

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton
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Tel: (330)497-9396

TestAmerica Job ID: 240-95595-1

Client Project/Site: Ford LTP Livonia MI - E203728

For:

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



Authorized for release by:
5/29/2018 2:48:54 PM

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

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Definitions/Glossary

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

TestAmerica Job ID: 240-95595-1

Qualifiers

GC/MS VOA

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

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: 240-95595-1

Job ID: 240-95595-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford LTP Livonia MI - E203728

Report Number: 240-95595-1

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

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

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

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

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

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

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

RECEIPT

The samples were received on 5/15/2018 8:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.9° C and 3.1° C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples MW-20_051118 (240-95595-1), MW-7_051118 (240-95595-2), MW-36_051418 (240-95595-3), MW-24_051418 (240-95595-4), MW-46_051418 (240-95595-5), TW-1604_051118 (240-95595-6), TW-1603_051118 (240-95595-7), PW-1602_051118 (240-95595-8), TW-1602_051118 (240-95595-9), DUP-03_051418 (240-95595-10) and TRIP BLANK (240-95595-11) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 05/24/2018 and 05/25/2018.

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.

Acetone failed the recovery criteria high for the MS of sample 240-95585-2 in batch 240-328594. Refer to the QC report for details.

Samples MW-46_051418 (240-95595-5)[1.67X], TW-1604_051118 (240-95595-6)[2.5X], TW-1603_051118 (240-95595-7)[2.5X] and TW-1602_051118 (240-95595-9)[500X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Case Narrative

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

TestAmerica Job ID: 240-95595-1

Job ID: 240-95595-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

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-20_051118 (240-95595-1), MW-7_051118 (240-95595-2), MW-24_051418 (240-95595-4), TW-1603_051118 (240-95595-7), PW-1602_051118 (240-95595-8), DUP-03_051418 (240-95595-10), TRIP BLANK (240-95595-11) and (CCVIS 240-328363/2).

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-20_051118 (240-95595-1), MW-7_051118 (240-95595-2), MW-24_051418 (240-95595-4), TW-1603_051118 (240-95595-7), PW-1602_051118 (240-95595-8), DUP-03_051418 (240-95595-10), TRIP BLANK (240-95595-11) and (LCS 240-328363/4).

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-20_051118 (240-95595-1), MW-7_051118 (240-95595-2), MW-24_051418 (240-95595-4), TW-1603_051118 (240-95595-7), PW-1602_051118 (240-95595-8), DUP-03_051418 (240-95595-10) and TRIP BLANK (240-95595-11).

Method(s) 8260B: The initial calibration (ICAL) did not pass the method calibration acceptance criteria for [1,4-Dioxane]. This variance only affects results measured above the reporting limit. A CCV standard at or below the reporting limit (RL) was analyzed with the samples and found to be acceptable. This demonstrates the reporting limit is valid for the affected analytes. The samples associated with the ICAL were non-detects for the affected analytes; therefore, the results have been reported. The following samples are impacted: MW-36_051418 (240-95595-3), MW-46_051418 (240-95595-5), TW-1604_051118 (240-95595-6), TW-1602_051118 (240-95595-9) and (CCVIS 240-328594/2).

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-20_051118 (240-95595-1), MW-7_051118 (240-95595-2), MW-36_051418 (240-95595-3), MW-24_051418 (240-95595-4), MW-46_051418 (240-95595-5), TW-1604_051118 (240-95595-6), TW-1603_051118 (240-95595-7), PW-1602_051118 (240-95595-8), TW-1602_051118 (240-95595-9) and DUP-03_051418 (240-95595-10) were analyzed for volatile organic compounds (GCMS SIM) in accordance with EPA SW-846 Method 8260B SIM. The samples were analyzed on 05/23/2018 and 05/24/2018.

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

Method Summary

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

TestAmerica Job ID: 240-95595-1

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: 240-95595-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-95595-1	MW-20_051118	Water	05/11/18 14:51	05/15/18 08:45
240-95595-2	MW-7_051118	Water	05/11/18 15:52	05/15/18 08:45
240-95595-3	MW-36_051418	Water	05/14/18 08:23	05/15/18 08:45
240-95595-4	MW-24_051418	Water	05/14/18 09:45	05/15/18 08:45
240-95595-5	MW-46_051418	Water	05/14/18 10:42	05/15/18 08:45
240-95595-6	TW-1604_051118	Water	05/11/18 13:02	05/15/18 08:45
240-95595-7	TW-1603_051118	Water	05/11/18 13:52	05/15/18 08:45
240-95595-8	PW-1602_051118	Water	05/11/18 15:02	05/15/18 08:45
240-95595-9	TW-1602_051118	Water	05/11/18 16:02	05/15/18 08:45
240-95595-10	DUP-03_051418	Water	05/14/18 00:00	05/15/18 08:45
240-95595-11	TRIP BLANK	Water	05/11/18 00:00	05/15/18 08:45



Detection Summary

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

TestAmerica Job ID: 240-95595-1

Client Sample ID: MW-20_051118

Lab Sample ID: 240-95595-1

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
2-Butanone (MEK)	1.4	J	10	1.0	ug/L	1		8260B	Total/NA
4-Methyl-2-pentanone (MIBK)	2.0	J	10	0.71	ug/L	1		8260B	Total/NA

Client Sample ID: MW-7_051118

Lab Sample ID: 240-95595-2

No Detections.

Client Sample ID: MW-36_051418

Lab Sample ID: 240-95595-3

No Detections.

Client Sample ID: MW-24_051418

Lab Sample ID: 240-95595-4

No Detections.

Client Sample ID: MW-46_051418

Lab Sample ID: 240-95595-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	13		2.0	0.24	ug/L	1		8260B SIM	Total/NA
cis-1,2-Dichloroethene	6.0		1.7	0.50	ug/L	1.67		8260B	Total/NA
1,1-Dichloroethane	1.0	J	1.7	0.42	ug/L	1.67		8260B	Total/NA
trans-1,2-Dichloroethene	0.86	J	1.7	0.48	ug/L	1.67		8260B	Total/NA
Vinyl chloride	30		1.7	0.75	ug/L	1.67		8260B	Total/NA

Client Sample ID: TW-1604_051118

Lab Sample ID: 240-95595-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	20		2.5	0.75	ug/L	2.5		8260B	Total/NA
Vinyl chloride	65		2.5	1.1	ug/L	2.5		8260B	Total/NA

Client Sample ID: TW-1603_051118

Lab Sample ID: 240-95595-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	39		2.5	0.75	ug/L	2.5		8260B	Total/NA
Vinyl chloride	78		2.5	1.1	ug/L	2.5		8260B	Total/NA

Client Sample ID: PW-1602_051118

Lab Sample ID: 240-95595-8

No Detections.

Client Sample ID: TW-1602_051118

Lab Sample ID: 240-95595-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	5.0		2.0	0.24	ug/L	1		8260B SIM	Total/NA
cis-1,2-Dichloroethene	4400		500	150	ug/L	500		8260B	Total/NA
Vinyl chloride	8500		500	230	ug/L	500		8260B	Total/NA

Client Sample ID: DUP-03_051418

Lab Sample ID: 240-95595-10

No Detections.

This Detection Summary does not include radiochemical test results.

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Detection Summary

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

TestAmerica Job ID: 240-95595-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-95595-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	4.1	J	10	1.8	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

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Client Sample Results

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

TestAmerica Job ID: 240-95595-1

Client Sample ID: MW-20_051118

Lab Sample ID: 240-95595-1

Date Collected: 05/11/18 14:51

Matrix: Water

Date Received: 05/15/18 08:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.24	ug/L			05/23/18 21:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		63 - 125					05/23/18 21:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.8	J	10	1.8	ug/L			05/24/18 15:23	1
Benzene	1.0	U	1.0	0.28	ug/L			05/24/18 15:23	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			05/24/18 15:23	1
Bromoform	1.0	U	1.0	0.43	ug/L			05/24/18 15:23	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/24/18 15:23	1
2-Butanone (MEK)	1.4	J	10	1.0	ug/L			05/24/18 15:23	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			05/24/18 15:23	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			05/24/18 15:23	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			05/24/18 15:23	1
Chloroethane	1.0	U	1.0	0.41	ug/L			05/24/18 15:23	1
Chloroform	1.0	U*	1.0	0.31	ug/L			05/24/18 15:23	1
Chloromethane	1.0	U	1.0	0.43	ug/L			05/24/18 15:23	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/24/18 15:23	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			05/24/18 15:23	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			05/24/18 15:23	1
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			05/24/18 15:23	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			05/24/18 15:23	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			05/24/18 15:23	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			05/24/18 15:23	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			05/24/18 15:23	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			05/24/18 15:23	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			05/24/18 15:23	1
1,1-Dichloroethane	1.0	U*	1.0	0.25	ug/L			05/24/18 15:23	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/24/18 15:23	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			05/24/18 15:23	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			05/24/18 15:23	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			05/24/18 15:23	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			05/24/18 15:23	1
2-Hexanone	10	U	10	1.2	ug/L			05/24/18 15:23	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			05/24/18 15:23	1
Methyl acetate	10	U	10	1.4	ug/L			05/24/18 15:23	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			05/24/18 15:23	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			05/24/18 15:23	1
4-Methyl-2-pentanone (MIBK)	2.0	J	10	0.71	ug/L			05/24/18 15:23	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			05/24/18 15:23	1
Styrene	1.0	U	1.0	0.23	ug/L			05/24/18 15:23	1
1,1,2,2-Tetrachloroethane	1.0	U*	1.0	0.32	ug/L			05/24/18 15:23	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			05/24/18 15:23	1
Toluene	1.0	U*	1.0	0.23	ug/L			05/24/18 15:23	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			05/24/18 15:23	1
trans-1,3-Dichloropropene	1.0	U*	1.0	0.31	ug/L			05/24/18 15:23	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			05/24/18 15:23	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			05/24/18 15:23	1

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Client Sample Results

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

TestAmerica Job ID: 240-95595-1

Client Sample ID: MW-20_051118

Lab Sample ID: 240-95595-1

Date Collected: 05/11/18 14:51

Matrix: Water

Date Received: 05/15/18 08:45

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 15:23	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			05/24/18 15:23	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			05/24/18 15:23	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/24/18 15:23	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			05/24/18 15:23	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/24/18 15:23	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/24/18 15:23	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/24/18 15:23	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			05/24/18 15:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	79		69 - 120					05/24/18 15:23	1
Dibromofluoromethane (Surr)	108		69 - 124					05/24/18 15:23	1
1,2-Dichloroethane-d4 (Surr)	111		61 - 138					05/24/18 15:23	1
Toluene-d8 (Surr)	118		73 - 120					05/24/18 15:23	1

