

ANALYTICAL REPORT

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Laboratory Job ID: 240-108878-1

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

For:
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Authorized for release by:
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Results relate only to the items tested and the sample(s) as received by the laboratory.



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Definitions/Glossary

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

Job ID: 240-108878-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
F1	MS and/or MSD Recovery 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.
U	Indicates the analyte was analyzed for but not detected.
X	Surrogate is outside control limits

Glossary

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

Case Narrative

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

Job ID: 240-108878-1

Job ID: 240-108878-1

Laboratory: Eurofins TestAmerica, Canton

Narrative

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ford LTP Livonia MI - E203728

Report Number: 240-108878-1

Revision

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

Report revision 4/12/2019 - To correct sample IDs on samples 12 and 13.

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

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

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

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

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

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

RECEIPT

The samples were received on 3/5/2019 8:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 0.2° C, 1.0° C and 1.4° C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples MW-2_030119 (240-108878-1), MW-5_030119 (240-108878-2), MW-3_030119 (240-108878-3), MW-4_030119 (240-108878-4), MW-10_030119 (240-108878-5), MW-58_030119 (240-108878-6), MW-9_030119 (240-108878-7), MW-1_030119 (240-108878-8), MW-51_030119 (240-108878-9), MW-36_030119 (240-108878-10), MW-24_030119 (240-108878-11), MW-69_022819(240-108878-12), MW-53_022819(240-108878-13) and TRIP BLANK (240-108878-14) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 03/12/2019, 03/13/2019 and 03/14/2019.

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

Case Narrative

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

Job ID: 240-108878-1

Job ID: 240-108878-1 (Continued)

Laboratory: Eurofins TestAmerica, Canton (Continued)

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

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

cis-1,2-Dichloroethene failed the recovery criteria low for the MS of sample MW-2_030119MS (240-108878-1) in batch 240-371223. Refer to the QC report for details.

Samples MW-2_030119 (240-108878-1)[100X], MW-4_030119 (240-108878-4)[2000X] and MW-10_030119 (240-108878-5)[100X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The MSD for batch 240-371223 was analyzed outside of the tune time, due to an instrument fault. This is a batch QC sample; therefore, the data have been reported: (240-108878-D-1 MSD).

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

The continuing calibration verification (CCV) associated with batch 371376 recovered above the upper control limit for Vinyl Chloride and 1,2-Dichloropropane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: MW-5_030119 (240-108878-2).

The laboratory control sample (LCS) for 371376 recovered outside control limits for multiple analytes. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported: MW-5_030119 (240-108878-2) and (LCS 240-371376/4).

No MS/MSD in batch 371376 due to analyte carry over: MW-5_030119 (240-108878-2).

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-2_030119 (240-108878-1), MW-5_030119 (240-108878-2), MW-3_030119 (240-108878-3), MW-4_030119 (240-108878-4), MW-10_030119 (240-108878-5), MW-58_030119 (240-108878-6), MW-9_030119 (240-108878-7), MW-1_030119 (240-108878-8), MW-51_030119 (240-108878-9), MW-36_030119 (240-108878-10), MW-24_030119 (240-108878-11), MW-69_022819(240-108878-12) and MW-53_022819(240-108878-13) were analyzed for volatile organic compounds (GCMS SIM) in accordance with EPA SW-846 Method 8260B SIM. The samples were analyzed on 03/08/2019 and 03/11/2019.

Sample MW-4_030119 (240-108878-4)[100X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

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

Method Summary

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

Job ID: 240-108878-1

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 = Eurofins 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

Job ID: 240-108878-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-108878-1	MW-2_030119	Water	03/01/19 10:08	03/05/19 08:15
240-108878-2	MW-5_030119	Water	03/01/19 11:32	03/05/19 08:15
240-108878-3	MW-3_030119	Water	03/01/19 12:55	03/05/19 08:15
240-108878-4	MW-4_030119	Water	03/01/19 14:30	03/05/19 08:15
240-108878-5	MW-10_030119	Water	03/01/19 15:53	03/05/19 08:15
240-108878-6	MW-58_030119	Water	03/01/19 15:57	03/05/19 08:15
240-108878-7	MW-9_030119	Water	03/01/19 12:41	03/05/19 08:15
240-108878-8	MW-1_030119	Water	03/01/19 09:45	03/05/19 08:15
240-108878-9	MW-51_030119	Water	03/01/19 09:40	03/05/19 08:15
240-108878-10	MW-36_030119	Water	03/01/19 14:50	03/05/19 08:15
240-108878-11	MW-24_030119	Water	03/01/19 12:10	03/05/19 08:15
240-108878-12	MW-69_022819	Water	02/28/19 17:16	03/05/19 08:15
240-108878-13	MW-53_022819	Water	02/28/19 17:10	03/05/19 08:15
240-108878-14	TRIP BLANK	Water	02/28/19 00:00	03/05/19 08:15



Detection Summary

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

Job ID: 240-108878-1

Client Sample ID: MW-2_030119

Lab Sample ID: 240-108878-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	3.9		2.0	0.86	ug/L	1		8260B SIM	Total/NA
cis-1,2-Dichloroethene	2600	F1	100	16	ug/L	100		8260B	Total/NA
trans-1,2-Dichloroethene	760		100	19	ug/L	100		8260B	Total/NA
Vinyl chloride	230		100	20	ug/L	100		8260B	Total/NA

Client Sample ID: MW-5_030119

Lab Sample ID: 240-108878-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,3-Dichlorobenzene	0.26	J	1.0	0.15	ug/L	1		8260B	Total/NA

Client Sample ID: MW-3_030119

Lab Sample ID: 240-108878-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	1.0	J	2.0	0.86	ug/L	1		8260B SIM	Total/NA
1,3-Dichlorobenzene	0.21	J	1.0	0.15	ug/L	1		8260B	Total/NA

Client Sample ID: MW-4_030119

Lab Sample ID: 240-108878-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	21000		2000	320	ug/L	2000		8260B	Total/NA
trans-1,2-Dichloroethene	1000	J	2000	380	ug/L	2000		8260B	Total/NA
Trichloroethene	41000		2000	200	ug/L	2000		8260B	Total/NA
Vinyl chloride	1100	J	2000	400	ug/L	2000		8260B	Total/NA

Client Sample ID: MW-10_030119

Lab Sample ID: 240-108878-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	4.5		2.0	0.86	ug/L	1		8260B SIM	Total/NA
Trichloroethene	14	J	100	10	ug/L	100		8260B	Total/NA
Vinyl chloride	3300		100	20	ug/L	100		8260B	Total/NA

Client Sample ID: MW-58_030119

Lab Sample ID: 240-108878-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	6.2		2.0	0.86	ug/L	1		8260B SIM	Total/NA

Client Sample ID: MW-9_030119

Lab Sample ID: 240-108878-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	3.8		2.0	0.86	ug/L	1		8260B SIM	Total/NA
Vinyl chloride	0.94	J	1.0	0.20	ug/L	1		8260B	Total/NA

Client Sample ID: MW-1_030119

Lab Sample ID: 240-108878-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	28		10	5.4	ug/L	1		8260B	Total/NA
2-Butanone (MEK)	3.8	J	10	1.2	ug/L	1		8260B	Total/NA
4-Methyl-2-pentanone (MIBK)	1.2	J	10	0.42	ug/L	1		8260B	Total/NA

Client Sample ID: MW-51_030119

Lab Sample ID: 240-108878-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	1.5	J	2.0	0.86	ug/L	1		8260B SIM	Total/NA
cis-1,2-Dichloroethene	0.22	J	1.0	0.16	ug/L	1		8260B	Total/NA
1,1-Dichloroethane	0.57	J	1.0	0.17	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Canton

Detection Summary

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

Job ID: 240-108878-1

Client Sample ID: MW-51_030119 (Continued)

Lab Sample ID: 240-108878-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	0.29	J	1.0	0.20	ug/L	1		8260B	Total/NA

Client Sample ID: MW-36_030119

Lab Sample ID: 240-108878-10

No Detections.

Client Sample ID: MW-24_030119

Lab Sample ID: 240-108878-11

No Detections.

Client Sample ID: MW-69_022819

Lab Sample ID: 240-108878-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	5.0		2.0	0.86	ug/L	1		8260B SIM	Total/NA
cis-1,2-Dichloroethene	0.19	J	1.0	0.16	ug/L	1		8260B	Total/NA
Vinyl chloride	4.1		1.0	0.20	ug/L	1		8260B	Total/NA

Client Sample ID: MW-53_022819

Lab Sample ID: 240-108878-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	1.7	J	2.0	0.86	ug/L	1		8260B SIM	Total/NA

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-108878-14

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Canton

Client Sample Results

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

Job ID: 240-108878-1

Client Sample ID: MW-2_030119

Lab Sample ID: 240-108878-1

Date Collected: 03/01/19 10:08

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	3.9		2.0	0.86	ug/L			03/08/19 19:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	89		63 - 125					03/08/19 19:34	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	1000	U	1000	540	ug/L			03/12/19 22:53	100
Benzene	100	U	100	13	ug/L			03/12/19 22:53	100
Bromodichloromethane	100	U	100	17	ug/L			03/12/19 22:53	100
Bromoform	100	U	100	76	ug/L			03/12/19 22:53	100
Bromomethane	100	U	100	42	ug/L			03/12/19 22:53	100
2-Butanone (MEK)	1000	U	1000	120	ug/L			03/12/19 22:53	100
Carbon disulfide	500	U	500	28	ug/L			03/12/19 22:53	100
Carbon tetrachloride	100	U	100	26	ug/L			03/12/19 22:53	100
Chlorobenzene	100	U	100	14	ug/L			03/12/19 22:53	100
Chloroethane	100	U	100	83	ug/L			03/12/19 22:53	100
Chloroform	100	U	100	13	ug/L			03/12/19 22:53	100
Chloromethane	100	U	100	20	ug/L			03/12/19 22:53	100
cis-1,2-Dichloroethene	2600	F1	100	16	ug/L			03/12/19 22:53	100
cis-1,3-Dichloropropene	100	U	100	61	ug/L			03/12/19 22:53	100
Cyclohexane	100	U	100	24	ug/L			03/12/19 22:53	100
Dibromochloromethane	100	U	100	39	ug/L			03/12/19 22:53	100
1,2-Dibromo-3-Chloropropane	100	U	100	91	ug/L			03/12/19 22:53	100
1,2-Dibromoethane	100	U	100	12	ug/L			03/12/19 22:53	100
1,2-Dichlorobenzene	100	U	100	15	ug/L			03/12/19 22:53	100
1,3-Dichlorobenzene	100	U	100	15	ug/L			03/12/19 22:53	100
1,4-Dichlorobenzene	100	U	100	16	ug/L			03/12/19 22:53	100
Dichlorodifluoromethane	100	U	100	35	ug/L			03/12/19 22:53	100
1,1-Dichloroethane	100	U	100	17	ug/L			03/12/19 22:53	100
1,2-Dichloroethane	100	U	100	21	ug/L			03/12/19 22:53	100
1,1-Dichloroethene	100	U	100	19	ug/L			03/12/19 22:53	100
1,2-Dichloropropane	100	U	100	15	ug/L			03/12/19 22:53	100
Ethylbenzene	100	U	100	11	ug/L			03/12/19 22:53	100
2-Hexanone	1000	U	1000	54	ug/L			03/12/19 22:53	100
Isopropylbenzene	100	U	100	9.0	ug/L			03/12/19 22:53	100
Methyl acetate	1000	U	1000	170	ug/L			03/12/19 22:53	100
Methylcyclohexane	100	U	100	33	ug/L			03/12/19 22:53	100
Methylene Chloride	500	U	500	260	ug/L			03/12/19 22:53	100
4-Methyl-2-pentanone (MIBK)	1000	U	1000	42	ug/L			03/12/19 22:53	100
Methyl tert-butyl ether	100	U	100	7.0	ug/L			03/12/19 22:53	100
Styrene	100	U	100	10	ug/L			03/12/19 22:53	100
1,1,2,2-Tetrachloroethane	100	U	100	13	ug/L			03/12/19 22:53	100
Tetrachloroethene	100	U	100	15	ug/L			03/12/19 22:53	100
Toluene	100	U	100	14	ug/L			03/12/19 22:53	100
trans-1,2-Dichloroethene	760		100	19	ug/L			03/12/19 22:53	100
trans-1,3-Dichloropropene	100	U	100	67	ug/L			03/12/19 22:53	100
1,2,4-Trichlorobenzene	100	U	100	26	ug/L			03/12/19 22:53	100
1,1,1-Trichloroethane	100	U	100	24	ug/L			03/12/19 22:53	100
1,1,2-Trichloroethane	100	U	100	9.0	ug/L			03/12/19 22:53	100

Eurofins TestAmerica, Canton

Client Sample Results

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

Job ID: 240-108878-1

Client Sample ID: MW-2_030119

Lab Sample ID: 240-108878-1

Date Collected: 03/01/19 10:08

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	100	U	100	10	ug/L			03/12/19 22:53	100
Trichlorofluoromethane	100	U	100	45	ug/L			03/12/19 22:53	100
1,1,2-Trichloro-1,2,2-trifluoroethane	100	U	100	41	ug/L			03/12/19 22:53	100
1,2,3-Trimethylbenzene	500	U	500	14	ug/L			03/12/19 22:53	100
1,2,4-Trimethylbenzene	100	U	100	7.0	ug/L			03/12/19 22:53	100
1,3,5-Trimethylbenzene	100	U	100	12	ug/L			03/12/19 22:53	100
Vinyl chloride	230		100	20	ug/L			03/12/19 22:53	100
Xylenes, Total	200	U	200	15	ug/L			03/12/19 22:53	100
Diethyl ether	200	U	200	19	ug/L			03/12/19 22:53	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		59 - 120		03/12/19 22:53	100
Dibromofluoromethane (Surr)	102		75 - 128		03/12/19 22:53	100
1,2-Dichloroethane-d4 (Surr)	116		70 - 121		03/12/19 22:53	100
Toluene-d8 (Surr)	95		70 - 123		03/12/19 22:53	100

Client Sample Results

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

Job ID: 240-108878-1

Client Sample ID: MW-5_030119

Lab Sample ID: 240-108878-2

Date Collected: 03/01/19 11:32

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			03/08/19 20:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		63 - 125					03/08/19 20:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	5.4	ug/L			03/13/19 12:48	1
Benzene	1.0	U	1.0	0.13	ug/L			03/13/19 12:48	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/13/19 12:48	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/13/19 12:48	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/13/19 12:48	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/13/19 12:48	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/13/19 12:48	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/13/19 12:48	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/13/19 12:48	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/13/19 12:48	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/13/19 12:48	1
Chloromethane	1.0	U *	1.0	0.20	ug/L			03/13/19 12:48	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/13/19 12:48	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/13/19 12:48	1
Cyclohexane	1.0	U *	1.0	0.24	ug/L			03/13/19 12:48	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/13/19 12:48	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/13/19 12:48	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/13/19 12:48	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/13/19 12:48	1
1,3-Dichlorobenzene	0.26	J	1.0	0.15	ug/L			03/13/19 12:48	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/13/19 12:48	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/13/19 12:48	1
1,1-Dichloroethane	1.0	U *	1.0	0.17	ug/L			03/13/19 12:48	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/13/19 12:48	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/13/19 12:48	1
1,2-Dichloropropane	1.0	U *	1.0	0.15	ug/L			03/13/19 12:48	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/13/19 12:48	1
2-Hexanone	10	U *	10	0.54	ug/L			03/13/19 12:48	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/13/19 12:48	1
Methyl acetate	10	U *	10	1.7	ug/L			03/13/19 12:48	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/13/19 12:48	1
Methylene Chloride	5.0	U *	5.0	2.6	ug/L			03/13/19 12:48	1
4-Methyl-2-pentanone (MIBK)	10	U *	10	0.42	ug/L			03/13/19 12:48	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/13/19 12:48	1
Styrene	1.0	U	1.0	0.10	ug/L			03/13/19 12:48	1
1,1,2,2-Tetrachloroethane	1.0	U *	1.0	0.13	ug/L			03/13/19 12:48	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/13/19 12:48	1
Toluene	1.0	U	1.0	0.14	ug/L			03/13/19 12:48	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/13/19 12:48	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/13/19 12:48	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/13/19 12:48	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/13/19 12:48	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/13/19 12:48	1

