	1
Chloroform	1.0	U	1.0	0.31	ug/L			05/23/18 14:17	1
Chloromethane	1.0	U	1.0	0.43	ug/L			05/23/18 14:17	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/23/18 14:17	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			05/23/18 14:17	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			05/23/18 14:17	1
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			05/23/18 14:17	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			05/23/18 14:17	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			05/23/18 14:17	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			05/23/18 14:17	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			05/23/18 14:17	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			05/23/18 14:17	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			05/23/18 14:17	1
1,1-Dichloroethane	1.0	U *	1.0	0.25	ug/L			05/23/18 14:17	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/23/18 14:17	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			05/23/18 14:17	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			05/23/18 14:17	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			05/23/18 14:17	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			05/23/18 14:17	1
2-Hexanone	10	U	10	1.2	ug/L			05/23/18 14:17	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			05/23/18 14:17	1
Methyl acetate	10	U	10	1.4	ug/L			05/23/18 14:17	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			05/23/18 14:17	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			05/23/18 14:17	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			05/23/18 14:17	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			05/23/18 14:17	1
Styrene	1.0	U	1.0	0.23	ug/L			05/23/18 14:17	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			05/23/18 14:17	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			05/23/18 14:17	1
Toluene	1.0	U *	1.0	0.23	ug/L			05/23/18 14:17	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			05/23/18 14:17	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			05/23/18 14:17	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			05/23/18 14:17	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			05/23/18 14:17	1

TestAmerica Canton

# Client Sample Results

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

TestAmerica Job ID: 240-95546-1

**Client Sample ID: MW-37\_051018**

**Lab Sample ID: 240-95546-9**

**Date Collected: 05/10/18 07:34**

**Matrix: Water**

**Date Received: 05/12/18 10:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U *	1.0	0.34	ug/L			05/23/18 14:17	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			05/23/18 14:17	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			05/23/18 14:17	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/23/18 14:17	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			05/23/18 14:17	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/23/18 14:17	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/23/18 14:17	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/23/18 14:17	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			05/23/18 14:17	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	69		69 - 120					05/23/18 14:17	1
Dibromofluoromethane (Surr)	102		69 - 124					05/23/18 14:17	1
1,2-Dichloroethane-d4 (Surr)	106		61 - 138					05/23/18 14:17	1
Toluene-d8 (Surr)	110		73 - 120					05/23/18 14:17	1

# Client Sample Results

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

TestAmerica Job ID: 240-95546-1

**Client Sample ID: MW-69\_051018**

**Lab Sample ID: 240-95546-10**

**Date Collected: 05/10/18 08:40**

**Matrix: Water**

**Date Received: 05/12/18 10:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	7.3		2.0	0.24	ug/L			05/17/18 22:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		63 - 125					05/17/18 22:54	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			05/23/18 14:40	1
Benzene	1.0	U	1.0	0.28	ug/L			05/23/18 14:40	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			05/23/18 14:40	1
Bromoform	1.0	U	1.0	0.43	ug/L			05/23/18 14:40	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/23/18 14:40	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/23/18 14:40	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			05/23/18 14:40	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			05/23/18 14:40	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			05/23/18 14:40	1
Chloroethane	1.0	U	1.0	0.41	ug/L			05/23/18 14:40	1
Chloroform	1.0	U	1.0	0.31	ug/L			05/23/18 14:40	1
Chloromethane	1.0	U	1.0	0.43	ug/L			05/23/18 14:40	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/23/18 14:40	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			05/23/18 14:40	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			05/23/18 14:40	1
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			05/23/18 14:40	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			05/23/18 14:40	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			05/23/18 14:40	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			05/23/18 14:40	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			05/23/18 14:40	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			05/23/18 14:40	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			05/23/18 14:40	1
1,1-Dichloroethane	1.0	U *	1.0	0.25	ug/L			05/23/18 14:40	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/23/18 14:40	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			05/23/18 14:40	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			05/23/18 14:40	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			05/23/18 14:40	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			05/23/18 14:40	1
2-Hexanone	10	U	10	1.2	ug/L			05/23/18 14:40	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			05/23/18 14:40	1
Methyl acetate	10	U	10	1.4	ug/L			05/23/18 14:40	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			05/23/18 14:40	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			05/23/18 14:40	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			05/23/18 14:40	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			05/23/18 14:40	1
Styrene	1.0	U	1.0	0.23	ug/L			05/23/18 14:40	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			05/23/18 14:40	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			05/23/18 14:40	1
Toluene	1.0	U *	1.0	0.23	ug/L			05/23/18 14:40	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			05/23/18 14:40	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			05/23/18 14:40	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			05/23/18 14:40	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			05/23/18 14:40	1

TestAmerica Canton

# Client Sample Results

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

TestAmerica Job ID: 240-95546-1

**Client Sample ID: MW-69\_051018**

**Lab Sample ID: 240-95546-10**

**Date Collected: 05/10/18 08:40**

**Matrix: Water**

**Date Received: 05/12/18 10:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U *	1.0	0.34	ug/L			05/23/18 14:40	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			05/23/18 14:40	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			05/23/18 14:40	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/23/18 14:40	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			05/23/18 14:40	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/23/18 14:40	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/23/18 14:40	1
<b>Vinyl chloride</b>	<b>3.3</b>		1.0	0.45	ug/L			05/23/18 14:40	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			05/23/18 14:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	79		69 - 120					05/23/18 14:40	1
Dibromofluoromethane (Surr)	112		69 - 124					05/23/18 14:40	1
1,2-Dichloroethane-d4 (Surr)	113		61 - 138					05/23/18 14:40	1
Toluene-d8 (Surr)	120		73 - 120					05/23/18 14:40	1

# Client Sample Results

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

TestAmerica Job ID: 240-95546-1

**Client Sample ID: MW-55\_051018**

**Lab Sample ID: 240-95546-11**

**Date Collected: 05/10/18 09:45**

**Matrix: Water**

**Date Received: 05/12/18 10:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	1.2	J	2.0	0.24	ug/L			05/17/18 18:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		63 - 125					05/17/18 18:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	2.7	J	10	1.8	ug/L			05/23/18 15:02	1
Benzene	1.0	U	1.0	0.28	ug/L			05/23/18 15:02	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			05/23/18 15:02	1
Bromoform	1.0	U	1.0	0.43	ug/L			05/23/18 15:02	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/23/18 15:02	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/23/18 15:02	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			05/23/18 15:02	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			05/23/18 15:02	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			05/23/18 15:02	1
Chloroethane	1.0	U	1.0	0.41	ug/L			05/23/18 15:02	1
Chloroform	1.0	U	1.0	0.31	ug/L			05/23/18 15:02	1
Chloromethane	1.0	U	1.0	0.43	ug/L			05/23/18 15:02	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/23/18 15:02	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			05/23/18 15:02	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			05/23/18 15:02	1
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			05/23/18 15:02	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			05/23/18 15:02	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			05/23/18 15:02	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			05/23/18 15:02	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			05/23/18 15:02	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			05/23/18 15:02	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			05/23/18 15:02	1
1,1-Dichloroethane	1.0	U *	1.0	0.25	ug/L			05/23/18 15:02	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/23/18 15:02	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			05/23/18 15:02	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			05/23/18 15:02	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			05/23/18 15:02	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			05/23/18 15:02	1
2-Hexanone	10	U	10	1.2	ug/L			05/23/18 15:02	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			05/23/18 15:02	1
Methyl acetate	10	U	10	1.4	ug/L			05/23/18 15:02	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			05/23/18 15:02	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			05/23/18 15:02	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			05/23/18 15:02	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			05/23/18 15:02	1
Styrene	1.0	U	1.0	0.23	ug/L			05/23/18 15:02	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			05/23/18 15:02	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			05/23/18 15:02	1
Toluene	1.0	U *	1.0	0.23	ug/L			05/23/18 15:02	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			05/23/18 15:02	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			05/23/18 15:02	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			05/23/18 15:02	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			05/23/18 15:02	1

TestAmerica Canton

# Client Sample Results

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

TestAmerica Job ID: 240-95546-1

**Client Sample ID: MW-55\_051018**

**Lab Sample ID: 240-95546-11**

**Date Collected: 05/10/18 09:45**

**Matrix: Water**

**Date Received: 05/12/18 10:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U *	1.0	0.34	ug/L			05/23/18 15:02	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			05/23/18 15:02	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			05/23/18 15:02	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/23/18 15:02	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			05/23/18 15:02	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/23/18 15:02	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/23/18 15:02	1
<b>Vinyl chloride</b>	<b>0.48</b>	<b>J</b>	1.0	0.45	ug/L			05/23/18 15:02	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			05/23/18 15:02	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	74		69 - 120					05/23/18 15:02	1
Dibromofluoromethane (Surr)	110		69 - 124					05/23/18 15:02	1
1,2-Dichloroethane-d4 (Surr)	111		61 - 138					05/23/18 15:02	1
Toluene-d8 (Surr)	115		73 - 120					05/23/18 15:02	1

