eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Michigan
10448 Citation Drive
Suite 200
Brighton, MI 48116
Tel: (810)229-2763

Laboratory Job ID: 190-27009-1
Client Project/Site: IAI- MENOMINEE WWTP

For:
Infrastructure Alternatives, Inc
7888 Childsale Ave
Rockford, Michigan 49341

Attn: Mike Thorsen

Patrick O'Meara

Authorized for release by:
10/13/2021 8:03:35 AM
Patrick O'Meara, Manager of Project Management
(330)966-5725
patrick.o'meara@eurofinset.com

Designee for

Sue Schafer, Project Manager II
(810)229-2763
Sue.Schafer@Eurofinset.com

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

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

Table of Contents

Cover Page 1
Table of Contents 2
Sample Summary 3
Case Narrative 4
Client Sample Results 5
QC Sample Results 7
Isotope Dilution Summary 13
Definitions/Glossary 14
QC Association Summary 15
Lab Chronicle 16
Certification Summary 17
Method Summary 18
Receipt Checklists 19
Chain of Custody 20

Sample Summary

Client: Infrastructure Alternatives, Inc
Project/Site: IAI- MENOMINEE WWTP

Job ID: 190-27009-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
190-27009-1	biosolids (2 bottles)	Solid	09/30/21 09:45	10/04/21 12:23

Job ID: 190-27009-1

Laboratory: Eurofins TestAmerica, Michigan

Narrative

Job Narrative
190-27009-1

Comments
No additional comments.

Receipt
The sample was received on 10/4/2021 @ 12:23 PM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.6º C.

Receipt Exceptions

The following sample had discoloration at receipt: (190-27009-1)

LCMS
Method 537 (modified): The "I" qualifier means the transition mass ratio for the indicated analyte was outside of the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty, and the reported value may have some high bias. However, analyst judgment was used to positively identify the analyte. (190-27009-A-1-C MS) and (190-27009-A-1-D MSD)

Method 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following samples: biosolids (2 bottles) (190-27009-1), (190-27009-A-1-C MS) and (190-27009-A-1-D MSD). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

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

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

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

Client: Infrastructure Alternatives, Inc
Project/Site: IAI- MENOMINEE WWTP

Job ID: 190-27009-1

Client Sample ID: biosolids (2 bottles)

