

ANALYTICAL REPORT

Eurofins TestAmerica, Canton
4101 Shuffel Street NW
North Canton, OH 44720
Tel: (330)497-9396

Laboratory Job ID: 240-149395-1
Client Project/Site: Ford LTP - On Site

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

Attn: Kristoffer Hinskey



Authorized for release by:
5/28/2021 2:06:22 PM

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

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Definitions/Glossary

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP - On Site

Job ID: 240-149395-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

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
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

Case Narrative

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP - On Site

Job ID: 240-149395-1

Job ID: 240-149395-1

Laboratory: Eurofins TestAmerica, Canton

Narrative

Job Narrative 240-149395-1

Comments

No additional comments.

Receipt

The samples were received on 5/14/2021 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.8° C.

GC/MS VOA

Method 8260B SIM: The following volatiles sample was diluted due to foaming at the time of purging during the original sample analysis: MW-58_051221 (240-149395-2). Elevated reporting limits (RLs) are provided.

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

VOA Prep

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

Method Summary

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP - On Site

Job ID: 240-149395-1

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

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- 12
- 13
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Sample Summary

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP - On Site

Job ID: 240-149395-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
240-149395-1	TRIP BLANK_66	Water	05/12/21 00:00	05/14/21 08:00	
240-149395-2	MW-58_051221	Water	05/12/21 08:25	05/14/21 08:00	
240-149395-3	MW-64_051221	Water	05/12/21 10:05	05/14/21 08:00	
240-149395-4	MW-69_051221	Water	05/12/21 11:30	05/14/21 08:00	

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- 2
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- 5
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- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP - On Site

Job ID: 240-149395-1

Client Sample ID: TRIP BLANK_66

Lab Sample ID: 240-149395-1

No Detections.

Client Sample ID: MW-58_051221

Lab Sample ID: 240-149395-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	5.5		4.0	1.7	ug/L		2	8260B SIM	Total/NA

Client Sample ID: MW-64_051221

Lab Sample ID: 240-149395-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.28	J	1.0	0.16	ug/L		1	8260B	Total/NA
Vinyl chloride	2.3		1.0	0.20	ug/L		1	8260B	Total/NA

Client Sample ID: MW-69_051221

Lab Sample ID: 240-149395-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	4.7		2.0	0.86	ug/L		1	8260B SIM	Total/NA
cis-1,2-Dichloroethene	0.28	J	1.0	0.16	ug/L		1	8260B	Total/NA
Vinyl chloride	3.5		1.0	0.20	ug/L		1	8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: Ford LTP - On Site

Job ID: 240-149395-1

Client Sample ID: TRIP BLANK_66

Lab Sample ID: 240-149395-1

Date Collected: 05/12/21 00:00

Matrix: Water

Date Received: 05/14/21 08:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/24/21 14:39	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			05/24/21 14:39	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/24/21 14:39	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/24/21 14:39	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			05/24/21 14:39	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			05/24/21 14:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		75 - 130		05/24/21 14:39	1
4-Bromofluorobenzene (Surr)	93		47 - 134		05/24/21 14:39	1
Toluene-d8 (Surr)	96		69 - 122		05/24/21 14:39	1
Dibromofluoromethane (Surr)	100		78 - 129		05/24/21 14:39	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP - On Site

Job ID: 240-149395-1

Client Sample ID: MW-58_051221

Lab Sample ID: 240-149395-2

Date Collected: 05/12/21 08:25

Matrix: Water

Date Received: 05/14/21 08:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	5.5		4.0	1.7	ug/L			05/18/21 18:34	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	82		70 - 133		05/18/21 18:34	2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/24/21 18:53	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			05/24/21 18:53	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/24/21 18:53	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/24/21 18:53	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			05/24/21 18:53	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			05/24/21 18:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		75 - 130		05/24/21 18:53	1
4-Bromofluorobenzene (Surr)	95		47 - 134		05/24/21 18:53	1
Toluene-d8 (Surr)	100		69 - 122		05/24/21 18:53	1
Dibromofluoromethane (Surr)	105		78 - 129		05/24/21 18:53	1

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: Ford LTP - On Site

Job ID: 240-149395-1

Client Sample ID: MW-64_051221

Lab Sample ID: 240-149395-3

Date Collected: 05/12/21 10:05

Matrix: Water

Date Received: 05/14/21 08:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.86	ug/L			05/18/21 18:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	82		70 - 133					05/18/21 18:58	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/24/21 18:06	1
cis-1,2-Dichloroethene	0.28	J	1.0	0.16	ug/L			05/24/21 18:06	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/24/21 18:06	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/24/21 18:06	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			05/24/21 18:06	1
Vinyl chloride	2.3		1.0	0.20	ug/L			05/24/21 18:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		75 - 130					05/24/21 18:06	1
4-Bromofluorobenzene (Surr)	93		47 - 134					05/24/21 18:06	1
Toluene-d8 (Surr)	97		69 - 122					05/24/21 18:06	1
Dibromofluoromethane (Surr)	103		78 - 129					05/24/21 18:06	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP - On Site