# Client Sample Results

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

TestAmerica Job ID: 240-95546-1

**Client Sample ID: MW-64\_051018**

**Lab Sample ID: 240-95546-12**

**Date Collected: 05/10/18 10:39**

**Matrix: Water**

**Date Received: 05/12/18 10:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.24	ug/L			05/17/18 23:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		63 - 125					05/17/18 23:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			05/24/18 14:37	1
Benzene	1.0	U	1.0	0.28	ug/L			05/24/18 14:37	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			05/24/18 14:37	1
Bromoform	1.0	U	1.0	0.43	ug/L			05/24/18 14:37	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/24/18 14:37	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/24/18 14:37	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			05/24/18 14:37	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			05/24/18 14:37	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			05/24/18 14:37	1
Chloroethane	1.0	U	1.0	0.41	ug/L			05/24/18 14:37	1
Chloroform	1.0	U*	1.0	0.31	ug/L			05/24/18 14:37	1
Chloromethane	1.0	U	1.0	0.43	ug/L			05/24/18 14:37	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/24/18 14:37	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			05/24/18 14:37	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			05/24/18 14:37	1
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			05/24/18 14:37	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			05/24/18 14:37	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			05/24/18 14:37	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			05/24/18 14:37	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			05/24/18 14:37	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			05/24/18 14:37	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			05/24/18 14:37	1
1,1-Dichloroethane	1.0	U*	1.0	0.25	ug/L			05/24/18 14:37	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/24/18 14:37	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			05/24/18 14:37	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			05/24/18 14:37	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			05/24/18 14:37	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			05/24/18 14:37	1
2-Hexanone	10	U	10	1.2	ug/L			05/24/18 14:37	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			05/24/18 14:37	1
Methyl acetate	10	U	10	1.4	ug/L			05/24/18 14:37	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			05/24/18 14:37	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			05/24/18 14:37	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			05/24/18 14:37	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			05/24/18 14:37	1
Styrene	1.0	U	1.0	0.23	ug/L			05/24/18 14:37	1
1,1,2,2-Tetrachloroethane	1.0	U*	1.0	0.32	ug/L			05/24/18 14:37	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			05/24/18 14:37	1
Toluene	1.0	U*	1.0	0.23	ug/L			05/24/18 14:37	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			05/24/18 14:37	1
trans-1,3-Dichloropropene	1.0	U*	1.0	0.31	ug/L			05/24/18 14:37	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			05/24/18 14:37	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			05/24/18 14:37	1

TestAmerica Canton



# Client Sample Results

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

TestAmerica Job ID: 240-95546-1

**Client Sample ID: MW-64\_051018**

**Lab Sample ID: 240-95546-12**

**Date Collected: 05/10/18 10:39**

**Matrix: Water**

**Date Received: 05/12/18 10:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U *	1.0	0.34	ug/L			05/24/18 14:37	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			05/24/18 14:37	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			05/24/18 14:37	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/24/18 14:37	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			05/24/18 14:37	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/24/18 14:37	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/24/18 14:37	1
<b>Vinyl chloride</b>	<b>1.3</b>		1.0	0.45	ug/L			05/24/18 14:37	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			05/24/18 14:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	73		69 - 120		05/24/18 14:37	1
Dibromofluoromethane (Surr)	108		69 - 124		05/24/18 14:37	1
1,2-Dichloroethane-d4 (Surr)	108		61 - 138		05/24/18 14:37	1
Toluene-d8 (Surr)	113		73 - 120		05/24/18 14:37	1

# Client Sample Results

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

TestAmerica Job ID: 240-95546-1

**Client Sample ID: DUP-02\_051018**

**Lab Sample ID: 240-95546-13**

**Date Collected: 05/10/18 00:00**

**Matrix: Water**

**Date Received: 05/12/18 10:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	7.6		2.0	0.24	ug/L			05/18/18 17:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		63 - 125					05/18/18 17:07	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			05/23/18 16:33	1
Benzene	1.0	U	1.0	0.28	ug/L			05/23/18 16:33	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			05/23/18 16:33	1
Bromoform	1.0	U	1.0	0.43	ug/L			05/23/18 16:33	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/23/18 16:33	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/23/18 16:33	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			05/23/18 16:33	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			05/23/18 16:33	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			05/23/18 16:33	1
Chloroethane	1.0	U	1.0	0.41	ug/L			05/23/18 16:33	1
Chloroform	1.0	U	1.0	0.31	ug/L			05/23/18 16:33	1
Chloromethane	1.0	U	1.0	0.43	ug/L			05/23/18 16:33	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/23/18 16:33	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			05/23/18 16:33	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			05/23/18 16:33	1
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			05/23/18 16:33	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			05/23/18 16:33	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			05/23/18 16:33	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			05/23/18 16:33	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			05/23/18 16:33	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			05/23/18 16:33	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			05/23/18 16:33	1
1,1-Dichloroethane	1.0	U *	1.0	0.25	ug/L			05/23/18 16:33	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/23/18 16:33	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			05/23/18 16:33	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			05/23/18 16:33	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			05/23/18 16:33	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			05/23/18 16:33	1
2-Hexanone	10	U	10	1.2	ug/L			05/23/18 16:33	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			05/23/18 16:33	1
Methyl acetate	10	U	10	1.4	ug/L			05/23/18 16:33	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			05/23/18 16:33	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			05/23/18 16:33	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			05/23/18 16:33	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			05/23/18 16:33	1
Styrene	1.0	U	1.0	0.23	ug/L			05/23/18 16:33	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			05/23/18 16:33	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			05/23/18 16:33	1
Toluene	1.0	U *	1.0	0.23	ug/L			05/23/18 16:33	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			05/23/18 16:33	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			05/23/18 16:33	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			05/23/18 16:33	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			05/23/18 16:33	1

TestAmerica Canton

# Client Sample Results

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

TestAmerica Job ID: 240-95546-1

**Client Sample ID: DUP-02\_051018**

**Lab Sample ID: 240-95546-13**

**Date Collected: 05/10/18 00:00**

**Matrix: Water**

**Date Received: 05/12/18 10:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U *	1.0	0.34	ug/L			05/23/18 16:33	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			05/23/18 16:33	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			05/23/18 16:33	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/23/18 16:33	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			05/23/18 16:33	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/23/18 16:33	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/23/18 16:33	1
<b>Vinyl chloride</b>	<b>2.9</b>		1.0	0.45	ug/L			05/23/18 16:33	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			05/23/18 16:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	76		69 - 120					05/23/18 16:33	1
Dibromofluoromethane (Surr)	104		69 - 124					05/23/18 16:33	1
1,2-Dichloroethane-d4 (Surr)	108		61 - 138					05/23/18 16:33	1
Toluene-d8 (Surr)	118		73 - 120					05/23/18 16:33	1

# Client Sample Results

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

TestAmerica Job ID: 240-95546-1

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 240-95546-14**

**Date Collected: 05/09/18 00:00**

**Matrix: Water**

**Date Received: 05/12/18 10:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.8	J	10	1.8	ug/L			05/23/18 16:56	1
Benzene	1.0	U	1.0	0.28	ug/L			05/23/18 16:56	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			05/23/18 16:56	1
Bromoform	1.0	U	1.0	0.43	ug/L			05/23/18 16:56	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/23/18 16:56	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/23/18 16:56	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			05/23/18 16:56	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			05/23/18 16:56	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			05/23/18 16:56	1
Chloroethane	1.0	U	1.0	0.41	ug/L			05/23/18 16:56	1
Chloroform	1.0	U	1.0	0.31	ug/L			05/23/18 16:56	1
Chloromethane	1.0	U	1.0	0.43	ug/L			05/23/18 16:56	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/23/18 16:56	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			05/23/18 16:56	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			05/23/18 16:56	1
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			05/23/18 16:56	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			05/23/18 16:56	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			05/23/18 16:56	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			05/23/18 16:56	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			05/23/18 16:56	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			05/23/18 16:56	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			05/23/18 16:56	1
1,1-Dichloroethane	1.0	U *	1.0	0.25	ug/L			05/23/18 16:56	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/23/18 16:56	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			05/23/18 16:56	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			05/23/18 16:56	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			05/23/18 16:56	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			05/23/18 16:56	1
2-Hexanone	10	U	10	1.2	ug/L			05/23/18 16:56	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			05/23/18 16:56	1
Methyl acetate	10	U	10	1.4	ug/L			05/23/18 16:56	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			05/23/18 16:56	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			05/23/18 16:56	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			05/23/18 16:56	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			05/23/18 16:56	1
Styrene	1.0	U	1.0	0.23	ug/L			05/23/18 16:56	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			05/23/18 16:56	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			05/23/18 16:56	1
Toluene	1.0	U *	1.0	0.23	ug/L			05/23/18 16:56	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			05/23/18 16:56	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			05/23/18 16:56	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			05/23/18 16:56	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			05/23/18 16:56	1
1,1,2-Trichloroethane	1.0	U *	1.0	0.34	ug/L			05/23/18 16:56	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			05/23/18 16:56	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			05/23/18 16:56	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/23/18 16:56	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			05/23/18 16:56	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/23/18 16:56	1