Client Sample Results

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

TestAmerica Job ID: 240-95595-1

Client Sample ID: MW-7_051118

Lab Sample ID: 240-95595-2

Date Collected: 05/11/18 15:52

Matrix: Water

Date Received: 05/15/18 08:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.24	ug/L			05/23/18 22:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		63 - 125					05/23/18 22:03	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 15:46	1
Benzene	1.0	U	1.0	0.28	ug/L			05/24/18 15:46	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			05/24/18 15:46	1
Bromoform	1.0	U	1.0	0.43	ug/L			05/24/18 15:46	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/24/18 15:46	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/24/18 15:46	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			05/24/18 15:46	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			05/24/18 15:46	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			05/24/18 15:46	1
Chloroethane	1.0	U	1.0	0.41	ug/L			05/24/18 15:46	1
Chloroform	1.0	U*	1.0	0.31	ug/L			05/24/18 15:46	1
Chloromethane	1.0	U	1.0	0.43	ug/L			05/24/18 15:46	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/24/18 15:46	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			05/24/18 15:46	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			05/24/18 15:46	1
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			05/24/18 15:46	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			05/24/18 15:46	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			05/24/18 15:46	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			05/24/18 15:46	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			05/24/18 15:46	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			05/24/18 15:46	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			05/24/18 15:46	1
1,1-Dichloroethane	1.0	U*	1.0	0.25	ug/L			05/24/18 15:46	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/24/18 15:46	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			05/24/18 15:46	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			05/24/18 15:46	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			05/24/18 15:46	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			05/24/18 15:46	1
2-Hexanone	10	U	10	1.2	ug/L			05/24/18 15:46	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			05/24/18 15:46	1
Methyl acetate	10	U	10	1.4	ug/L			05/24/18 15:46	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			05/24/18 15:46	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			05/24/18 15:46	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			05/24/18 15:46	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			05/24/18 15:46	1
Styrene	1.0	U	1.0	0.23	ug/L			05/24/18 15:46	1
1,1,2,2-Tetrachloroethane	1.0	U*	1.0	0.32	ug/L			05/24/18 15:46	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			05/24/18 15:46	1
Toluene	1.0	U*	1.0	0.23	ug/L			05/24/18 15:46	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			05/24/18 15:46	1
trans-1,3-Dichloropropene	1.0	U*	1.0	0.31	ug/L			05/24/18 15:46	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			05/24/18 15:46	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			05/24/18 15:46	1

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-95595-1

Client Sample ID: MW-7_051118

Lab Sample ID: 240-95595-2

Date Collected: 05/11/18 15:52

Matrix: Water

Date Received: 05/15/18 08:45

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 15:46	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			05/24/18 15:46	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			05/24/18 15:46	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/24/18 15:46	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			05/24/18 15:46	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/24/18 15:46	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/24/18 15:46	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/24/18 15:46	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			05/24/18 15:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	76		69 - 120		05/24/18 15:46	1
Dibromofluoromethane (Surr)	108		69 - 124		05/24/18 15:46	1
1,2-Dichloroethane-d4 (Surr)	110		61 - 138		05/24/18 15:46	1
Toluene-d8 (Surr)	116		73 - 120		05/24/18 15:46	1

Client Sample Results

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

TestAmerica Job ID: 240-95595-1

Client Sample ID: MW-36_051418

Lab Sample ID: 240-95595-3

Date Collected: 05/14/18 08:23

Matrix: Water

Date Received: 05/15/18 08:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.24	ug/L			05/23/18 23:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		63 - 125					05/23/18 23:18	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			05/25/18 17:21	1
Benzene	1.0	U	1.0	0.28	ug/L			05/25/18 17:21	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			05/25/18 17:21	1
Bromoform	1.0	U	1.0	0.43	ug/L			05/25/18 17:21	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/25/18 17:21	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/25/18 17:21	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			05/25/18 17:21	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			05/25/18 17:21	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			05/25/18 17:21	1
Chloroethane	1.0	U	1.0	0.41	ug/L			05/25/18 17:21	1
Chloroform	1.0	U	1.0	0.31	ug/L			05/25/18 17:21	1
Chloromethane	1.0	U	1.0	0.43	ug/L			05/25/18 17:21	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/25/18 17:21	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			05/25/18 17:21	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			05/25/18 17:21	1
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			05/25/18 17:21	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			05/25/18 17:21	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			05/25/18 17:21	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			05/25/18 17:21	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			05/25/18 17:21	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			05/25/18 17:21	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			05/25/18 17:21	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/25/18 17:21	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/25/18 17:21	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			05/25/18 17:21	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			05/25/18 17:21	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			05/25/18 17:21	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			05/25/18 17:21	1
2-Hexanone	10	U	10	1.2	ug/L			05/25/18 17:21	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			05/25/18 17:21	1
Methyl acetate	10	U	10	1.4	ug/L			05/25/18 17:21	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			05/25/18 17:21	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			05/25/18 17:21	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			05/25/18 17:21	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			05/25/18 17:21	1
Styrene	1.0	U	1.0	0.23	ug/L			05/25/18 17:21	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			05/25/18 17:21	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			05/25/18 17:21	1
Toluene	1.0	U	1.0	0.23	ug/L			05/25/18 17:21	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			05/25/18 17:21	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			05/25/18 17:21	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			05/25/18 17:21	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			05/25/18 17:21	1

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-95595-1

Client Sample ID: MW-36_051418

Lab Sample ID: 240-95595-3

Date Collected: 05/14/18 08:23

Matrix: Water

Date Received: 05/15/18 08:45

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			05/25/18 17:21	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			05/25/18 17:21	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			05/25/18 17:21	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/25/18 17:21	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			05/25/18 17:21	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/25/18 17:21	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/25/18 17:21	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/25/18 17:21	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			05/25/18 17:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		69 - 120					05/25/18 17:21	1
Dibromofluoromethane (Surr)	89		69 - 124					05/25/18 17:21	1
1,2-Dichloroethane-d4 (Surr)	89		61 - 138					05/25/18 17:21	1
Toluene-d8 (Surr)	95		73 - 120					05/25/18 17:21	1

Client Sample Results

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

TestAmerica Job ID: 240-95595-1

Client Sample ID: MW-24_051418

Lab Sample ID: 240-95595-4

Date Collected: 05/14/18 09:45

Matrix: Water

Date Received: 05/15/18 08:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.24	ug/L			05/24/18 00:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		63 - 125					05/24/18 00:33	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			05/24/18 16:31	1
Benzene	1.0	U	1.0	0.28	ug/L			05/24/18 16:31	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			05/24/18 16:31	1
Bromoform	1.0	U	1.0	0.43	ug/L			05/24/18 16:31	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/24/18 16:31	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/24/18 16:31	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			05/24/18 16:31	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			05/24/18 16:31	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			05/24/18 16:31	1
Chloroethane	1.0	U	1.0	0.41	ug/L			05/24/18 16:31	1
Chloroform	1.0	U*	1.0	0.31	ug/L			05/24/18 16:31	1
Chloromethane	1.0	U	1.0	0.43	ug/L			05/24/18 16:31	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/24/18 16:31	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			05/24/18 16:31	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			05/24/18 16:31	1
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			05/24/18 16:31	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			05/24/18 16:31	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			05/24/18 16:31	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			05/24/18 16:31	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			05/24/18 16:31	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			05/24/18 16:31	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			05/24/18 16:31	1
1,1-Dichloroethane	1.0	U*	1.0	0.25	ug/L			05/24/18 16:31	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/24/18 16:31	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			05/24/18 16:31	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			05/24/18 16:31	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			05/24/18 16:31	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			05/24/18 16:31	1
2-Hexanone	10	U	10	1.2	ug/L			05/24/18 16:31	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			05/24/18 16:31	1
Methyl acetate	10	U	10	1.4	ug/L			05/24/18 16:31	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			05/24/18 16:31	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			05/24/18 16:31	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			05/24/18 16:31	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			05/24/18 16:31	1
Styrene	1.0	U	1.0	0.23	ug/L			05/24/18 16:31	1
1,1,2,2-Tetrachloroethane	1.0	U*	1.0	0.32	ug/L			05/24/18 16:31	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			05/24/18 16:31	1
Toluene	1.0	U*	1.0	0.23	ug/L			05/24/18 16:31	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			05/24/18 16:31	1
trans-1,3-Dichloropropene	1.0	U*	1.0	0.31	ug/L			05/24/18 16:31	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			05/24/18 16:31	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			05/24/18 16:31	1

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-95595-1

Client Sample ID: MW-24_051418

Lab Sample ID: 240-95595-4

Date Collected: 05/14/18 09:45

Matrix: Water

Date Received: 05/15/18 08:45

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 16:31	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			05/24/18 16:31	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			05/24/18 16:31	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/24/18 16:31	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			05/24/18 16:31	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/24/18 16:31	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/24/18 16:31	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/24/18 16:31	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			05/24/18 16:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	78		69 - 120					05/24/18 16:31	1
Dibromofluoromethane (Surr)	109		69 - 124					05/24/18 16:31	1
1,2-Dichloroethane-d4 (Surr)	111		61 - 138					05/24/18 16:31	1
Toluene-d8 (Surr)	119		73 - 120					05/24/18 16:31	1