Eurofins TestAmerica, Canton

Client Sample Results

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

Job ID: 240-108878-1

Client Sample ID: MW-5_030119

Lab Sample ID: 240-108878-2

Date Collected: 03/01/19 11:32

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/13/19 12:48	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/13/19 12:48	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/13/19 12:48	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/13/19 12:48	1
1,2,4-Trimethylbenzene	1.0	U *	1.0	0.070	ug/L			03/13/19 12:48	1
1,3,5-Trimethylbenzene	1.0	U *	1.0	0.12	ug/L			03/13/19 12:48	1
Vinyl chloride	1.0	U *	1.0	0.20	ug/L			03/13/19 12:48	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/13/19 12:48	1
Diethyl ether	2.0	U *	2.0	0.19	ug/L			03/13/19 12:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	77		59 - 120					03/13/19 12:48	1
Dibromofluoromethane (Surr)	90		75 - 128					03/13/19 12:48	1
1,2-Dichloroethane-d4 (Surr)	96		70 - 121					03/13/19 12:48	1
Toluene-d8 (Surr)	91		70 - 123					03/13/19 12:48	1

Client Sample Results

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

Job ID: 240-108878-1

Client Sample ID: MW-3_030119

Lab Sample ID: 240-108878-3

Date Collected: 03/01/19 12:55

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	1.0	J	2.0	0.86	ug/L			03/08/19 20:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		63 - 125					03/08/19 20:25	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	5.4	ug/L			03/12/19 12:59	1
Benzene	1.0	U	1.0	0.13	ug/L			03/12/19 12:59	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/12/19 12:59	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/12/19 12:59	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/12/19 12:59	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/12/19 12:59	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/12/19 12:59	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/12/19 12:59	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/12/19 12:59	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/12/19 12:59	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/12/19 12:59	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/12/19 12:59	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/12/19 12:59	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/12/19 12:59	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/12/19 12:59	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/12/19 12:59	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/12/19 12:59	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/12/19 12:59	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/12/19 12:59	1
1,3-Dichlorobenzene	0.21	J	1.0	0.15	ug/L			03/12/19 12:59	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/12/19 12:59	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/12/19 12:59	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/12/19 12:59	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/12/19 12:59	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 12:59	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/12/19 12:59	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/12/19 12:59	1
2-Hexanone	10	U	10	0.54	ug/L			03/12/19 12:59	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/12/19 12:59	1
Methyl acetate	10	U	10	1.7	ug/L			03/12/19 12:59	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/12/19 12:59	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/12/19 12:59	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/12/19 12:59	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/12/19 12:59	1
Styrene	1.0	U	1.0	0.10	ug/L			03/12/19 12:59	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/12/19 12:59	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/12/19 12:59	1
Toluene	1.0	U	1.0	0.14	ug/L			03/12/19 12:59	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 12:59	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/12/19 12:59	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/12/19 12:59	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/12/19 12:59	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/12/19 12:59	1

Eurofins TestAmerica, Canton

Client Sample Results

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

Job ID: 240-108878-1

Client Sample ID: MW-3_030119

Lab Sample ID: 240-108878-3

Date Collected: 03/01/19 12:55

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/12/19 12:59	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/12/19 12:59	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/12/19 12:59	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/12/19 12:59	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/12/19 12:59	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/12/19 12:59	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/12/19 12:59	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/12/19 12:59	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/12/19 12:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	71		59 - 120		03/12/19 12:59	1
Dibromofluoromethane (Surr)	98		75 - 128		03/12/19 12:59	1
1,2-Dichloroethane-d4 (Surr)	93		70 - 121		03/12/19 12:59	1
Toluene-d8 (Surr)	77		70 - 123		03/12/19 12:59	1

Client Sample Results

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

Job ID: 240-108878-1

Client Sample ID: MW-4_030119

Lab Sample ID: 240-108878-4

Date Collected: 03/01/19 14:30

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	200	U	200	86	ug/L			03/11/19 14:02	100
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		63 - 125					03/11/19 14:02	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	20000	U	20000	11000	ug/L			03/14/19 13:13	2000
Benzene	2000	U	2000	260	ug/L			03/14/19 13:13	2000
Bromodichloromethane	2000	U	2000	340	ug/L			03/14/19 13:13	2000
Bromoform	2000	U	2000	1500	ug/L			03/14/19 13:13	2000
Bromomethane	2000	U	2000	840	ug/L			03/14/19 13:13	2000
2-Butanone (MEK)	20000	U	20000	2300	ug/L			03/14/19 13:13	2000
Carbon disulfide	10000	U	10000	560	ug/L			03/14/19 13:13	2000
Carbon tetrachloride	2000	U	2000	520	ug/L			03/14/19 13:13	2000
Chlorobenzene	2000	U	2000	280	ug/L			03/14/19 13:13	2000
Chloroethane	2000	U	2000	1700	ug/L			03/14/19 13:13	2000
Chloroform	2000	U	2000	260	ug/L			03/14/19 13:13	2000
Chloromethane	2000	U	2000	400	ug/L			03/14/19 13:13	2000
cis-1,2-Dichloroethene	21000		2000	320	ug/L			03/14/19 13:13	2000
cis-1,3-Dichloropropene	2000	U	2000	1200	ug/L			03/14/19 13:13	2000
Cyclohexane	2000	U	2000	480	ug/L			03/14/19 13:13	2000
Dibromochloromethane	2000	U	2000	780	ug/L			03/14/19 13:13	2000
1,2-Dibromo-3-Chloropropane	2000	U	2000	1800	ug/L			03/14/19 13:13	2000
1,2-Dibromoethane	2000	U	2000	240	ug/L			03/14/19 13:13	2000
1,2-Dichlorobenzene	2000	U	2000	300	ug/L			03/14/19 13:13	2000
1,3-Dichlorobenzene	2000	U	2000	300	ug/L			03/14/19 13:13	2000
1,4-Dichlorobenzene	2000	U	2000	320	ug/L			03/14/19 13:13	2000
Dichlorodifluoromethane	2000	U	2000	700	ug/L			03/14/19 13:13	2000
1,1-Dichloroethane	2000	U	2000	340	ug/L			03/14/19 13:13	2000
1,2-Dichloroethane	2000	U	2000	420	ug/L			03/14/19 13:13	2000
1,1-Dichloroethene	2000	U	2000	380	ug/L			03/14/19 13:13	2000
1,2-Dichloropropane	2000	U	2000	300	ug/L			03/14/19 13:13	2000
Ethylbenzene	2000	U	2000	220	ug/L			03/14/19 13:13	2000
2-Hexanone	20000	U	20000	1100	ug/L			03/14/19 13:13	2000
Isopropylbenzene	2000	U	2000	180	ug/L			03/14/19 13:13	2000
Methyl acetate	20000	U	20000	3400	ug/L			03/14/19 13:13	2000
Methylcyclohexane	2000	U	2000	660	ug/L			03/14/19 13:13	2000
Methylene Chloride	10000	U	10000	5200	ug/L			03/14/19 13:13	2000
4-Methyl-2-pentanone (MIBK)	20000	U	20000	840	ug/L			03/14/19 13:13	2000
Methyl tert-butyl ether	2000	U	2000	140	ug/L			03/14/19 13:13	2000
Styrene	2000	U	2000	200	ug/L			03/14/19 13:13	2000
1,1,2,2-Tetrachloroethane	2000	U	2000	260	ug/L			03/14/19 13:13	2000
Tetrachloroethene	2000	U	2000	300	ug/L			03/14/19 13:13	2000
Toluene	2000	U	2000	280	ug/L			03/14/19 13:13	2000
trans-1,2-Dichloroethene	1000	J	2000	380	ug/L			03/14/19 13:13	2000
trans-1,3-Dichloropropene	2000	U	2000	1300	ug/L			03/14/19 13:13	2000
1,2,4-Trichlorobenzene	2000	U	2000	520	ug/L			03/14/19 13:13	2000
1,1,1-Trichloroethane	2000	U	2000	480	ug/L			03/14/19 13:13	2000
1,1,2-Trichloroethane	2000	U	2000	180	ug/L			03/14/19 13:13	2000

Eurofins TestAmerica, Canton

Client Sample Results

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

Job ID: 240-108878-1

Client Sample ID: MW-4_030119

Lab Sample ID: 240-108878-4

Date Collected: 03/01/19 14:30

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	41000		2000	200	ug/L			03/14/19 13:13	2000
Trichlorofluoromethane	2000	U	2000	900	ug/L			03/14/19 13:13	2000
1,1,2-Trichloro-1,2,2-trifluoroethane	2000	U	2000	820	ug/L			03/14/19 13:13	2000
1,2,3-Trimethylbenzene	10000	U	10000	280	ug/L			03/14/19 13:13	2000
1,2,4-Trimethylbenzene	2000	U	2000	140	ug/L			03/14/19 13:13	2000
1,3,5-Trimethylbenzene	2000	U	2000	240	ug/L			03/14/19 13:13	2000
Vinyl chloride	1100	J	2000	400	ug/L			03/14/19 13:13	2000
Xylenes, Total	4000	U	4000	300	ug/L			03/14/19 13:13	2000
Diethyl ether	4000	U	4000	380	ug/L			03/14/19 13:13	2000
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	68		59 - 120					03/14/19 13:13	2000
Dibromofluoromethane (Surr)	91		75 - 128					03/14/19 13:13	2000
1,2-Dichloroethane-d4 (Surr)	91		70 - 121					03/14/19 13:13	2000
Toluene-d8 (Surr)	80		70 - 123					03/14/19 13:13	2000

Client Sample Results

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

Job ID: 240-108878-1

Client Sample ID: MW-10_030119

Lab Sample ID: 240-108878-5

Date Collected: 03/01/19 15:53

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	4.5		2.0	0.86	ug/L			03/08/19 21:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		63 - 125					03/08/19 21:17	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	1000	U	1000	540	ug/L			03/14/19 13:35	100
Benzene	100	U	100	13	ug/L			03/14/19 13:35	100
Bromodichloromethane	100	U	100	17	ug/L			03/14/19 13:35	100
Bromoform	100	U	100	76	ug/L			03/14/19 13:35	100
Bromomethane	100	U	100	42	ug/L			03/14/19 13:35	100
2-Butanone (MEK)	1000	U	1000	120	ug/L			03/14/19 13:35	100
Carbon disulfide	500	U	500	28	ug/L			03/14/19 13:35	100
Carbon tetrachloride	100	U	100	26	ug/L			03/14/19 13:35	100
Chlorobenzene	100	U	100	14	ug/L			03/14/19 13:35	100
Chloroethane	100	U	100	83	ug/L			03/14/19 13:35	100
Chloroform	100	U	100	13	ug/L			03/14/19 13:35	100
Chloromethane	100	U	100	20	ug/L			03/14/19 13:35	100
cis-1,2-Dichloroethene	100	U	100	16	ug/L			03/14/19 13:35	100
cis-1,3-Dichloropropene	100	U	100	61	ug/L			03/14/19 13:35	100
Cyclohexane	100	U	100	24	ug/L			03/14/19 13:35	100
Dibromochloromethane	100	U	100	39	ug/L			03/14/19 13:35	100
1,2-Dibromo-3-Chloropropane	100	U	100	91	ug/L			03/14/19 13:35	100
1,2-Dibromoethane	100	U	100	12	ug/L			03/14/19 13:35	100
1,2-Dichlorobenzene	100	U	100	15	ug/L			03/14/19 13:35	100
1,3-Dichlorobenzene	100	U	100	15	ug/L			03/14/19 13:35	100
1,4-Dichlorobenzene	100	U	100	16	ug/L			03/14/19 13:35	100
Dichlorodifluoromethane	100	U	100	35	ug/L			03/14/19 13:35	100
1,1-Dichloroethane	100	U	100	17	ug/L			03/14/19 13:35	100
1,2-Dichloroethane	100	U	100	21	ug/L			03/14/19 13:35	100
1,1-Dichloroethene	100	U	100	19	ug/L			03/14/19 13:35	100
1,2-Dichloropropane	100	U	100	15	ug/L			03/14/19 13:35	100
Ethylbenzene	100	U	100	11	ug/L			03/14/19 13:35	100
2-Hexanone	1000	U	1000	54	ug/L			03/14/19 13:35	100
Isopropylbenzene	100	U	100	9.0	ug/L			03/14/19 13:35	100
Methyl acetate	1000	U	1000	170	ug/L			03/14/19 13:35	100
Methylcyclohexane	100	U	100	33	ug/L			03/14/19 13:35	100
Methylene Chloride	500	U	500	260	ug/L			03/14/19 13:35	100
4-Methyl-2-pentanone (MIBK)	1000	U	1000	42	ug/L			03/14/19 13:35	100
Methyl tert-butyl ether	100	U	100	7.0	ug/L			03/14/19 13:35	100
Styrene	100	U	100	10	ug/L			03/14/19 13:35	100
1,1,2,2-Tetrachloroethane	100	U	100	13	ug/L			03/14/19 13:35	100
Tetrachloroethene	100	U	100	15	ug/L			03/14/19 13:35	100
Toluene	100	U	100	14	ug/L			03/14/19 13:35	100
trans-1,2-Dichloroethene	100	U	100	19	ug/L			03/14/19 13:35	100
trans-1,3-Dichloropropene	100	U	100	67	ug/L			03/14/19 13:35	100
1,2,4-Trichlorobenzene	100	U	100	26	ug/L			03/14/19 13:35	100
1,1,1-Trichloroethane	100	U	100	24	ug/L			03/14/19 13:35	100
1,1,2-Trichloroethane	100	U	100	9.0	ug/L			03/14/19 13:35	100

Eurofins TestAmerica, Canton

Client Sample Results

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

Job ID: 240-108878-1

Client Sample ID: MW-10_030119

Lab Sample ID: 240-108878-5

Date Collected: 03/01/19 15:53

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	14	J	100	10	ug/L			03/14/19 13:35	100
Trichlorofluoromethane	100	U	100	45	ug/L			03/14/19 13:35	100
1,1,2-Trichloro-1,2,2-trifluoroethane	100	U	100	41	ug/L			03/14/19 13:35	100
1,2,3-Trimethylbenzene	500	U	500	14	ug/L			03/14/19 13:35	100
1,2,4-Trimethylbenzene	100	U	100	7.0	ug/L			03/14/19 13:35	100
1,3,5-Trimethylbenzene	100	U	100	12	ug/L			03/14/19 13:35	100
Vinyl chloride	3300		100	20	ug/L			03/14/19 13:35	100
Xylenes, Total	200	U	200	15	ug/L			03/14/19 13:35	100
Diethyl ether	200	U	200	19	ug/L			03/14/19 13:35	100
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	70		59 - 120					03/14/19 13:35	100
Dibromofluoromethane (Surr)	96		75 - 128					03/14/19 13:35	100
1,2-Dichloroethane-d4 (Surr)	92		70 - 121					03/14/19 13:35	100
Toluene-d8 (Surr)	80		70 - 123					03/14/19 13:35	100

Client Sample Results

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

Job ID: 240-108878-1

Client Sample ID: MW-58_030119

Lab Sample ID: 240-108878-6

Date Collected: 03/01/19 15:57

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	6.2		2.0	0.86	ug/L			03/08/19 21:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		63 - 125					03/08/19 21:43	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	5.4	ug/L			03/12/19 13:21	1
Benzene	1.0	U	1.0	0.13	ug/L			03/12/19 13:21	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/12/19 13:21	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/12/19 13:21	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/12/19 13:21	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/12/19 13:21	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/12/19 13:21	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/12/19 13:21	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/12/19 13:21	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/12/19 13:21	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/12/19 13:21	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/12/19 13:21	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/12/19 13:21	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/12/19 13:21	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/12/19 13:21	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/12/19 13:21	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/12/19 13:21	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/12/19 13:21	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/12/19 13:21	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/12/19 13:21	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/12/19 13:21	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/12/19 13:21	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/12/19 13:21	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/12/19 13:21	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 13:21	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/12/19 13:21	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/12/19 13:21	1
2-Hexanone	10	U	10	0.54	ug/L			03/12/19 13:21	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/12/19 13:21	1
Methyl acetate	10	U	10	1.7	ug/L			03/12/19 13:21	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/12/19 13:21	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/12/19 13:21	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/12/19 13:21	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/12/19 13:21	1
Styrene	1.0	U	1.0	0.10	ug/L			03/12/19 13:21	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/12/19 13:21	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/12/19 13:21	1
Toluene	1.0	U	1.0	0.14	ug/L			03/12/19 13:21	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 13:21	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/12/19 13:21	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/12/19 13:21	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/12/19 13:21	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/12/19 13:21	1