TestAmerica Canton

# Client Sample Results

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

TestAmerica Job ID: 240-95546-1

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 240-95546-14**

**Date Collected: 05/09/18 00:00**

**Matrix: Water**

**Date Received: 05/12/18 10:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/23/18 16:56	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/23/18 16:56	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			05/23/18 16:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	71		69 - 120		05/23/18 16:56	1
Dibromofluoromethane (Surr)	107		69 - 124		05/23/18 16:56	1
1,2-Dichloroethane-d4 (Surr)	110		61 - 138		05/23/18 16:56	1
Toluene-d8 (Surr)	114		73 - 120		05/23/18 16:56	1

# Surrogate Summary

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

TestAmerica Job ID: 240-95546-1

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

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		BFB (69-120)	DBFM (69-124)	DCA (61-138)	TOL (73-120)
240-95546-1	MW-53_050918	73	102	106	112
240-95546-2	MW-54_050918	73	103	107	114
240-95546-3	MW-57_050918	74	110	107	115
240-95546-4	MW-56_050918	74	106	106	114
240-95546-5	MW-25_050918	75	108	108	116
240-95546-6	MW-62_050918	75	107	106	115
240-95546-7	MW-50_050918	78	108	107	119
240-95546-8	MW-63_050918	68 X	99	100	106
240-95546-8	MW-63_050918	75	105	110	111
240-95546-9	MW-37_051018	69	102	106	110
240-95546-10	MW-69_051018	79	112	113	120
240-95546-11	MW-55_051018	74	110	111	115
240-95546-11 MS	MW-55_051018	85	102	109	115
240-95546-11 MSD	MW-55_051018	84	98	109	119
240-95546-12	MW-64_051018	73	108	108	113
240-95546-13	DUP-02_051018	76	104	108	118
240-95546-14	TRIP BLANK	71	107	110	114
LCS 240-327952/4	Lab Control Sample	77	96	101	109
LCS 240-328190/4	Lab Control Sample	79	99	104	109
LCS 240-328363/4	Lab Control Sample	83	100	99	114
MB 240-327952/6	Method Blank	77	105	106	114
MB 240-328190/6	Method Blank	70	100	100	110
MB 240-328363/6	Method Blank	74	108	110	117

#### Surrogate Legend

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

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

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA
		(63-125)
240-95546-1	MW-53_050918	89
240-95546-2	MW-54_050918	92
240-95546-3	MW-57_050918	94
240-95546-4	MW-56_050918	92
240-95546-5	MW-25_050918	97
240-95546-6	MW-62_050918	96
240-95546-7	MW-50_050918	95
240-95546-8	MW-63_050918	99
240-95546-9	MW-37_051018	99
240-95546-10	MW-69_051018	94
240-95546-11	MW-55_051018	97
240-95546-11 MS	MW-55_051018	94
240-95546-11 MSD	MW-55_051018	92

TestAmerica Canton

# Surrogate Summary

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

TestAmerica Job ID: 240-95546-1

## 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)
240-95546-12	MW-64_051018	93
240-95546-13	DUP-02_051018	92
LCS 240-327329/4	Lab Control Sample	91
LCS 240-327549/4	Lab Control Sample	96
MB 240-327329/5	Method Blank	85
MB 240-327549/5	Method Blank	93

#### 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: 240-95546-1

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

**Lab Sample ID: MB 240-327952/6**

**Matrix: Water**

**Analysis Batch: 327952**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			05/22/18 11:21	1
Benzene	1.0	U	1.0	0.28	ug/L			05/22/18 11:21	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			05/22/18 11:21	1
Bromoform	1.0	U	1.0	0.43	ug/L			05/22/18 11:21	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/22/18 11:21	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/22/18 11:21	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			05/22/18 11:21	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			05/22/18 11:21	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			05/22/18 11:21	1
Chloroethane	1.0	U	1.0	0.41	ug/L			05/22/18 11:21	1
Chloroform	1.0	U	1.0	0.31	ug/L			05/22/18 11:21	1
Chloromethane	1.0	U	1.0	0.43	ug/L			05/22/18 11:21	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/22/18 11:21	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			05/22/18 11:21	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			05/22/18 11:21	1
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			05/22/18 11:21	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			05/22/18 11:21	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			05/22/18 11:21	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			05/22/18 11:21	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			05/22/18 11:21	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			05/22/18 11:21	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			05/22/18 11:21	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/22/18 11:21	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/22/18 11:21	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			05/22/18 11:21	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			05/22/18 11:21	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			05/22/18 11:21	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			05/22/18 11:21	1
2-Hexanone	10	U	10	1.2	ug/L			05/22/18 11:21	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			05/22/18 11:21	1
Methyl acetate	10	U	10	1.4	ug/L			05/22/18 11:21	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			05/22/18 11:21	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			05/22/18 11:21	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			05/22/18 11:21	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			05/22/18 11:21	1
Styrene	1.0	U	1.0	0.23	ug/L			05/22/18 11:21	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			05/22/18 11:21	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			05/22/18 11:21	1
Toluene	1.0	U	1.0	0.23	ug/L			05/22/18 11:21	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			05/22/18 11:21	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			05/22/18 11:21	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			05/22/18 11:21	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			05/22/18 11:21	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			05/22/18 11:21	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			05/22/18 11:21	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			05/22/18 11:21	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/22/18 11:21	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			05/22/18 11:21	1

TestAmerica Canton



# QC Sample Results

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

TestAmerica Job ID: 240-95546-1

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

**Lab Sample ID: MB 240-327952/6**  
**Matrix: Water**  
**Analysis Batch: 327952**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/22/18 11:21	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/22/18 11:21	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/22/18 11:21	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			05/22/18 11:21	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	77		69 - 120		05/22/18 11:21	1
Dibromofluoromethane (Surr)	105		69 - 124		05/22/18 11:21	1
1,2-Dichloroethane-d4 (Surr)	106		61 - 138		05/22/18 11:21	1
Toluene-d8 (Surr)	114		73 - 120		05/22/18 11:21	1

**Lab Sample ID: LCS 240-327952/4**  
**Matrix: Water**  
**Analysis Batch: 327952**

**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	35 - 131
Benzene	10.0	9.73		ug/L		97	79 - 120
Bromodichloromethane	10.0	9.79		ug/L		98	79 - 125
Bromoform	10.0	8.06		ug/L		81	55 - 145
Bromomethane	10.0	12.5		ug/L		125	17 - 158
2-Butanone (MEK)	20.0	16.6		ug/L		83	43 - 149
Carbon disulfide	10.0	8.90		ug/L		89	49 - 141
Carbon tetrachloride	10.0	8.64		ug/L		86	55 - 171
Chlorobenzene	10.0	9.87		ug/L		99	80 - 120
Chloroethane	10.0	12.8		ug/L		128	10 - 149
Chloroform	10.0	9.97		ug/L		100	80 - 120
Chloromethane	10.0	10.0		ug/L		100	59 - 124
cis-1,2-Dichloroethene	10.0	9.69		ug/L		97	77 - 120
cis-1,3-Dichloropropene	10.0	9.45		ug/L		94	75 - 120
Cyclohexane	10.0	10.1		ug/L		101	66 - 135
Dibromochloromethane	10.0	9.67		ug/L		97	64 - 129
1,2-Dibromo-3-Chloropropane	10.0	7.73		ug/L		77	50 - 130
1,2-Dibromoethane	10.0	9.41		ug/L		94	80 - 120
1,2-Dichlorobenzene	10.0	9.35		ug/L		93	80 - 120
1,3-Dichlorobenzene	10.0	9.42		ug/L		94	80 - 120
1,4-Dichlorobenzene	10.0	9.32		ug/L		93	80 - 120
Dichlorodifluoromethane	10.0	10.0		ug/L		100	42 - 141
1,1-Dichloroethane	10.0	10.5		ug/L		105	74 - 120
1,2-Dichloroethane	10.0	10.5		ug/L		105	68 - 133
1,1-Dichloroethene	10.0	8.51		ug/L		85	65 - 127
1,2-Dichloropropane	10.0	10.7		ug/L		107	78 - 127
Diethyl ether	10.0	9.85		ug/L		98	72 - 125
Ethylbenzene	10.0	9.26		ug/L		93	80 - 120
2-Hexanone	20.0	17.1		ug/L		85	28 - 169
Isopropylbenzene	10.0	7.96		ug/L		80	80 - 128
Methyl acetate	20.0	20.0		ug/L		100	63 - 137
Methylcyclohexane	10.0	8.29		ug/L		83	63 - 141