Client Sample Results

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

TestAmerica Job ID: 240-95595-1

Client Sample ID: MW-46_051418

Lab Sample ID: 240-95595-5

Date Collected: 05/14/18 10:42

Matrix: Water

Date Received: 05/15/18 08:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	13		2.0	0.24	ug/L			05/24/18 00:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		63 - 125					05/24/18 00:58	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	17	U	17	2.9	ug/L			05/25/18 17:43	1.67
Benzene	1.7	U	1.7	0.47	ug/L			05/25/18 17:43	1.67
Bromodichloromethane	1.7	U	1.7	0.50	ug/L			05/25/18 17:43	1.67
Bromoform	1.7	U	1.7	0.72	ug/L			05/25/18 17:43	1.67
Bromomethane	1.7	U	1.7	0.70	ug/L			05/25/18 17:43	1.67
2-Butanone (MEK)	17	U	17	1.7	ug/L			05/25/18 17:43	1.67
Carbon disulfide	8.4	U	8.4	0.57	ug/L			05/25/18 17:43	1.67
Carbon tetrachloride	1.7	U	1.7	0.58	ug/L			05/25/18 17:43	1.67
Chlorobenzene	1.7	U	1.7	0.53	ug/L			05/25/18 17:43	1.67
Chloroethane	1.7	U	1.7	0.68	ug/L			05/25/18 17:43	1.67
Chloroform	1.7	U	1.7	0.52	ug/L			05/25/18 17:43	1.67
Chloromethane	1.7	U	1.7	0.72	ug/L			05/25/18 17:43	1.67
cis-1,2-Dichloroethene	6.0		1.7	0.50	ug/L			05/25/18 17:43	1.67
cis-1,3-Dichloropropene	1.7	U	1.7	0.43	ug/L			05/25/18 17:43	1.67
Cyclohexane	1.7	U	1.7	0.73	ug/L			05/25/18 17:43	1.67
Dibromochloromethane	1.7	U	1.7	0.42	ug/L			05/25/18 17:43	1.67
1,2-Dibromo-3-Chloropropane	1.7	U	1.7	0.78	ug/L			05/25/18 17:43	1.67
1,2-Dibromoethane	1.7	U	1.7	0.38	ug/L			05/25/18 17:43	1.67
1,2-Dichlorobenzene	1.7	U	1.7	0.43	ug/L			05/25/18 17:43	1.67
1,3-Dichlorobenzene	1.7	U	1.7	0.53	ug/L			05/25/18 17:43	1.67
1,4-Dichlorobenzene	1.7	U	1.7	0.38	ug/L			05/25/18 17:43	1.67
Dichlorodifluoromethane	1.7	U	1.7	0.84	ug/L			05/25/18 17:43	1.67
1,1-Dichloroethane	1.0	J	1.7	0.42	ug/L			05/25/18 17:43	1.67
1,2-Dichloroethane	1.7	U	1.7	0.50	ug/L			05/25/18 17:43	1.67
1,1-Dichloroethene	1.7	U	1.7	0.45	ug/L			05/25/18 17:43	1.67
1,2-Dichloropropane	1.7	U	1.7	0.50	ug/L			05/25/18 17:43	1.67
Diethyl ether	3.3	U	3.3	0.58	ug/L			05/25/18 17:43	1.67
Ethylbenzene	1.7	U	1.7	0.43	ug/L			05/25/18 17:43	1.67
2-Hexanone	17	U	17	2.1	ug/L			05/25/18 17:43	1.67
Isopropylbenzene	1.7	U	1.7	0.35	ug/L			05/25/18 17:43	1.67
Methyl acetate	17	U	17	2.4	ug/L			05/25/18 17:43	1.67
Methylcyclohexane	1.7	U	1.7	0.75	ug/L			05/25/18 17:43	1.67
Methylene Chloride	8.4	U	8.4	0.89	ug/L			05/25/18 17:43	1.67
4-Methyl-2-pentanone (MIBK)	17	U	17	1.2	ug/L			05/25/18 17:43	1.67
Methyl tert-butyl ether	1.7	U	1.7	0.45	ug/L			05/25/18 17:43	1.67
Styrene	1.7	U	1.7	0.38	ug/L			05/25/18 17:43	1.67
1,1,1,2-Tetrachloroethane	1.7	U	1.7	0.53	ug/L			05/25/18 17:43	1.67
Tetrachloroethene	1.7	U	1.7	0.50	ug/L			05/25/18 17:43	1.67
Toluene	1.7	U	1.7	0.38	ug/L			05/25/18 17:43	1.67
trans-1,2-Dichloroethene	0.86	J	1.7	0.48	ug/L			05/25/18 17:43	1.67
trans-1,3-Dichloropropene	1.7	U	1.7	0.52	ug/L			05/25/18 17:43	1.67
1,2,4-Trichlorobenzene	1.7	U	1.7	0.45	ug/L			05/25/18 17:43	1.67
1,1,1-Trichloroethane	1.7	U	1.7	0.38	ug/L			05/25/18 17:43	1.67

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-95595-1

Client Sample ID: MW-46_051418
Date Collected: 05/14/18 10:42
Date Received: 05/15/18 08:45

Lab Sample ID: 240-95595-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.7	U	1.7	0.57	ug/L			05/25/18 17:43	1.67
Trichloroethene	1.7	U	1.7	0.55	ug/L			05/25/18 17:43	1.67
Trichlorofluoromethane	1.7	U	1.7	0.84	ug/L			05/25/18 17:43	1.67
1,1,2-Trichloro-1,2,2-trifluoroethane	1.7	U	1.7	0.68	ug/L			05/25/18 17:43	1.67
1,2,3-Trimethylbenzene	8.4	U	8.4	0.37	ug/L			05/25/18 17:43	1.67
1,2,4-Trimethylbenzene	1.7	U	1.7	0.40	ug/L			05/25/18 17:43	1.67
1,3,5-Trimethylbenzene	1.7	U	1.7	0.40	ug/L			05/25/18 17:43	1.67
Vinyl chloride	30		1.7	0.75	ug/L			05/25/18 17:43	1.67
Xylenes, Total	3.3	U	3.3	0.40	ug/L			05/25/18 17:43	1.67

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		69 - 120		05/25/18 17:43	1.67
Dibromofluoromethane (Surr)	92		69 - 124		05/25/18 17:43	1.67
1,2-Dichloroethane-d4 (Surr)	88		61 - 138		05/25/18 17:43	1.67
Toluene-d8 (Surr)	97		73 - 120		05/25/18 17:43	1.67

Client Sample Results

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

TestAmerica Job ID: 240-95595-1

Client Sample ID: TW-1604_051118

Lab Sample ID: 240-95595-6

Date Collected: 05/11/18 13:02

Matrix: Water

Date Received: 05/15/18 08:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.24	ug/L			05/24/18 01:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		63 - 125					05/24/18 01:23	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	4.4	ug/L			05/25/18 15:30	2.5
Benzene	2.5	U	2.5	0.70	ug/L			05/25/18 15:30	2.5
Bromodichloromethane	2.5	U	2.5	0.75	ug/L			05/25/18 15:30	2.5
Bromoform	2.5	U	2.5	1.1	ug/L			05/25/18 15:30	2.5
Bromomethane	2.5	U	2.5	1.1	ug/L			05/25/18 15:30	2.5
2-Butanone (MEK)	25	U	25	2.6	ug/L			05/25/18 15:30	2.5
Carbon disulfide	13	U	13	0.85	ug/L			05/25/18 15:30	2.5
Carbon tetrachloride	2.5	U	2.5	0.88	ug/L			05/25/18 15:30	2.5
Chlorobenzene	2.5	U	2.5	0.80	ug/L			05/25/18 15:30	2.5
Chloroethane	2.5	U	2.5	1.0	ug/L			05/25/18 15:30	2.5
Chloroform	2.5	U	2.5	0.78	ug/L			05/25/18 15:30	2.5
Chloromethane	2.5	U	2.5	1.1	ug/L			05/25/18 15:30	2.5
cis-1,2-Dichloroethene	20		2.5	0.75	ug/L			05/25/18 15:30	2.5
cis-1,3-Dichloropropene	2.5	U	2.5	0.65	ug/L			05/25/18 15:30	2.5
Cyclohexane	2.5	U	2.5	1.1	ug/L			05/25/18 15:30	2.5
Dibromochloromethane	2.5	U	2.5	0.63	ug/L			05/25/18 15:30	2.5
1,2-Dibromo-3-Chloropropane	2.5	U	2.5	1.2	ug/L			05/25/18 15:30	2.5
1,2-Dibromoethane	2.5	U	2.5	0.58	ug/L			05/25/18 15:30	2.5
1,2-Dichlorobenzene	2.5	U	2.5	0.65	ug/L			05/25/18 15:30	2.5
1,3-Dichlorobenzene	2.5	U	2.5	0.80	ug/L			05/25/18 15:30	2.5
1,4-Dichlorobenzene	2.5	U	2.5	0.58	ug/L			05/25/18 15:30	2.5
Dichlorodifluoromethane	2.5	U	2.5	1.3	ug/L			05/25/18 15:30	2.5
1,1-Dichloroethane	2.5	U	2.5	0.63	ug/L			05/25/18 15:30	2.5
1,2-Dichloroethane	2.5	U	2.5	0.75	ug/L			05/25/18 15:30	2.5
1,1-Dichloroethene	2.5	U	2.5	0.68	ug/L			05/25/18 15:30	2.5
1,2-Dichloropropane	2.5	U	2.5	0.75	ug/L			05/25/18 15:30	2.5
Diethyl ether	5.0	U	5.0	0.88	ug/L			05/25/18 15:30	2.5
Ethylbenzene	2.5	U	2.5	0.65	ug/L			05/25/18 15:30	2.5
2-Hexanone	25	U	25	3.1	ug/L			05/25/18 15:30	2.5
Isopropylbenzene	2.5	U	2.5	0.53	ug/L			05/25/18 15:30	2.5
Methyl acetate	25	U	25	3.6	ug/L			05/25/18 15:30	2.5
Methylcyclohexane	2.5	U	2.5	1.1	ug/L			05/25/18 15:30	2.5
Methylene Chloride	13	U	13	1.3	ug/L			05/25/18 15:30	2.5
4-Methyl-2-pentanone (MIBK)	25	U	25	1.8	ug/L			05/25/18 15:30	2.5
Methyl tert-butyl ether	2.5	U	2.5	0.68	ug/L			05/25/18 15:30	2.5
Styrene	2.5	U	2.5	0.58	ug/L			05/25/18 15:30	2.5
1,1,2,2-Tetrachloroethane	2.5	U	2.5	0.80	ug/L			05/25/18 15:30	2.5
Tetrachloroethene	2.5	U	2.5	0.75	ug/L			05/25/18 15:30	2.5
Toluene	2.5	U	2.5	0.58	ug/L			05/25/18 15:30	2.5
trans-1,2-Dichloroethene	2.5	U	2.5	0.73	ug/L			05/25/18 15:30	2.5
trans-1,3-Dichloropropene	2.5	U	2.5	0.78	ug/L			05/25/18 15:30	2.5
1,2,4-Trichlorobenzene	2.5	U	2.5	0.68	ug/L			05/25/18 15:30	2.5
1,1,1-Trichloroethane	2.5	U	2.5	0.58	ug/L			05/25/18 15:30	2.5