Job ID: 240-149395-1

Client Sample ID: MW-69_051221

Lab Sample ID: 240-149395-4

Date Collected: 05/12/21 11:30

Matrix: Water

Date Received: 05/14/21 08:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	4.7		2.0	0.86	ug/L			05/18/21 19:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	82		70 - 133					05/18/21 19:23	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/24/21 18:30	1
cis-1,2-Dichloroethene	0.28	J	1.0	0.16	ug/L			05/24/21 18:30	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/24/21 18:30	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/24/21 18:30	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			05/24/21 18:30	1
Vinyl chloride	3.5		1.0	0.20	ug/L			05/24/21 18:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		75 - 130					05/24/21 18:30	1
4-Bromofluorobenzene (Surr)	96		47 - 134					05/24/21 18:30	1
Toluene-d8 (Surr)	99		69 - 122					05/24/21 18:30	1
Dibromofluoromethane (Surr)	104		78 - 129					05/24/21 18:30	1

Surrogate Summary

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP - On Site

Job ID: 240-149395-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (75-130)	BFB (47-134)	TOL (69-122)	DBFM (78-129)
240-149395-1	TRIP BLANK_66	95	93	96	100
240-149395-2	MW-58_051221	101	95	100	105
240-149395-3	MW-64_051221	99	93	97	103
240-149395-4	MW-69_051221	101	96	99	104
240-149412-C-3 MS	Matrix Spike	93	100	99	97
240-149412-C-3 MSD	Matrix Spike Duplicate	98	100	97	101
LCS 240-487192/5	Lab Control Sample	93	95	97	97
MB 240-487192/7	Method Blank	96	95	95	102

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (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 (70-133)
240-149395-2	MW-58_051221	82
240-149395-3	MW-64_051221	82
240-149395-4	MW-69_051221	82
240-149470-H-4 MS	Matrix Spike	84
240-149470-N-4 MSD	Matrix Spike Duplicate	81
LCS 240-486375/4	Lab Control Sample	82
MB 240-486375/5	Method Blank	83

Surrogate Legend

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

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP - On Site

Job ID: 240-149395-1

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

Lab Sample ID: MB 240-487192/7
Matrix: Water
Analysis Batch: 487192

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/24/21 13:53	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.16	ug/L			05/24/21 13:53	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			05/24/21 13:53	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.19	ug/L			05/24/21 13:53	1
Trichloroethene	1.0	U	1.0	0.10	ug/L			05/24/21 13:53	1
Vinyl chloride	1.0	U	1.0	0.20	ug/L			05/24/21 13:53	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	96		75 - 130		05/24/21 13:53	1
4-Bromofluorobenzene (Surr)	95		47 - 134		05/24/21 13:53	1
Toluene-d8 (Surr)	95		69 - 122		05/24/21 13:53	1
Dibromofluoromethane (Surr)	102		78 - 129		05/24/21 13:53	1

Lab Sample ID: LCS 240-487192/5
Matrix: Water
Analysis Batch: 487192

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

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
1,1-Dichloroethene	25.0	26.2		ug/L		105	73 - 129
cis-1,2-Dichloroethene	25.0	24.4		ug/L		98	75 - 124
Tetrachloroethene	25.0	24.2		ug/L		97	70 - 125
trans-1,2-Dichloroethene	25.0	25.6		ug/L		102	74 - 130
Trichloroethene	25.0	24.0		ug/L		96	71 - 121
Vinyl chloride	25.0	24.1		ug/L		96	61 - 134

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	93		75 - 130
4-Bromofluorobenzene (Surr)	95		47 - 134
Toluene-d8 (Surr)	97		69 - 122
Dibromofluoromethane (Surr)	97		78 - 129

Lab Sample ID: 240-149412-C-3 MS
Matrix: Water
Analysis Batch: 487192

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	%Rec. Limits
				Result	Qualifier				
1,1-Dichloroethene	100	U F1	2500	2610		ug/L		105	64 - 132
cis-1,2-Dichloroethene	41	J F1	2500	2540		ug/L		100	68 - 121
Tetrachloroethene	100	U F1	2500	2450		ug/L		98	52 - 129
trans-1,2-Dichloroethene	100	U F1	2500	2530		ug/L		101	69 - 126
Trichloroethene	100	U F1	2500	2400		ug/L		96	56 - 124
Vinyl chloride	1400	F1	2500	3730		ug/L		92	49 - 136

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	93		75 - 130
4-Bromofluorobenzene (Surr)	100		47 - 134
Toluene-d8 (Surr)	99		69 - 122