TestAmerica Canton

# QC Sample Results

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

TestAmerica Job ID: 240-95546-1

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

**Lab Sample ID: LCS 240-327952/4**  
**Matrix: Water**  
**Analysis Batch: 327952**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methylene Chloride	10.0	8.63		ug/L		86	64 - 140
4-Methyl-2-pentanone (MIBK)	20.0	16.8		ug/L		84	53 - 144
Methyl tert-butyl ether	10.0	8.85		ug/L		89	73 - 120
Styrene	10.0	8.26		ug/L		83	80 - 121
1,1,2,2-Tetrachloroethane	10.0	10.7		ug/L		107	58 - 122
Tetrachloroethene	10.0	9.97		ug/L		100	80 - 122
Toluene	10.0	11.0		ug/L		110	78 - 120
trans-1,2-Dichloroethene	10.0	9.29		ug/L		93	74 - 124
trans-1,3-Dichloropropene	10.0	10.6		ug/L		106	67 - 120
1,2,4-Trichlorobenzene	10.0	7.59		ug/L		76	34 - 141
1,1,1-Trichloroethane	10.0	9.23		ug/L		92	64 - 147
1,1,2-Trichloroethane	10.0	10.8		ug/L		108	76 - 121
Trichloroethene	10.0	9.08		ug/L		91	76 - 124
Trichlorofluoromethane	10.0	12.1		ug/L		121	27 - 176
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	8.75		ug/L		87	65 - 144
1,2,4-Trimethylbenzene	10.0	9.22		ug/L		92	80 - 120
1,3,5-Trimethylbenzene	10.0	9.47		ug/L		95	79 - 120
Vinyl chloride	10.0	10.6		ug/L		106	65 - 124
Xylenes, Total	20.0	17.9		ug/L		89	80 - 120
1,4-Dioxane	200	114		ug/L		57	35 - 134

Surrogate	LCS %Recovery	LCS Qualifier	LCS Limits
4-Bromofluorobenzene (Surr)	77		69 - 120
Dibromofluoromethane (Surr)	96		69 - 124
1,2-Dichloroethane-d4 (Surr)	101		61 - 138
Toluene-d8 (Surr)	109		73 - 120

**Lab Sample ID: MB 240-328190/6**  
**Matrix: Water**  
**Analysis Batch: 328190**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			05/23/18 12:34	1
Benzene	1.0	U	1.0	0.28	ug/L			05/23/18 12:34	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			05/23/18 12:34	1
Bromoform	1.0	U	1.0	0.43	ug/L			05/23/18 12:34	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/23/18 12:34	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/23/18 12:34	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			05/23/18 12:34	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			05/23/18 12:34	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			05/23/18 12:34	1
Chloroethane	1.0	U	1.0	0.41	ug/L			05/23/18 12:34	1
Chloroform	1.0	U	1.0	0.31	ug/L			05/23/18 12:34	1
Chloromethane	1.0	U	1.0	0.43	ug/L			05/23/18 12:34	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/23/18 12:34	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			05/23/18 12:34	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			05/23/18 12:34	1

TestAmerica Canton

# QC Sample Results

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

TestAmerica Job ID: 240-95546-1

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

**Lab Sample ID: MB 240-328190/6**  
**Matrix: Water**  
**Analysis Batch: 328190**

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			05/23/18 12:34	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			05/23/18 12:34	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			05/23/18 12:34	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			05/23/18 12:34	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			05/23/18 12:34	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			05/23/18 12:34	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			05/23/18 12:34	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/23/18 12:34	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/23/18 12:34	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			05/23/18 12:34	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			05/23/18 12:34	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			05/23/18 12:34	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			05/23/18 12:34	1
2-Hexanone	10	U	10	1.2	ug/L			05/23/18 12:34	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			05/23/18 12:34	1
Methyl acetate	10	U	10	1.4	ug/L			05/23/18 12:34	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			05/23/18 12:34	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			05/23/18 12:34	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			05/23/18 12:34	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			05/23/18 12:34	1
Styrene	1.0	U	1.0	0.23	ug/L			05/23/18 12:34	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			05/23/18 12:34	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			05/23/18 12:34	1
Toluene	1.0	U	1.0	0.23	ug/L			05/23/18 12:34	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			05/23/18 12:34	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			05/23/18 12:34	1
1,2,4-Trichlorobenzene	1.18		1.0	0.27	ug/L			05/23/18 12:34	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			05/23/18 12:34	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			05/23/18 12:34	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			05/23/18 12:34	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			05/23/18 12:34	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/23/18 12:34	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			05/23/18 12:34	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/23/18 12:34	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/23/18 12:34	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/23/18 12:34	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			05/23/18 12:34	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	70		69 - 120		05/23/18 12:34	1
Dibromofluoromethane (Surr)	100		69 - 124		05/23/18 12:34	1
1,2-Dichloroethane-d4 (Surr)	100		61 - 138		05/23/18 12:34	1
Toluene-d8 (Surr)	110		73 - 120		05/23/18 12:34	1

TestAmerica Canton

# QC Sample Results

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

TestAmerica Job ID: 240-95546-1

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

**Lab Sample ID: LCS 240-328190/4**

**Matrix: Water**

**Analysis Batch: 328190**

**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	15.9		ug/L		79	35 - 131
Benzene	10.0	11.6		ug/L		116	79 - 120
Bromodichloromethane	10.0	11.3		ug/L		113	79 - 125
Bromoform	10.0	8.96		ug/L		90	55 - 145
Bromomethane	10.0	12.9		ug/L		129	17 - 158
2-Butanone (MEK)	20.0	19.5		ug/L		98	43 - 149
Carbon disulfide	10.0	10.8		ug/L		108	49 - 141
Carbon tetrachloride	10.0	10.6		ug/L		106	55 - 171
Chlorobenzene	10.0	11.1		ug/L		111	80 - 120
Chloroethane	10.0	13.1		ug/L		131	10 - 149
Chloroform	10.0	11.8		ug/L		118	80 - 120
Chloromethane	10.0	10.2		ug/L		102	59 - 124
cis-1,2-Dichloroethene	10.0	11.2		ug/L		112	77 - 120
cis-1,3-Dichloropropene	10.0	11.3		ug/L		113	75 - 120
Cyclohexane	10.0	12.4		ug/L		124	66 - 135
Dibromochloromethane	10.0	10.9		ug/L		109	64 - 129
1,2-Dibromo-3-Chloropropane	10.0	7.64		ug/L		76	50 - 130
1,2-Dibromoethane	10.0	10.6		ug/L		106	80 - 120
1,2-Dichlorobenzene	10.0	10.7		ug/L		107	80 - 120
1,3-Dichlorobenzene	10.0	10.4		ug/L		104	80 - 120
1,4-Dichlorobenzene	10.0	10.3		ug/L		103	80 - 120
Dichlorodifluoromethane	10.0	9.35		ug/L		94	42 - 141
1,1-Dichloroethane	10.0	12.4	*	ug/L		124	74 - 120
1,2-Dichloroethane	10.0	12.6		ug/L		126	68 - 133
1,1-Dichloroethene	10.0	10.3		ug/L		103	65 - 127
1,2-Dichloropropane	10.0	12.6		ug/L		126	78 - 127
Diethyl ether	10.0	11.6		ug/L		116	72 - 125
Ethylbenzene	10.0	10.8		ug/L		108	80 - 120
2-Hexanone	20.0	19.5		ug/L		97	28 - 169
Isopropylbenzene	10.0	9.52		ug/L		95	80 - 128
Methyl acetate	20.0	21.3		ug/L		107	63 - 137
Methylcyclohexane	10.0	10.1		ug/L		101	63 - 141
Methylene Chloride	10.0	10.8		ug/L		108	64 - 140
4-Methyl-2-pentanone (MIBK)	20.0	19.6		ug/L		98	53 - 144
Methyl tert-butyl ether	10.0	10.2		ug/L		102	73 - 120
Styrene	10.0	9.64		ug/L		96	80 - 121
1,1,2,2-Tetrachloroethane	10.0	11.7		ug/L		117	58 - 122
Tetrachloroethene	10.0	11.0		ug/L		110	80 - 122
Toluene	10.0	12.8	*	ug/L		128	78 - 120
trans-1,2-Dichloroethene	10.0	11.4		ug/L		114	74 - 124
trans-1,3-Dichloropropene	10.0	11.7		ug/L		117	67 - 120
1,2,4-Trichlorobenzene	10.0	8.74		ug/L		87	34 - 141
1,1,1-Trichloroethane	10.0	11.4		ug/L		114	64 - 147
1,1,2-Trichloroethane	10.0	12.6	*	ug/L		126	76 - 121
Trichloroethene	10.0	10.6		ug/L		106	76 - 124
Trichlorofluoromethane	10.0	12.8		ug/L		128	27 - 176
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	10.4		ug/L		104	65 - 144

TestAmerica Canton

# QC Sample Results

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

TestAmerica Job ID: 240-95546-1

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

**Lab Sample ID: LCS 240-328190/4**  
**Matrix: Water**  
**Analysis Batch: 328190**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trimethylbenzene	10.0	10.8		ug/L		108	80 - 120
1,3,5-Trimethylbenzene	10.0	10.7		ug/L		107	79 - 120
Vinyl chloride	10.0	11.3		ug/L		113	65 - 124
Xylenes, Total	20.0	20.6		ug/L		103	80 - 120
1,4-Dioxane	200	168		ug/L		84	35 - 134

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	79		69 - 120
Dibromofluoromethane (Surr)	99		69 - 124
1,2-Dichloroethane-d4 (Surr)	104		61 - 138
Toluene-d8 (Surr)	109		73 - 120