Date Collected: 09/30/21 09:45
Date Received: 10/04/21 12:23

Lab Sample ID: 190-27009-1

Matrix: Solid
Percent Solids: 4.2

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<4.6		4.6		ug/Kg	☼	10/08/21 04:45	10/10/21 07:33	1
Perfluoropentanoic acid (PFPeA)	<4.6		4.6		ug/Kg	☼	10/08/21 04:45	10/10/21 07:33	1
Perfluorohexanoic acid (PFHxA)	**7.9**		4.6		ug/Kg	☼	10/08/21 04:45	10/10/21 07:33	1
Perfluoroheptanoic acid (PFHpA)	<4.6		4.6		ug/Kg	☼	10/08/21 04:45	10/10/21 07:33	1
Perfluorooctanoic acid (PFOA)	<4.6		4.6		ug/Kg	☼	10/08/21 04:45	10/10/21 07:33	1
Perfluorononanoic acid (PFNA)	<4.6		4.6		ug/Kg	☼	10/08/21 04:45	10/10/21 07:33	1
Perfluorodecanoic acid (PFDA)	<4.6		4.6		ug/Kg	☼	10/08/21 04:45	10/10/21 07:33	1
Perfluoroundecanoic acid (PFUnA)	<4.6		4.6		ug/Kg	☼	10/08/21 04:45	10/10/21 07:33	1
Perfluorododecanoic acid (PFDoA)	<4.6		4.6		ug/Kg	☼	10/08/21 04:45	10/10/21 07:33	1
Perfluorotridecanoic acid (PFTrDA)	<4.6		4.6		ug/Kg	☼	10/08/21 04:45	10/10/21 07:33	1
Perfluorotetradecanoic acid (PFTeA)	<4.6		4.6		ug/Kg	☼	10/08/21 04:45	10/10/21 07:33	1
Perfluorobutanesulfonic acid (PFBS)	<4.6		4.6		ug/Kg	☼	10/08/21 04:45	10/10/21 07:33	1
Perfluoropentanesulfonic acid (PFPeS)	<4.6		4.6		ug/Kg	☼	10/08/21 04:45	10/10/21 07:33	1
Perfluorohexanesulfonic acid (PFHxS)	<4.6		4.6		ug/Kg	☼	10/08/21 04:45	10/10/21 07:33	1
Perfluoroheptanesulfonic Acid (PFHpS)	<4.6		4.6		ug/Kg	☼	10/08/21 04:45	10/10/21 07:33	1
Perfluorooctanesulfonic acid (PFOS)	**19**		4.6		ug/Kg	☼	10/08/21 04:45	10/10/21 07:33	1
Perfluorononanesulfonic acid (PFNS)	<4.6		4.6		ug/Kg	☼	10/08/21 04:45	10/10/21 07:33	1
Perfluorodecanesulfonic acid (PFDS)	<4.6		4.6		ug/Kg	☼	10/08/21 04:45	10/10/21 07:33	1
Perfluorooctanesulfonamide (FOSA)	<4.6		4.6		ug/Kg	☼	10/08/21 04:45	10/10/21 07:33	1
NMeFOSAA	**21**		4.6		ug/Kg	☼	10/08/21 04:45	10/10/21 07:33	1
NEtFOSAA	**11**		4.6		ug/Kg	☼	10/08/21 04:45	10/10/21 07:33	1
4:2 FTS	<4.6		4.6		ug/Kg	☼	10/08/21 04:45	10/10/21 07:33	1
6:2 FTS	<4.6		4.6		ug/Kg	☼	10/08/21 04:45	10/10/21 07:33	1
8:2 FTS	<4.6		4.6		ug/Kg	☼	10/08/21 04:45	10/10/21 07:33	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<4.6		4.6		ug/Kg	☼	10/08/21 04:45	10/10/21 07:33	1
HFPO-DA (GenX)	<4.6		4.6		ug/Kg	☼	10/08/21 04:45	10/10/21 07:33	1
9Cl-PF3ONS	<4.6		4.6		ug/Kg	☼	10/08/21 04:45	10/10/21 07:33	1
11Cl-PF3OUdS	<4.6		4.6		ug/Kg	☼	10/08/21 04:45	10/10/21 07:33	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*90*		*25 - 150*	*10/08/21 04:45*	*10/10/21 07:33*	*1*
13C5 PFPeA	*101*		*25 - 150*	*10/08/21 04:45*	*10/10/21 07:33*	*1*
13C2 PFHxA	*102*		*25 - 150*	*10/08/21 04:45*	*10/10/21 07:33*	*1*
13C4 PFHpA	*111*		*25 - 150*	*10/08/21 04:45*	*10/10/21 07:33*	*1*
13C4 PFOA	*110*		*25 - 150*	*10/08/21 04:45*	*10/10/21 07:33*	*1*
13C5 PFNA	*109*		*25 - 150*	*10/08/21 04:45*	*10/10/21 07:33*	*1*
13C2 PFDA	*112*		*25 - 150*	*10/08/21 04:45*	*10/10/21 07:33*	*1*
13C2 PFUnA	*95*		*25 - 150*	*10/08/21 04:45*	*10/10/21 07:33*	*1*
13C2 PFDoA	*64*		*25 - 150*	*10/08/21 04:45*	*10/10/21 07:33*	*1*
13C2 PFTeDA	*55*		*25 - 150*	*10/08/21 04:45*	*10/10/21 07:33*	*1*
13C3 PFBS	*106*		*25 - 150*	*10/08/21 04:45*	*10/10/21 07:33*	*1*
18O2 PFHxS	*109*		*25 - 150*	*10/08/21 04:45*	*10/10/21 07:33*	*1*
13C4 PFOS	*98*		*25 - 150*	*10/08/21 04:45*	*10/10/21 07:33*	*1*
13C8 FOSA	*106*		*25 - 150*	*10/08/21 04:45*	*10/10/21 07:33*	*1*
d3-NMeFOSAA	*90*		*25 - 150*	*10/08/21 04:45*	*10/10/21 07:33*	*1*
d5-NEtFOSAA	*77*		*25 - 150*	*10/08/21 04:45*	*10/10/21 07:33*	*1*
M2-6:2 FTS	*160*	*5+	*25 - 150*	*10/08/21 04:45*	*10/10/21 07:33*	*1*

Client: Infrastructure Alternatives, Inc
Project/Site: IAI- MENOMINEE WWTP

Job ID: 190-27009-1

Client Sample ID: biosolids (2 bottles)
Date Collected: 09/30/21 09:45
Date Received: 10/04/21 12:23

Lab Sample ID: 190-27009-1
Matrix: Solid
Percent Solids: 4.2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-8:2 FTS	*163*	*5+	*25 - 150*	*10/08/21 04:45*	*10/10/21 07:33*	*1*
M2-4:2 FTS	*142*		*25 - 150*	*10/08/21 04:45*	*10/10/21 07:33*	*1*
13C3 HFPO-DA	*101*		*25 - 150*	*10/08/21 04:45*	*10/10/21 07:33*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**95.8**		0.1	%			10/08/21 12:49	1
Percent Solids	**4.2**		0.1	%			10/08/21 12:49	1

Client: Infrastructure Alternatives, Inc
Project/Site: IAI- MENOMINEE WWTP

Job ID: 190-27009-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-532105/1-A
Matrix: Solid
Analysis Batch: 532798