Eurofins TestAmerica, Canton

Client Sample Results

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

Job ID: 240-108878-1

Client Sample ID: MW-58_030119

Lab Sample ID: 240-108878-6

Date Collected: 03/01/19 15:57

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/12/19 13:21	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/12/19 13:21	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/12/19 13:21	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/12/19 13:21	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/12/19 13:21	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/12/19 13:21	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/12/19 13:21	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/12/19 13:21	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/12/19 13:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	71		59 - 120		03/12/19 13:21	1
Dibromofluoromethane (Surr)	96		75 - 128		03/12/19 13:21	1
1,2-Dichloroethane-d4 (Surr)	91		70 - 121		03/12/19 13:21	1
Toluene-d8 (Surr)	80		70 - 123		03/12/19 13:21	1

Client Sample Results

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

Job ID: 240-108878-1

Client Sample ID: MW-9_030119

Lab Sample ID: 240-108878-7

Date Collected: 03/01/19 12:41

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	3.8		2.0	0.86	ug/L			03/08/19 22:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		63 - 125					03/08/19 22:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	5.4	ug/L			03/12/19 13:43	1
Benzene	1.0	U	1.0	0.13	ug/L			03/12/19 13:43	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/12/19 13:43	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/12/19 13:43	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/12/19 13:43	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/12/19 13:43	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/12/19 13:43	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/12/19 13:43	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/12/19 13:43	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/12/19 13:43	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/12/19 13:43	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/12/19 13:43	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/12/19 13:43	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/12/19 13:43	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/12/19 13:43	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/12/19 13:43	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/12/19 13:43	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/12/19 13:43	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/12/19 13:43	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/12/19 13:43	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/12/19 13:43	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/12/19 13:43	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/12/19 13:43	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/12/19 13:43	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 13:43	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/12/19 13:43	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/12/19 13:43	1
2-Hexanone	10	U	10	0.54	ug/L			03/12/19 13:43	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/12/19 13:43	1
Methyl acetate	10	U	10	1.7	ug/L			03/12/19 13:43	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/12/19 13:43	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/12/19 13:43	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/12/19 13:43	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/12/19 13:43	1
Styrene	1.0	U	1.0	0.10	ug/L			03/12/19 13:43	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/12/19 13:43	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/12/19 13:43	1
Toluene	1.0	U	1.0	0.14	ug/L			03/12/19 13:43	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 13:43	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/12/19 13:43	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/12/19 13:43	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/12/19 13:43	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/12/19 13:43	1

Eurofins TestAmerica, Canton

Client Sample Results

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

Job ID: 240-108878-1

Client Sample ID: MW-9_030119

Lab Sample ID: 240-108878-7

Date Collected: 03/01/19 12:41

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/12/19 13:43	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/12/19 13:43	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/12/19 13:43	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/12/19 13:43	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/12/19 13:43	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/12/19 13:43	1
Vinyl chloride	0.94	J	1.0	0.20	ug/L			03/12/19 13:43	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/12/19 13:43	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/12/19 13:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	69		59 - 120		03/12/19 13:43	1
Dibromofluoromethane (Surr)	93		75 - 128		03/12/19 13:43	1
1,2-Dichloroethane-d4 (Surr)	92		70 - 121		03/12/19 13:43	1
Toluene-d8 (Surr)	80		70 - 123		03/12/19 13:43	1

Client Sample Results

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

Job ID: 240-108878-1

Client Sample ID: MW-1_030119

Lab Sample ID: 240-108878-8

Date Collected: 03/01/19 09:45

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			03/08/19 22:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		63 - 125					03/08/19 22:34	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	28		10	5.4	ug/L			03/12/19 15:52	1
Benzene	1.0	U	1.0	0.13	ug/L			03/12/19 15:52	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/12/19 15:52	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/12/19 15:52	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/12/19 15:52	1
2-Butanone (MEK)	3.8	J	10	1.2	ug/L			03/12/19 15:52	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/12/19 15:52	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/12/19 15:52	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/12/19 15:52	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/12/19 15:52	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/12/19 15:52	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/12/19 15:52	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/12/19 15:52	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/12/19 15:52	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/12/19 15:52	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/12/19 15:52	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/12/19 15:52	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/12/19 15:52	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/12/19 15:52	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/12/19 15:52	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/12/19 15:52	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/12/19 15:52	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/12/19 15:52	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/12/19 15:52	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 15:52	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/12/19 15:52	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/12/19 15:52	1
2-Hexanone	10	U	10	0.54	ug/L			03/12/19 15:52	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/12/19 15:52	1
Methyl acetate	10	U	10	1.7	ug/L			03/12/19 15:52	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/12/19 15:52	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/12/19 15:52	1
4-Methyl-2-pentanone (MIBK)	1.2	J	10	0.42	ug/L			03/12/19 15:52	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/12/19 15:52	1
Styrene	1.0	U	1.0	0.10	ug/L			03/12/19 15:52	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/12/19 15:52	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/12/19 15:52	1
Toluene	1.0	U	1.0	0.14	ug/L			03/12/19 15:52	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 15:52	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/12/19 15:52	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/12/19 15:52	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/12/19 15:52	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/12/19 15:52	1

Eurofins TestAmerica, Canton

Client Sample Results

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

Job ID: 240-108878-1

Client Sample ID: MW-1_030119

Lab Sample ID: 240-108878-8

Date Collected: 03/01/19 09:45

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/12/19 15:52	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/12/19 15:52	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/12/19 15:52	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/12/19 15:52	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/12/19 15:52	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/12/19 15:52	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/12/19 15:52	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/12/19 15:52	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/12/19 15:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		59 - 120		03/12/19 15:52	1
Dibromofluoromethane (Surr)	100		75 - 128		03/12/19 15:52	1
1,2-Dichloroethane-d4 (Surr)	120		70 - 121		03/12/19 15:52	1
Toluene-d8 (Surr)	96		70 - 123		03/12/19 15:52	1

Client Sample Results

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

Job ID: 240-108878-1

Client Sample ID: MW-51_030119

Lab Sample ID: 240-108878-9

Date Collected: 03/01/19 09:40

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	1.5	J	2.0	0.86	ug/L			03/11/19 14:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		63 - 125					03/11/19 14:28	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	5.4	ug/L			03/12/19 16:23	1
Benzene	1.0	U	1.0	0.13	ug/L			03/12/19 16:23	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/12/19 16:23	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/12/19 16:23	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/12/19 16:23	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/12/19 16:23	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/12/19 16:23	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/12/19 16:23	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/12/19 16:23	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/12/19 16:23	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/12/19 16:23	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/12/19 16:23	1
cis-1,2-Dichloroethene	0.22	J	1.0	0.16	ug/L			03/12/19 16:23	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/12/19 16:23	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/12/19 16:23	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/12/19 16:23	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/12/19 16:23	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/12/19 16:23	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/12/19 16:23	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/12/19 16:23	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/12/19 16:23	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/12/19 16:23	1
1,1-Dichloroethane	0.57	J	1.0	0.17	ug/L			03/12/19 16:23	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/12/19 16:23	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 16:23	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/12/19 16:23	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/12/19 16:23	1
2-Hexanone	10	U	10	0.54	ug/L			03/12/19 16:23	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/12/19 16:23	1
Methyl acetate	10	U	10	1.7	ug/L			03/12/19 16:23	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/12/19 16:23	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/12/19 16:23	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/12/19 16:23	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/12/19 16:23	1
Styrene	1.0	U	1.0	0.10	ug/L			03/12/19 16:23	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/12/19 16:23	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/12/19 16:23	1
Toluene	1.0	U	1.0	0.14	ug/L			03/12/19 16:23	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 16:23	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/12/19 16:23	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/12/19 16:23	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/12/19 16:23	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/12/19 16:23	1

Eurofins TestAmerica, Canton

Client Sample Results

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

Job ID: 240-108878-1

Client Sample ID: MW-51_030119

Lab Sample ID: 240-108878-9

Date Collected: 03/01/19 09:40

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/12/19 16:23	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/12/19 16:23	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/12/19 16:23	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/12/19 16:23	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/12/19 16:23	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/12/19 16:23	1
Vinyl chloride	0.29	J	1.0	0.20	ug/L			03/12/19 16:23	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/12/19 16:23	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/12/19 16:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		59 - 120		03/12/19 16:23	1
Dibromofluoromethane (Surr)	97		75 - 128		03/12/19 16:23	1
1,2-Dichloroethane-d4 (Surr)	114		70 - 121		03/12/19 16:23	1
Toluene-d8 (Surr)	96		70 - 123		03/12/19 16:23	1

Client Sample Results

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

Job ID: 240-108878-1

Client Sample ID: MW-36_030119

Lab Sample ID: 240-108878-10

Date Collected: 03/01/19 14:50

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			03/11/19 14:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		63 - 125					03/11/19 14:53	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	5.4	ug/L			03/12/19 16:46	1
Benzene	1.0	U	1.0	0.13	ug/L			03/12/19 16:46	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/12/19 16:46	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/12/19 16:46	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/12/19 16:46	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/12/19 16:46	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/12/19 16:46	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/12/19 16:46	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/12/19 16:46	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/12/19 16:46	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/12/19 16:46	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/12/19 16:46	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/12/19 16:46	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/12/19 16:46	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/12/19 16:46	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/12/19 16:46	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/12/19 16:46	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/12/19 16:46	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/12/19 16:46	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/12/19 16:46	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/12/19 16:46	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/12/19 16:46	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/12/19 16:46	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/12/19 16:46	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 16:46	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/12/19 16:46	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/12/19 16:46	1
2-Hexanone	10	U	10	0.54	ug/L			03/12/19 16:46	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/12/19 16:46	1
Methyl acetate	10	U	10	1.7	ug/L			03/12/19 16:46	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/12/19 16:46	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/12/19 16:46	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/12/19 16:46	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/12/19 16:46	1
Styrene	1.0	U	1.0	0.10	ug/L			03/12/19 16:46	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/12/19 16:46	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/12/19 16:46	1
Toluene	1.0	U	1.0	0.14	ug/L			03/12/19 16:46	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 16:46	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/12/19 16:46	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/12/19 16:46	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/12/19 16:46	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/12/19 16:46	1

Eurofins TestAmerica, Canton

Client Sample Results

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

Job ID: 240-108878-1

Client Sample ID: MW-36_030119

Lab Sample ID: 240-108878-10

Date Collected: 03/01/19 14:50

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/12/19 16:46	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/12/19 16:46	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/12/19 16:46	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/12/19 16:46	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/12/19 16:46	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/12/19 16:46	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/12/19 16:46	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/12/19 16:46	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/12/19 16:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		59 - 120		03/12/19 16:46	1
Dibromofluoromethane (Surr)	101		75 - 128		03/12/19 16:46	1
1,2-Dichloroethane-d4 (Surr)	117		70 - 121		03/12/19 16:46	1
Toluene-d8 (Surr)	97		70 - 123		03/12/19 16:46	1

Client Sample Results

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

Job ID: 240-108878-1

Client Sample ID: MW-24_030119

Lab Sample ID: 240-108878-11

Date Collected: 03/01/19 12:10

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			03/11/19 15:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		63 - 125					03/11/19 15:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	5.4	ug/L			03/12/19 17:18	1
Benzene	1.0	U	1.0	0.13	ug/L			03/12/19 17:18	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/12/19 17:18	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/12/19 17:18	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/12/19 17:18	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/12/19 17:18	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/12/19 17:18	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/12/19 17:18	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/12/19 17:18	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/12/19 17:18	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/12/19 17:18	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/12/19 17:18	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/12/19 17:18	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/12/19 17:18	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/12/19 17:18	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/12/19 17:18	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/12/19 17:18	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/12/19 17:18	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/12/19 17:18	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/12/19 17:18	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/12/19 17:18	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/12/19 17:18	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/12/19 17:18	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/12/19 17:18	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 17:18	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/12/19 17:18	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/12/19 17:18	1
2-Hexanone	10	U	10	0.54	ug/L			03/12/19 17:18	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/12/19 17:18	1
Methyl acetate	10	U	10	1.7	ug/L			03/12/19 17:18	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/12/19 17:18	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/12/19 17:18	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/12/19 17:18	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/12/19 17:18	1
Styrene	1.0	U	1.0	0.10	ug/L			03/12/19 17:18	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/12/19 17:18	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/12/19 17:18	1
Toluene	1.0	U	1.0	0.14	ug/L			03/12/19 17:18	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 17:18	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/12/19 17:18	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/12/19 17:18	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/12/19 17:18	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/12/19 17:18	1

Eurofins TestAmerica, Canton

Client Sample Results

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

Job ID: 240-108878-1

Client Sample ID: MW-24_030119

Lab Sample ID: 240-108878-11

Date Collected: 03/01/19 12:10

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/12/19 17:18	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/12/19 17:18	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/12/19 17:18	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/12/19 17:18	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/12/19 17:18	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/12/19 17:18	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/12/19 17:18	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/12/19 17:18	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/12/19 17:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		59 - 120		03/12/19 17:18	1
Dibromofluoromethane (Surr)	102		75 - 128		03/12/19 17:18	1
1,2-Dichloroethane-d4 (Surr)	115		70 - 121		03/12/19 17:18	1
Toluene-d8 (Surr)	93		70 - 123		03/12/19 17:18	1

Client Sample Results

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

Job ID: 240-108878-1

Client Sample ID: MW-69_022819

Lab Sample ID: 240-108878-12

Date Collected: 02/28/19 17:16

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	5.0		2.0	0.86	ug/L			03/08/19 17:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		63 - 125					03/08/19 17:25	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	5.4	ug/L			03/12/19 17:50	1
Benzene	1.0	U	1.0	0.13	ug/L			03/12/19 17:50	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/12/19 17:50	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/12/19 17:50	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/12/19 17:50	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/12/19 17:50	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/12/19 17:50	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/12/19 17:50	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/12/19 17:50	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/12/19 17:50	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/12/19 17:50	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/12/19 17:50	1
cis-1,2-Dichloroethene	0.19	J	1.0	0.16	ug/L			03/12/19 17:50	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/12/19 17:50	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/12/19 17:50	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/12/19 17:50	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/12/19 17:50	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/12/19 17:50	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/12/19 17:50	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/12/19 17:50	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/12/19 17:50	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/12/19 17:50	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/12/19 17:50	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/12/19 17:50	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 17:50	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/12/19 17:50	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/12/19 17:50	1
2-Hexanone	10	U	10	0.54	ug/L			03/12/19 17:50	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/12/19 17:50	1
Methyl acetate	10	U	10	1.7	ug/L			03/12/19 17:50	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/12/19 17:50	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/12/19 17:50	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/12/19 17:50	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/12/19 17:50	1
Styrene	1.0	U	1.0	0.10	ug/L			03/12/19 17:50	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/12/19 17:50	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/12/19 17:50	1
Toluene	1.0	U	1.0	0.14	ug/L			03/12/19 17:50	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 17:50	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/12/19 17:50	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/12/19 17:50	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/12/19 17:50	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/12/19 17:50	1

Eurofins TestAmerica, Canton

Client Sample Results

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

Job ID: 240-108878-1

Client Sample ID: MW-69_022819

Lab Sample ID: 240-108878-12

Date Collected: 02/28/19 17:16

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/12/19 17:50	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/12/19 17:50	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/12/19 17:50	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/12/19 17:50	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/12/19 17:50	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/12/19 17:50	1
Vinyl chloride	4.1		1.0	0.20	ug/L			03/12/19 17:50	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/12/19 17:50	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/12/19 17:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		59 - 120		03/12/19 17:50	1
Dibromofluoromethane (Surr)	101		75 - 128		03/12/19 17:50	1
1,2-Dichloroethane-d4 (Surr)	117		70 - 121		03/12/19 17:50	1
Toluene-d8 (Surr)	94		70 - 123		03/12/19 17:50	1