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QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP - On Site

Job ID: 240-149395-1

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

Lab Sample ID: 240-149412-C-3 MS
Matrix: Water
Analysis Batch: 487192

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

Surrogate	MS %Recovery	MS Qualifier	Limits
Dibromofluoromethane (Surr)	97		78 - 129

Lab Sample ID: 240-149412-C-3 MSD
Matrix: Water
Analysis Batch: 487192

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1-Dichloroethene	100	U F1	2500	2640		ug/L		105	64 - 132	1	35
cis-1,2-Dichloroethene	41	J F1	2500	2540		ug/L		100	68 - 121	0	35
Tetrachloroethene	100	U F1	2500	2410		ug/L		96	52 - 129	2	35
trans-1,2-Dichloroethene	100	U F1	2500	2560		ug/L		102	69 - 126	1	35
Trichloroethene	100	U F1	2500	2420		ug/L		97	56 - 124	1	35
Vinyl chloride	1400	F1	2500	3780		ug/L		94	49 - 136	1	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		75 - 130
4-Bromofluorobenzene (Surr)	100		47 - 134
Toluene-d8 (Surr)	97		69 - 122
Dibromofluoromethane (Surr)	101		78 - 129

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

Lab Sample ID: MB 240-486375/5
Matrix: Water
Analysis Batch: 486375

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			05/18/21 16:05	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	83		70 - 133		05/18/21 16:05	1

Lab Sample ID: LCS 240-486375/4
Matrix: Water
Analysis Batch: 486375

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	10.5		ug/L		105	80 - 135

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	82		70 - 133

Lab Sample ID: 240-149470-H-4 MS
Matrix: Water
Analysis Batch: 486375

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	1.3	J	10.0	12.4		ug/L		111	46 - 170

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QC Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: Ford LTP - On Site

Job ID: 240-149395-1

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

<i>Surrogate</i>	<i>%Recovery</i>	<i>MS MS Qualifier</i>	<i>Limits</i>
1,2-Dichloroethane-d4 (Surr)	84		70 - 133

Lab Sample ID: 240-149470-N-4 MSD
 Matrix: Water
 Analysis Batch: 486375

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	1.3	J	10.0	11.5		ug/L		102	46 - 170	8	26

<i>Surrogate</i>	<i>%Recovery</i>	<i>MSD MSD Qualifier</i>	<i>Limits</i>
1,2-Dichloroethane-d4 (Surr)	81		70 - 133



QC Association Summary

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP - On Site

Job ID: 240-149395-1

GC/MS VOA

Analysis Batch: 486375

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-149395-2	MW-58_051221	Total/NA	Water	8260B SIM	
240-149395-3	MW-64_051221	Total/NA	Water	8260B SIM	
240-149395-4	MW-69_051221	Total/NA	Water	8260B SIM	
MB 240-486375/5	Method Blank	Total/NA	Water	8260B SIM	
LCS 240-486375/4	Lab Control Sample	Total/NA	Water	8260B SIM	
240-149470-H-4 MS	Matrix Spike	Total/NA	Water	8260B SIM	
240-149470-N-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B SIM	

Analysis Batch: 487192

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-149395-1	TRIP BLANK_66	Total/NA	Water	8260B	
240-149395-2	MW-58_051221	Total/NA	Water	8260B	
240-149395-3	MW-64_051221	Total/NA	Water	8260B	
240-149395-4	MW-69_051221	Total/NA	Water	8260B	
MB 240-487192/7	Method Blank	Total/NA	Water	8260B	
LCS 240-487192/5	Lab Control Sample	Total/NA	Water	8260B	
240-149412-C-3 MS	Matrix Spike	Total/NA	Water	8260B	
240-149412-C-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Ford LTP - On Site

Job ID: 240-149395-1

Client Sample ID: TRIP BLANK_66

Lab Sample ID: 240-149395-1

Date Collected: 05/12/21 00:00

Matrix: Water

Date Received: 05/14/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	487192	05/24/21 14:39	SAM	TAL CAN

Client Sample ID: MW-58_051221

Lab Sample ID: 240-149395-2

Date Collected: 05/12/21 08:25

Matrix: Water

Date Received: 05/14/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	487192	05/24/21 18:53	SAM	TAL CAN
Total/NA	Analysis	8260B SIM		2	486375	05/18/21 18:34	CS	TAL CAN

Client Sample ID: MW-64_051221

Lab Sample ID: 240-149395-3

Date Collected: 05/12/21 10:05

Matrix: Water

Date Received: 05/14/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	487192	05/24/21 18:06	SAM	TAL CAN
Total/NA	Analysis	8260B SIM		1	486375	05/18/21 18:58	CS	TAL CAN