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-95595-1

Client Sample ID: TW-1604_051118

Lab Sample ID: 240-95595-6

Date Collected: 05/11/18 13:02

Matrix: Water

Date Received: 05/15/18 08:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	2.5	U	2.5	0.85	ug/L			05/25/18 15:30	2.5
Trichloroethene	2.5	U	2.5	0.83	ug/L			05/25/18 15:30	2.5
Trichlorofluoromethane	2.5	U	2.5	1.3	ug/L			05/25/18 15:30	2.5
1,1,2-Trichloro-1,2,2-trifluoroethane	2.5	U	2.5	1.0	ug/L			05/25/18 15:30	2.5
1,2,3-Trimethylbenzene	13	U	13	0.55	ug/L			05/25/18 15:30	2.5
1,2,4-Trimethylbenzene	2.5	U	2.5	0.60	ug/L			05/25/18 15:30	2.5
1,3,5-Trimethylbenzene	2.5	U	2.5	0.60	ug/L			05/25/18 15:30	2.5
Vinyl chloride	65		2.5	1.1	ug/L			05/25/18 15:30	2.5
Xylenes, Total	5.0	U	5.0	0.60	ug/L			05/25/18 15:30	2.5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		69 - 120					05/25/18 15:30	2.5
Dibromofluoromethane (Surr)	90		69 - 124					05/25/18 15:30	2.5
1,2-Dichloroethane-d4 (Surr)	93		61 - 138					05/25/18 15:30	2.5
Toluene-d8 (Surr)	95		73 - 120					05/25/18 15:30	2.5

Client Sample Results

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

TestAmerica Job ID: 240-95595-1

Client Sample ID: TW-1603_051118

Lab Sample ID: 240-95595-7

Date Collected: 05/11/18 13:52

Matrix: Water

Date Received: 05/15/18 08:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.24	ug/L			05/24/18 01:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		63 - 125					05/24/18 01:48	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	4.4	ug/L			05/24/18 17:39	2.5
Benzene	2.5	U	2.5	0.70	ug/L			05/24/18 17:39	2.5
Bromodichloromethane	2.5	U	2.5	0.75	ug/L			05/24/18 17:39	2.5
Bromoform	2.5	U	2.5	1.1	ug/L			05/24/18 17:39	2.5
Bromomethane	2.5	U	2.5	1.1	ug/L			05/24/18 17:39	2.5
2-Butanone (MEK)	25	U	25	2.6	ug/L			05/24/18 17:39	2.5
Carbon disulfide	13	U	13	0.85	ug/L			05/24/18 17:39	2.5
Carbon tetrachloride	2.5	U	2.5	0.88	ug/L			05/24/18 17:39	2.5
Chlorobenzene	2.5	U	2.5	0.80	ug/L			05/24/18 17:39	2.5
Chloroethane	2.5	U	2.5	1.0	ug/L			05/24/18 17:39	2.5
Chloroform	2.5	U*	2.5	0.78	ug/L			05/24/18 17:39	2.5
Chloromethane	2.5	U	2.5	1.1	ug/L			05/24/18 17:39	2.5
cis-1,2-Dichloroethene	39		2.5	0.75	ug/L			05/24/18 17:39	2.5
cis-1,3-Dichloropropene	2.5	U	2.5	0.65	ug/L			05/24/18 17:39	2.5
Cyclohexane	2.5	U	2.5	1.1	ug/L			05/24/18 17:39	2.5
Dibromochloromethane	2.5	U	2.5	0.63	ug/L			05/24/18 17:39	2.5
1,2-Dibromo-3-Chloropropane	2.5	U	2.5	1.2	ug/L			05/24/18 17:39	2.5
1,2-Dibromoethane	2.5	U	2.5	0.58	ug/L			05/24/18 17:39	2.5
1,2-Dichlorobenzene	2.5	U	2.5	0.65	ug/L			05/24/18 17:39	2.5
1,3-Dichlorobenzene	2.5	U	2.5	0.80	ug/L			05/24/18 17:39	2.5
1,4-Dichlorobenzene	2.5	U	2.5	0.58	ug/L			05/24/18 17:39	2.5
Dichlorodifluoromethane	2.5	U	2.5	1.3	ug/L			05/24/18 17:39	2.5
1,1-Dichloroethane	2.5	U*	2.5	0.63	ug/L			05/24/18 17:39	2.5
1,2-Dichloroethane	2.5	U	2.5	0.75	ug/L			05/24/18 17:39	2.5
1,1-Dichloroethene	2.5	U	2.5	0.68	ug/L			05/24/18 17:39	2.5
1,2-Dichloropropane	2.5	U	2.5	0.75	ug/L			05/24/18 17:39	2.5
Diethyl ether	5.0	U	5.0	0.88	ug/L			05/24/18 17:39	2.5
Ethylbenzene	2.5	U	2.5	0.65	ug/L			05/24/18 17:39	2.5
2-Hexanone	25	U	25	3.1	ug/L			05/24/18 17:39	2.5
Isopropylbenzene	2.5	U	2.5	0.53	ug/L			05/24/18 17:39	2.5
Methyl acetate	25	U	25	3.6	ug/L			05/24/18 17:39	2.5
Methylcyclohexane	2.5	U	2.5	1.1	ug/L			05/24/18 17:39	2.5
Methylene Chloride	13	U	13	1.3	ug/L			05/24/18 17:39	2.5
4-Methyl-2-pentanone (MIBK)	25	U	25	1.8	ug/L			05/24/18 17:39	2.5
Methyl tert-butyl ether	2.5	U	2.5	0.68	ug/L			05/24/18 17:39	2.5
Styrene	2.5	U	2.5	0.58	ug/L			05/24/18 17:39	2.5
1,1,2,2-Tetrachloroethane	2.5	U*	2.5	0.80	ug/L			05/24/18 17:39	2.5
Tetrachloroethene	2.5	U	2.5	0.75	ug/L			05/24/18 17:39	2.5
Toluene	2.5	U*	2.5	0.58	ug/L			05/24/18 17:39	2.5
trans-1,2-Dichloroethene	2.5	U	2.5	0.73	ug/L			05/24/18 17:39	2.5
trans-1,3-Dichloropropene	2.5	U*	2.5	0.78	ug/L			05/24/18 17:39	2.5
1,2,4-Trichlorobenzene	2.5	U	2.5	0.68	ug/L			05/24/18 17:39	2.5
1,1,1-Trichloroethane	2.5	U	2.5	0.58	ug/L			05/24/18 17:39	2.5

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-95595-1

Client Sample ID: TW-1603_051118

Lab Sample ID: 240-95595-7

Date Collected: 05/11/18 13:52

Matrix: Water

Date Received: 05/15/18 08:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	2.5	U *	2.5	0.85	ug/L			05/24/18 17:39	2.5
Trichloroethene	2.5	U	2.5	0.83	ug/L			05/24/18 17:39	2.5
Trichlorofluoromethane	2.5	U	2.5	1.3	ug/L			05/24/18 17:39	2.5
1,1,2-Trichloro-1,2,2-trifluoroethane	2.5	U	2.5	1.0	ug/L			05/24/18 17:39	2.5
1,2,3-Trimethylbenzene	13	U	13	0.55	ug/L			05/24/18 17:39	2.5
1,2,4-Trimethylbenzene	2.5	U	2.5	0.60	ug/L			05/24/18 17:39	2.5
1,3,5-Trimethylbenzene	2.5	U	2.5	0.60	ug/L			05/24/18 17:39	2.5
Vinyl chloride	78		2.5	1.1	ug/L			05/24/18 17:39	2.5
Xylenes, Total	5.0	U	5.0	0.60	ug/L			05/24/18 17:39	2.5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	76		69 - 120					05/24/18 17:39	2.5
Dibromofluoromethane (Surr)	108		69 - 124					05/24/18 17:39	2.5
1,2-Dichloroethane-d4 (Surr)	115		61 - 138					05/24/18 17:39	2.5
Toluene-d8 (Surr)	113		73 - 120					05/24/18 17:39	2.5

Client Sample Results

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

TestAmerica Job ID: 240-95595-1

Client Sample ID: PW-1602_051118

Lab Sample ID: 240-95595-8

Date Collected: 05/11/18 15:02

Matrix: Water

Date Received: 05/15/18 08:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.24	ug/L			05/23/18 22:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		63 - 125					05/23/18 22:28	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 18:02	1
Benzene	1.0	U	1.0	0.28	ug/L			05/24/18 18:02	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			05/24/18 18:02	1
Bromoform	1.0	U	1.0	0.43	ug/L			05/24/18 18:02	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/24/18 18:02	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/24/18 18:02	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			05/24/18 18:02	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			05/24/18 18:02	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			05/24/18 18:02	1
Chloroethane	1.0	U	1.0	0.41	ug/L			05/24/18 18:02	1
Chloroform	1.0	U*	1.0	0.31	ug/L			05/24/18 18:02	1
Chloromethane	1.0	U	1.0	0.43	ug/L			05/24/18 18:02	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/24/18 18:02	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			05/24/18 18:02	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			05/24/18 18:02	1
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			05/24/18 18:02	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			05/24/18 18:02	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			05/24/18 18:02	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			05/24/18 18:02	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			05/24/18 18:02	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			05/24/18 18:02	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			05/24/18 18:02	1
1,1-Dichloroethane	1.0	U*	1.0	0.25	ug/L			05/24/18 18:02	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/24/18 18:02	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			05/24/18 18:02	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			05/24/18 18:02	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			05/24/18 18:02	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			05/24/18 18:02	1
2-Hexanone	10	U	10	1.2	ug/L			05/24/18 18:02	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			05/24/18 18:02	1
Methyl acetate	10	U	10	1.4	ug/L			05/24/18 18:02	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			05/24/18 18:02	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			05/24/18 18:02	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			05/24/18 18:02	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			05/24/18 18:02	1
Styrene	1.0	U	1.0	0.23	ug/L			05/24/18 18:02	1
1,1,1,2-Tetrachloroethane	1.0	U*	1.0	0.32	ug/L			05/24/18 18:02	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			05/24/18 18:02	1
Toluene	1.0	U*	1.0	0.23	ug/L			05/24/18 18:02	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			05/24/18 18:02	1
trans-1,3-Dichloropropene	1.0	U*	1.0	0.31	ug/L			05/24/18 18:02	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			05/24/18 18:02	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			05/24/18 18:02	1