Client Sample Results

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

Job ID: 240-108878-1

Client Sample ID: MW-53_022819

Lab Sample ID: 240-108878-13

Date Collected: 02/28/19 17:10

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	1.7	J	2.0	0.86	ug/L			03/08/19 17:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		63 - 125					03/08/19 17:51	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	5.4	ug/L			03/12/19 18:23	1
Benzene	1.0	U	1.0	0.13	ug/L			03/12/19 18:23	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/12/19 18:23	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/12/19 18:23	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/12/19 18:23	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/12/19 18:23	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/12/19 18:23	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/12/19 18:23	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/12/19 18:23	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/12/19 18:23	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/12/19 18:23	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/12/19 18:23	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/12/19 18:23	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/12/19 18:23	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/12/19 18:23	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/12/19 18:23	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/12/19 18:23	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/12/19 18:23	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/12/19 18:23	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/12/19 18:23	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/12/19 18:23	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/12/19 18:23	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/12/19 18:23	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/12/19 18:23	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 18:23	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/12/19 18:23	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/12/19 18:23	1
2-Hexanone	10	U	10	0.54	ug/L			03/12/19 18:23	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/12/19 18:23	1
Methyl acetate	10	U	10	1.7	ug/L			03/12/19 18:23	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/12/19 18:23	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/12/19 18:23	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/12/19 18:23	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/12/19 18:23	1
Styrene	1.0	U	1.0	0.10	ug/L			03/12/19 18:23	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/12/19 18:23	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/12/19 18:23	1
Toluene	1.0	U	1.0	0.14	ug/L			03/12/19 18:23	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 18:23	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/12/19 18:23	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/12/19 18:23	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/12/19 18:23	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/12/19 18:23	1

Eurofins TestAmerica, Canton

Client Sample Results

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

Job ID: 240-108878-1

Client Sample ID: MW-53_022819

Lab Sample ID: 240-108878-13

Date Collected: 02/28/19 17:10

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/12/19 18:23	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/12/19 18:23	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/12/19 18:23	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/12/19 18:23	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/12/19 18:23	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/12/19 18:23	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/12/19 18:23	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/12/19 18:23	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/12/19 18:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		59 - 120		03/12/19 18:23	1
Dibromofluoromethane (Surr)	102		75 - 128		03/12/19 18:23	1
1,2-Dichloroethane-d4 (Surr)	113		70 - 121		03/12/19 18:23	1
Toluene-d8 (Surr)	94		70 - 123		03/12/19 18:23	1

Client Sample Results

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

Job ID: 240-108878-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-108878-14

Date Collected: 02/28/19 00:00

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	5.4	ug/L			03/12/19 18:55	1
Benzene	1.0	U	1.0	0.13	ug/L			03/12/19 18:55	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/12/19 18:55	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/12/19 18:55	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/12/19 18:55	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/12/19 18:55	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/12/19 18:55	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/12/19 18:55	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/12/19 18:55	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/12/19 18:55	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/12/19 18:55	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/12/19 18:55	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/12/19 18:55	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/12/19 18:55	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/12/19 18:55	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/12/19 18:55	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/12/19 18:55	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/12/19 18:55	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/12/19 18:55	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/12/19 18:55	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/12/19 18:55	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/12/19 18:55	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/12/19 18:55	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/12/19 18:55	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 18:55	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/12/19 18:55	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/12/19 18:55	1
2-Hexanone	10	U	10	0.54	ug/L			03/12/19 18:55	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/12/19 18:55	1
Methyl acetate	10	U	10	1.7	ug/L			03/12/19 18:55	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/12/19 18:55	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/12/19 18:55	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/12/19 18:55	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/12/19 18:55	1
Styrene	1.0	U	1.0	0.10	ug/L			03/12/19 18:55	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/12/19 18:55	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/12/19 18:55	1
Toluene	1.0	U	1.0	0.14	ug/L			03/12/19 18:55	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 18:55	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/12/19 18:55	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/12/19 18:55	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/12/19 18:55	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/12/19 18:55	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/12/19 18:55	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/12/19 18:55	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/12/19 18:55	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/12/19 18:55	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/12/19 18:55	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/12/19 18:55	1

Eurofins TestAmerica, Canton

Client Sample Results

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

Job ID: 240-108878-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-108878-14

Date Collected: 02/28/19 00:00

Matrix: Water

Date Received: 03/05/19 08:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/12/19 18:55	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/12/19 18:55	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/12/19 18:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		59 - 120					03/12/19 18:55	1
Dibromofluoromethane (Surr)	105		75 - 128					03/12/19 18:55	1
1,2-Dichloroethane-d4 (Surr)	118		70 - 121					03/12/19 18:55	1
Toluene-d8 (Surr)	94		70 - 123					03/12/19 18:55	1

Surrogate Summary

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

Job ID: 240-108878-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		BFB (59-120)	DBFM (75-128)	DCA (70-121)	TOL (70-123)
240-108876-E-4 MSD	Matrix Spike Duplicate	83	91	82	85
240-108876-H-4 MS	Matrix Spike	85	94	85	86
240-108878-1	MW-2_030119	85	102	116	95
240-108878-1 MS	MW-2_030119	112	90	107	107
240-108878-1 MSD	MW-2_030119	105	88	102	103
240-108878-2	MW-5_030119	77	90	96	91
240-108878-3	MW-3_030119	71	98	93	77
240-108878-4	MW-4_030119	68	91	91	80
240-108878-5	MW-10_030119	70	96	92	80
240-108878-6	MW-58_030119	71	96	91	80
240-108878-7	MW-9_030119	69	93	92	80
240-108878-8	MW-1_030119	88	100	120	96
240-108878-9	MW-51_030119	85	97	114	96
240-108878-10	MW-36_030119	88	101	117	97
240-108878-11	MW-24_030119	84	102	115	93
240-108878-12	MW-69_022819	84	101	117	94
240-108878-13	MW-53_022819	84	102	113	94
240-108878-14	TRIP BLANK	85	105	118	94
240-108933-E-2 MS	Matrix Spike	82	94	84	87
240-108933-H-2 MSD	Matrix Spike Duplicate	77	86	79	82
LCS 240-371207/4	Lab Control Sample	82	87	79	83
LCS 240-371223/4	Lab Control Sample	109	92	99	106
LCS 240-371376/4	Lab Control Sample	111	98	109	124 X
LCS 240-371554/4	Lab Control Sample	82	91	82	84
MB 240-371207/6	Method Blank	73	94	92	83
MB 240-371223/7	Method Blank	86	100	112	97
MB 240-371376/6	Method Blank	95	108	117	113
MB 240-371554/6	Method Blank	72	91	87	80

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

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

TOL = Toluene-d8 (Surr)

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		DCA (63-125)
240-108878-1	MW-2_030119	89
240-108878-2	MW-5_030119	103
240-108878-3	MW-3_030119	99
240-108878-4	MW-4_030119	97
240-108878-5	MW-10_030119	105
240-108878-6	MW-58_030119	101
240-108878-7	MW-9_030119	103
240-108878-8	MW-1_030119	113
240-108878-9	MW-51_030119	97

Eurofins TestAmerica, Canton

Surrogate Summary

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

Job ID: 240-108878-1

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA (63-125)
240-108878-10	MW-36_030119	98
240-108878-11	MW-24_030119	97
240-108878-12	MW-69_022819	98
240-108878-13	MW-53_022819	97
240-108941-C-1 MS	Matrix Spike	102
240-108941-C-1 MSD	Matrix Spike Duplicate	100
240-109088-A-1 MS	Matrix Spike	92
240-109088-A-1 MSD	Matrix Spike Duplicate	95
LCS 240-370850/4	Lab Control Sample	97
LCS 240-371053/4	Lab Control Sample	98
MB 240-370850/5	Method Blank	94
MB 240-371053/5	Method Blank	102

Surrogate Legend

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

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA (10-150)
MRL 240-370850/6	Lab Control Sample	95
MRL 240-371053/6	Lab Control Sample	101

Surrogate Legend

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

QC Sample Results

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

Job ID: 240-108878-1

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

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

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acetone	10	U	10	5.4	ug/L			03/12/19 10:01	1
Benzene	1.0	U	1.0	0.13	ug/L			03/12/19 10:01	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/12/19 10:01	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/12/19 10:01	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/12/19 10:01	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/12/19 10:01	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/12/19 10:01	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/12/19 10:01	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/12/19 10:01	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/12/19 10:01	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/12/19 10:01	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/12/19 10:01	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/12/19 10:01	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/12/19 10:01	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/12/19 10:01	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/12/19 10:01	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/12/19 10:01	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/12/19 10:01	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/12/19 10:01	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/12/19 10:01	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/12/19 10:01	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/12/19 10:01	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/12/19 10:01	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/12/19 10:01	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 10:01	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/12/19 10:01	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/12/19 10:01	1
2-Hexanone	10	U	10	0.54	ug/L			03/12/19 10:01	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/12/19 10:01	1
Methyl acetate	10	U	10	1.7	ug/L			03/12/19 10:01	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/12/19 10:01	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/12/19 10:01	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/12/19 10:01	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/12/19 10:01	1
Styrene	1.0	U	1.0	0.10	ug/L			03/12/19 10:01	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/12/19 10:01	1
Tetrachloroethene	0.193	J	1.0	0.15	ug/L			03/12/19 10:01	1
Toluene	1.0	U	1.0	0.14	ug/L			03/12/19 10:01	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 10:01	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/12/19 10:01	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/12/19 10:01	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/12/19 10:01	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/12/19 10:01	1
Trichloroethene	0.124	J	1.0	0.10	ug/L			03/12/19 10:01	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/12/19 10:01	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/12/19 10:01	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/12/19 10:01	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/12/19 10:01	1

Eurofins TestAmerica, Canton

QC Sample Results

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

Job ID: 240-108878-1

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

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

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/12/19 10:01	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/12/19 10:01	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/12/19 10:01	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/12/19 10:01	1

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

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

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	10.0	10.0		ug/L		100	80 - 123
Bromodichloromethane	10.0	8.38		ug/L		84	77 - 125
Bromoform	10.0	5.99		ug/L		60	49 - 141
Bromomethane	10.0	7.38		ug/L		74	41 - 175
2-Butanone (MEK)	20.0	14.1		ug/L		70	39 - 163
Carbon disulfide	10.0	7.30		ug/L		73	60 - 138
Carbon tetrachloride	10.0	9.84		ug/L		98	63 - 140
Chlorobenzene	10.0	10.4		ug/L		104	80 - 121
Chloroethane	10.0	7.61		ug/L		76	33 - 173
Chloroform	10.0	10.6		ug/L		106	79 - 127
Chloromethane	10.0	7.99		ug/L		80	54 - 143
cis-1,2-Dichloroethene	10.0	10.5		ug/L		105	76 - 128
cis-1,3-Dichloropropene	10.0	7.64		ug/L		76	64 - 132
Cyclohexane	10.0	9.24		ug/L		92	58 - 145
Dibromochloromethane	10.0	8.12		ug/L		81	70 - 132
1,2-Dibromo-3-Chloropropane	10.0	4.88		ug/L		49	46 - 132
1,2-Dibromoethane	10.0	8.29		ug/L		83	77 - 123
1,2-Dichlorobenzene	10.0	10.0		ug/L		100	78 - 120
1,3-Dichlorobenzene	10.0	9.92		ug/L		99	78 - 120
1,4-Dichlorobenzene	10.0	9.94		ug/L		99	78 - 120
Dichlorodifluoromethane	10.0	8.57		ug/L		86	29 - 148
1,1-Dichloroethane	10.0	9.92		ug/L		99	75 - 133
1,2-Dichloroethane	10.0	9.62		ug/L		96	71 - 135
1,1-Dichloroethene	10.0	8.57		ug/L		86	65 - 139
1,2-Dichloropropane	10.0	9.37		ug/L		94	78 - 133
Ethylbenzene	10.0	10.0		ug/L		100	80 - 120
2-Hexanone	20.0	11.7		ug/L		59	43 - 148
Isopropylbenzene	10.0	10.2		ug/L		102	74 - 120
Methyl acetate	20.0	13.0		ug/L		65	52 - 145
Methylcyclohexane	10.0	9.13		ug/L		91	60 - 125
Methylene Chloride	10.0	9.38		ug/L		94	70 - 134

Eurofins TestAmerica, Canton

QC Sample Results

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

Job ID: 240-108878-1

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

Lab Sample ID: LCS 240-371207/4

Matrix: Water

Analysis Batch: 371207

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Methyl-2-pentanone (MIBK)	20.0	11.2		ug/L		56	49 - 143
Methyl tert-butyl ether	10.0	7.01		ug/L		70	51 - 133
Styrene	10.0	9.59		ug/L		96	79 - 120
1,1,2,2-Tetrachloroethane	10.0	7.50		ug/L		75	65 - 139
Tetrachloroethene	10.0	11.4		ug/L		114	74 - 130
Toluene	10.0	10.2		ug/L		102	78 - 129
trans-1,2-Dichloroethene	10.0	11.0		ug/L		110	78 - 133
trans-1,3-Dichloropropene	10.0	6.52		ug/L		65	55 - 128
1,2,4-Trichlorobenzene	10.0	8.93		ug/L		89	42 - 133
1,1,1-Trichloroethane	10.0	11.0		ug/L		110	69 - 134
1,1,2-Trichloroethane	10.0	9.41		ug/L		94	78 - 133
Trichloroethene	10.0	10.3		ug/L		103	76 - 125
Trichlorofluoromethane	10.0	9.04		ug/L		90	51 - 164
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	10.3		ug/L		103	50 - 156
1,2,4-Trimethylbenzene	10.0	9.67		ug/L		97	74 - 120
1,3,5-Trimethylbenzene	10.0	9.74		ug/L		97	75 - 121
Vinyl chloride	10.0	8.19		ug/L		82	58 - 143
Xylenes, Total	20.0	20.0		ug/L		100	80 - 120
Diethyl ether	10.0	8.66		ug/L		87	70 - 146

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

Lab Sample ID: 240-108876-E-4 MSD

Matrix: Water

Analysis Batch: 371207

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	10	U	20.0	17.9		ug/L		90	10 - 168	0	35
Benzene	1.0	U	10.0	9.28		ug/L		93	71 - 122	2	22
Bromodichloromethane	1.0	U	10.0	7.65		ug/L		77	64 - 125	1	27
Bromoform	1.0	U	10.0	5.67		ug/L		57	44 - 129	1	28
Bromomethane	1.0	U	10.0	6.37		ug/L		64	19 - 187	13	35
2-Butanone (MEK)	10	U	20.0	12.4		ug/L		62	37 - 156	0	35
Carbon disulfide	5.0	U	10.0	8.75		ug/L		87	43 - 144	2	33
Carbon tetrachloride	1.0	U	10.0	8.70		ug/L		87	41 - 143	8	30
Chlorobenzene	1.0	U	10.0	9.48		ug/L		95	70 - 123	2	23
Chloroethane	1.0	U	10.0	7.08		ug/L		71	11 - 189	11	35
Chloroform	1.0	U	10.0	9.83		ug/L		98	68 - 130	2	23
Chloromethane	1.0	U	10.0	3.84		ug/L		38	31 - 154	12	35
cis-1,2-Dichloroethene	1.0	U	10.0	9.75		ug/L		97	64 - 130	2	21
cis-1,3-Dichloropropene	1.0	U	10.0	6.23		ug/L		62	48 - 127	4	30
Cyclohexane	1.0	U	10.0	7.84		ug/L		78	42 - 135	21	35
Dibromochloromethane	1.0	U	10.0	7.37		ug/L		74	60 - 129	2	26
1,2-Dibromo-3-Chloropropane	1.0	U	10.0	4.45		ug/L		45	38 - 124	1	35