Client Sample ID: MW-69_051221

Lab Sample ID: 240-149395-4

Date Collected: 05/12/21 11:30

Matrix: Water

Date Received: 05/14/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	487192	05/24/21 18:30	SAM	TAL CAN
Total/NA	Analysis	8260B SIM		1	486375	05/18/21 19:23	CS	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 - On Site

Job ID: 240-149395-1

Laboratory: Eurofins TestAmerica, Canton

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

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-22
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-22
Illinois	NELAP	200004	07-31-21
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21 *
Kentucky (UST)	State	112225	02-23-22
Kentucky (WW)	State	KY98016	12-31-21
Minnesota	NELAP	OH00048	12-31-21
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-21
New York	NELAP	10975	03-31-22
Ohio VAP	State	CL0024	12-21-23
Oregon	NELAP	4062	02-23-22
Pennsylvania	NELAP	68-00340	08-31-21
Texas	NELAP	T104704517-18-10	08-31-21
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-21
Washington	State	C971	01-12-22
West Virginia DEP	State	210	12-31-21

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



27/12/21

Chain of Custody Record

TestAmerica

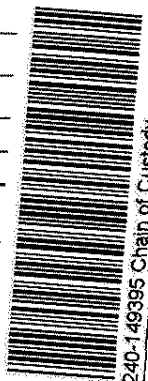
MICHIGAN

Brighton — 10448 Citation Drive Suite 200 Brighton, MI 48116 / 810-229-2763

CONN

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Client Contact Company Name: Arcadis Address: 28550 Cabot Drive, Suite 500 City/State/Zip: Novi, MI, 48377 Phone: 248-994-2240 Project Name: Ford LTP On-Site Project Number: 30880642.401.03 PO # 30880642.401.03		Regulatory program: DW NPDES RCRA Other Client Project Manager: Kris Hinskey Telephone: 248-994-2240 Email: kristoffer.hinskey@arcadis.com Sampler Name: Emma Witherspoon Method of Shipment/Carrier: Shipping/Tracking No:		Site Contact: Julia McClafferty Telephone: 734-644-5131 Lab Contact: Mike DeMonico Telephone: 330-497-9396		TestAmerica Laboratories, Inc. COC No: 1 of 1 COCs For lab use only: Walk-in client Lab sampling Job/SDG No:	
Sample Identification Sample Date: --- Sample Time: --- Sample ID: TRIP BLANK - 66 MW-58_051221 MW-64_051221 MW-69_051221		Matrix Air: X Aqueous: X Sediment: X Solid: X Other: X		Containers & Preservatives H2SO4: 1 HNO3: 6 HCl: 6 NaOH: 6 ZnAc: 6 NaOH: 6 Other: 6		Analysis Turnaround Time TAT if differ from below: 3 w eeks 2 weeks 1 week 2 days 1 day 10 day	
Sample Disposal Return to Client: <input type="checkbox"/> Disposal By Lab: <input checked="" type="checkbox"/> Archive For: _____ Months		Sample Disposal Return to Client: <input type="checkbox"/> Disposal By Lab: <input checked="" type="checkbox"/> Archive For: _____ Months		Special Instructions/QC Requirements & Comments. Submit all results through Cadena at jomalala@cadenaco.com. Cadena #E203728 Level IV Reporting requested.		Sample Specific Notes Special Instructions: 1 Trip Blank 3 VOAs for 8260B 3 VOAs for 8260B SIM	
Relinquished by: Emma Witherspoon Date/Time: 5/12/21 1300 Company: Arcadis		Relinquished by: Emma Witherspoon Date/Time: 5/13/21 Company: Arcadis		Relinquished by: Emma Witherspoon Date/Time: 5/13/21 1519 Company: ETA		Relinquished by: Emma Witherspoon Date/Time: 5/12/21 1300 Company: Arcadis	



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Canton Facility _____

Client Arco 5 Site Name _____ Cooler unpacked by: _____

Cooler Received on 5-14-21 Opened on 5-14-21 Matts

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

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

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

1 Cooler temperature upon receipt See Multiple Cooler Form
 IR GUN# IR-11 (CF +0.1 °C) Observed Cooler Temp 27 °C Corrected Cooler Temp. 28 °C
 IR GUN #IR-12 (CF +0.2°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 (ID/Date/Time) be reconciled with the COC? Yes No

9 For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)? Yes No

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

11 Sufficient quantity received to perform indicated analyses? Yes No

12 Are these work share samples and all listed on the COC? Yes No

If yes, Questions 13-17 have been checked at the originating laboratory

13 Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC022887

14 Were VOAs on the COC? Yes No

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

16 Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # Covered Yes No

17 Was a LL Hg or Me Hg trip blank present? Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____
 Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES additional next page Samples processed by: _____

19. 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)

20. 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 _____

Tests that are not checked for pH by Receiving.
 VOAs
 Oil and Grease
 TOC

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