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 532105

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.20		0.20		ug/Kg		10/08/21 04:45	10/10/21 03:54	1
Perfluoropentanoic acid (PFPeA)	<0.20		0.20		ug/Kg		10/08/21 04:45	10/10/21 03:54	1
Perfluorohexanoic acid (PFHxA)	<0.20		0.20		ug/Kg		10/08/21 04:45	10/10/21 03:54	1
Perfluoroheptanoic acid (PFHpA)	<0.20		0.20		ug/Kg		10/08/21 04:45	10/10/21 03:54	1
Perfluorooctanoic acid (PFOA)	<0.20		0.20		ug/Kg		10/08/21 04:45	10/10/21 03:54	1
Perfluorononanoic acid (PFNA)	<0.20		0.20		ug/Kg		10/08/21 04:45	10/10/21 03:54	1
Perfluorodecanoic acid (PFDA)	<0.20		0.20		ug/Kg		10/08/21 04:45	10/10/21 03:54	1
Perfluoroundecanoic acid (PFUnA)	<0.20		0.20		ug/Kg		10/08/21 04:45	10/10/21 03:54	1
Perfluorododecanoic acid (PFDoA)	<0.20		0.20		ug/Kg		10/08/21 04:45	10/10/21 03:54	1
Perfluorotridecanoic acid (PFTrDA)	<0.20		0.20		ug/Kg		10/08/21 04:45	10/10/21 03:54	1
Perfluorotetradecanoic acid (PFTeA)	<0.20		0.20		ug/Kg		10/08/21 04:45	10/10/21 03:54	1
Perfluorobutanesulfonic acid (PFBS)	<0.20		0.20		ug/Kg		10/08/21 04:45	10/10/21 03:54	1
Perfluoropentanesulfonic acid (PFPeS)	<0.20		0.20		ug/Kg		10/08/21 04:45	10/10/21 03:54	1
Perfluorohexanesulfonic acid (PFHxS)	<0.20		0.20		ug/Kg		10/08/21 04:45	10/10/21 03:54	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.20		0.20		ug/Kg		10/08/21 04:45	10/10/21 03:54	1
Perfluorooctanesulfonic acid (PFOS)	<0.20		0.20		ug/Kg		10/08/21 04:45	10/10/21 03:54	1
Perfluorononanesulfonic acid (PFNS)	<0.20		0.20		ug/Kg		10/08/21 04:45	10/10/21 03:54	1
Perfluorodecanesulfonic acid (PFDS)	<0.20		0.20		ug/Kg		10/08/21 04:45	10/10/21 03:54	1
Perfluorooctanesulfonamide (FOSA)	<0.20		0.20		ug/Kg		10/08/21 04:45	10/10/21 03:54	1
NMeFOSAA	<0.20		0.20		ug/Kg		10/08/21 04:45	10/10/21 03:54	1
NEtFOSAA	<0.20		0.20		ug/Kg		10/08/21 04:45	10/10/21 03:54	1
4:2 FTS	<0.20		0.20		ug/Kg		10/08/21 04:45	10/10/21 03:54	1
6:2 FTS	<0.20		0.20		ug/Kg		10/08/21 04:45	10/10/21 03:54	1
8:2 FTS	<0.20		0.20		ug/Kg		10/08/21 04:45	10/10/21 03:54	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.20		0.20		ug/Kg		10/08/21 04:45	10/10/21 03:54	1
HFPO-DA (GenX)	<0.20		0.20		ug/Kg		10/08/21 04:45	10/10/21 03:54	1
9Cl-PF3ONS	<0.20		0.20		ug/Kg		10/08/21 04:45	10/10/21 03:54	1
11Cl-PF3OUdS	<0.20		0.20		ug/Kg		10/08/21 04:45	10/10/21 03:54	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*83*		*25 - 150*	*10/08/21 04:45*	*10/10/21 03:54*	*1*
13C5 PFPeA	*93*		*25 - 150*	*10/08/21 04:45*	*10/10/21 03:54*	*1*
13C2 PFHxA	*91*		*25 - 150*	*10/08/21 04:45*	*10/10/21 03:54*	*1*
13C4 PFHpA	*96*		*25 - 150*	*10/08/21 04:45*	*10/10/21 03:54*	*1*
13C4 PFOA	*97*		*25 - 150*	*10/08/21 04:45*	*10/10/21 03:54*	*1*
13C5 PFNA	*95*		*25 - 150*	*10/08/21 04:45*	*10/10/21 03:54*	*1*
13C2 PFDA	*98*		*25 - 150*	*10/08/21 04:45*	*10/10/21 03:54*	*1*
13C2 PFUnA	*97*		*25 - 150*	*10/08/21 04:45*	*10/10/21 03:54*	*1*
13C2 PFDoA	*94*		*25 - 150*	*10/08/21 04:45*	*10/10/21 03:54*	*1*
13C2 PFTeDA	*87*		*25 - 150*	*10/08/21 04:45*	*10/10/21 03:54*	*1*
13C3 PFBS	*95*		*25 - 150*	*10/08/21 04:45*	*10/10/21 03:54*	*1*
18O2 PFHxS	*97*		*25 - 150*	*10/08/21 04:45*	*10/10/21 03:54*	*1*
13C4 PFOS	*84*		*25 - 150*	*10/08/21 04:45*	*10/10/21 03:54*	*1*
13C8 FOSA	*96*		*25 - 150*	*10/08/21 04:45*	*10/10/21 03:54*	*1*
d3-NMeFOSAA	*102*		*25 - 150*	*10/08/21 04:45*	*10/10/21 03:54*	*1*
d5-NEtFOSAA	*107*		*25 - 150*	*10/08/21 04:45*	*10/10/21 03:54*	*1*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-532105/1-A
Matrix: Solid
Analysis Batch: 532798

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 532105

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-6:2 FTS	114		25 - 150	10/08/21 04:45	10/10/21 03:54	1
M2-8:2 FTS	102		25 - 150	10/08/21 04:45	10/10/21 03:54	1
M2-4:2 FTS	120		25 - 150	10/08/21 04:45	10/10/21 03:54	1
13C3 HFPO-DA	98		25 - 150	10/08/21 04:45	10/10/21 03:54	1