**Lab Sample ID: 240-95546-11 MS**  
**Matrix: Water**  
**Analysis Batch: 328190**

**Client Sample ID: MW-55\_051018**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	2.7	J	20.0	16.6		ug/L		69	19 - 133
Benzene	1.0	U	10.0	11.2		ug/L		112	69 - 127
Bromodichloromethane	1.0	U	10.0	11.0		ug/L		110	75 - 128
Bromoform	1.0	U	10.0	8.32		ug/L		83	61 - 135
Bromomethane	1.0	U	10.0	13.2		ug/L		132	10 - 148
2-Butanone (MEK)	10	U	20.0	19.4		ug/L		97	34 - 153
Carbon disulfide	5.0	U	10.0	10.7		ug/L		107	46 - 143
Carbon tetrachloride	1.0	U	10.0	9.65		ug/L		96	53 - 175
Chlorobenzene	1.0	U	10.0	11.0		ug/L		110	76 - 120
Chloroethane	1.0	U	10.0	13.9		ug/L		139	10 - 141
Chloroform	1.0	U	10.0	11.8		ug/L		118	74 - 125
Chloromethane	1.0	U	10.0	8.25		ug/L		82	34 - 127
cis-1,2-Dichloroethene	1.0	U	10.0	11.3		ug/L		113	69 - 127
cis-1,3-Dichloropropene	1.0	U	10.0	10.5		ug/L		105	68 - 120
Cyclohexane	1.0	U	10.0	10.2		ug/L		102	56 - 135
Dibromochloromethane	1.0	U	10.0	10.8		ug/L		108	62 - 131
1,2-Dibromo-3-Chloropropane	1.0	U	10.0	8.24		ug/L		82	48 - 130
1,2-Dibromoethane	1.0	U	10.0	10.6		ug/L		106	73 - 121
1,2-Dichlorobenzene	1.0	U	10.0	10.3		ug/L		103	70 - 120
1,3-Dichlorobenzene	1.0	U	10.0	9.93		ug/L		99	71 - 120
1,4-Dichlorobenzene	1.0	U	10.0	10.2		ug/L		102	72 - 120
Dichlorodifluoromethane	1.0	U	10.0	9.71		ug/L		97	45 - 130
1,1-Dichloroethane	1.0	U *	10.0	12.2		ug/L		122	69 - 122
1,2-Dichloroethane	1.0	U	10.0	12.1		ug/L		121	64 - 138
1,1-Dichloroethene	1.0	U	10.0	9.38		ug/L		94	62 - 127
1,2-Dichloropropane	1.0	U	10.0	12.0		ug/L		120	72 - 131
Diethyl ether	2.0	U	10.0	11.1		ug/L		111	65 - 124
Ethylbenzene	1.0	U	10.0	10.2		ug/L		102	72 - 121
2-Hexanone	10	U	20.0	21.7		ug/L		108	21 - 184
Isopropylbenzene	1.0	U	10.0	8.81		ug/L		88	70 - 132
Methyl acetate	10	U	20.0	21.3		ug/L		106	52 - 139

TestAmerica Canton

# QC Sample Results

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

TestAmerica Job ID: 240-95546-1

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

**Lab Sample ID: 240-95546-11 MS**

**Matrix: Water**

**Analysis Batch: 328190**

**Client Sample ID: MW-55\_051018**

**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier		Added	Result				
Methylcyclohexane	1.0	U	10.0	8.36		ug/L		84	46 - 139
Methylene Chloride	5.0	U	10.0	9.89		ug/L		99	52 - 137
4-Methyl-2-pentanone (MIBK)	10	U	20.0	22.4		ug/L		112	53 - 147
Methyl tert-butyl ether	1.0	U	10.0	10.2		ug/L		102	67 - 125
Styrene	1.0	U	10.0	9.31		ug/L		93	74 - 125
1,1,2,2-Tetrachloroethane	1.0	U	10.0	12.0		ug/L		120	51 - 123
Tetrachloroethene	1.0	U	10.0	10.7		ug/L		107	69 - 126
Toluene	1.0	U *	10.0	12.3		ug/L		123	69 - 125
trans-1,2-Dichloroethene	1.0	U	10.0	10.9		ug/L		109	66 - 131
trans-1,3-Dichloropropene	1.0	U	10.0	11.4		ug/L		114	59 - 120
1,2,4-Trichlorobenzene	1.0	U	10.0	8.30		ug/L		83	26 - 138
1,1,1-Trichloroethane	1.0	U	10.0	10.4		ug/L		104	57 - 156
1,1,2-Trichloroethane	1.0	U *	10.0	12.4		ug/L		124	68 - 127
Trichloroethene	1.0	U	10.0	10.3		ug/L		103	68 - 129
Trichlorofluoromethane	1.0	U	10.0	12.6		ug/L		126	28 - 172
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	10.0	8.69		ug/L		87	58 - 137
1,2,4-Trimethylbenzene	1.0	U	10.0	10.1		ug/L		101	64 - 120
1,3,5-Trimethylbenzene	1.0	U	10.0	10.2		ug/L		102	67 - 120
Vinyl chloride	0.48	J	10.0	11.6		ug/L		111	55 - 123
Xylenes, Total	2.0	U	20.0	19.8		ug/L		99	71 - 122
1,4-Dioxane	50	U	200	177		ug/L		88	13 - 155

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	85		69 - 120
Dibromofluoromethane (Surr)	102		69 - 124
1,2-Dichloroethane-d4 (Surr)	109		61 - 138
Toluene-d8 (Surr)	115		73 - 120

**Lab Sample ID: 240-95546-11 MSD**

**Matrix: Water**

**Analysis Batch: 328190**

**Client Sample ID: MW-55\_051018**

**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Result	Qualifier		Added	Result						
Acetone	2.7	J	20.0	16.0		ug/L		66	19 - 133	4	35
Benzene	1.0	U	10.0	11.0		ug/L		110	69 - 127	1	10
Bromodichloromethane	1.0	U	10.0	10.7		ug/L		107	75 - 128	3	13
Bromoform	1.0	U	10.0	8.56		ug/L		86	61 - 135	3	13
Bromomethane	1.0	U	10.0	13.5		ug/L		135	10 - 148	2	35
2-Butanone (MEK)	10	U	20.0	19.0		ug/L		95	34 - 153	2	23
Carbon disulfide	5.0	U	10.0	10.5		ug/L		105	46 - 143	1	18
Carbon tetrachloride	1.0	U	10.0	10.0		ug/L		100	53 - 175	4	17
Chlorobenzene	1.0	U	10.0	11.1		ug/L		111	76 - 120	1	12
Chloroethane	1.0	U	10.0	14.1		ug/L		141	10 - 141	1	35
Chloroform	1.0	U	10.0	11.2		ug/L		112	74 - 125	5	11
Chloromethane	1.0	U	10.0	9.02		ug/L		90	34 - 127	9	25
cis-1,2-Dichloroethene	1.0	U	10.0	11.0		ug/L		110	69 - 127	3	11
cis-1,3-Dichloropropene	1.0	U	10.0	10.3		ug/L		103	68 - 120	2	13