Eurofins TestAmerica, Canton

QC Sample Results

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

Job ID: 240-108878-1

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

Lab Sample ID: 240-108876-E-4 MSD

Client Sample ID: Matrix Spike Duplicate

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 371207

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

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

Lab Sample ID: 240-108876-H-4 MS

Client Sample ID: Matrix Spike

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 371207

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	10	U	20.0	17.9		ug/L		89	10 - 168
Benzene	1.0	U	10.0	9.42		ug/L		94	71 - 122

Eurofins TestAmerica, Canton

QC Sample Results

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

Job ID: 240-108878-1

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

Lab Sample ID: 240-108876-H-4 MS

Matrix: Water

Analysis Batch: 371207

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				
Bromodichloromethane	1.0	U	10.0	7.61		ug/L		76	64 - 125
Bromoform	1.0	U	10.0	5.63		ug/L		56	44 - 129
Bromomethane	1.0	U	10.0	7.29		ug/L		73	19 - 187
2-Butanone (MEK)	10	U	20.0	12.3		ug/L		62	37 - 156
Carbon disulfide	5.0	U	10.0	8.89		ug/L		89	43 - 144
Carbon tetrachloride	1.0	U	10.0	8.06		ug/L		81	41 - 143
Chlorobenzene	1.0	U	10.0	9.33		ug/L		93	70 - 123
Chloroethane	1.0	U	10.0	7.90		ug/L		79	11 - 189
Chloroform	1.0	U	10.0	9.99		ug/L		100	68 - 130
Chloromethane	1.0	U	10.0	3.39		ug/L		34	31 - 154
cis-1,2-Dichloroethene	1.0	U	10.0	9.90		ug/L		99	64 - 130
cis-1,3-Dichloropropene	1.0	U	10.0	5.98		ug/L		60	48 - 127
Cyclohexane	1.0	U	10.0	6.37		ug/L		64	42 - 135
Dibromochloromethane	1.0	U	10.0	7.20		ug/L		72	60 - 129
1,2-Dibromo-3-Chloropropane	1.0	U	10.0	4.48		ug/L		45	38 - 124
1,2-Dibromoethane	1.0	U	10.0	7.45		ug/L		75	71 - 123
1,2-Dichlorobenzene	1.0	U	10.0	9.07		ug/L		91	64 - 120
1,3-Dichlorobenzene	1.0	U	10.0	8.67		ug/L		87	62 - 120
1,4-Dichlorobenzene	1.0	U	10.0	8.80		ug/L		88	63 - 120
Dichlorodifluoromethane	1.0	U	10.0	7.94		ug/L		79	28 - 136
1,1-Dichloroethane	1.0	U	10.0	9.40		ug/L		94	63 - 136
1,2-Dichloroethane	1.0	U	10.0	8.95		ug/L		89	65 - 135
1,1-Dichloroethene	1.0	U	10.0	8.00		ug/L		80	53 - 140
1,2-Dichloropropane	1.0	U	10.0	8.53		ug/L		85	70 - 132
Ethylbenzene	1.0	U	10.0	8.78		ug/L		88	66 - 120
2-Hexanone	10	U	20.0	10.7		ug/L		53	42 - 150
Isopropylbenzene	1.0	U	10.0	8.70		ug/L		87	59 - 120
Methyl acetate	10	U	20.0	12.3		ug/L		61	41 - 142
Methylcyclohexane	1.0	U	10.0	5.85		ug/L		58	37 - 123
Methylene Chloride	5.0	U	10.0	8.50		ug/L		85	61 - 130
4-Methyl-2-pentanone (MIBK)	10	U	20.0	10.0		ug/L		50	44 - 143
Methyl tert-butyl ether	1.0	U	10.0	6.39		ug/L		64	41 - 136
Styrene	1.0	U	10.0	8.64		ug/L		86	68 - 120
1,1,2,2-Tetrachloroethane	1.0	U	10.0	6.77		ug/L		68	60 - 137
Tetrachloroethene	1.0	U	10.0	9.30		ug/L		93	51 - 136
Toluene	1.0	U	10.0	9.16		ug/L		92	62 - 132
trans-1,2-Dichloroethene	1.0	U	10.0	10.2		ug/L		102	68 - 133
trans-1,3-Dichloropropene	1.0	U	10.0	5.13		ug/L		51	40 - 125
1,2,4-Trichlorobenzene	1.0	U	10.0	7.46		ug/L		75	30 - 126
1,1,1-Trichloroethane	1.0	U	10.0	9.78		ug/L		98	51 - 138
1,1,2-Trichloroethane	1.0	U	10.0	8.58		ug/L		86	76 - 132
Trichloroethene	1.0	U	10.0	9.17		ug/L		92	55 - 131
Trichlorofluoromethane	1.0	U	10.0	8.89		ug/L		89	37 - 174
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	10.0	7.47		ug/L		75	31 - 156
1,2,4-Trimethylbenzene	1.0	U	10.0	8.31		ug/L		83	62 - 120
1,3,5-Trimethylbenzene	1.0	U	10.0	8.16		ug/L		82	64 - 120
Vinyl chloride	1.0	U	10.0	9.09		ug/L		91	43 - 154
Xylenes, Total	2.0	U	20.0	17.9		ug/L		90	67 - 120

Eurofins TestAmerica, Canton

QC Sample Results

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

Job ID: 240-108878-1

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

Lab Sample ID: 240-108876-H-4 MS

Matrix: Water

Analysis Batch: 371207

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
Diethyl ether	2.0	U	10.0	8.11		ug/L		81	65 - 134
Surrogate	MS %Recovery	MS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	85		59 - 120						
Dibromofluoromethane (Surr)	94		75 - 128						
1,2-Dichloroethane-d4 (Surr)	85		70 - 121						
Toluene-d8 (Surr)	86		70 - 123						

Lab Sample ID: MB 240-371223/7

Matrix: Water

Analysis Batch: 371223

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	5.4	ug/L			03/12/19 14:16	1
Benzene	1.0	U	1.0	0.13	ug/L			03/12/19 14:16	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/12/19 14:16	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/12/19 14:16	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/12/19 14:16	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/12/19 14:16	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/12/19 14:16	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/12/19 14:16	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/12/19 14:16	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/12/19 14:16	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/12/19 14:16	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/12/19 14:16	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/12/19 14:16	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/12/19 14:16	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/12/19 14:16	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/12/19 14:16	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/12/19 14:16	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/12/19 14:16	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/12/19 14:16	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/12/19 14:16	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/12/19 14:16	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/12/19 14:16	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/12/19 14:16	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/12/19 14:16	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 14:16	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/12/19 14:16	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/12/19 14:16	1
2-Hexanone	10	U	10	0.54	ug/L			03/12/19 14:16	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/12/19 14:16	1
Methyl acetate	10	U	10	1.7	ug/L			03/12/19 14:16	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/12/19 14:16	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/12/19 14:16	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/12/19 14:16	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/12/19 14:16	1
Styrene	1.0	U	1.0	0.10	ug/L			03/12/19 14:16	1

Eurofins TestAmerica, Canton

QC Sample Results

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

Job ID: 240-108878-1

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

Lab Sample ID: MB 240-371223/7
Matrix: Water
Analysis Batch: 371223

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/12/19 14:16	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/12/19 14:16	1
Toluene	1.0	U	1.0	0.14	ug/L			03/12/19 14:16	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/12/19 14:16	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/12/19 14:16	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/12/19 14:16	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/12/19 14:16	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/12/19 14:16	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/12/19 14:16	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/12/19 14:16	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/12/19 14:16	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/12/19 14:16	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/12/19 14:16	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/12/19 14:16	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/12/19 14:16	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/12/19 14:16	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/12/19 14:16	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		59 - 120		03/12/19 14:16	1
Dibromofluoromethane (Surr)	100		75 - 128		03/12/19 14:16	1
1,2-Dichloroethane-d4 (Surr)	112		70 - 121		03/12/19 14:16	1
Toluene-d8 (Surr)	97		70 - 123		03/12/19 14:16	1

Lab Sample ID: LCS 240-371223/4
Matrix: Water
Analysis Batch: 371223

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	20.2		ug/L		101	21 - 162
Benzene	10.0	10.5		ug/L		105	80 - 123
Bromodichloromethane	10.0	9.13		ug/L		91	77 - 125
Bromoform	10.0	8.14		ug/L		81	49 - 141
Bromomethane	10.0	7.43		ug/L		74	41 - 175
2-Butanone (MEK)	20.0	21.7		ug/L		108	39 - 163
Carbon disulfide	10.0	10.1		ug/L		101	60 - 138
Carbon tetrachloride	10.0	8.72		ug/L		87	63 - 140
Chlorobenzene	10.0	9.77		ug/L		98	80 - 121
Chloroethane	10.0	7.11		ug/L		71	33 - 173
Chloroform	10.0	9.90		ug/L		99	79 - 127
Chloromethane	10.0	12.5		ug/L		125	54 - 143
cis-1,2-Dichloroethene	10.0	9.54		ug/L		95	76 - 128
cis-1,3-Dichloropropene	10.0	9.67		ug/L		97	64 - 132
Cyclohexane	10.0	11.9		ug/L		119	58 - 145
Dibromochloromethane	10.0	8.81		ug/L		88	70 - 132
1,2-Dibromo-3-Chloropropane	10.0	7.07		ug/L		71	46 - 132
1,2-Dibromoethane	10.0	9.59		ug/L		96	77 - 123
1,2-Dichlorobenzene	10.0	9.62		ug/L		96	78 - 120

Eurofins TestAmerica, Canton

QC Sample Results

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

Job ID: 240-108878-1

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

Lab Sample ID: LCS 240-371223/4
Matrix: Water
Analysis Batch: 371223

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichlorobenzene	10.0	9.52		ug/L		95	78 - 120
1,4-Dichlorobenzene	10.0	9.35		ug/L		94	78 - 120
Dichlorodifluoromethane	10.0	10.7		ug/L		107	29 - 148
1,1-Dichloroethane	10.0	11.0		ug/L		110	75 - 133
1,2-Dichloroethane	10.0	10.0		ug/L		100	71 - 135
1,1-Dichloroethene	10.0	9.86		ug/L		99	65 - 139
1,2-Dichloropropane	10.0	11.7		ug/L		117	78 - 133
Ethylbenzene	10.0	10.0		ug/L		100	80 - 120
2-Hexanone	20.0	23.0		ug/L		115	43 - 148
Isopropylbenzene	10.0	9.75		ug/L		97	74 - 120
Methyl acetate	20.0	24.9		ug/L		124	52 - 145
Methylcyclohexane	10.0	9.12		ug/L		91	60 - 125
Methylene Chloride	10.0	12.0		ug/L		120	70 - 134
4-Methyl-2-pentanone (MIBK)	20.0	21.0		ug/L		105	49 - 143
Methyl tert-butyl ether	10.0	8.43		ug/L		84	51 - 133
Styrene	10.0	9.95		ug/L		100	79 - 120
1,1,2,2-Tetrachloroethane	10.0	10.7		ug/L		107	65 - 139
Tetrachloroethene	10.0	9.71		ug/L		97	74 - 130
Toluene	10.0	11.0		ug/L		110	78 - 129
trans-1,2-Dichloroethene	10.0	9.95		ug/L		99	78 - 133
trans-1,3-Dichloropropene	10.0	9.67		ug/L		97	55 - 128
1,2,4-Trichlorobenzene	10.0	7.59		ug/L		76	42 - 133
1,1,1-Trichloroethane	10.0	9.06		ug/L		91	69 - 134
1,1,2-Trichloroethane	10.0	11.1		ug/L		111	78 - 133
Trichloroethene	10.0	8.31		ug/L		83	76 - 125
Trichlorofluoromethane	10.0	8.91		ug/L		89	51 - 164
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	9.12		ug/L		91	50 - 156
1,2,4-Trimethylbenzene	10.0	10.1		ug/L		101	74 - 120
1,3,5-Trimethylbenzene	10.0	10.1		ug/L		101	75 - 121
Vinyl chloride	10.0	10.2		ug/L		102	58 - 143
Xylenes, Total	20.0	20.2		ug/L		101	80 - 120
Diethyl ether	10.0	12.2		ug/L		122	70 - 146

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	109		59 - 120
Dibromofluoromethane (Surr)	92		75 - 128
1,2-Dichloroethane-d4 (Surr)	99		70 - 121
Toluene-d8 (Surr)	106		70 - 123

Lab Sample ID: 240-108878-1 MS
Matrix: Water
Analysis Batch: 371223

Client Sample ID: MW-2_030119
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	1000	U	2000	2120		ug/L		106	10 - 168
Benzene	100	U	1000	962		ug/L		96	71 - 122
Bromodichloromethane	100	U	1000	857		ug/L		86	64 - 125
Bromoform	100	U	1000	838		ug/L		84	44 - 129

Eurofins TestAmerica, Canton

QC Sample Results

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

Job ID: 240-108878-1

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

Lab Sample ID: 240-108878-1 MS

Client Sample ID: MW-2_030119

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 371223

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
Bromomethane	100	U	1000	710		ug/L		71	19 - 187
2-Butanone (MEK)	1000	U	2000	2360		ug/L		118	37 - 156
Carbon disulfide	500	U	1000	904		ug/L		90	43 - 144
Carbon tetrachloride	100	U	1000	797		ug/L		80	41 - 143
Chlorobenzene	100	U	1000	930		ug/L		93	70 - 123
Chloroethane	100	U	1000	706		ug/L		71	11 - 189
Chloroform	100	U	1000	928		ug/L		93	68 - 130
Chloromethane	100	U	1000	1270		ug/L		127	31 - 154
cis-1,2-Dichloroethene	2600	F1	1000	3170	F1	ug/L		56	64 - 130
cis-1,3-Dichloropropene	100	U	1000	852		ug/L		85	48 - 127
Cyclohexane	100	U	1000	989		ug/L		99	42 - 135
Dibromochloromethane	100	U	1000	826		ug/L		83	60 - 129
1,2-Dibromo-3-Chloropropane	100	U	1000	740		ug/L		74	38 - 124
1,2-Dibromoethane	100	U	1000	1000		ug/L		100	71 - 123
1,2-Dichlorobenzene	100	U	1000	905		ug/L		91	64 - 120
1,3-Dichlorobenzene	100	U	1000	873		ug/L		87	62 - 120
1,4-Dichlorobenzene	100	U	1000	859		ug/L		86	63 - 120
Dichlorodifluoromethane	100	U	1000	1020		ug/L		102	28 - 136
1,1-Dichloroethane	100	U	1000	1020		ug/L		102	63 - 136
1,2-Dichloroethane	100	U	1000	950		ug/L		95	65 - 135
1,1-Dichloroethene	100	U	1000	873		ug/L		87	53 - 140
1,2-Dichloropropane	100	U	1000	1060		ug/L		106	70 - 132
Ethylbenzene	100	U	1000	916		ug/L		92	66 - 120
2-Hexanone	1000	U	2000	2570		ug/L		129	42 - 150
Isopropylbenzene	100	U	1000	909		ug/L		91	59 - 120
Methyl acetate	1000	U	2000	2610		ug/L		130	41 - 142
Methylcyclohexane	100	U	1000	758		ug/L		76	37 - 123
Methylene Chloride	500	U	1000	1100		ug/L		110	61 - 130
4-Methyl-2-pentanone (MIBK)	1000	U	2000	2240		ug/L		112	44 - 143
Methyl tert-butyl ether	100	U	1000	851		ug/L		85	41 - 136
Styrene	100	U	1000	931		ug/L		93	68 - 120
1,1,2,2-Tetrachloroethane	100	U	1000	1090		ug/L		109	60 - 137
Tetrachloroethene	100	U	1000	902		ug/L		90	51 - 136
Toluene	100	U	1000	1040		ug/L		104	62 - 132
trans-1,2-Dichloroethene	760		1000	1590		ug/L		82	68 - 133
trans-1,3-Dichloropropene	100	U	1000	931		ug/L		93	40 - 125
1,2,4-Trichlorobenzene	100	U	1000	663		ug/L		66	30 - 126
1,1,1-Trichloroethane	100	U	1000	830		ug/L		83	51 - 138
1,1,2-Trichloroethane	100	U	1000	1100		ug/L		110	76 - 132
Trichloroethene	100	U	1000	769		ug/L		77	55 - 131
Trichlorofluoromethane	100	U	1000	861		ug/L		86	37 - 174
1,1,2-Trichloro-1,2,2-trifluoroethane	100	U	1000	774		ug/L		77	31 - 156
1,2,4-Trimethylbenzene	100	U	1000	911		ug/L		91	62 - 120
1,3,5-Trimethylbenzene	100	U	1000	917		ug/L		92	64 - 120
Vinyl chloride	230		1000	1220		ug/L		98	43 - 154
Xylenes, Total	200	U	2000	1880		ug/L		94	67 - 120
Diethyl ether	200	U	1000	1160		ug/L		116	65 - 134