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-95595-1

Client Sample ID: PW-1602_051118

Lab Sample ID: 240-95595-8

Date Collected: 05/11/18 15:02

Matrix: Water

Date Received: 05/15/18 08:45

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 18:02	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			05/24/18 18:02	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			05/24/18 18:02	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/24/18 18:02	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			05/24/18 18:02	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/24/18 18:02	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/24/18 18:02	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/24/18 18:02	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			05/24/18 18:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	70		69 - 120					05/24/18 18:02	1
Dibromofluoromethane (Surr)	98		69 - 124					05/24/18 18:02	1
1,2-Dichloroethane-d4 (Surr)	102		61 - 138					05/24/18 18:02	1
Toluene-d8 (Surr)	104		73 - 120					05/24/18 18:02	1

Client Sample Results

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

TestAmerica Job ID: 240-95595-1

Client Sample ID: TW-1602_051118

Lab Sample ID: 240-95595-9

Date Collected: 05/11/18 16:02

Matrix: Water

Date Received: 05/15/18 08:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	5.0		2.0	0.24	ug/L			05/23/18 22:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		63 - 125					05/23/18 22:53	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	5000	U	5000	880	ug/L			05/25/18 15:52	500
Benzene	500	U	500	140	ug/L			05/25/18 15:52	500
Bromodichloromethane	500	U	500	150	ug/L			05/25/18 15:52	500
Bromoform	500	U	500	220	ug/L			05/25/18 15:52	500
Bromomethane	500	U	500	210	ug/L			05/25/18 15:52	500
2-Butanone (MEK)	5000	U	5000	510	ug/L			05/25/18 15:52	500
Carbon disulfide	2500	U	2500	170	ug/L			05/25/18 15:52	500
Carbon tetrachloride	500	U	500	180	ug/L			05/25/18 15:52	500
Chlorobenzene	500	U	500	160	ug/L			05/25/18 15:52	500
Chloroethane	500	U	500	210	ug/L			05/25/18 15:52	500
Chloroform	500	U	500	160	ug/L			05/25/18 15:52	500
Chloromethane	500	U	500	220	ug/L			05/25/18 15:52	500
cis-1,2-Dichloroethene	4400		500	150	ug/L			05/25/18 15:52	500
cis-1,3-Dichloropropene	500	U	500	130	ug/L			05/25/18 15:52	500
Cyclohexane	500	U	500	220	ug/L			05/25/18 15:52	500
Dibromochloromethane	500	U	500	130	ug/L			05/25/18 15:52	500
1,2-Dibromo-3-Chloropropane	500	U	500	240	ug/L			05/25/18 15:52	500
1,2-Dibromoethane	500	U	500	120	ug/L			05/25/18 15:52	500
1,2-Dichlorobenzene	500	U	500	130	ug/L			05/25/18 15:52	500
1,3-Dichlorobenzene	500	U	500	160	ug/L			05/25/18 15:52	500
1,4-Dichlorobenzene	500	U	500	120	ug/L			05/25/18 15:52	500
Dichlorodifluoromethane	500	U	500	250	ug/L			05/25/18 15:52	500
1,1-Dichloroethane	500	U	500	130	ug/L			05/25/18 15:52	500
1,2-Dichloroethane	500	U	500	150	ug/L			05/25/18 15:52	500
1,1-Dichloroethene	500	U	500	140	ug/L			05/25/18 15:52	500
1,2-Dichloropropane	500	U	500	150	ug/L			05/25/18 15:52	500
Diethyl ether	1000	U	1000	180	ug/L			05/25/18 15:52	500
Ethylbenzene	500	U	500	130	ug/L			05/25/18 15:52	500
2-Hexanone	5000	U	5000	620	ug/L			05/25/18 15:52	500
Isopropylbenzene	500	U	500	110	ug/L			05/25/18 15:52	500
Methyl acetate	5000	U	5000	720	ug/L			05/25/18 15:52	500
Methylcyclohexane	500	U	500	230	ug/L			05/25/18 15:52	500
Methylene Chloride	2500	U	2500	270	ug/L			05/25/18 15:52	500
4-Methyl-2-pentanone (MIBK)	5000	U	5000	360	ug/L			05/25/18 15:52	500
Methyl tert-butyl ether	500	U	500	140	ug/L			05/25/18 15:52	500
Styrene	500	U	500	120	ug/L			05/25/18 15:52	500
1,1,2,2-Tetrachloroethane	500	U	500	160	ug/L			05/25/18 15:52	500
Tetrachloroethene	500	U	500	150	ug/L			05/25/18 15:52	500
Toluene	500	U	500	120	ug/L			05/25/18 15:52	500
trans-1,2-Dichloroethene	500	U	500	150	ug/L			05/25/18 15:52	500
trans-1,3-Dichloropropene	500	U	500	160	ug/L			05/25/18 15:52	500
1,2,4-Trichlorobenzene	500	U	500	140	ug/L			05/25/18 15:52	500
1,1,1-Trichloroethane	500	U	500	120	ug/L			05/25/18 15:52	500

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-95595-1

Client Sample ID: TW-1602_051118

Lab Sample ID: 240-95595-9

Date Collected: 05/11/18 16:02

Matrix: Water

Date Received: 05/15/18 08:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	500	U	500	170	ug/L			05/25/18 15:52	500
Trichloroethene	500	U	500	170	ug/L			05/25/18 15:52	500
Trichlorofluoromethane	500	U	500	250	ug/L			05/25/18 15:52	500
1,1,2-Trichloro-1,2,2-trifluoroethane	500	U	500	210	ug/L			05/25/18 15:52	500
1,2,3-Trimethylbenzene	2500	U	2500	110	ug/L			05/25/18 15:52	500
1,2,4-Trimethylbenzene	500	U	500	120	ug/L			05/25/18 15:52	500
1,3,5-Trimethylbenzene	500	U	500	120	ug/L			05/25/18 15:52	500
Vinyl chloride	8500		500	230	ug/L			05/25/18 15:52	500
Xylenes, Total	1000	U	1000	120	ug/L			05/25/18 15:52	500

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		69 - 120		05/25/18 15:52	500
Dibromofluoromethane (Surr)	92		69 - 124		05/25/18 15:52	500
1,2-Dichloroethane-d4 (Surr)	92		61 - 138		05/25/18 15:52	500
Toluene-d8 (Surr)	96		73 - 120		05/25/18 15:52	500

Client Sample Results

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

TestAmerica Job ID: 240-95595-1

Client Sample ID: DUP-03_051418

Lab Sample ID: 240-95595-10

Date Collected: 05/14/18 00:00

Matrix: Water

Date Received: 05/15/18 08:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.24	ug/L			05/24/18 02:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		63 - 125					05/24/18 02:13	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 18:48	1
Benzene	1.0	U	1.0	0.28	ug/L			05/24/18 18:48	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			05/24/18 18:48	1
Bromoform	1.0	U	1.0	0.43	ug/L			05/24/18 18:48	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/24/18 18:48	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/24/18 18:48	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			05/24/18 18:48	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			05/24/18 18:48	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			05/24/18 18:48	1
Chloroethane	1.0	U	1.0	0.41	ug/L			05/24/18 18:48	1
Chloroform	1.0	U*	1.0	0.31	ug/L			05/24/18 18:48	1
Chloromethane	1.0	U	1.0	0.43	ug/L			05/24/18 18:48	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/24/18 18:48	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			05/24/18 18:48	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			05/24/18 18:48	1
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			05/24/18 18:48	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			05/24/18 18:48	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			05/24/18 18:48	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			05/24/18 18:48	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			05/24/18 18:48	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			05/24/18 18:48	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			05/24/18 18:48	1
1,1-Dichloroethane	1.0	U*	1.0	0.25	ug/L			05/24/18 18:48	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/24/18 18:48	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			05/24/18 18:48	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			05/24/18 18:48	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			05/24/18 18:48	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			05/24/18 18:48	1
2-Hexanone	10	U	10	1.2	ug/L			05/24/18 18:48	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			05/24/18 18:48	1
Methyl acetate	10	U	10	1.4	ug/L			05/24/18 18:48	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			05/24/18 18:48	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			05/24/18 18:48	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			05/24/18 18:48	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			05/24/18 18:48	1
Styrene	1.0	U	1.0	0.23	ug/L			05/24/18 18:48	1
1,1,2,2-Tetrachloroethane	1.0	U*	1.0	0.32	ug/L			05/24/18 18:48	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			05/24/18 18:48	1
Toluene	1.0	U*	1.0	0.23	ug/L			05/24/18 18:48	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			05/24/18 18:48	1
trans-1,3-Dichloropropene	1.0	U*	1.0	0.31	ug/L			05/24/18 18:48	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			05/24/18 18:48	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			05/24/18 18:48	1

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-95595-1

Client Sample ID: DUP-03_051418

Lab Sample ID: 240-95595-10

Date Collected: 05/14/18 00:00

Matrix: Water

Date Received: 05/15/18 08:45

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 18:48	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			05/24/18 18:48	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			05/24/18 18:48	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/24/18 18:48	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			05/24/18 18:48	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/24/18 18:48	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/24/18 18:48	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/24/18 18:48	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			05/24/18 18:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	71		69 - 120		05/24/18 18:48	1
Dibromofluoromethane (Surr)	108		69 - 124		05/24/18 18:48	1
1,2-Dichloroethane-d4 (Surr)	106		61 - 138		05/24/18 18:48	1
Toluene-d8 (Surr)	113		73 - 120		05/24/18 18:48	1

Client Sample Results

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

TestAmerica Job ID: 240-95595-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-95595-11