TestAmerica Canton

# QC Sample Results

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

TestAmerica Job ID: 240-95546-1

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

Lab Sample ID: 240-95546-11 MSD

Matrix: Water

Analysis Batch: 328190

Client Sample ID: MW-55\_051018

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyclohexane	1.0	U	10.0	11.4		ug/L		114	56 - 135	12	35
Dibromochloromethane	1.0	U	10.0	10.7		ug/L		107	62 - 131	1	15
1,2-Dibromo-3-Chloropropane	1.0	U	10.0	8.99		ug/L		90	48 - 130	9	31
1,2-Dibromoethane	1.0	U	10.0	10.7		ug/L		107	73 - 121	2	12
1,2-Dichlorobenzene	1.0	U	10.0	10.2		ug/L		102	70 - 120	1	19
1,3-Dichlorobenzene	1.0	U	10.0	9.84		ug/L		98	71 - 120	1	18
1,4-Dichlorobenzene	1.0	U	10.0	10.1		ug/L		101	72 - 120	1	17
Dichlorodifluoromethane	1.0	U	10.0	9.69		ug/L		97	45 - 130	0	34
1,1-Dichloroethane	1.0	U *	10.0	11.9		ug/L		119	69 - 122	3	11
1,2-Dichloroethane	1.0	U	10.0	11.8		ug/L		118	64 - 138	2	11
1,1-Dichloroethene	1.0	U	10.0	9.63		ug/L		96	62 - 127	3	14
1,2-Dichloropropane	1.0	U	10.0	11.8		ug/L		118	72 - 131	2	12
Diethyl ether	2.0	U	10.0	11.0		ug/L		110	65 - 124	1	11
Ethylbenzene	1.0	U	10.0	10.4		ug/L		104	72 - 121	2	15
2-Hexanone	10	U	20.0	22.2		ug/L		111	21 - 184	3	12
Isopropylbenzene	1.0	U	10.0	9.02		ug/L		90	70 - 132	2	16
Methyl acetate	10	U	20.0	20.2		ug/L		101	52 - 139	5	14
Methylcyclohexane	1.0	U	10.0	9.36		ug/L		94	46 - 139	11	35
Methylene Chloride	5.0	U	10.0	9.94		ug/L		99	52 - 137	0	12
4-Methyl-2-pentanone (MIBK)	10	U	20.0	22.1		ug/L		111	53 - 147	1	16
Methyl tert-butyl ether	1.0	U	10.0	10.1		ug/L		101	67 - 125	1	12
Styrene	1.0	U	10.0	9.44		ug/L		94	74 - 125	1	14
1,1,2,2-Tetrachloroethane	1.0	U	10.0	11.9		ug/L		119	51 - 123	1	17
Tetrachloroethene	1.0	U	10.0	11.1		ug/L		111	69 - 126	3	18
Toluene	1.0	U *	10.0	12.5		ug/L		125	69 - 125	2	14
trans-1,2-Dichloroethene	1.0	U	10.0	10.7		ug/L		107	66 - 131	1	11
trans-1,3-Dichloropropene	1.0	U	10.0	11.5		ug/L		115	59 - 120	1	14
1,2,4-Trichlorobenzene	1.0	U	10.0	9.22		ug/L		92	26 - 138	10	35
1,1,1-Trichloroethane	1.0	U	10.0	10.4		ug/L		104	57 - 156	1	13
1,1,2-Trichloroethane	1.0	U *	10.0	12.5		ug/L		125	68 - 127	1	11
Trichloroethene	1.0	U	10.0	10.1		ug/L		101	68 - 129	2	12
Trichlorofluoromethane	1.0	U	10.0	12.9		ug/L		129	28 - 172	2	26
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	10.0	9.50		ug/L		95	58 - 137	9	35
1,2,4-Trimethylbenzene	1.0	U	10.0	10.2		ug/L		102	64 - 120	0	22
1,3,5-Trimethylbenzene	1.0	U	10.0	10.4		ug/L		104	67 - 120	2	25
Vinyl chloride	0.48	J	10.0	12.2		ug/L		117	55 - 123	5	12
Xylenes, Total	2.0	U	20.0	20.5		ug/L		103	71 - 122	4	14
1,4-Dioxane	50	U	200	201		ug/L		100	13 - 155	13	35

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
4-Bromofluorobenzene (Surr)	84		69 - 120
Dibromofluoromethane (Surr)	98		69 - 124
1,2-Dichloroethane-d4 (Surr)	109		61 - 138
Toluene-d8 (Surr)	119		73 - 120

TestAmerica Canton



# QC Sample Results

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

TestAmerica Job ID: 240-95546-1

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

**Lab Sample ID: MB 240-328363/6**

**Matrix: Water**

**Analysis Batch: 328363**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			05/24/18 11:13	1
Benzene	1.0	U	1.0	0.28	ug/L			05/24/18 11:13	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			05/24/18 11:13	1
Bromoform	1.0	U	1.0	0.43	ug/L			05/24/18 11:13	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/24/18 11:13	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/24/18 11:13	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			05/24/18 11:13	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			05/24/18 11:13	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			05/24/18 11:13	1
Chloroethane	1.0	U	1.0	0.41	ug/L			05/24/18 11:13	1
Chloroform	1.0	U	1.0	0.31	ug/L			05/24/18 11:13	1
Chloromethane	1.0	U	1.0	0.43	ug/L			05/24/18 11:13	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/24/18 11:13	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			05/24/18 11:13	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			05/24/18 11:13	1
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			05/24/18 11:13	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			05/24/18 11:13	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			05/24/18 11:13	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			05/24/18 11:13	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			05/24/18 11:13	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			05/24/18 11:13	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			05/24/18 11:13	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/24/18 11:13	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/24/18 11:13	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			05/24/18 11:13	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			05/24/18 11:13	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			05/24/18 11:13	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			05/24/18 11:13	1
2-Hexanone	10	U	10	1.2	ug/L			05/24/18 11:13	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			05/24/18 11:13	1
Methyl acetate	10	U	10	1.4	ug/L			05/24/18 11:13	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			05/24/18 11:13	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			05/24/18 11:13	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			05/24/18 11:13	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			05/24/18 11:13	1
Styrene	1.0	U	1.0	0.23	ug/L			05/24/18 11:13	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			05/24/18 11:13	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			05/24/18 11:13	1
Toluene	1.0	U	1.0	0.23	ug/L			05/24/18 11:13	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			05/24/18 11:13	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			05/24/18 11:13	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			05/24/18 11:13	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			05/24/18 11:13	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			05/24/18 11:13	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			05/24/18 11:13	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			05/24/18 11:13	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/24/18 11:13	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			05/24/18 11:13	1

TestAmerica Canton



# QC Sample Results

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

TestAmerica Job ID: 240-95546-1

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

**Lab Sample ID: MB 240-328363/6**  
**Matrix: Water**  
**Analysis Batch: 328363**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/24/18 11:13	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/24/18 11:13	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/24/18 11:13	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			05/24/18 11:13	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	74		69 - 120		05/24/18 11:13	1
Dibromofluoromethane (Surr)	108		69 - 124		05/24/18 11:13	1
1,2-Dichloroethane-d4 (Surr)	110		61 - 138		05/24/18 11:13	1
Toluene-d8 (Surr)	117		73 - 120		05/24/18 11:13	1

**Lab Sample ID: LCS 240-328363/4**  
**Matrix: Water**  
**Analysis Batch: 328363**

**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	16.8		ug/L		84	35 - 131
Benzene	10.0	11.7		ug/L		117	79 - 120
Bromodichloromethane	10.0	11.7		ug/L		117	79 - 125
Bromoform	10.0	9.59		ug/L		96	55 - 145
Bromomethane	10.0	12.9		ug/L		129	17 - 158
2-Butanone (MEK)	20.0	19.0		ug/L		95	43 - 149
Carbon disulfide	10.0	10.9		ug/L		109	49 - 141
Carbon tetrachloride	10.0	11.2		ug/L		112	55 - 171
Chlorobenzene	10.0	11.7		ug/L		117	80 - 120
Chloroethane	10.0	13.0		ug/L		130	10 - 149
Chloroform	10.0	12.1	*	ug/L		121	80 - 120
Chloromethane	10.0	9.52		ug/L		95	59 - 124
cis-1,2-Dichloroethene	10.0	11.7		ug/L		117	77 - 120
cis-1,3-Dichloropropene	10.0	11.7		ug/L		117	75 - 120
Cyclohexane	10.0	11.6		ug/L		116	66 - 135
Dibromochloromethane	10.0	11.7		ug/L		117	64 - 129
1,2-Dibromo-3-Chloropropane	10.0	8.66		ug/L		87	50 - 130
1,2-Dibromoethane	10.0	11.0		ug/L		110	80 - 120
1,2-Dichlorobenzene	10.0	11.2		ug/L		112	80 - 120
1,3-Dichlorobenzene	10.0	11.2		ug/L		112	80 - 120
1,4-Dichlorobenzene	10.0	11.2		ug/L		112	80 - 120
Dichlorodifluoromethane	10.0	8.39		ug/L		84	42 - 141
1,1-Dichloroethane	10.0	12.6	*	ug/L		126	74 - 120
1,2-Dichloroethane	10.0	12.7		ug/L		127	68 - 133
1,1-Dichloroethene	10.0	9.75		ug/L		98	65 - 127
1,2-Dichloropropane	10.0	12.4		ug/L		124	78 - 127
Diethyl ether	10.0	11.8		ug/L		118	72 - 125
Ethylbenzene	10.0	11.0		ug/L		110	80 - 120
2-Hexanone	20.0	19.9		ug/L		100	28 - 169
Isopropylbenzene	10.0	9.46		ug/L		95	80 - 128
Methyl acetate	20.0	22.5		ug/L		113	63 - 137
Methylcyclohexane	10.0	9.09		ug/L		91	63 - 141

TestAmerica Canton

# QC Sample Results

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

TestAmerica Job ID: 240-95546-1

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

**Lab Sample ID: LCS 240-328363/4**  
**Matrix: Water**  
**Analysis Batch: 328363**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methylene Chloride	10.0	10.9		ug/L		109	64 - 140
4-Methyl-2-pentanone (MIBK)	20.0	20.1		ug/L		101	53 - 144
Methyl tert-butyl ether	10.0	10.5		ug/L		105	73 - 120
Styrene	10.0	9.93		ug/L		99	80 - 121
1,1,2,2-Tetrachloroethane	10.0	12.9	*	ug/L		129	58 - 122
Tetrachloroethene	10.0	11.2		ug/L		112	80 - 122
Toluene	10.0	13.1	*	ug/L		131	78 - 120
trans-1,2-Dichloroethene	10.0	11.2		ug/L		112	74 - 124
trans-1,3-Dichloropropene	10.0	12.6	*	ug/L		126	67 - 120
1,2,4-Trichlorobenzene	10.0	9.98		ug/L		100	34 - 141
1,1,1-Trichloroethane	10.0	11.3		ug/L		113	64 - 147
1,1,2-Trichloroethane	10.0	13.3	*	ug/L		133	76 - 121
Trichloroethene	10.0	10.7		ug/L		107	76 - 124
Trichlorofluoromethane	10.0	11.8		ug/L		118	27 - 176
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	9.90		ug/L		99	65 - 144
1,2,4-Trimethylbenzene	10.0	11.1		ug/L		111	80 - 120
1,3,5-Trimethylbenzene	10.0	11.5		ug/L		115	79 - 120
Vinyl chloride	10.0	10.3		ug/L		103	65 - 124
Xylenes, Total	20.0	21.6		ug/L		108	80 - 120
1,4-Dioxane	200	173		ug/L		87	35 - 134