Lab Sample ID: LCS 320-532105/2-A
Matrix: Solid
Analysis Batch: 532798

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 532105

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	2.00	1.97		ug/Kg		98	76 - 136
Perfluoropentanoic acid (PFPeA)	2.00	2.00		ug/Kg		100	69 - 129
Perfluorohexanoic acid (PFHxA)	2.00	1.96		ug/Kg		98	71 - 131
Perfluoroheptanoic acid (PFHpA)	2.00	1.87		ug/Kg		94	71 - 131
Perfluorooctanoic acid (PFOA)	2.00	2.05		ug/Kg		102	72 - 132
Perfluorononanoic acid (PFNA)	2.00	2.04		ug/Kg		102	73 - 133
Perfluorodecanoic acid (PFDA)	2.00	1.85		ug/Kg		93	72 - 132
Perfluoroundecanoic acid (PFUnA)	2.00	1.69		ug/Kg		84	66 - 126
Perfluorododecanoic acid (PFDoA)	2.00	2.04		ug/Kg		102	71 - 131
Perfluorotridecanoic acid (PFTrDA)	2.00	1.88		ug/Kg		94	71 - 131
Perfluorotetradecanoic acid (PFTeA)	2.00	1.95		ug/Kg		97	67 - 127
Perfluorobutanesulfonic acid (PFBS)	1.77	1.74		ug/Kg		99	69 - 129
Perfluoropentanesulfonic acid (PFPeS)	1.88	1.84		ug/Kg		98	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	1.82	1.58		ug/Kg		87	62 - 122
Perfluoroheptanesulfonic Acid (PFHpS)	1.90	2.02		ug/Kg		106	76 - 136
Perfluorooctanesulfonic acid (PFOS)	1.86	2.06		ug/Kg		111	68 - 141
Perfluorononanesulfonic acid (PFNS)	1.92	2.13		ug/Kg		111	72 - 132
Perfluorodecanesulfonic acid (PFDS)	1.93	1.87		ug/Kg		97	71 - 131
Perfluorooctanesulfonamide (FOSA)	2.00	1.93		ug/Kg		96	77 - 137
NMeFOSAA	2.00	1.73		ug/Kg		86	72 - 132
NEtFOSAA	2.00	1.74		ug/Kg		87	72 - 132
4:2 FTS	1.87	1.77		ug/Kg		95	68 - 143
6:2 FTS	1.90	1.71		ug/Kg		90	73 - 139
8:2 FTS	1.92	1.91		ug/Kg		100	75 - 135
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.88	2.11		ug/Kg		112	79 - 139
HFPO-DA (GenX)	2.00	1.81		ug/Kg		91	53 - 158
9Cl-PF3ONS	1.86	2.07		ug/Kg		111	74 - 134
11Cl-PF3OUdS	1.88	1.79		ug/Kg		95	66 - 136

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C4 PFBA	84		25 - 150
13C5 PFPeA	92		25 - 150
13C2 PFHxA	91		25 - 150
13C4 PFHpA	95		25 - 150
13C4 PFOA	96		25 - 150
13C5 PFNA	97		25 - 150
13C2 PFDA	99		25 - 150
13C2 PFUnA	98		25 - 150
13C2 PFDoA	94		25 - 150
13C2 PFTeDA	86		25 - 150
13C3 PFBS	91		25 - 150
18O2 PFHxS	98		25 - 150
13C4 PFOS	86		25 - 150
13C8 FOSA	95		25 - 150
d3-NMeFOSAA	102		25 - 150
d5-NEtFOSAA	103		25 - 150
M2-6:2 FTS	115		25 - 150
M2-8:2 FTS	97		25 - 150
M2-4:2 FTS	119		25 - 150
13C3 HFPO-DA	99		25 - 150

Lab Sample ID: 190-27009-1 MS — **Client Sample ID: biosolids (2 bottles)**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 532798 — **Prep Batch: 532105**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	<4.6		169	177		ug/Kg	☼	105	76 - 136
Perfluoropentanoic acid (PFPeA)	<4.6		169	167		ug/Kg	☼	99	69 - 129
Perfluorohexanoic acid (PFHxA)	7.9		169	179		ug/Kg	☼	100	71 - 131
Perfluoroheptanoic acid (PFHpA)	<4.6		169	160		ug/Kg	☼	95	71 - 131
Perfluorooctanoic acid (PFOA)	<4.6		169	181		ug/Kg	☼	107	72 - 132
Perfluorononanoic acid (PFNA)	<4.6		169	172		ug/Kg	☼	102	73 - 133
Perfluorodecanoic acid (PFDA)	<4.6		169	160		ug/Kg	☼	94	72 - 132
Perfluoroundecanoic acid (PFUnA)	<4.6		169	160		ug/Kg	☼	95	66 - 126
Perfluorododecanoic acid (PFDoA)	<4.6		169	164		ug/Kg	☼	97	71 - 131
Perfluorotridecanoic acid (PFTrDA)	<4.6		169	122		ug/Kg	☼	72	71 - 131
Perfluorotetradecanoic acid (PFTeA)	<4.6		169	168		ug/Kg	☼	99	67 - 127
Perfluorobutanesulfonic acid (PFBS)	<4.6		149	155		ug/Kg	☼	104	69 - 129
Perfluoropentanesulfonic acid (PFPeS)	<4.6		159	160		ug/Kg	☼	101	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	<4.6		154	147		ug/Kg	☼	95	62 - 122
Perfluoroheptanesulfonic Acid (PFHpS)	<4.6		161	175		ug/Kg	☼	109	76 - 136
Perfluorooctanesulfonic acid (PFOS)	19		157	188	I	ug/Kg	☼	111	68 - 141
Perfluorononanesulfonic acid (PFNS)	<4.6		162	169		ug/Kg	☼	104	72 - 132
Perfluorodecanesulfonic acid (PFDS)	<4.6		163	162		ug/Kg	☼	99	71 - 131