Date Collected: 05/11/18 00:00

Matrix: Water

Date Received: 05/15/18 08:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	4.1	J	10	1.8	ug/L			05/24/18 19:10	1
Benzene	1.0	U	1.0	0.28	ug/L			05/24/18 19:10	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			05/24/18 19:10	1
Bromoform	1.0	U	1.0	0.43	ug/L			05/24/18 19:10	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/24/18 19:10	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/24/18 19:10	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			05/24/18 19:10	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			05/24/18 19:10	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			05/24/18 19:10	1
Chloroethane	1.0	U	1.0	0.41	ug/L			05/24/18 19:10	1
Chloroform	1.0	U *	1.0	0.31	ug/L			05/24/18 19:10	1
Chloromethane	1.0	U	1.0	0.43	ug/L			05/24/18 19:10	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/24/18 19:10	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			05/24/18 19:10	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			05/24/18 19:10	1
Dibromochloromethane	1.0	U	1.0	0.25	ug/L			05/24/18 19:10	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			05/24/18 19:10	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			05/24/18 19:10	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			05/24/18 19:10	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			05/24/18 19:10	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			05/24/18 19:10	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			05/24/18 19:10	1
1,1-Dichloroethane	1.0	U *	1.0	0.25	ug/L			05/24/18 19:10	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/24/18 19:10	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			05/24/18 19:10	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			05/24/18 19:10	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			05/24/18 19:10	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			05/24/18 19:10	1
2-Hexanone	10	U	10	1.2	ug/L			05/24/18 19:10	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			05/24/18 19:10	1
Methyl acetate	10	U	10	1.4	ug/L			05/24/18 19:10	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			05/24/18 19:10	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			05/24/18 19:10	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			05/24/18 19:10	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			05/24/18 19:10	1
Styrene	1.0	U	1.0	0.23	ug/L			05/24/18 19:10	1
1,1,2,2-Tetrachloroethane	1.0	U *	1.0	0.32	ug/L			05/24/18 19:10	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			05/24/18 19:10	1
Toluene	1.0	U *	1.0	0.23	ug/L			05/24/18 19:10	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			05/24/18 19:10	1
trans-1,3-Dichloropropene	1.0	U *	1.0	0.31	ug/L			05/24/18 19:10	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			05/24/18 19:10	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			05/24/18 19:10	1
1,1,2-Trichloroethane	1.0	U *	1.0	0.34	ug/L			05/24/18 19:10	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			05/24/18 19:10	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			05/24/18 19:10	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/24/18 19:10	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			05/24/18 19:10	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/24/18 19:10	1

TestAmerica Canton

Client Sample Results

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

TestAmerica Job ID: 240-95595-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-95595-11

Date Collected: 05/11/18 00:00

Matrix: Water

Date Received: 05/15/18 08:45

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			05/24/18 19:10	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/24/18 19:10	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			05/24/18 19:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	71		69 - 120		05/24/18 19:10	1
Dibromofluoromethane (Surr)	102		69 - 124		05/24/18 19:10	1
1,2-Dichloroethane-d4 (Surr)	103		61 - 138		05/24/18 19:10	1
Toluene-d8 (Surr)	104		73 - 120		05/24/18 19:10	1



Surrogate Summary

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

TestAmerica Job ID: 240-95595-1

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)
240-95585-D-2 MS	Matrix Spike	92	95	88	98
240-95585-D-2 MSD	Matrix Spike Duplicate	92	97	98	100
240-95595-1	MW-20_051118	79	108	111	118
240-95595-2	MW-7_051118	76	108	110	116
240-95595-3	MW-36_051418	88	89	89	95
240-95595-4	MW-24_051418	78	109	111	119
240-95595-5	MW-46_051418	89	92	88	97
240-95595-6	TW-1604_051118	88	90	93	95
240-95595-7	TW-1603_051118	76	108	115	113
240-95595-8	PW-1602_051118	70	98	102	104
240-95595-9	TW-1602_051118	90	92	92	96
240-95595-10	DUP-03_051418	71	108	106	113
240-95595-11	TRIP BLANK	71	102	103	104
LCS 240-328363/4	Lab Control Sample	83	100	99	114
LCS 240-328594/4	Lab Control Sample	93	91	89	96
MB 240-328363/6	Method Blank	74	108	110	117
MB 240-328594/6	Method Blank	88	93	91	94

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)
240-95595-1	MW-20_051118	107
240-95595-2	MW-7_051118	105
240-95595-3	MW-36_051418	105
240-95595-3 MS	MW-36_051418	104
240-95595-3 MSD	MW-36_051418	106
240-95595-4	MW-24_051418	103
240-95595-5	MW-46_051418	101
240-95595-6	TW-1604_051118	104
240-95595-7	TW-1603_051118	100
240-95595-8	PW-1602_051118	102
240-95595-9	TW-1602_051118	103
240-95595-10	DUP-03_051418	102
LCS 240-328228/4	Lab Control Sample	109
MB 240-328228/5	Method Blank	106

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: 240-95595-1

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

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: 240-95595-1

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: 240-95595-1

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

Lab Sample ID: MB 240-328594/6
Matrix: Water
Analysis Batch: 328594

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			05/25/18 15:08	1
Benzene	1.0	U	1.0	0.28	ug/L			05/25/18 15:08	1
Bromodichloromethane	1.0	U	1.0	0.30	ug/L			05/25/18 15:08	1
Bromoform	1.0	U	1.0	0.43	ug/L			05/25/18 15:08	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/25/18 15:08	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			05/25/18 15:08	1
Carbon disulfide	5.0	U	5.0	0.34	ug/L			05/25/18 15:08	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			05/25/18 15:08	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			05/25/18 15:08	1
Chloroethane	1.0	U	1.0	0.41	ug/L			05/25/18 15:08	1
Chloroform	1.0	U	1.0	0.31	ug/L			05/25/18 15:08	1
Chloromethane	1.0	U	1.0	0.43	ug/L			05/25/18 15:08	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/25/18 15:08	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			05/25/18 15:08	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			05/25/18 15:08	1

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-95595-1

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

Lab Sample ID: MB 240-328594/6

Matrix: Water

Analysis Batch: 328594

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			05/25/18 15:08	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.47	ug/L			05/25/18 15:08	1
1,2-Dibromoethane	1.0	U	1.0	0.23	ug/L			05/25/18 15:08	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			05/25/18 15:08	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			05/25/18 15:08	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			05/25/18 15:08	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			05/25/18 15:08	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			05/25/18 15:08	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/25/18 15:08	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			05/25/18 15:08	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			05/25/18 15:08	1
Diethyl ether	2.0	U	2.0	0.35	ug/L			05/25/18 15:08	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			05/25/18 15:08	1
2-Hexanone	10	U	10	1.2	ug/L			05/25/18 15:08	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			05/25/18 15:08	1
Methyl acetate	10	U	10	1.4	ug/L			05/25/18 15:08	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			05/25/18 15:08	1
Methylene Chloride	5.0	U	5.0	0.53	ug/L			05/25/18 15:08	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			05/25/18 15:08	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			05/25/18 15:08	1
Styrene	1.0	U	1.0	0.23	ug/L			05/25/18 15:08	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			05/25/18 15:08	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			05/25/18 15:08	1
Toluene	1.0	U	1.0	0.23	ug/L			05/25/18 15:08	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			05/25/18 15:08	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			05/25/18 15:08	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			05/25/18 15:08	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			05/25/18 15:08	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			05/25/18 15:08	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			05/25/18 15:08	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			05/25/18 15:08	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/25/18 15:08	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.22	ug/L			05/25/18 15:08	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/25/18 15:08	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.24	ug/L			05/25/18 15:08	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/25/18 15:08	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			05/25/18 15:08	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	88		69 - 120		05/25/18 15:08	1
Dibromofluoromethane (Surr)	93		69 - 124		05/25/18 15:08	1
1,2-Dichloroethane-d4 (Surr)	91		61 - 138		05/25/18 15:08	1
Toluene-d8 (Surr)	94		73 - 120		05/25/18 15:08	1

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-95595-1

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

Lab Sample ID: LCS 240-328594/4

Matrix: Water

Analysis Batch: 328594

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	20.0		ug/L		100	35 - 131
Benzene	10.0	9.48		ug/L		95	79 - 120
Bromodichloromethane	10.0	9.95		ug/L		100	79 - 125
Bromoform	10.0	9.56		ug/L		96	55 - 145
Bromomethane	10.0	7.50		ug/L		75	17 - 158
2-Butanone (MEK)	20.0	22.3		ug/L		112	43 - 149
Carbon disulfide	10.0	9.53		ug/L		95	49 - 141
Carbon tetrachloride	10.0	9.88		ug/L		99	55 - 171
Chlorobenzene	10.0	9.92		ug/L		99	80 - 120
Chloroethane	10.0	7.05		ug/L		71	10 - 149
Chloroform	10.0	9.64		ug/L		96	80 - 120
Chloromethane	10.0	7.78		ug/L		78	59 - 124
cis-1,2-Dichloroethene	10.0	9.39		ug/L		94	77 - 120
cis-1,3-Dichloropropene	10.0	10.3		ug/L		103	75 - 120
Cyclohexane	10.0	10.0		ug/L		100	66 - 135
Dibromochloromethane	10.0	10.3		ug/L		103	64 - 129
1,2-Dibromo-3-Chloropropane	10.0	10.1		ug/L		101	50 - 130
1,2-Dibromoethane	10.0	10.6		ug/L		106	80 - 120
1,2-Dichlorobenzene	10.0	10.3		ug/L		103	80 - 120
1,3-Dichlorobenzene	10.0	10.2		ug/L		102	80 - 120
1,4-Dichlorobenzene	10.0	10.4		ug/L		104	80 - 120
Dichlorodifluoromethane	10.0	8.91		ug/L		89	42 - 141
1,1-Dichloroethane	10.0	9.79		ug/L		98	74 - 120
1,2-Dichloroethane	10.0	10.1		ug/L		101	68 - 133
1,1-Dichloroethene	10.0	10.1		ug/L		101	65 - 127
1,2-Dichloropropane	10.0	10.7		ug/L		107	78 - 127
Diethyl ether	10.0	11.0		ug/L		110	72 - 125
Ethylbenzene	10.0	9.88		ug/L		99	80 - 120
2-Hexanone	20.0	20.4		ug/L		102	28 - 169
Isopropylbenzene	10.0	9.86		ug/L		99	80 - 128
Methyl acetate	20.0	20.0		ug/L		100	63 - 137
Methylcyclohexane	10.0	9.19		ug/L		92	63 - 141
Methylene Chloride	10.0	9.35		ug/L		94	64 - 140
4-Methyl-2-pentanone (MIBK)	20.0	20.5		ug/L		102	53 - 144
Methyl tert-butyl ether	10.0	9.85		ug/L		98	73 - 120
Styrene	10.0	9.90		ug/L		99	80 - 121
1,1,2,2-Tetrachloroethane	10.0	10.7		ug/L		107	58 - 122
Tetrachloroethene	10.0	10.4		ug/L		104	80 - 122
Toluene	10.0	10.2		ug/L		102	78 - 120
trans-1,2-Dichloroethene	10.0	10.0		ug/L		100	74 - 124
trans-1,3-Dichloropropene	10.0	10.0		ug/L		100	67 - 120
1,2,4-Trichlorobenzene	10.0	9.15		ug/L		92	34 - 141
1,1,1-Trichloroethane	10.0	9.70		ug/L		97	64 - 147
1,1,2-Trichloroethane	10.0	10.8		ug/L		108	76 - 121
Trichloroethene	10.0	9.98		ug/L		100	76 - 124
Trichlorofluoromethane	10.0	8.08		ug/L		81	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: 240-95595-1