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	83		69 - 120
Dibromofluoromethane (Surr)	100		69 - 124
1,2-Dichloroethane-d4 (Surr)	99		61 - 138
Toluene-d8 (Surr)	114		73 - 120

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

**Lab Sample ID: MB 240-327329/5**  
**Matrix: Water**  
**Analysis Batch: 327329**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.24	ug/L			05/17/18 13:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	85		63 - 125		05/17/18 13:43	1

**Lab Sample ID: LCS 240-327329/4**  
**Matrix: Water**  
**Analysis Batch: 327329**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	10.0	9.17		ug/L		92	59 - 131

TestAmerica Canton

# QC Sample Results

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

TestAmerica Job ID: 240-95546-1

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

**Lab Sample ID: LCS 240-327329/4**  
**Matrix: Water**  
**Analysis Batch: 327329**

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

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	91		63 - 125

**Lab Sample ID: 240-95546-11 MS**  
**Matrix: Water**  
**Analysis Batch: 327329**

**Client Sample ID: MW-55\_051018**  
**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier	Added	Result	Qualifier				Limits
1,4-Dioxane	1.2	J	10.0	9.71		ug/L		85	52 - 129
Surrogate	MS	MS							
1,2-Dichloroethane-d4 (Surr)	%Recovery	Qualifier	Limits						
	94		63 - 125						

**Lab Sample ID: 240-95546-11 MSD**  
**Matrix: Water**  
**Analysis Batch: 327329**

**Client Sample ID: MW-55\_051018**  
**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
1,4-Dioxane	1.2	J	10.0	8.80		ug/L		76	52 - 129	10	13
Surrogate	MSD	MSD									
1,2-Dichloroethane-d4 (Surr)	%Recovery	Qualifier	Limits								
	92		63 - 125								

**Lab Sample ID: MB 240-327549/5**  
**Matrix: Water**  
**Analysis Batch: 327549**

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
	Result	Qualifier								
1,4-Dioxane	2.0	U	2.0	0.24	ug/L			05/18/18 16:17	1	
Surrogate	MB	MB								
1,2-Dichloroethane-d4 (Surr)	%Recovery	Qualifier	Limits					Prepared	Analyzed	Dil Fac
	93		63 - 125					05/18/18 16:17	1	

**Lab Sample ID: LCS 240-327549/4**  
**Matrix: Water**  
**Analysis Batch: 327549**

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

Analyte			Spike	LCS	LCS	Unit	D	%Rec	%Rec.
	Result	Qualifier	Added	Result	Qualifier				Limits
1,4-Dioxane			10.0	8.86		ug/L		89	59 - 131
Surrogate	LCS	LCS							
1,2-Dichloroethane-d4 (Surr)	%Recovery	Qualifier	Limits						
	96		63 - 125						

TestAmerica Canton

# QC Association Summary

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

TestAmerica Job ID: 240-95546-1

## GC/MS VOA

### Analysis Batch: 327329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-95546-1	MW-53_050918	Total/NA	Water	8260B SIM	
240-95546-2	MW-54_050918	Total/NA	Water	8260B SIM	
240-95546-3	MW-57_050918	Total/NA	Water	8260B SIM	
240-95546-4	MW-56_050918	Total/NA	Water	8260B SIM	
240-95546-5	MW-25_050918	Total/NA	Water	8260B SIM	
240-95546-6	MW-62_050918	Total/NA	Water	8260B SIM	
240-95546-7	MW-50_050918	Total/NA	Water	8260B SIM	
240-95546-8	MW-63_050918	Total/NA	Water	8260B SIM	
240-95546-9	MW-37_051018	Total/NA	Water	8260B SIM	
240-95546-10	MW-69_051018	Total/NA	Water	8260B SIM	
240-95546-11	MW-55_051018	Total/NA	Water	8260B SIM	
240-95546-12	MW-64_051018	Total/NA	Water	8260B SIM	
MB 240-327329/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-327329/4	Lab Control Sample	Total/NA	Water	8260B SIM	
240-95546-11 MS	MW-55_051018	Total/NA	Water	8260B SIM	
240-95546-11 MSD	MW-55_051018	Total/NA	Water	8260B SIM	

### Analysis Batch: 327549

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-95546-13	DUP-02_051018	Total/NA	Water	8260B SIM	
MB 240-327549/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-327549/4	Lab Control Sample	Total/NA	Water	8260B SIM	

### Analysis Batch: 327952

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-95546-1	MW-53_050918	Total/NA	Water	8260B	
240-95546-2	MW-54_050918	Total/NA	Water	8260B	
240-95546-3	MW-57_050918	Total/NA	Water	8260B	
240-95546-4	MW-56_050918	Total/NA	Water	8260B	
240-95546-5	MW-25_050918	Total/NA	Water	8260B	
240-95546-6	MW-62_050918	Total/NA	Water	8260B	
240-95546-8	MW-63_050918	Total/NA	Water	8260B	
MB 240-327952/6	Method Blank	Total/NA	Water	8260B	
LCS 240-327952/4	Lab Control Sample	Total/NA	Water	8260B	

### Analysis Batch: 328190

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-95546-7	MW-50_050918	Total/NA	Water	8260B	
240-95546-8	MW-63_050918	Total/NA	Water	8260B	
240-95546-9	MW-37_051018	Total/NA	Water	8260B	
240-95546-10	MW-69_051018	Total/NA	Water	8260B	
240-95546-11	MW-55_051018	Total/NA	Water	8260B	
240-95546-13	DUP-02_051018	Total/NA	Water	8260B	
240-95546-14	TRIP BLANK	Total/NA	Water	8260B	
MB 240-328190/6	Method Blank	Total/NA	Water	8260B	
LCS 240-328190/4	Lab Control Sample	Total/NA	Water	8260B	
240-95546-11 MS	MW-55_051018	Total/NA	Water	8260B	
240-95546-11 MSD	MW-55_051018	Total/NA	Water	8260B	

TestAmerica Canton

# QC Association Summary

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

TestAmerica Job ID: 240-95546-1

## GC/MS VOA (Continued)

### Analysis Batch: 328363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-95546-12	MW-64_051018	Total/NA	Water	8260B	
MB 240-328363/6	Method Blank	Total/NA	Water	8260B	
LCS 240-328363/4	Lab Control Sample	Total/NA	Water	8260B	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

# Lab Chronicle

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

TestAmerica Job ID: 240-95546-1

**Client Sample ID: MW-53\_050918**

**Date Collected: 05/09/18 13:52**

**Date Received: 05/12/18 10:00**

**Lab Sample ID: 240-95546-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	327952	05/22/18 17:07	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	327329	05/17/18 17:54	SAM	TAL CAN

**Client Sample ID: MW-54\_050918**

**Date Collected: 05/09/18 14:42**

**Date Received: 05/12/18 10:00**

**Lab Sample ID: 240-95546-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	327952	05/22/18 17:30	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	327329	05/17/18 19:34	SAM	TAL CAN

**Client Sample ID: MW-57\_050918**

**Date Collected: 05/09/18 15:45**

**Date Received: 05/12/18 10:00**

**Lab Sample ID: 240-95546-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	327952	05/22/18 17:52	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	327329	05/17/18 19:59	SAM	TAL CAN

**Client Sample ID: MW-56\_050918**

**Date Collected: 05/09/18 16:40**

**Date Received: 05/12/18 10:00**

**Lab Sample ID: 240-95546-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	327952	05/22/18 18:15	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	327329	05/17/18 20:24	SAM	TAL CAN

**Client Sample ID: MW-25\_050918**

**Date Collected: 05/09/18 12:30**

**Date Received: 05/12/18 10:00**

**Lab Sample ID: 240-95546-5**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	327952	05/22/18 18:36	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	327329	05/17/18 20:49	SAM	TAL CAN

**Client Sample ID: MW-62\_050918**

**Date Collected: 05/09/18 14:25**

**Date Received: 05/12/18 10:00**

**Lab Sample ID: 240-95546-6**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	327952	05/22/18 18:58	LEE	TAL CAN

TestAmerica Canton

# Lab Chronicle

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

TestAmerica Job ID: 240-95546-1

**Client Sample ID: MW-62\_050918**

**Lab Sample ID: 240-95546-6**

Date Collected: 05/09/18 14:25

Matrix: Water

Date Received: 05/12/18 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B SIM		1	327329	05/17/18 21:14	SAM	TAL CAN