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 190-27009-1 MS
Matrix: Solid
Analysis Batch: 532798

Client Sample ID: biosolids (2 bottles)
Prep Type: Total/NA
Prep Batch: 532105

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorooctanesulfonamide (FOSA)	<4.6		169	164		ug/Kg	☼	97	77 - 137
NMeFOSAA	21		169	196		ug/Kg	☼	100	72 - 132
NEtFOSAA	11		169	178		ug/Kg	☼	98	72 - 132
4:2 FTS	<4.6		158	158		ug/Kg	☼	100	68 - 143
6:2 FTS	<4.6		160	152		ug/Kg	☼	95	73 - 139
8:2 FTS	<4.6		162	162		ug/Kg	☼	100	75 - 135
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<4.6		159	178		ug/Kg	☼	112	79 - 139
HFPO-DA (GenX)	<4.6		169	161		ug/Kg	☼	95	53 - 158
9Cl-PF3ONS	<4.6		158	174		ug/Kg	☼	110	74 - 134
11Cl-PF3OUdS	<4.6		159	144		ug/Kg	☼	90	66 - 136

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C4 PFBA	*59*		*25 - 150*
13C5 PFPeA	*105*		*25 - 150*
13C2 PFHxA	*109*		*25 - 150*
13C4 PFHpA	*115*		*25 - 150*
13C4 PFOA	*114*		*25 - 150*
13C5 PFNA	*116*		*25 - 150*
13C2 PFDA	*121*		*25 - 150*
13C2 PFUnA	*112*		*25 - 150*
13C2 PFDoA	*94*		*25 - 150*
13C2 PFTeDA	*79*		*25 - 150*
13C3 PFBS	*114*		*25 - 150*
18O2 PFHxS	*117*		*25 - 150*
13C4 PFOS	*105*		*25 - 150*
13C8 FOSA	*116*		*25 - 150*
d3-NMeFOSAA	*117*		*25 - 150*
d5-NEtFOSAA	*106*		*25 - 150*
M2-6:2 FTS	*168*	*5+	*25 - 150*
M2-8:2 FTS	*159*	*5+	*25 - 150*
M2-4:2 FTS	*167*	*5+	*25 - 150*
13C3 HFPO-DA	*111*		*25 - 150*

Lab Sample ID: 190-27009-1 MSD
Matrix: Solid
Analysis Batch: 532798

Client Sample ID: biosolids (2 bottles)
Prep Type: Total/NA
Prep Batch: 532105

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	<4.6		167	177		ug/Kg	☼	106	76 - 136	0	30
Perfluoropentanoic acid (PFPeA)	<4.6		167	175		ug/Kg	☼	105	69 - 129	4	30
Perfluorohexanoic acid (PFHxA)	7.9		167	174		ug/Kg	☼	99	71 - 131	3	30
Perfluoroheptanoic acid (PFHpA)	<4.6		167	161		ug/Kg	☼	97	71 - 131	1	30
Perfluorooctanoic acid (PFOA)	<4.6		167	177		ug/Kg	☼	106	72 - 132	2	30
Perfluorononanoic acid (PFNA)	<4.6		167	169		ug/Kg	☼	102	73 - 133	1	30
Perfluorodecanoic acid (PFDA)	<4.6		167	158		ug/Kg	☼	95	72 - 132	1	30
Perfluoroundecanoic acid (PFUnA)	<4.6		167	159		ug/Kg	☼	95	66 - 126	1	30

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 190-27009-1 MSD
Matrix: Solid
Analysis Batch: 532798