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

Lab Sample ID: LCS 240-328594/4
Matrix: Water
Analysis Batch: 328594

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	10.1		ug/L		101	80 - 120
1,3,5-Trimethylbenzene	10.0	10.4		ug/L		104	79 - 120
Vinyl chloride	10.0	9.70		ug/L		97	65 - 124
Xylenes, Total	20.0	20.0		ug/L		100	80 - 120
1,4-Dioxane	200	142		ug/L		71	35 - 134

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	93		69 - 120
Dibromofluoromethane (Surr)	91		69 - 124
1,2-Dichloroethane-d4 (Surr)	89		61 - 138
Toluene-d8 (Surr)	96		73 - 120

Lab Sample ID: 240-95585-D-2 MS
Matrix: Water
Analysis Batch: 328594

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	130	U F1	267	384	F1	ug/L		144	19 - 133
Benzene	13	U	133	122		ug/L		92	69 - 127
Bromodichloromethane	13	U	133	126		ug/L		95	75 - 128
Bromoform	13	U	133	112		ug/L		84	61 - 135
Bromomethane	13	U	133	132		ug/L		99	10 - 148
2-Butanone (MEK)	130	U	267	267		ug/L		100	34 - 153
Carbon disulfide	67	U	133	122		ug/L		91	46 - 143
Carbon tetrachloride	13	U	133	119		ug/L		90	53 - 175
Chlorobenzene	13	U	133	122		ug/L		91	76 - 120
Chloroethane	13	U	133	148		ug/L		111	10 - 141
Chloroform	13	U	133	130		ug/L		98	74 - 125
Chloromethane	13	U	133	143		ug/L		107	34 - 127
cis-1,2-Dichloroethene	13	U	133	127		ug/L		95	69 - 127
cis-1,3-Dichloropropene	13	U	133	110		ug/L		83	68 - 120
Cyclohexane	13	U	133	120		ug/L		90	56 - 135
Dibromochloromethane	13	U	133	122		ug/L		92	62 - 131
1,2-Dibromo-3-Chloropropane	13	U	133	120		ug/L		90	48 - 130
1,2-Dibromoethane	13	U	133	130		ug/L		97	73 - 121
1,2-Dichlorobenzene	13	U	133	123		ug/L		92	70 - 120
1,3-Dichlorobenzene	13	U	133	120		ug/L		90	71 - 120
1,4-Dichlorobenzene	13	U	133	120		ug/L		90	72 - 120
Dichlorodifluoromethane	13	U	133	110		ug/L		82	45 - 130
1,1-Dichloroethane	13	U	133	129		ug/L		97	69 - 122
1,2-Dichloroethane	13	U	133	131		ug/L		98	64 - 138
1,1-Dichloroethene	13	U	133	130		ug/L		98	62 - 127
1,2-Dichloropropane	13	U	133	131		ug/L		98	72 - 131
Diethyl ether	27	U	133	146		ug/L		109	65 - 124
Ethylbenzene	13	U	133	116		ug/L		87	72 - 121
2-Hexanone	130	U	267	264		ug/L		99	21 - 184
Isopropylbenzene	13	U	133	118		ug/L		88	70 - 132
Methyl acetate	130	U	267	284		ug/L		107	52 - 139

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-95595-1

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

Lab Sample ID: 240-95585-D-2 MS

Matrix: Water

Analysis Batch: 328594

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Methylcyclohexane	13	U	133	110		ug/L		82	46 - 139	
Methylene Chloride	9.7	J	133	129		ug/L		89	52 - 137	
4-Methyl-2-pentanone (MIBK)	130	U	267	256		ug/L		96	53 - 147	
Methyl tert-butyl ether	13	U	133	127		ug/L		96	67 - 125	
Styrene	13	U	133	115		ug/L		86	74 - 125	
1,1,2,2-Tetrachloroethane	13	U	133	127		ug/L		95	51 - 123	
Tetrachloroethene	13	U	133	121		ug/L		91	69 - 126	
Toluene	13	U	133	132		ug/L		99	69 - 125	
trans-1,2-Dichloroethene	13	U	133	127		ug/L		95	66 - 131	
trans-1,3-Dichloropropene	13	U	133	106		ug/L		80	59 - 120	
1,2,4-Trichlorobenzene	13	U	133	110		ug/L		82	26 - 138	
1,1,1-Trichloroethane	13	U	133	126		ug/L		94	57 - 156	
1,1,2-Trichloroethane	13	U	133	133		ug/L		100	68 - 127	
Trichloroethene	13	U	133	122		ug/L		91	68 - 129	
Trichlorofluoromethane	13	U	133	127		ug/L		95	28 - 172	
1,1,2-Trichloro-1,2,2-trifluoroethane	13	U	133	124		ug/L		93	58 - 137	
1,2,4-Trimethylbenzene	13	U	133	121		ug/L		90	64 - 120	
1,3,5-Trimethylbenzene	13	U	133	119		ug/L		89	67 - 120	
Vinyl chloride	270		133	395		ug/L		95	55 - 123	
Xylenes, Total	27	U	267	244		ug/L		92	71 - 122	
1,4-Dioxane	670	U	2670	1490		ug/L		56	13 - 155	

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	92		69 - 120
Dibromofluoromethane (Surr)	95		69 - 124
1,2-Dichloroethane-d4 (Surr)	88		61 - 138
Toluene-d8 (Surr)	98		73 - 120

Lab Sample ID: 240-95585-D-2 MSD

Matrix: Water

Analysis Batch: 328594

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	RPD Limit
	Result	Qualifier	Added	Result	Qualifier							
Acetone	130	U F1	267	275		ug/L		103	19 - 133	33	35	
Benzene	13	U	133	125		ug/L		94	69 - 127	2	10	
Bromodichloromethane	13	U	133	125		ug/L		93	75 - 128	1	13	
Bromoform	13	U	133	112		ug/L		84	61 - 135	0	13	
Bromomethane	13	U	133	150		ug/L		113	10 - 148	13	35	
2-Butanone (MEK)	130	U	267	264		ug/L		99	34 - 153	1	23	
Carbon disulfide	67	U	133	128		ug/L		96	46 - 143	5	18	
Carbon tetrachloride	13	U	133	125		ug/L		94	53 - 175	5	17	
Chlorobenzene	13	U	133	126		ug/L		94	76 - 120	3	12	
Chloroethane	13	U	133	155		ug/L		116	10 - 141	5	35	
Chloroform	13	U	133	131		ug/L		98	74 - 125	0	11	
Chloromethane	13	U	133	142		ug/L		106	34 - 127	1	25	
cis-1,2-Dichloroethene	13	U	133	131		ug/L		98	69 - 127	3	11	
cis-1,3-Dichloropropene	13	U	133	114		ug/L		86	68 - 120	3	13	

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-95595-1

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

Lab Sample ID: 240-95585-D-2 MSD

Matrix: Water

Analysis Batch: 328594

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyclohexane	13	U	133	123		ug/L		93	56 - 135	2	35
Dibromochloromethane	13	U	133	124		ug/L		93	62 - 131	1	15
1,2-Dibromo-3-Chloropropane	13	U	133	114		ug/L		85	48 - 130	5	31
1,2-Dibromoethane	13	U	133	131		ug/L		98	73 - 121	1	12
1,2-Dichlorobenzene	13	U	133	127		ug/L		96	70 - 120	4	19
1,3-Dichlorobenzene	13	U	133	123		ug/L		93	71 - 120	3	18
1,4-Dichlorobenzene	13	U	133	125		ug/L		93	72 - 120	4	17
Dichlorodifluoromethane	13	U	133	107		ug/L		80	45 - 130	3	34
1,1-Dichloroethane	13	U	133	132		ug/L		99	69 - 122	2	11
1,2-Dichloroethane	13	U	133	139		ug/L		105	64 - 138	6	11
1,1-Dichloroethene	13	U	133	129		ug/L		97	62 - 127	1	14
1,2-Dichloropropane	13	U	133	139		ug/L		104	72 - 131	6	12
Diethyl ether	27	U	133	144		ug/L		108	65 - 124	1	11
Ethylbenzene	13	U	133	116		ug/L		87	72 - 121	1	15
2-Hexanone	130	U	267	256		ug/L		96	21 - 184	3	12
Isopropylbenzene	13	U	133	119		ug/L		89	70 - 132	1	16
Methyl acetate	130	U	267	259		ug/L		97	52 - 139	9	14
Methylcyclohexane	13	U	133	112		ug/L		84	46 - 139	2	35
Methylene Chloride	9.7	J	133	131		ug/L		91	52 - 137	2	12
4-Methyl-2-pentanone (MIBK)	130	U	267	257		ug/L		96	53 - 147	0	16
Methyl tert-butyl ether	13	U	133	133		ug/L		99	67 - 125	4	12
Styrene	13	U	133	119		ug/L		89	74 - 125	3	14
1,1,2,2-Tetrachloroethane	13	U	133	129		ug/L		97	51 - 123	2	17
Tetrachloroethene	13	U	133	123		ug/L		92	69 - 126	2	18
Toluene	13	U	133	127		ug/L		95	69 - 125	4	14
trans-1,2-Dichloroethene	13	U	133	132		ug/L		99	66 - 131	4	11
trans-1,3-Dichloropropene	13	U	133	112		ug/L		84	59 - 120	5	14
1,2,4-Trichlorobenzene	13	U	133	113		ug/L		85	26 - 138	3	35
1,1,1-Trichloroethane	13	U	133	135		ug/L		101	57 - 156	7	13
1,1,2-Trichloroethane	13	U	133	136		ug/L		102	68 - 127	2	11
Trichloroethene	13	U	133	126		ug/L		94	68 - 129	3	12
Trichlorofluoromethane	13	U	133	127		ug/L		95	28 - 172	0	26
1,1,2-Trichloro-1,2,2-trifluoroethane	13	U	133	125		ug/L		94	58 - 137	1	35
1,2,4-Trimethylbenzene	13	U	133	124		ug/L		93	64 - 120	2	22
1,3,5-Trimethylbenzene	13	U	133	124		ug/L		93	67 - 120	4	25
Vinyl chloride	270		133	404		ug/L		101	55 - 123	2	12
Xylenes, Total	27	U	267	249		ug/L		93	71 - 122	2	14
1,4-Dioxane	670	U	2670	1410		ug/L		53	13 - 155	6	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	92		69 - 120
Dibromofluoromethane (Surr)	97		69 - 124
1,2-Dichloroethane-d4 (Surr)	98		61 - 138
Toluene-d8 (Surr)	100		73 - 120