**Client Sample ID: MW-50\_050918**

**Lab Sample ID: 240-95546-7**

Date Collected: 05/09/18 15:25

Matrix: Water

Date Received: 05/12/18 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	328190	05/23/18 13:32	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	327329	05/17/18 21:39	SAM	TAL CAN

**Client Sample ID: MW-63\_050918**

**Lab Sample ID: 240-95546-8**

Date Collected: 05/09/18 16:30

Matrix: Water

Date Received: 05/12/18 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	327952	05/22/18 19:44	LEE	TAL CAN
Total/NA	Analysis	8260B		1	328190	05/23/18 13:54	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	327329	05/17/18 22:04	SAM	TAL CAN

**Client Sample ID: MW-37\_051018**

**Lab Sample ID: 240-95546-9**

Date Collected: 05/10/18 07:34

Matrix: Water

Date Received: 05/12/18 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	328190	05/23/18 14:17	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	327329	05/17/18 22:30	SAM	TAL CAN

**Client Sample ID: MW-69\_051018**

**Lab Sample ID: 240-95546-10**

Date Collected: 05/10/18 08:40

Matrix: Water

Date Received: 05/12/18 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	328190	05/23/18 14:40	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	327329	05/17/18 22:54	SAM	TAL CAN

**Client Sample ID: MW-55\_051018**

**Lab Sample ID: 240-95546-11**

Date Collected: 05/10/18 09:45

Matrix: Water

Date Received: 05/12/18 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	328190	05/23/18 15:02	LEE	TAL CAN

TestAmerica Canton

# Lab Chronicle

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

TestAmerica Job ID: 240-95546-1

**Client Sample ID: MW-55\_051018**

**Lab Sample ID: 240-95546-11**

**Date Collected: 05/10/18 09:45**

**Matrix: Water**

**Date Received: 05/12/18 10:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B SIM		1	327329	05/17/18 18:19	SAM	TAL CAN

**Client Sample ID: MW-64\_051018**

**Lab Sample ID: 240-95546-12**

**Date Collected: 05/10/18 10:39**

**Matrix: Water**

**Date Received: 05/12/18 10:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	328363	05/24/18 14:37	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	327329	05/17/18 23:19	SAM	TAL CAN

**Client Sample ID: DUP-02\_051018**

**Lab Sample ID: 240-95546-13**

**Date Collected: 05/10/18 00:00**

**Matrix: Water**

**Date Received: 05/12/18 10:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	328190	05/23/18 16:33	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	327549	05/18/18 17:07	SAM	TAL CAN

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 240-95546-14**

**Date Collected: 05/09/18 00:00**

**Matrix: Water**

**Date Received: 05/12/18 10:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	328190	05/23/18 16:56	LEE	TAL CAN

**Laboratory References:**

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



# Accreditation/Certification Summary

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

TestAmerica Job ID: 240-95546-1

## Laboratory: TestAmerica Canton

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

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

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

**Chain of Custody Record**

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

Regulatory program:  DW  NPDES  RCRA  Other

Client Contact: Arcadis  
Address: 28550 Cabot Drive, Suite 500  
City/State/Zip: Nov4, MI, 48377  
Phone: 248-994-2240  
Project Name: Ford LTP  
Project Number: M1001454.0004.00001  
PO # M1001454.0004.00001

Client Project Manager: Kris Hinsky  
Telephone: 248-994-2240  
Email: kristoffer.hinsky@arcadis.com

Site Contact: Angela DeGrandis  
Telephone: 734-320-0065

Lab Contact: Denise Pohl  
Telephone: 330-966-9789

Analysis:  Walk-in client  Lab sampling  Job/SDG No.

COC No: 1 of 2 COCs

Analysis Turnaround Time: 10 day  
TAT if different from below:  3 weeks  2 weeks  1 week  2 days  1 day

Method of Shipment/Carrier:  
Shipping/Tracking No:

Sample Identification	Sample Date	Sample Time	Matrix				Containers & Preservatives							Filtered Sample (Y/N)	Composite=C/Grab=G	1,4-Dioxane 8260B SIM	Sample Specific Notes / Special Instructions:	
			Aqueous	Sediment	Solid	Other:	H2SO4	HNO3	HCl	NaOH	NaOH	Impres	Other:					
MW-53-050918	5-9-18	1352	X															
MW-54-050918	5-9-18	1442	X															
MW-57-050918	5-9-18	1545	X															
MW-56-050918	5-9-18	1640	X															
MW-25-050918	5-9-18	1230	X															
MW-62-050918	5-9-18	1425	X															
MW-50-050918	5-9-18	1525	X															
MW-63-050918	5-9-18	1630	X															
MW-37-051018	5-10-18	734	X															
MW-64-051018	5-10-18	840	X															

Possible Hazard Identification:  Non-Hazard  Irritant  Poison B  Unknown

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

Special Instructions/OC Requirements & Comments:

Submit all results through Cardona at jim.tonnala@cardona.com, Cardona #E203728

Relinquished by: *Jim Tonnala* / KALAN BELEGOS  
Relinquished Date/Time: 5/11/18 12:21  
Relinquished Company: ARCADIS  
Relinquished Date/Time: 5/11/18 14:41  
Relinquished Company: TAL

Received in Laboratory by: *Denise Pohl*  
Received Date/Time: 5/11/18 13:49  
Received Company: TAL

Barcode: 240-95546 Chain of Custody



**Chain of Custody Record**

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

<b>Client Contact</b> Company Name: Arcadis Address: 28550 Cabot Drive, Suite 500 City/State/Zip: Novi, MI, 48377 Phone: 248-994-2240 Project Name: Ford LTP Project Number: MI001454.0004.00001 PO # MI001454.0004.00001		<b>Regulatory program:</b> <input type="checkbox"/> DW <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other	
Client Project Manager: Kris Hinskey Telephone: 248-994-2240 Email: kristoffer.hinskey@arcadis.com		Site Contact: Angela DeGrandis Telephone: 734-320-0065	
Method of Shipment/Carrier: Shipping/Tracking No:		Lab Contact: Denise Pohl Telephone: 330-966-9789	
TAT if different from below 10 day <input type="checkbox"/> 3 weeks <input type="checkbox"/> 2 weeks <input checked="" type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day <input type="checkbox"/>		Analysis Turnaround Time	
Matrix: Aqueous <input type="checkbox"/> Solid <input type="checkbox"/> Other:		Filtered Sample (Y/N)	
Containers & Preservatives: HCl <input type="checkbox"/> HNO3 <input type="checkbox"/> H2SO4 <input type="checkbox"/> Other:		Composite C/Grab-G	
Sample Date Sample Time Sample Identification		VOCs 8260B 1,4-Dioxane 8260B SIM	
MW-55-051018	5-10-18 945	X	NG X X X
MW-64-051018	5-10-18 1039	X	NG X X X
DUP-02-051018	5-10-18 -	X	NG X X X
TRIP BLANK	-	-	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown			
Special Instructions/QC Requirements & Comments:			
Submit all results through Cadena at jim.tomalia@cadenalabs.com, Cadena #E203728			
Relinquished by: <i>Jim Tomalia</i> Relinquished by: <i>Jim Tomalia</i> Relinquished by: <i>Jim Tomalia</i>		Received by: <i>Angela DeGrandis</i> Received by: <i>Angela DeGrandis</i> Received in Laboratory by:	
Company: ARCADIS Date/Time: 5-11-18 12:21		Company: TAL Date/Time: 5/11/18 13:49	
Company: TAL Date/Time: 5/11/18 11:41		Company: TAL Date/Time: 5-12-18 10:20	



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TestAmerica Canton Sample Receipt Form/Narrative

Login # : 95546

Canton Facility

Client Arcadis Site Name

Cooler unpacked by:

Cooler Received on 5-12-18 Opened on 5-12-18

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

Receipt After-hours: Drop-off Date/Time

Storage Location

TestAmerica Cooler # Foam Box Client Cooler Box Other mult

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

- 1. Cooler temperature upon receipt See Multiple Cooler Form IR GUN# IR-8 (CF +0.1 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C IR GUN #36 (CF +0.3°C) Observed Cooler Temp. °C Corrected Cooler Temp. °C IR GUN # 627 (CF -1.3°C) Observed Cooler Temp. °C Corrected Cooler Temp. °C

- 2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 4 Yes No -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No -Were tamper/custody seals intact and uncompromised? Yes No NA

3. Shippers' packing slip attached to the cooler(s)? Yes No

4. Did custody papers accompany the sample(s)? Yes No

5. Were the custody papers relinquished & signed in the appropriate place? Yes No

6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No

7. Did all bottles arrive in good condition (Unbroken)? Yes No

8. Could all bottle labels be reconciled with the COC? Yes No

9. Were correct bottle(s) used for the test(s) indicated? Yes No

10. Sufficient quantity received to perform indicated analyses? Yes No

11. Are these work share samples? Yes No

If yes, Questions 12-16 have been checked at the originating laboratory.

12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC732776

13. Were VOAs on the COC? Yes No

14. Were air bubbles >6 mm in any VOA vials? Larger than this. Yes No NA

15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # 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:

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):