Client Sample ID: biosolids (2 bottles)
Prep Type: Total/NA
Prep Batch: 532105

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorododecanoic acid (PFDoA)	<4.6		167	159		ug/Kg	☼	95	71 - 131	3	30
Perfluorotridecanoic acid (PFTrDA)	<4.6		167	120		ug/Kg	☼	72	71 - 131	2	30
Perfluorotetradecanoic acid (PFTeA)	<4.6		167	163		ug/Kg	☼	98	67 - 127	3	30
Perfluorobutanesulfonic acid (PFBS)	<4.6		147	150		ug/Kg	☼	102	69 - 129	3	30
Perfluoropentanesulfonic acid (PFPeS)	<4.6		156	155		ug/Kg	☼	99	66 - 126	4	30
Perfluorohexanesulfonic acid (PFHxS)	<4.6		152	138		ug/Kg	☼	91	62 - 122	7	30
Perfluoroheptanesulfonic Acid (PFHpS)	<4.6		159	168		ug/Kg	☼	106	76 - 136	4	30
Perfluorooctanesulfonic acid (PFOS)	19		155	190	I	ug/Kg	☼	113	68 - 141	1	30
Perfluorononanesulfonic acid (PFNS)	<4.6		160	166		ug/Kg	☼	104	72 - 132	2	30
Perfluorodecanesulfonic acid (PFDS)	<4.6		161	153		ug/Kg	☼	95	71 - 131	5	30
Perfluorooctanesulfonamide (FOSA)	<4.6		167	162		ug/Kg	☼	97	77 - 137	2	30
NMeFOSAA	21		167	190		ug/Kg	☼	98	72 - 132	3	30
NEtFOSAA	11		167	163		ug/Kg	☼	91	72 - 132	9	30
4:2 FTS	<4.6		156	153		ug/Kg	☼	98	68 - 143	3	30
6:2 FTS	<4.6		158	138		ug/Kg	☼	87	73 - 139	10	30
8:2 FTS	<4.6		160	162		ug/Kg	☼	101	75 - 135	0	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<4.6		157	186		ug/Kg	☼	118	79 - 139	4	30
HFPO-DA (GenX)	<4.6		167	157		ug/Kg	☼	94	53 - 158	3	30
9Cl-PF3ONS	<4.6		155	171		ug/Kg	☼	110	74 - 134	2	30
11Cl-PF3OUdS	<4.6		157	140		ug/Kg	☼	89	66 - 136	3	30

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C4 PFBA	*52*		*25 - 150*
13C5 PFPeA	*94*		*25 - 150*
13C2 PFHxA	*101*		*25 - 150*
13C4 PFHpA	*106*		*25 - 150*
13C4 PFOA	*107*		*25 - 150*
13C5 PFNA	*111*		*25 - 150*
13C2 PFDA	*113*		*25 - 150*
13C2 PFUnA	*104*		*25 - 150*
13C2 PFDoA	*88*		*25 - 150*
13C2 PFTeDA	*73*		*25 - 150*
13C3 PFBS	*102*		*25 - 150*
18O2 PFHxS	*106*		*25 - 150*
13C4 PFOS	*94*		*25 - 150*
13C8 FOSA	*106*		*25 - 150*
d3-NMeFOSAA	*105*		*25 - 150*
d5-NEtFOSAA	*104*		*25 - 150*
M2-6:2 FTS	*154*	*5+	*25 - 150*
M2-8:2 FTS	*148*		*25 - 150*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 190-27009-1 MSD
Matrix: Solid
Analysis Batch: 532798

Client Sample ID: biosolids (2 bottles)
Prep Type: Total/NA
Prep Batch: 532105

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
M2-4:2 FTS	147		25 - 150
13C3 HFPO-DA	106		25 - 150

Isotope Dilution Summary

Client: Infrastructure Alternatives, Inc
Project/Site: IAI- MENOMINEE WWTP

Job ID: 190-27009-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Solid **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFBA	PFPeA	PFHxA	C4PFHA	PFOA	PFNA	PFDA	PFUnA
Lab Sample ID	Client Sample ID	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)
190-27009-1	biosolids (2 bottles)	90	101	102	111	110	109	112	95
190-27009-1 MS	biosolids (2 bottles)	59	105	109	115	114	116	121	112
190-27009-1 MSD	biosolids (2 bottles)	52	94	101	106	107	111	113	104
LCS 320-532105/2-A	Lab Control Sample	84	92	91	95	96	97	99	98
MB 320-532105/1-A	Method Blank	83	93	91	96	97	95	98	97

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFDoA	PFTDA	C3PFBS	PFHxS	PFOS	PFOSA	d3NMFOS	d5NEFOS
Lab Sample ID	Client Sample ID	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)
190-27009-1	biosolids (2 bottles)	64	55	106	109	98	106	90	77
190-27009-1 MS	biosolids (2 bottles)	94	79	114	117	105	116	117	106
190-27009-1 MSD	biosolids (2 bottles)	88	73	102	106	94	106	105	104
LCS 320-532105/2-A	Lab Control Sample	94	86	91	98	86	95	102	103
MB 320-532105/1-A	Method Blank	94	87	95	97	84	96	102	107

		Percent Isotope Dilution Recovery (Acceptance Limits)			
		M262FTS	M282FTS	M242FTS	HFPODA
Lab Sample ID	Client Sample ID	(25-150)	(25-150)	(25-150)	(25-150)
190-27009-1	biosolids (2 bottles)	160 *5+	163 *5+	142	101
190-27009-1 MS	biosolids (2 bottles)	168 *5+	159 *5+	167 *5+	111
190-27009-1 MSD	biosolids (2 bottles)	154 *5+	148	147	106
LCS 320-532105/2-A	Lab Control Sample	115	97	119	99
MB 320-532105/1-A	Method Blank	114	102	120	98

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
M242FTS = M2-4:2 FTS
HFPODA = 13C3 HFPO-DA

Definitions/Glossary

Client: Infrastructure Alternatives, Inc
Project/Site: IAI- MENOMINEE WWTP

Job ID: 190-27009-1

Qualifiers

LCMS

Qualifier	Qualifier Description
*5+	Isotope dilution analyte is outside acceptance limits, high biased.
I	Value is EMPC (estimated maximum possible concentration).