TestAmerica Canton

QC Sample Results

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

TestAmerica Job ID: 240-95595-1

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

Lab Sample ID: MB 240-328228/5
Matrix: Water
Analysis Batch: 328228

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			05/23/18 16:37	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		63 - 125					05/23/18 16:37	1

Lab Sample ID: LCS 240-328228/4
Matrix: Water
Analysis Batch: 328228

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	9.32		ug/L		93	59 - 131
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	109		63 - 125				

Lab Sample ID: 240-95595-3 MS
Matrix: Water
Analysis Batch: 328228

Client Sample ID: MW-36_051418
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	2.0	U	10.0	8.89		ug/L		89	52 - 129
Surrogate	MS %Recovery	MS Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	104		63 - 125						

Lab Sample ID: 240-95595-3 MSD
Matrix: Water
Analysis Batch: 328228

Client Sample ID: MW-36_051418
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane	2.0	U	10.0	9.34		ug/L		93	52 - 129	5	13
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	106		63 - 125								

QC Association Summary

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

TestAmerica Job ID: 240-95595-1

GC/MS VOA

Analysis Batch: 328228

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-95595-1	MW-20_051118	Total/NA	Water	8260B SIM	
240-95595-2	MW-7_051118	Total/NA	Water	8260B SIM	
240-95595-3	MW-36_051418	Total/NA	Water	8260B SIM	
240-95595-4	MW-24_051418	Total/NA	Water	8260B SIM	
240-95595-5	MW-46_051418	Total/NA	Water	8260B SIM	
240-95595-6	TW-1604_051118	Total/NA	Water	8260B SIM	
240-95595-7	TW-1603_051118	Total/NA	Water	8260B SIM	
240-95595-8	PW-1602_051118	Total/NA	Water	8260B SIM	
240-95595-9	TW-1602_051118	Total/NA	Water	8260B SIM	
240-95595-10	DUP-03_051418	Total/NA	Water	8260B SIM	
MB 240-328228/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-328228/4	Lab Control Sample	Total/NA	Water	8260B SIM	
240-95595-3 MS	MW-36_051418	Total/NA	Water	8260B SIM	
240-95595-3 MSD	MW-36_051418	Total/NA	Water	8260B SIM	

Analysis Batch: 328363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-95595-1	MW-20_051118	Total/NA	Water	8260B	
240-95595-2	MW-7_051118	Total/NA	Water	8260B	
240-95595-4	MW-24_051418	Total/NA	Water	8260B	
240-95595-7	TW-1603_051118	Total/NA	Water	8260B	
240-95595-8	PW-1602_051118	Total/NA	Water	8260B	
240-95595-10	DUP-03_051418	Total/NA	Water	8260B	
240-95595-11	TRIP BLANK	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	

Analysis Batch: 328594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-95595-3	MW-36_051418	Total/NA	Water	8260B	
240-95595-5	MW-46_051418	Total/NA	Water	8260B	
240-95595-6	TW-1604_051118	Total/NA	Water	8260B	
240-95595-9	TW-1602_051118	Total/NA	Water	8260B	
MB 240-328594/6	Method Blank	Total/NA	Water	8260B	
LCS 240-328594/4	Lab Control Sample	Total/NA	Water	8260B	
240-95585-D-2 MS	Matrix Spike	Total/NA	Water	8260B	
240-95585-D-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Lab Chronicle

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

TestAmerica Job ID: 240-95595-1

Client Sample ID: MW-20_051118

Date Collected: 05/11/18 14:51

Date Received: 05/15/18 08:45

Lab Sample ID: 240-95595-1

Matrix: Water

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 15:23	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	328228	05/23/18 21:38	SAM	TAL CAN

Client Sample ID: MW-7_051118

Date Collected: 05/11/18 15:52

Date Received: 05/15/18 08:45

Lab Sample ID: 240-95595-2

Matrix: Water

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 15:46	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	328228	05/23/18 22:03	SAM	TAL CAN

Client Sample ID: MW-36_051418

Date Collected: 05/14/18 08:23

Date Received: 05/15/18 08:45

Lab Sample ID: 240-95595-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	328594	05/25/18 17:21	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	328228	05/23/18 23:18	SAM	TAL CAN

Client Sample ID: MW-24_051418

Date Collected: 05/14/18 09:45

Date Received: 05/15/18 08:45

Lab Sample ID: 240-95595-4

Matrix: Water

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 16:31	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	328228	05/24/18 00:33	SAM	TAL CAN

Client Sample ID: MW-46_051418

Date Collected: 05/14/18 10:42

Date Received: 05/15/18 08:45

Lab Sample ID: 240-95595-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1.67	328594	05/25/18 17:43	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	328228	05/24/18 00:58	SAM	TAL CAN

Client Sample ID: TW-1604_051118

Date Collected: 05/11/18 13:02

Date Received: 05/15/18 08:45

Lab Sample ID: 240-95595-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2.5	328594	05/25/18 15:30	LRW	TAL CAN

TestAmerica Canton

Lab Chronicle

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

TestAmerica Job ID: 240-95595-1

Client Sample ID: TW-1604_051118

Lab Sample ID: 240-95595-6

Date Collected: 05/11/18 13:02

Matrix: Water

Date Received: 05/15/18 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B SIM		1	328228	05/24/18 01:23	SAM	TAL CAN

Client Sample ID: TW-1603_051118

Lab Sample ID: 240-95595-7

Date Collected: 05/11/18 13:52

Matrix: Water

Date Received: 05/15/18 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2.5	328363	05/24/18 17:39	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	328228	05/24/18 01:48	SAM	TAL CAN

Client Sample ID: PW-1602_051118

Lab Sample ID: 240-95595-8

Date Collected: 05/11/18 15:02

Matrix: Water

Date Received: 05/15/18 08:45

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 18:02	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	328228	05/23/18 22:28	SAM	TAL CAN

Client Sample ID: TW-1602_051118

Lab Sample ID: 240-95595-9

Date Collected: 05/11/18 16:02

Matrix: Water

Date Received: 05/15/18 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		500	328594	05/25/18 15:52	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	328228	05/23/18 22:53	SAM	TAL CAN

Client Sample ID: DUP-03_051418

Lab Sample ID: 240-95595-10

Date Collected: 05/14/18 00:00

Matrix: Water

Date Received: 05/15/18 08:45

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 18:48	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	328228	05/24/18 02:13	SAM	TAL CAN

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-95595-11

Date Collected: 05/11/18 00:00

Matrix: Water

Date Received: 05/15/18 08:45

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 19:10	LEE	TAL CAN

TestAmerica Canton

Lab Chronicle

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

TestAmerica Job ID: 240-95595-1

Laboratory References:

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

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Accreditation/Certification Summary

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

TestAmerica Job ID: 240-95595-1

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.



TestAmerica Laboratory location: Brighton — 10448 Citation 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: Novi, MI, 48377
Phone: 248-994-2240
Project Name: Ford LTP
Project Number: MI001454.0004.00001
PO # MI001454.0004.00001

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

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

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

COC No: |
| of / COCs

For lab use only
Walk-in client
Lab sampling
Job/SDG No

Sample Specific Notes / Special Instructions:

Analysis Turnaround Time
TAT if different from below
10 day
 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	VOCs 8260B	1,4-Dioxane 8260B SIM	Date/Time	
			Aqueous	Sediment	Solid	Other:	H2SO4	HNO3	HCl	NaOH	ZnAc	NaOH						Other:
MW-20-051118	5-11-18	1451	X															
MW-7-051118	5-11-18	1552	X															
MW-36-051418	5-14-18	823	X															
MW-24-051418	5-14-18	945	X															
MW-46-051418	5-14-18	1042	X															
TW-1604-051118	5-11-18	1302	X															
TW-1603-051118	5-11-18	1352	X															
PW-1602-051118	5-11-18	1502	X															
TW-1602-051118	5-11-18	1602	X															
DUP-03-051418	5-14-18	-	X															

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

Special Instructions/QC Requirements & Comments:

Relinquished by: *[Signature]* Company: ARCADIS Date/Time: 5-14-18 11:11
 Relinquished by: *[Signature]* Company: ARCADIS Date/Time: 5/14/18 13:40
 Relinquished by: *[Signature]* Company: TESTAMERICA Date/Time: 5/14/18 15:00

Received by: DIVYA KAMATH/Aud Conema Company: ARCADIS Date/Time: 5/14/18 11:11
 Received by: *[Signature]* Company: TESTAMERICA Date/Time: 5/14/18 13:40
 Received in Laboratory by: *[Signature]* Company: TAC Date/Time: 5-18-18 8:45

Submit all results through Cadena at jim.tomalia@cadenalab.com. Cadena #E202728



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TestAmerica Canton Sample Receipt Form/Narrative Login # : 45595

Canton Facility

Client ARCADIS Site Name Cooler unpacked by: POP

Cooler Received on 5-15-18 Opened on 5-15-18

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

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

TestAmerica Cooler # TA Foam Box Client Cooler Box Other

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt See Multiple Cooler Form

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

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

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

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No

-Were the seals on the outside of the cooler(s) signed & dated? Yes No NA

-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No

-Were tamper/custody seals intact and uncompromised? Yes No NA

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

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

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

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

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

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

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

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

11. Are these work share samples? Yes No

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

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

13. Were VOAs on the COC? Yes No

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

15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # B73 4501UB 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: POP

RECEIVED 1 TB NOT ON COC, WILL LOG LAST

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): _____