Eurofins TestAmerica, Canton

QC Sample Results

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

Job ID: 240-108878-1

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

Lab Sample ID: 240-108878-1 MS
Matrix: Water
Analysis Batch: 371223

Client Sample ID: MW-2_030119
Prep Type: Total/NA

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	112		59 - 120
Dibromofluoromethane (Surr)	90		75 - 128
1,2-Dichloroethane-d4 (Surr)	107		70 - 121
Toluene-d8 (Surr)	107		70 - 123

Lab Sample ID: 240-108878-1 MSD
Matrix: Water
Analysis Batch: 371223

Client Sample ID: MW-2_030119
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	1000	U	2000	2190		ug/L		110	10 - 168	3	35
Benzene	100	U	1000	1010		ug/L		101	71 - 122	5	22
Bromodichloromethane	100	U	1000	892		ug/L		89	64 - 125	4	27
Bromoform	100	U	1000	838		ug/L		84	44 - 129	0	28
Bromomethane	100	U	1000	766		ug/L		77	19 - 187	8	35
2-Butanone (MEK)	1000	U	2000	2370		ug/L		118	37 - 156	0	35
Carbon disulfide	500	U	1000	972		ug/L		97	43 - 144	7	33
Carbon tetrachloride	100	U	1000	834		ug/L		83	41 - 143	5	30
Chlorobenzene	100	U	1000	941		ug/L		94	70 - 123	1	23
Chloroethane	100	U	1000	758		ug/L		76	11 - 189	7	35
Chloroform	100	U	1000	958		ug/L		96	68 - 130	3	23
Chloromethane	100	U	1000	1320		ug/L		132	31 - 154	4	35
cis-1,2-Dichloroethene	2600	F1	1000	3260		ug/L		65	64 - 130	3	21
cis-1,3-Dichloropropene	100	U	1000	892		ug/L		89	48 - 127	5	30
Cyclohexane	100	U	1000	1040		ug/L		104	42 - 135	5	35
Dibromochloromethane	100	U	1000	868		ug/L		87	60 - 129	5	26
1,2-Dibromo-3-Chloropropane	100	U	1000	786		ug/L		79	38 - 124	6	35
1,2-Dibromoethane	100	U	1000	992		ug/L		99	71 - 123	1	27
1,2-Dichlorobenzene	100	U	1000	929		ug/L		93	64 - 120	3	30
1,3-Dichlorobenzene	100	U	1000	900		ug/L		90	62 - 120	3	31
1,4-Dichlorobenzene	100	U	1000	891		ug/L		89	63 - 120	4	28
Dichlorodifluoromethane	100	U	1000	1010		ug/L		101	28 - 136	0	35
1,1-Dichloroethane	100	U	1000	1070		ug/L		107	63 - 136	5	23
1,2-Dichloroethane	100	U	1000	979		ug/L		98	65 - 135	3	24
1,1-Dichloroethene	100	U	1000	935		ug/L		94	53 - 140	7	35
1,2-Dichloropropane	100	U	1000	1120		ug/L		112	70 - 132	5	26
Ethylbenzene	100	U	1000	929		ug/L		93	66 - 120	1	24
2-Hexanone	1000	U	2000	2580		ug/L		129	42 - 150	1	35
Isopropylbenzene	100	U	1000	897		ug/L		90	59 - 120	1	31
Methyl acetate	1000	U	2000	2740		ug/L		137	41 - 142	5	35
Methylcyclohexane	100	U	1000	806		ug/L		81	37 - 123	6	35
Methylene Chloride	500	U	1000	1150		ug/L		115	61 - 130	5	29
4-Methyl-2-pentanone (MIBK)	1000	U	2000	2380		ug/L		119	44 - 143	6	35
Methyl tert-butyl ether	100	U	1000	893		ug/L		89	41 - 136	5	29
Styrene	100	U	1000	929		ug/L		93	68 - 120	0	26
1,1,2,2-Tetrachloroethane	100	U	1000	1150		ug/L		115	60 - 137	5	31
Tetrachloroethene	100	U	1000	875		ug/L		87	51 - 136	3	23
Toluene	100	U	1000	1030		ug/L		103	62 - 132	1	23

Eurofins TestAmerica, Canton

QC Sample Results

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

Job ID: 240-108878-1

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

Lab Sample ID: 240-108878-1 MSD

Client Sample ID: MW-2_030119

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 371223

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
trans-1,2-Dichloroethene	760		1000	1640		ug/L		87	68 - 133	3	24
trans-1,3-Dichloropropene	100	U	1000	927		ug/L		93	40 - 125	0	27
1,2,4-Trichlorobenzene	100	U	1000	725		ug/L		72	30 - 126	9	35
1,1,1-Trichloroethane	100	U	1000	868		ug/L		87	51 - 138	4	27
1,1,2-Trichloroethane	100	U	1000	1090		ug/L		109	76 - 132	1	25
Trichloroethene	100	U	1000	786		ug/L		79	55 - 131	2	23
Trichlorofluoromethane	100	U	1000	883		ug/L		88	37 - 174	3	35
1,1,2-Trichloro-1,2,2-trifluoroethane	100	U	1000	721		ug/L		72	31 - 156	7	35
1,2,4-Trimethylbenzene	100	U	1000	953		ug/L		95	62 - 120	4	27
1,3,5-Trimethylbenzene	100	U	1000	953		ug/L		95	64 - 120	4	23
Vinyl chloride	230		1000	1270		ug/L		104	43 - 154	4	29
Xylenes, Total	200	U	2000	1880		ug/L		94	67 - 120	0	25
Diethyl ether	200	U	1000	1210		ug/L		121	65 - 134	4	33

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
4-Bromofluorobenzene (Surr)	105		59 - 120
Dibromofluoromethane (Surr)	88		75 - 128
1,2-Dichloroethane-d4 (Surr)	102		70 - 121
Toluene-d8 (Surr)	103		70 - 123

Lab Sample ID: MB 240-371376/6

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 371376

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	5.4	ug/L			03/13/19 11:40	1
Benzene	1.0	U	1.0	0.13	ug/L			03/13/19 11:40	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/13/19 11:40	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/13/19 11:40	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/13/19 11:40	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/13/19 11:40	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/13/19 11:40	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/13/19 11:40	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/13/19 11:40	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/13/19 11:40	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/13/19 11:40	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/13/19 11:40	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/13/19 11:40	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/13/19 11:40	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/13/19 11:40	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/13/19 11:40	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/13/19 11:40	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/13/19 11:40	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/13/19 11:40	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/13/19 11:40	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/13/19 11:40	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/13/19 11:40	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/13/19 11:40	1

Eurofins TestAmerica, Canton

QC Sample Results

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

Job ID: 240-108878-1

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

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

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/13/19 11:40	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/13/19 11:40	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/13/19 11:40	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/13/19 11:40	1
2-Hexanone	10	U	10	0.54	ug/L			03/13/19 11:40	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/13/19 11:40	1
Methyl acetate	10	U	10	1.7	ug/L			03/13/19 11:40	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/13/19 11:40	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/13/19 11:40	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/13/19 11:40	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/13/19 11:40	1
Styrene	1.0	U	1.0	0.10	ug/L			03/13/19 11:40	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/13/19 11:40	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/13/19 11:40	1
Toluene	1.0	U	1.0	0.14	ug/L			03/13/19 11:40	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/13/19 11:40	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/13/19 11:40	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/13/19 11:40	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/13/19 11:40	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/13/19 11:40	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/13/19 11:40	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/13/19 11:40	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/13/19 11:40	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/13/19 11:40	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/13/19 11:40	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/13/19 11:40	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/13/19 11:40	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/13/19 11:40	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/13/19 11:40	1

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

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

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	28.6		ug/L		143	21 - 162
Benzene	10.0	12.1		ug/L		121	80 - 123
Bromodichloromethane	10.0	10.9		ug/L		109	77 - 125
Bromoform	10.0	8.39		ug/L		84	49 - 141
Bromomethane	10.0	12.0		ug/L		120	41 - 175
2-Butanone (MEK)	20.0	32.4		ug/L		162	39 - 163
Carbon disulfide	10.0	12.6		ug/L		126	60 - 138

Eurofins TestAmerica, Canton

QC Sample Results

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

Job ID: 240-108878-1

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

Lab Sample ID: LCS 240-371376/4

Matrix: Water

Analysis Batch: 371376

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	10.0	9.59		ug/L		96	63 - 140
Chlorobenzene	10.0	10.5		ug/L		105	80 - 121
Chloroethane	10.0	16.1		ug/L		161	33 - 173
Chloroform	10.0	11.7		ug/L		117	79 - 127
Chloromethane	10.0	17.0	*	ug/L		170	54 - 143
cis-1,2-Dichloroethene	10.0	10.7		ug/L		107	76 - 128
cis-1,3-Dichloropropene	10.0	11.9		ug/L		119	64 - 132
Cyclohexane	10.0	15.8	*	ug/L		158	58 - 145
Dibromochloromethane	10.0	10.8		ug/L		108	70 - 132
1,2-Dibromo-3-Chloropropane	10.0	10.4		ug/L		104	46 - 132
1,2-Dibromoethane	10.0	10.8		ug/L		108	77 - 123
1,2-Dichlorobenzene	10.0	10.4		ug/L		104	78 - 120
1,3-Dichlorobenzene	10.0	9.98		ug/L		100	78 - 120
1,4-Dichlorobenzene	10.0	10.1		ug/L		101	78 - 120
Dichlorodifluoromethane	10.0	10.3		ug/L		103	29 - 148
1,1-Dichloroethane	10.0	13.8	*	ug/L		138	75 - 133
1,2-Dichloroethane	10.0	11.5		ug/L		115	71 - 135
1,1-Dichloroethene	10.0	11.9		ug/L		119	65 - 139
1,2-Dichloropropane	10.0	15.1	*	ug/L		151	78 - 133
Ethylbenzene	10.0	10.9		ug/L		109	80 - 120
2-Hexanone	20.0	35.0	*	ug/L		175	43 - 148
Isopropylbenzene	10.0	11.3		ug/L		113	74 - 120
Methyl acetate	20.0	32.9	*	ug/L		164	52 - 145
Methylcyclohexane	10.0	11.5		ug/L		115	60 - 125
Methylene Chloride	10.0	14.2	*	ug/L		142	70 - 134
4-Methyl-2-pentanone (MIBK)	20.0	30.8	*	ug/L		154	49 - 143
Methyl tert-butyl ether	10.0	11.7		ug/L		117	51 - 133
Styrene	10.0	10.7		ug/L		107	79 - 120
1,1,2,2-Tetrachloroethane	10.0	15.5	*	ug/L		155	65 - 139
Tetrachloroethene	10.0	8.56		ug/L		86	74 - 130
Toluene	10.0	12.4		ug/L		124	78 - 129
trans-1,2-Dichloroethene	10.0	11.1		ug/L		111	78 - 133
trans-1,3-Dichloropropene	10.0	11.9		ug/L		119	55 - 128
1,2,4-Trichlorobenzene	10.0	7.67		ug/L		77	42 - 133
1,1,1-Trichloroethane	10.0	9.91		ug/L		99	69 - 134
1,1,2-Trichloroethane	10.0	12.1		ug/L		121	78 - 133
Trichloroethene	10.0	8.52		ug/L		85	76 - 125
Trichlorofluoromethane	10.0	11.0		ug/L		110	51 - 164
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	8.15		ug/L		81	50 - 156
1,2,4-Trimethylbenzene	10.0	12.9	*	ug/L		129	74 - 120
1,3,5-Trimethylbenzene	10.0	12.8	*	ug/L		128	75 - 121
Vinyl chloride	10.0	15.7	*	ug/L		157	58 - 143
Xylenes, Total	20.0	23.3		ug/L		117	80 - 120
Diethyl ether	10.0	16.6	*	ug/L		166	70 - 146

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	111		59 - 120

Eurofins TestAmerica, Canton

QC Sample Results

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

Job ID: 240-108878-1

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

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

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

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

Lab Sample ID: MB 240-371554/6
Matrix: Water
Analysis Batch: 371554

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acetone	10	U	10	5.4	ug/L			03/14/19 10:31	1
Benzene	1.0	U	1.0	0.13	ug/L			03/14/19 10:31	1
Bromodichloromethane	1.0	U	1.0	0.17	ug/L			03/14/19 10:31	1
Bromoform	1.0	U	1.0	0.76	ug/L			03/14/19 10:31	1
Bromomethane	1.0	U	1.0	0.42	ug/L			03/14/19 10:31	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			03/14/19 10:31	1
Carbon disulfide	5.0	U	5.0	0.28	ug/L			03/14/19 10:31	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			03/14/19 10:31	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/14/19 10:31	1
Chloroethane	1.0	U	1.0	0.83	ug/L			03/14/19 10:31	1
Chloroform	1.0	U	1.0	0.13	ug/L			03/14/19 10:31	1
Chloromethane	1.0	U	1.0	0.20	ug/L			03/14/19 10:31	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			03/14/19 10:31	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			03/14/19 10:31	1
Cyclohexane	1.0	U	1.0	0.24	ug/L			03/14/19 10:31	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			03/14/19 10:31	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.91	ug/L			03/14/19 10:31	1
1,2-Dibromoethane	1.0	U	1.0	0.12	ug/L			03/14/19 10:31	1
1,2-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/14/19 10:31	1
1,3-Dichlorobenzene	1.0	U	1.0	0.15	ug/L			03/14/19 10:31	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			03/14/19 10:31	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			03/14/19 10:31	1
1,1-Dichloroethane	1.0	U	1.0	0.17	ug/L			03/14/19 10:31	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/14/19 10:31	1
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/14/19 10:31	1
1,2-Dichloropropane	1.0	U	1.0	0.15	ug/L			03/14/19 10:31	1
Ethylbenzene	1.0	U	1.0	0.11	ug/L			03/14/19 10:31	1
2-Hexanone	10	U	10	0.54	ug/L			03/14/19 10:31	1
Isopropylbenzene	1.0	U	1.0	0.090	ug/L			03/14/19 10:31	1
Methyl acetate	10	U	10	1.7	ug/L			03/14/19 10:31	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			03/14/19 10:31	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			03/14/19 10:31	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.42	ug/L			03/14/19 10:31	1
Methyl tert-butyl ether	1.0	U	1.0	0.070	ug/L			03/14/19 10:31	1
Styrene	1.0	U	1.0	0.10	ug/L			03/14/19 10:31	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.13	ug/L			03/14/19 10:31	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/14/19 10:31	1
Toluene	1.0	U	1.0	0.14	ug/L			03/14/19 10:31	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			03/14/19 10:31	1

Eurofins TestAmerica, Canton

QC Sample Results

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

Job ID: 240-108878-1

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

Lab Sample ID: MB 240-371554/6
Matrix: Water
Analysis Batch: 371554

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			03/14/19 10:31	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.26	ug/L			03/14/19 10:31	1
1,1,1-Trichloroethane	1.0	U	1.0	0.24	ug/L			03/14/19 10:31	1
1,1,2-Trichloroethane	1.0	U	1.0	0.090	ug/L			03/14/19 10:31	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			03/14/19 10:31	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			03/14/19 10:31	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			03/14/19 10:31	1
1,2,3-Trimethylbenzene	5.0	U	5.0	0.14	ug/L			03/14/19 10:31	1
1,2,4-Trimethylbenzene	1.0	U	1.0	0.070	ug/L			03/14/19 10:31	1
1,3,5-Trimethylbenzene	1.0	U	1.0	0.12	ug/L			03/14/19 10:31	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			03/14/19 10:31	1
Xylenes, Total	2.0	U	2.0	0.15	ug/L			03/14/19 10:31	1
Diethyl ether	2.0	U	2.0	0.19	ug/L			03/14/19 10:31	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	72		59 - 120		03/14/19 10:31	1
Dibromofluoromethane (Surr)	91		75 - 128		03/14/19 10:31	1
1,2-Dichloroethane-d4 (Surr)	87		70 - 121		03/14/19 10:31	1
Toluene-d8 (Surr)	80		70 - 123		03/14/19 10:31	1