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	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

QC Association Summary

Client: Infrastructure Alternatives, Inc
Project/Site: IAI- MENOMINEE WWTP

Job ID: 190-27009-1

LCMS

Prep Batch: 532105

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-27009-1	biosolids (2 bottles)	Total/NA	Solid	SHAKE	
MB 320-532105/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 320-532105/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
190-27009-1 MS	biosolids (2 bottles)	Total/NA	Solid	SHAKE	
190-27009-1 MSD	biosolids (2 bottles)	Total/NA	Solid	SHAKE	

Analysis Batch: 532798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-27009-1	biosolids (2 bottles)	Total/NA	Solid	537 (modified)	532105
MB 320-532105/1-A	Method Blank	Total/NA	Solid	537 (modified)	532105
LCS 320-532105/2-A	Lab Control Sample	Total/NA	Solid	537 (modified)	532105
190-27009-1 MS	biosolids (2 bottles)	Total/NA	Solid	537 (modified)	532105
190-27009-1 MSD	biosolids (2 bottles)	Total/NA	Solid	537 (modified)	532105

General Chemistry

Analysis Batch: 532237

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-27009-1	biosolids (2 bottles)	Total/NA	Solid	D 2216	

Lab Chronicle

Client: Infrastructure Alternatives, Inc
Job ID: 190-27009-1
Project/Site: IAI- MENOMINEE WWTP

Client Sample ID: biosolids (2 bottles)
Lab Sample ID: 190-27009-1
Date Collected: 09/30/21 09:45
Matrix: Solid
Date Received: 10/04/21 12:23

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	532237	10/08/21 12:49	TCS	TAL SAC

Client Sample ID: biosolids (2 bottles)
Lab Sample ID: 190-27009-1
Date Collected: 09/30/21 09:45
Matrix: Solid
Date Received: 10/04/21 12:23
Percent Solids: 4.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			532105	10/08/21 04:45	HK	TAL SAC
Total/NA	Analysis	537 (modified)		1	532798	10/10/21 07:33	K1S	TAL SAC

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Analyst References:

Lab: TAL SAC

Batch Type: Prep

HK = Harmandeep Kaur

Batch Type: Analysis

K1S = Kotechakon Sorndee

TCS = Tammy Saechao

Accreditation/Certification Summary

Client: Infrastructure Alternatives, Inc
Job ID: 190-27009-1
Project/Site: IAI- MENOMINEE WWTP

Laboratory: Eurofins TestAmerica, Sacramento

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	02-20-24
ANAB	Dept. of Defense ELAP	L2468	01-20-24
ANAB	Dept. of Energy	L2468.01	01-20-24
ANAB	ISO/IEC 17025	L2468	01-20-24
Arizona	State	AZ0708	08-11-22
Arkansas DEQ	State	88-0691	06-17-21 *
California	State	2897	01-31-22
Colorado	State	CA0004	08-31-21 *
Florida	NELAP	E87570	06-30-22
Georgia	State	4040	01-29-22
Hawaii	State	<cert No.>	01-29-22
Illinois	NELAP	200060	03-18-22
Kansas	NELAP	E-10375	10-31-21
Louisiana	NELAP	01944	06-30-22
Maine	State	CA00004	04-14-22
Michigan	State	9947	01-29-22
Nevada	State	CA00044	08-31-22
New Hampshire	NELAP	2997	04-18-22
New Jersey	NELAP	CA005	06-30-22
New York	NELAP	11666	04-01-22
Ohio	State	41252	01-29-22
Oregon	NELAP	4040	01-30-23
Texas	NELAP	T104704399-19-13	05-31-22
US Fish & Wildlife	US Federal Programs	58448	07-31-22
Utah	NELAP	CA000442021-12	03-01-22
Virginia	NELAP	460278	03-14-22
Washington	State	C581	05-05-22
West Virginia (DW)	State	9930C	12-31-21
Wisconsin	State	998204680	08-31-22
Wyoming	State Program	8TMS-L	01-28-19 *

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

Method Summary

Client: Infrastructure Alternatives, Inc
Project/Site: IAI- MENOMINEE WWTP

Job ID: 190-27009-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC
SHAKE	Shake Extraction with Ultrasonic Bath Extraction	SW846	TAL SAC

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Login Sample Receipt Checklist

Client: Infrastructure Alternatives, Inc

Job Number: 190-27009-1

Login Number: 27009
List Number: 2
Creator: Oropeza, Salvador

List Source: Eurofins TestAmerica, Sacramento
List Creation: 10/07/21 03:46 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	1435987
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.2c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Chain of Custody Record

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

eurofins | Environment Testing TestAmerica

Regulatory program: ☐ DW ☑ NPDES ☐ RCRA ☐ Other wastewater permit

Client Contact	Client Project Manager:	Site Contact:	Lab Contact:	COC No:
Company Name: Infrastructure Alternatives	Mike Thorsen	Mike Thorsen	Sue Schafer	
Address: 7888 Childsale Ave.	Telephone: 906-630-1016	Telephone: 906-630-1016	Telephone: 810-229-2763 ext 1	1 of 1 COCs
City/State/Zip: Rockford, MI 49341	Email: mthorsen@iaiwater.com	Analysis Turnaround Time	Analyses	For lab use only
Phone: 906-630-1016		TAT if different from below 10 bus ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		Walk-in client Lab sampling
Project Name: Menominee WWTP	Method of Shipment/Carrier:			Job/SDG No:
Project Number:	Shipping/Tracking No:			
PO # MEN 301				

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y / N)	Composite=C / Grab=G	PFAS - 28 parameters	Sample Specific Notes / Special Instructions:
biosolids (2 bottles)	9/30/2021	9:45 AM											X		N	G		report in ug/kg dry weight

190-27009 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

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

Special Instructions/QC Requirements & Comments:
Custody Seal # 1432563 Sampled by: Scott Faucette

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Scott Faucette	IAI	9-30-21- 1:00	T Hall to cold storage	ETA	10/4/21 1223
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Cold storage to T Hall	ETA	10/5/21 1039			
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

eurofins | Environment Testing TestAmerica

☐ SDS or Known Hazard Information Supplied by Client
☐ Discrepancies
☐ Short Hold
Client ID: Infrastructure Alternatives
Work Oder #: 190-27009
☐ Rush ☐ 24 Hr ☐ 2-Day ☐ 3-Day ☐ 5-Day ☐ Other: _____
Receipt Evaluation Performed by: Initials: TRH Date: ~~10/5/21~~ 10/4/21 Time: 1223 (14)

Cooler / Sample Receipt

After hours receipt: complete gray areas. Place cooler in walk-in, place form in Receiving box. Date: _____ Time: _____

Method of Shipment:
Walk-In Client Eurofins TA Field/Courier
Other Client / 3rd Party Courier: _____
Fed Ex Tracking #: _____
UPS Tracking #: Ground
Other: _____

Shipping Container Type:
☑ Cooler ☐ Box
☐ None ☐ Other: _____

Custody Seals Intact:
☑ Yes ☐ No
☐ NA (not used or required)

Packing Materials:
☑ Plastic Bags ☐ Foam
☐ Bubble Wrap ☐ Paper
☐ Packing Peanuts ☐ None
☐ Other: _____

Cooling Materials:
☐ Ice (Solid) ☑ Ice (Melted)
☐ Blue Ice ☐ None
☐ Other: _____

Bacteriological Samples	Temp Corrected (°C)	Frozen? Yes	Frozen? No	Rec'd Within 2 Hrs? Yes	Rec'd Within 2 Hrs? No	Sample Flagged? Yes	Sample Flagged? No

Received on same day sampled? Yes (No) Additional Sheets Required? Yes (No)

Receipt Temperatures

Thermometer ID	Observed (°C)	Corrected (°C)	Temp Blank	Sample Temp	Acceptable	Cooler ID	Affected Samples
CP313207	4.6	4.6		✓	✓Y __N		
					__Y __N		
					__Y __N		

Receipt Questions**	Y	N	NA	"No" answers require additional comment
CoC present and ETA receipt signature, date, and time properly documented?	✓			
Containers and Labels in good condition? *(unbroken, not leaking, appropriately filled, labels legible & attached)*	✓			
Appropriate containers used and adequate volume provided?	✓			Preserved bottles checked for pH?* Yes No
Number of sample containers match CoC?	✓			pH strip lot # _____
Samples received within hold?	✓			
Samples submitted for GRO and Volatiles analysis (8260, 624, 524) received without headspace?			✓	
Was a Trip Blank received with VOA samples?			✓	
Were the samples free of any questionable physical conformities? (i.e.; field duplicates or multiple bottles of the same sample do not significantly vary in appearance – color, solid proportions, etc.)	✓			
Were the CoC bottle labels and all other items free of all other discrepancies or issues that would need to be addressed with the Project Manager and/or Client?	✓			
**May not be applicable if samples are not for compliance testing				*Excludes FOG, VOAs, TOC Vials, HEM

Client Contact Record

Contact Via: ☐ Phone ☐ Email ☐ Other: _____ Person Contacted: _____ Date/Time: _____
☐ Discrepancy allowance agreement is on record in the client project file

Discussion / Resolution

Any additional documentation and clarification from the client must be noted in the narrative and/or scanned into the CoC directory.

Reviewed by Terri Hall Date: 10/4/21

WI-MI-010_020720

Eurofins TestAmerica, Michigan
10448 Citation Drive Suite 200
Brighton, MI 48116
Phone: 810-229-2763 Fax: 810-229-0000

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Schafer, Sue	Carrier Tracking No(s):	COC No: 190-30205.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Sue.Schafer@Eurofinset.com	State of Origin: Michigan	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 190-27009-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 10/24/2021			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: IAI- MENOMINEE WWTP	Project #: 19001705			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Moisture	PFC_IDA/Shake_Bath_14D (MOD) PFAS, Standard List (24 Analytes)	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
biosolids (2 bottles) (190-27009-1)	9/30/21	09:45 Eastern		Solid			X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	10/5/21 1700	ETA	[signature]	10/6/21 1010	ESTASC
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact:	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
Δ Yes (Δ) No	1435 987	3.2c