Lab Sample ID: LCS 240-371554/4
Matrix: Water
Analysis Batch: 371554

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	10.0	10.1		ug/L		101	80 - 123
Bromodichloromethane	10.0	8.56		ug/L		86	77 - 125
Bromoform	10.0	5.72		ug/L		57	49 - 141
Bromomethane	10.0	7.80		ug/L		78	41 - 175
2-Butanone (MEK)	20.0	13.1		ug/L		66	39 - 163
Carbon disulfide	10.0	7.70		ug/L		77	60 - 138
Carbon tetrachloride	10.0	9.71		ug/L		97	63 - 140
Chlorobenzene	10.0	9.95		ug/L		100	80 - 121
Chloroethane	10.0	8.41		ug/L		84	33 - 173
Chloroform	10.0	10.7		ug/L		107	79 - 127
Chloromethane	10.0	9.11		ug/L		91	54 - 143
cis-1,2-Dichloroethene	10.0	10.4		ug/L		104	76 - 128
cis-1,3-Dichloropropene	10.0	7.40		ug/L		74	64 - 132
Cyclohexane	10.0	9.07		ug/L		91	58 - 145
Dibromochloromethane	10.0	7.93		ug/L		79	70 - 132
1,2-Dibromo-3-Chloropropane	10.0	4.68		ug/L		47	46 - 132
1,2-Dibromoethane	10.0	7.69		ug/L		77	77 - 123
1,2-Dichlorobenzene	10.0	9.84		ug/L		98	78 - 120
1,3-Dichlorobenzene	10.0	9.72		ug/L		97	78 - 120
1,4-Dichlorobenzene	10.0	9.61		ug/L		96	78 - 120
Dichlorodifluoromethane	10.0	9.71		ug/L		97	29 - 148
1,1-Dichloroethane	10.0	10.2		ug/L		102	75 - 133

Eurofins TestAmerica, Canton

QC Sample Results

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

Job ID: 240-108878-1

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

Lab Sample ID: LCS 240-371554/4

Matrix: Water

Analysis Batch: 371554

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	10.0	9.66		ug/L		97	71 - 135
1,1-Dichloroethene	10.0	8.24		ug/L		82	65 - 139
1,2-Dichloropropane	10.0	9.55		ug/L		96	78 - 133
Ethylbenzene	10.0	9.68		ug/L		97	80 - 120
2-Hexanone	20.0	11.8		ug/L		59	43 - 148
Isopropylbenzene	10.0	9.82		ug/L		98	74 - 120
Methyl acetate	20.0	13.2		ug/L		66	52 - 145
Methylcyclohexane	10.0	8.74		ug/L		87	60 - 125
Methylene Chloride	10.0	9.55		ug/L		96	70 - 134
4-Methyl-2-pentanone (MIBK)	20.0	11.3		ug/L		57	49 - 143
Methyl tert-butyl ether	10.0	6.98		ug/L		70	51 - 133
Styrene	10.0	9.24		ug/L		92	79 - 120
1,1,2,2-Tetrachloroethane	10.0	7.27		ug/L		73	65 - 139
Tetrachloroethene	10.0	10.3		ug/L		103	74 - 130
Toluene	10.0	10.0		ug/L		100	78 - 129
trans-1,2-Dichloroethene	10.0	10.8		ug/L		108	78 - 133
trans-1,3-Dichloropropene	10.0	6.22		ug/L		62	55 - 128
1,2,4-Trichlorobenzene	10.0	9.02		ug/L		90	42 - 133
1,1,1-Trichloroethane	10.0	10.9		ug/L		109	69 - 134
1,1,2-Trichloroethane	10.0	8.93		ug/L		89	78 - 133
Trichloroethene	10.0	9.70		ug/L		97	76 - 125
Trichlorofluoromethane	10.0	10.2		ug/L		102	51 - 164
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	9.23		ug/L		92	50 - 156
1,2,4-Trimethylbenzene	10.0	9.72		ug/L		97	74 - 120
1,3,5-Trimethylbenzene	10.0	9.68		ug/L		97	75 - 121
Vinyl chloride	10.0	9.28		ug/L		93	58 - 143
Xylenes, Total	20.0	19.2		ug/L		96	80 - 120
Diethyl ether	10.0	8.67		ug/L		87	70 - 146

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	82		59 - 120
Dibromofluoromethane (Surr)	91		75 - 128
1,2-Dichloroethane-d4 (Surr)	82		70 - 121
Toluene-d8 (Surr)	84		70 - 123

Lab Sample ID: 240-108933-E-2 MS

Matrix: Water

Analysis Batch: 371554

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	10	U	20.0	13.6		ug/L		68	10 - 168
Benzene	1.0	U	10.0	9.58		ug/L		96	71 - 122
Bromodichloromethane	1.0	U	10.0	7.88		ug/L		79	64 - 125
Bromoform	1.0	U	10.0	4.95		ug/L		50	44 - 129
Bromomethane	1.0	U	10.0	7.62		ug/L		76	19 - 187
2-Butanone (MEK)	10	U	20.0	11.2		ug/L		56	37 - 156
Carbon disulfide	5.0	U	10.0	6.88		ug/L		69	43 - 144
Carbon tetrachloride	1.0	U	10.0	8.38		ug/L		84	41 - 143

Eurofins TestAmerica, Canton

QC Sample Results

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

Job ID: 240-108878-1

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

Lab Sample ID: 240-108933-E-2 MS

Matrix: Water

Analysis Batch: 371554

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				
Chlorobenzene	1.0	U	10.0	9.36		ug/L		94	70 - 123
Chloroethane	1.0	U	10.0	8.29		ug/L		83	11 - 189
Chloroform	1.0	U	10.0	10.5		ug/L		105	68 - 130
Chloromethane	1.0	U	10.0	9.39		ug/L		94	31 - 154
cis-1,2-Dichloroethene	1.0	U	10.0	10.0		ug/L		100	64 - 130
cis-1,3-Dichloropropene	1.0	U	10.0	6.04		ug/L		60	48 - 127
Dibromochloromethane	1.0	U	10.0	7.10		ug/L		71	60 - 129
1,2-Dibromo-3-Chloropropane	1.0	U	10.0	3.98		ug/L		40	38 - 124
1,2-Dibromoethane	1.0	U	10.0	7.35		ug/L		73	71 - 123
1,2-Dichlorobenzene	1.0	U	10.0	9.20		ug/L		92	64 - 120
1,3-Dichlorobenzene	1.0	U	10.0	8.79		ug/L		88	62 - 120
1,4-Dichlorobenzene	1.0	U	10.0	8.76		ug/L		88	63 - 120
Dichlorodifluoromethane	1.0	U	10.0	9.48		ug/L		95	28 - 136
1,1-Dichloroethane	1.0	U	10.0	10.3		ug/L		103	63 - 136
1,2-Dichloroethane	1.0	U	10.0	9.16		ug/L		92	65 - 135
1,1-Dichloroethene	1.0	U	10.0	7.97		ug/L		80	53 - 140
1,2-Dichloropropane	1.0	U	10.0	9.14		ug/L		91	70 - 132
Ethylbenzene	1.0	U	10.0	8.82		ug/L		88	66 - 120
2-Hexanone	10	U	20.0	10.8		ug/L		54	42 - 150
Isopropylbenzene	1.0	U	10.0	8.65		ug/L		86	59 - 120
Methylene Chloride	5.0	U	10.0	8.88		ug/L		89	61 - 130
4-Methyl-2-pentanone (MIBK)	10	U	20.0	9.94	J	ug/L		50	44 - 143
Methyl tert-butyl ether	1.0	U	10.0	6.18		ug/L		62	41 - 136
Styrene	1.0	U	10.0	8.63		ug/L		86	68 - 120
1,1,2,2-Tetrachloroethane	1.0	U	10.0	6.60		ug/L		66	60 - 137
Tetrachloroethene	1.0	U	10.0	9.34		ug/L		93	51 - 136
Toluene	1.0	U	10.0	9.44		ug/L		94	62 - 132
trans-1,2-Dichloroethene	1.0	U	10.0	10.4		ug/L		104	68 - 133
trans-1,3-Dichloropropene	1.0	U	10.0	5.30		ug/L		53	40 - 125
1,2,4-Trichlorobenzene	1.0	U	10.0	8.00		ug/L		80	30 - 126
1,1,1-Trichloroethane	1.0	U	10.0	10.0		ug/L		100	51 - 138
1,1,2-Trichloroethane	1.0	U	10.0	8.72		ug/L		87	76 - 132
Trichloroethene	1.0	U	10.0	9.07		ug/L		91	55 - 131
Trichlorofluoromethane	1.0	U	10.0	9.74		ug/L		97	37 - 174
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	10.0	8.09		ug/L		81	31 - 156
Vinyl chloride	1.0	U	10.0	9.66		ug/L		97	43 - 154
Xylenes, Total	2.0	U	20.0	18.1		ug/L		90	67 - 120
		MS	MS						
Surrogate	%Recovery	Qualifier	Limits						
4-Bromofluorobenzene (Surr)	82		59 - 120						
Dibromofluoromethane (Surr)	94		75 - 128						
1,2-Dichloroethane-d4 (Surr)	84		70 - 121						
Toluene-d8 (Surr)	87		70 - 123						

QC Sample Results

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

Job ID: 240-108878-1

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

Lab Sample ID: 240-108933-H-2 MSD

Matrix: Water

Analysis Batch: 371554

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	10	U	20.0	11.8		ug/L		59	10 - 168	14	35
Benzene	1.0	U	10.0	9.47		ug/L		95	71 - 122	1	22
Bromodichloromethane	1.0	U	10.0	7.72		ug/L		77	64 - 125	2	27
Bromoform	1.0	U	10.0	4.94		ug/L		49	44 - 129	0	28
Bromomethane	1.0	U	10.0	7.92		ug/L		79	19 - 187	4	35
2-Butanone (MEK)	10	U	20.0	11.2		ug/L		56	37 - 156	1	35
Carbon disulfide	5.0	U	10.0	7.26		ug/L		73	43 - 144	5	33
Carbon tetrachloride	1.0	U	10.0	8.96		ug/L		90	41 - 143	7	30
Chlorobenzene	1.0	U	10.0	9.39		ug/L		94	70 - 123	0	23
Chloroethane	1.0	U	10.0	8.28		ug/L		83	11 - 189	0	35
Chloroform	1.0	U	10.0	10.1		ug/L		101	68 - 130	4	23
Chloromethane	1.0	U	10.0	8.42		ug/L		84	31 - 154	11	35
cis-1,2-Dichloroethene	1.0	U	10.0	9.81		ug/L		98	64 - 130	2	21
cis-1,3-Dichloropropene	1.0	U	10.0	6.16		ug/L		62	48 - 127	2	30
Dibromochloromethane	1.0	U	10.0	6.88		ug/L		69	60 - 129	3	26
1,2-Dibromo-3-Chloropropane	1.0	U	10.0	3.85		ug/L		39	38 - 124	3	35
1,2-Dibromoethane	1.0	U	10.0	7.08		ug/L		71	71 - 123	4	27
1,2-Dichlorobenzene	1.0	U	10.0	8.98		ug/L		90	64 - 120	2	30
1,3-Dichlorobenzene	1.0	U	10.0	8.86		ug/L		89	62 - 120	1	31
1,4-Dichlorobenzene	1.0	U	10.0	8.78		ug/L		88	63 - 120	0	28
Dichlorodifluoromethane	1.0	U	10.0	8.45		ug/L		85	28 - 136	11	35
1,1-Dichloroethane	1.0	U	10.0	9.86		ug/L		99	63 - 136	4	23
1,2-Dichloroethane	1.0	U	10.0	9.01		ug/L		90	65 - 135	2	24
1,1-Dichloroethene	1.0	U	10.0	8.13		ug/L		81	53 - 140	2	35
1,2-Dichloropropane	1.0	U	10.0	8.94		ug/L		89	70 - 132	2	26
Ethylbenzene	1.0	U	10.0	9.04		ug/L		90	66 - 120	3	24
2-Hexanone	10	U	20.0	10.3		ug/L		52	42 - 150	5	35
Isopropylbenzene	1.0	U	10.0	9.18		ug/L		92	59 - 120	6	31
Methylene Chloride	5.0	U	10.0	8.43		ug/L		84	61 - 130	5	29
4-Methyl-2-pentanone (MIBK)	10	U	20.0	9.50	J	ug/L		48	44 - 143	4	35
Methyl tert-butyl ether	1.0	U	10.0	5.98		ug/L		60	41 - 136	3	29
Styrene	1.0	U	10.0	8.70		ug/L		87	68 - 120	1	26
1,1,2,2-Tetrachloroethane	1.0	U	10.0	6.40		ug/L		64	60 - 137	3	31
Tetrachloroethene	1.0	U	10.0	9.60		ug/L		96	51 - 136	3	23
Toluene	1.0	U	10.0	9.41		ug/L		94	62 - 132	0	23
trans-1,2-Dichloroethene	1.0	U	10.0	10.3		ug/L		103	68 - 133	1	24
trans-1,3-Dichloropropene	1.0	U	10.0	5.37		ug/L		54	40 - 125	1	27
1,2,4-Trichlorobenzene	1.0	U	10.0	7.47		ug/L		75	30 - 126	7	35
1,1,1-Trichloroethane	1.0	U	10.0	10.2		ug/L		102	51 - 138	2	27
1,1,2-Trichloroethane	1.0	U	10.0	8.26		ug/L		83	76 - 132	5	25
Trichloroethene	1.0	U	10.0	9.14		ug/L		91	55 - 131	1	23
Trichlorofluoromethane	1.0	U	10.0	9.30		ug/L		93	37 - 174	5	35
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	10.0	8.78		ug/L		88	31 - 156	8	35
Vinyl chloride	1.0	U	10.0	9.29		ug/L		93	43 - 154	4	29
Xylenes, Total	2.0	U	20.0	18.2		ug/L		91	67 - 120	1	25

Eurofins TestAmerica, Canton

QC Sample Results

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

Job ID: 240-108878-1

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

Lab Sample ID: 240-108933-H-2 MSD
Matrix: Water
Analysis Batch: 371554

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

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	77		59 - 120
Dibromofluoromethane (Surr)	86		75 - 128
1,2-Dichloroethane-d4 (Surr)	79		70 - 121
Toluene-d8 (Surr)	82		70 - 123

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

Lab Sample ID: MB 240-370850/5
Matrix: Water
Analysis Batch: 370850

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			03/08/19 12:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		63 - 125		03/08/19 12:43	1

Lab Sample ID: LCS 240-370850/4
Matrix: Water
Analysis Batch: 370850

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	9.41		ug/L		94	59 - 131

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		63 - 125

Lab Sample ID: MRL 240-370850/6
Matrix: Water
Analysis Batch: 370850

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	0.00100	0.00119	J	ng/uL		119	10 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	95		10 - 150

Lab Sample ID: 240-109088-A-1 MS
Matrix: Water
Analysis Batch: 370850

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	2.0	U	10.0	9.72		ug/L		97	52 - 129

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	92		63 - 125

Eurofins TestAmerica, Canton

QC Sample Results

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

Job ID: 240-108878-1

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

Lab Sample ID: 240-109088-A-1 MSD
Matrix: Water
Analysis Batch: 370850

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane	2.0	U	10.0	9.42		ug/L		94	52 - 129	3	13
Surrogate	%Recovery	MSD Qualifier	MSD Limits								
1,2-Dichloroethane-d4 (Surr)	95		63 - 125								

Lab Sample ID: MB 240-371053/5
Matrix: Water
Analysis Batch: 371053

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			03/11/19 13:11	1
Surrogate	%Recovery	MB Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	102		63 - 125						
							Prepared	Analyzed	Dil Fac
								03/11/19 13:11	1

Lab Sample ID: LCS 240-371053/4
Matrix: Water
Analysis Batch: 371053

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	10.0	11.1		ug/L		111	59 - 131
Surrogate	%Recovery	LCS Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	98		63 - 125				

Lab Sample ID: MRL 240-371053/6
Matrix: Water
Analysis Batch: 371053

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	0.00100	0.00129	J	ng/uL		129	10 - 150
Surrogate	%Recovery	MRL Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	101		10 - 150				

Lab Sample ID: 240-108941-C-1 MS
Matrix: Water
Analysis Batch: 371053

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	1.6	J	10.0	13.1		ug/L		115	52 - 129
Surrogate	%Recovery	MS Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	102		63 - 125						

Eurofins TestAmerica, Canton

QC Sample Results

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

Job ID: 240-108878-1

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

Lab Sample ID: 240-108941-C-1 MSD

Matrix: Water

Analysis Batch: 371053

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane	1.6	J	10.0	11.7		ug/L		102	52 - 129	11	13
Surrogate	%Recovery	MSD Qualifier	MSD Limits								
1,2-Dichloroethane-d4 (Surr)	100		63 - 125								

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QC Association Summary

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

Job ID: 240-108878-1

GC/MS VOA

Analysis Batch: 370850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108878-1	MW-2_030119	Total/NA	Water	8260B SIM	
240-108878-2	MW-5_030119	Total/NA	Water	8260B SIM	
240-108878-3	MW-3_030119	Total/NA	Water	8260B SIM	
240-108878-5	MW-10_030119	Total/NA	Water	8260B SIM	
240-108878-6	MW-58_030119	Total/NA	Water	8260B SIM	
240-108878-7	MW-9_030119	Total/NA	Water	8260B SIM	
240-108878-8	MW-1_030119	Total/NA	Water	8260B SIM	
240-108878-12	MW-69_022819	Total/NA	Water	8260B SIM	
240-108878-13	MW-53_022819	Total/NA	Water	8260B SIM	
MB 240-370850/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-370850/4	Lab Control Sample	Total/NA	Water	8260B SIM	
MRL 240-370850/6	Lab Control Sample	Total/NA	Water	8260B SIM	
240-109088-A-1 MS	Matrix Spike	Total/NA	Water	8260B SIM	
240-109088-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B SIM	

Analysis Batch: 371053

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108878-4	MW-4_030119	Total/NA	Water	8260B SIM	
240-108878-9	MW-51_030119	Total/NA	Water	8260B SIM	
240-108878-10	MW-36_030119	Total/NA	Water	8260B SIM	
240-108878-11	MW-24_030119	Total/NA	Water	8260B SIM	
MB 240-371053/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-371053/4	Lab Control Sample	Total/NA	Water	8260B SIM	
MRL 240-371053/6	Lab Control Sample	Total/NA	Water	8260B SIM	
240-108941-C-1 MS	Matrix Spike	Total/NA	Water	8260B SIM	
240-108941-C-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B SIM	

Analysis Batch: 371207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108878-3	MW-3_030119	Total/NA	Water	8260B	
240-108878-6	MW-58_030119	Total/NA	Water	8260B	
240-108878-7	MW-9_030119	Total/NA	Water	8260B	
MB 240-371207/6	Method Blank	Total/NA	Water	8260B	
LCS 240-371207/4	Lab Control Sample	Total/NA	Water	8260B	
240-108876-E-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
240-108876-H-4 MS	Matrix Spike	Total/NA	Water	8260B	

Analysis Batch: 371223

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108878-1	MW-2_030119	Total/NA	Water	8260B	
240-108878-8	MW-1_030119	Total/NA	Water	8260B	
240-108878-9	MW-51_030119	Total/NA	Water	8260B	
240-108878-10	MW-36_030119	Total/NA	Water	8260B	
240-108878-11	MW-24_030119	Total/NA	Water	8260B	
240-108878-12	MW-69_022819	Total/NA	Water	8260B	
240-108878-13	MW-53_022819	Total/NA	Water	8260B	
240-108878-14	TRIP BLANK	Total/NA	Water	8260B	
MB 240-371223/7	Method Blank	Total/NA	Water	8260B	
LCS 240-371223/4	Lab Control Sample	Total/NA	Water	8260B	
240-108878-1 MS	MW-2_030119	Total/NA	Water	8260B	
240-108878-1 MSD	MW-2_030119	Total/NA	Water	8260B	

Eurofins TestAmerica, Canton

QC Association Summary

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

Job ID: 240-108878-1

GC/MS VOA

Analysis Batch: 371376

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108878-2	MW-5_030119	Total/NA	Water	8260B	
MB 240-371376/6	Method Blank	Total/NA	Water	8260B	
LCS 240-371376/4	Lab Control Sample	Total/NA	Water	8260B	

Analysis Batch: 371554

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108878-4	MW-4_030119	Total/NA	Water	8260B	
240-108878-5	MW-10_030119	Total/NA	Water	8260B	
MB 240-371554/6	Method Blank	Total/NA	Water	8260B	
LCS 240-371554/4	Lab Control Sample	Total/NA	Water	8260B	
240-108933-E-2 MS	Matrix Spike	Total/NA	Water	8260B	
240-108933-H-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Lab Chronicle

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

Job ID: 240-108878-1

Client Sample ID: MW-2_030119

Date Collected: 03/01/19 10:08

Date Received: 03/05/19 08:15

Lab Sample ID: 240-108878-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		100	371223	03/12/19 22:53	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	370850	03/08/19 19:34	SAM	TAL CAN
Total/NA	Analysis	8260B SIM		1	370850	03/08/19 19:34	SAM	TAL CAN

Client Sample ID: MW-5_030119

Date Collected: 03/01/19 11:32

Date Received: 03/05/19 08:15

Lab Sample ID: 240-108878-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	371376	03/13/19 12:48	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	370850	03/08/19 20:00	SAM	TAL CAN

Client Sample ID: MW-3_030119

Date Collected: 03/01/19 12:55

Date Received: 03/05/19 08:15

Lab Sample ID: 240-108878-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	371207	03/12/19 12:59	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	370850	03/08/19 20:25	SAM	TAL CAN

Client Sample ID: MW-4_030119

Date Collected: 03/01/19 14:30

Date Received: 03/05/19 08:15

Lab Sample ID: 240-108878-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2000	371554	03/14/19 13:13	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		100	371053	03/11/19 14:02	SAM	TAL CAN

Client Sample ID: MW-10_030119

Date Collected: 03/01/19 15:53

Date Received: 03/05/19 08:15

Lab Sample ID: 240-108878-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		100	371554	03/14/19 13:35	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	370850	03/08/19 21:17	SAM	TAL CAN

Client Sample ID: MW-58_030119

Date Collected: 03/01/19 15:57

Date Received: 03/05/19 08:15

Lab Sample ID: 240-108878-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	371207	03/12/19 13:21	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	370850	03/08/19 21:43	SAM	TAL CAN

Eurofins TestAmerica, Canton

Lab Chronicle

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

Job ID: 240-108878-1

Client Sample ID: MW-9_030119

Lab Sample ID: 240-108878-7

Date Collected: 03/01/19 12:41

Matrix: Water

Date Received: 03/05/19 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	371207	03/12/19 13:43	LEE	TAL CAN
Total/NA	Analysis	8260B SIM		1	370850	03/08/19 22:08	SAM	TAL CAN
Total/NA	Analysis	8260B SIM		1	370850	03/08/19 22:08	SAM	TAL CAN

Client Sample ID: MW-1_030119

Lab Sample ID: 240-108878-8

Date Collected: 03/01/19 09:45

Matrix: Water

Date Received: 03/05/19 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	371223	03/12/19 15:52	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	370850	03/08/19 22:34	SAM	TAL CAN

Client Sample ID: MW-51_030119

Lab Sample ID: 240-108878-9

Date Collected: 03/01/19 09:40

Matrix: Water

Date Received: 03/05/19 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	371223	03/12/19 16:23	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	371053	03/11/19 14:28	SAM	TAL CAN

Client Sample ID: MW-36_030119

Lab Sample ID: 240-108878-10

Date Collected: 03/01/19 14:50

Matrix: Water

Date Received: 03/05/19 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	371223	03/12/19 16:46	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	371053	03/11/19 14:53	SAM	TAL CAN

Client Sample ID: MW-24_030119

Lab Sample ID: 240-108878-11

Date Collected: 03/01/19 12:10

Matrix: Water

Date Received: 03/05/19 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	371223	03/12/19 17:18	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	371053	03/11/19 15:18	SAM	TAL CAN

Client Sample ID: MW-69_022819

Lab Sample ID: 240-108878-12

Date Collected: 02/28/19 17:16

Matrix: Water

Date Received: 03/05/19 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	371223	03/12/19 17:50	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	370850	03/08/19 17:25	SAM	TAL CAN

Eurofins TestAmerica, Canton

Lab Chronicle

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

Job ID: 240-108878-1

Client Sample ID: MW-53_022819

Lab Sample ID: 240-108878-13

Date Collected: 02/28/19 17:10

Matrix: Water

Date Received: 03/05/19 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	371223	03/12/19 18:23	LRW	TAL CAN
Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B SIM		1	370850	03/08/19 17:51	SAM	TAL CAN
Total/NA	Analysis	8260B SIM		1	370850	03/08/19 17:51	SAM	TAL CAN

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-108878-14

Date Collected: 02/28/19 00:00

Matrix: Water

Date Received: 03/05/19 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	371223	03/12/19 18:55	LRW	TAL CAN

Laboratory References:

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

Accreditation/Certification Summary

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

Job ID: 240-108878-1

Laboratory: Eurofins TestAmerica, Canton

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

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	2927	02-23-20
Connecticut	State Program	1	PH-0590	12-31-19
Florida	NELAP	4	E87225	06-30-19
Illinois	NELAP	5	200004	07-31-19
Kansas	NELAP	7	E-10336	04-30-19 *
Kentucky (UST)	State Program	4	58	02-23-20
Kentucky (WW)	State Program	4	98016	12-31-19
Minnesota	NELAP	5	039-999-348	12-31-19 *
Minnesota (Petrofund)	State Program	1	3506	07-31-19
Nevada	State Program	9	OH00048	07-31-19
New Jersey	NELAP	2	OH001	06-30-19
New York	NELAP	2	10975	03-31-20
Ohio VAP	State Program	5	CL0024	09-06-19
Oregon	NELAP	10	4062	02-23-20
Pennsylvania	NELAP	3	68-00340	08-31-19 *
Texas	NELAP	6	T104704517-18-10	08-31-19
USDA	Federal		P330-16-00404	12-28-19
Virginia	NELAP	3	460175	09-14-19
Washington	State Program	10	C971	01-12-20 *
West Virginia DEP	State Program	3	210	12-31-19

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



1.6/C1.4 1.2/C1.0 6.4/C0.2

MICHIGAN 190

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Regulatory program: DW NPDES RCRA Other

Company Name: Arcadis
 Address: 28550 Cabot Drive, Suite 500
 City/State/Zip: Novi, MI, 48377
 Phone: 248-994-2240
 Project Name: Ford LTP
 Project Number: MI001454-0004-00001-
 PO # MI001454-0004-00001-
 MI001454-0004-00003
 MI001454-0004-00003

Client Contact
 Company Name: Arcadis
 Address: 28550 Cabot Drive, Suite 500
 City/State/Zip: Novi, MI, 48377
 Phone: 248-994-2240
 Email: kristoffer.hinskey@arcadis.com
 Project Manager: Kris Hinskey
 Telephone: 248-994-2240
 Site Contact: Angela DeGrandis
 Telephone: 734-320-0065
 Lab Contact: Mike DelMonico
 Telephone: 330-497-9396

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	Analyses	Sample Specific Notes / Special Instructions:	
			Air	Aqueous	Sediment	Solid	Other:	H2SO4	HNO3	HCl							NaOH
MW-2-030119	3/1/19	1008	X					X									
MW-5-030119	3/1/19	1132	X					X									
MW-3-030119	3/1/19	1255	X					X									
MW-4-030119	3/1/19	1430	X					X									
MW-10-030119	3/1/19	1553	X					X									
MW-58-030119	3/1/19	1557	X					X									
MW-9-030119	3/1/19	1241	X					X									
MW-1-030119	3/1/19	0945	X					X									
MW-51-030119	3/1/19	0940	X					X									
MW-30-030119	3/1/19	1450	X					X									



Possible Hazard Identification
 Non-Hazard Irritable Inflammable Poison B Unknown

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

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
RACHEL BIEVAK Just for lead	ARCADIS	3/1/19 1820	NOVI GOLD STORAGE	ARCADIS	3/1/19 1820
Colleen O'Neil	ARCADIS	3/4/19 14:00	VW ↓	TSSA MARIANA	3/4/19 1410
VW ↓	TSSA MARIANA	3/4/19 1445	FA	FA	3-5-19 815

TestAmerica Laboratories, Inc. 14190 E. Grand Avenue, Suite 100, Grand Haven, MI 49424
 Phone: 616-841-1000 Fax: 616-841-1001
 TestAmerica Laboratories, Inc. 14190 E. Grand Avenue, Suite 100, Grand Haven, MI 49424
 Phone: 616-841-1000 Fax: 616-841-1001

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Chain of Custody Record

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

Client Contact Company Name: Arcadis Address: 28550 Cabot Drive, Suite 500 City/State/Zip: Novi, MI, 48377 Phone: 248-994-2240		Regulatory program: <input type="checkbox"/> DW <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other	
Client Project Manager: Kris Hinskey Telephone: 248-994-2240 Email: kristoffer.hinskey@arcadis.com		Lab Contact: Mike DeMonico Telephone: 330-497-9396	
Project Name: Ford LJP Project Number: MI001454.0004.00001 PO # MI001454.0004.00001		TestAmerica Laboratories, Inc. COC No: 2 of 2 For lab use only	
Method of Shipment/Carrier: Shipping/Tracking No:		Walk-in client Lab sampling Job-SDG No:	
Analysis Turnaround Time TAT if different from below: <input type="checkbox"/> 3 weeks <input checked="" type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day 10 day		Analyses	
Containers & Preservatives H2SO4 <input type="checkbox"/> HNO3 <input type="checkbox"/> HCl <input type="checkbox"/> NaOH <input type="checkbox"/> ZnAc <input type="checkbox"/> Umpres <input type="checkbox"/> Other:		Filtered Sample (Y/N) Composite=C/Grab=C VOCs 8260B 1,4-Dioxane 8260B SIM	
Matrix Air <input type="checkbox"/> Aqueous <input type="checkbox"/> Sediment <input type="checkbox"/> Solid <input type="checkbox"/> Other:		Sample Specific Notes / Special Instructions:	
Sample Identification	Sample Date	Sample Time	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
MW-24-030119	3/1/19	1210	<input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months
MW-69-022619	2/28/19	1716	
MW-53-072819	2/28/19	1710	
TRIP BLANK			

Relinquished by: RACHEL BLEAK	Company: ARCADIS	Date/Time: 3/1/19	1820	Received by: NOVI COLD STORAGE	Company: ARCADIS	Date/Time: 3/1/19	1820
Relinquished by: Leah Cinked	Company: ARCADIS	Date/Time: 3/4/19	14:10	Received by: [Signature]	Company: TESTAMERICA	Date/Time: 3/4/19	1410
Relinquished by: [Signature]	Company: TESTAMERICA	Date/Time: 3/4/19	14:45	Received in Laboratory by: [Signature]	Company: TA	Date/Time: 3-5-19	815

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TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 108878

Client Arcadis Site Name _____ Cooler unpacked by: Ryan Cribley
 Cooler Received on 3-5-19 Opened on 3-5-19 815
 FedEx: 1st Grd 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 -0.2 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 IR GUN #36 (CF +0.7 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
 -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
 -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
 -Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC861525
13. Were VOAs on the COC? Yes No
14. Were air bubbles >6 mm in any VOA vials? Yes No NA
 (●) ← Larger than this.
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # B831701VB 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: RC

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

19. SAMPLE PRESERVATION
 Sample(s) _____ were further preserved in the laboratory.
 Time preserved: _____ Preservative(s) added/Lot number(s): _____
 VOA Sample Preservation - Date/Time VOAs Frozen: _____

