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ANALYTICAL REPORT

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-215329-1
Client Project/Site: PFAS Testing

For:
City of Eau Claire
1000 Ferry Street
Eau Claire, Wisconsin 54703

Attn: Ty Fadness

Sandra Fredrick

Authorized for release by:
5/5/2022 2:05:24 PM

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Case Narrative

Client: City of Eau Claire
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Narrative

Job Narrative
500-215329-1

Comments
No additional comments.

Receipt
The sample was received on 4/21/2022 9:40 AM. 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 2.7º C.

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

Organic Prep
Method 3535: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-583996. Method: 3535 PFC-W Matrix: Aqueous

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

Detection Summary

Client: City of Eau Claire
Project/Site: PFAS Testing

Job ID: 500-215329-1

Client Sample ID: WW Outfall

Lab Sample ID: 500-215329-1

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	5.8		4.5	2.2	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	7.5		1.8	0.44	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	6.9		1.8	0.52	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.9		1.8	0.23	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	4.0		1.8	0.77	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	5.1		1.8	0.18	ng/L	1		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	6.2		1.8	0.27	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	45		1.8	0.51	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic acid (PFHpS)	0.94	J	1.8	0.17	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	21		1.8	0.49	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: City of Eau Claire
Project/Site: PFAS Testing

Job ID: 500-215329-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL SAC
3535	Solid-Phase Extraction (SPE)	SW846	TAL SAC

Protocol References:

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 Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: City of Eau Claire
Project/Site: PFAS Testing

Job ID: 500-215329-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-215329-1	WW Outfall	Water	04/20/22 11:36	04/20/22 12:44

Client: City of Eau Claire
Project/Site: PFAS Testing

Job ID: 500-215329-1

Client Sample ID: WW Outfall
Date Collected: 04/20/22 11:36
Date Received: 04/20/22 12:44

Lab Sample ID: 500-215329-1
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**5.8**		4.5	2.2	ng/L		05/04/22 04:44	05/04/22 17:20	1
Perfluoropentanoic acid (PFPeA)	**7.5**		1.8	0.44	ng/L		05/04/22 04:44	05/04/22 17:20	1
Perfluorohexanoic acid (PFHxA)	**6.9**		1.8	0.52	ng/L		05/04/22 04:44	05/04/22 17:20	1
Perfluoroheptanoic acid (PFHpA)	**1.9**		1.8	0.23	ng/L		05/04/22 04:44	05/04/22 17:20	1
Perfluorooctanoic acid (PFOA)	**4.0**		1.8	0.77	ng/L		05/04/22 04:44	05/04/22 17:20	1
Perfluorononanoic acid (PFNA)	<0.24		1.8	0.24	ng/L		05/04/22 04:44	05/04/22 17:20	1
Perfluorodecanoic acid (PFDA)	<0.28		1.8	0.28	ng/L		05/04/22 04:44	05/04/22 17:20	1
Perfluoroundecanoic acid (PFUnA)	<0.99		1.8	0.99	ng/L		05/04/22 04:44	05/04/22 17:20	1
Perfluorododecanoic acid (PFDoA)	<0.50		1.8	0.50	ng/L		05/04/22 04:44	05/04/22 17:20	1
Perfluorotridecanoic acid (PFTrDA)	<1.2		1.8	1.2	ng/L		05/04/22 04:44	05/04/22 17:20	1
Perfluorotetradecanoic acid (PFTeA)	<0.66		1.8	0.66	ng/L		05/04/22 04:44	05/04/22 17:20	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.80		1.8	0.80	ng/L		05/04/22 04:44	05/04/22 17:20	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.85		1.8	0.85	ng/L		05/04/22 04:44	05/04/22 17:20	1
Perfluorobutanesulfonic acid (PFBS)	**5.1**		1.8	0.18	ng/L		05/04/22 04:44	05/04/22 17:20	1
Perfluoropentanesulfonic acid (PFPeS)	**6.2**		1.8	0.27	ng/L		05/04/22 04:44	05/04/22 17:20	1
Perfluorohexanesulfonic acid (PFHxS)	**45**		1.8	0.51	ng/L		05/04/22 04:44	05/04/22 17:20	1
Perfluoroheptanesulfonic acid (PFHpS)	**0.94**	**J**	1.8	0.17	ng/L		05/04/22 04:44	05/04/22 17:20	1
Perfluorooctanesulfonic acid (PFOS)	**21**		1.8	0.49	ng/L		05/04/22 04:44	05/04/22 17:20	1
Perfluorononanesulfonic acid (PFNS)	<0.33		1.8	0.33	ng/L		05/04/22 04:44	05/04/22 17:20	1
Perfluorodecanesulfonic acid (PFDS)	<0.29		1.8	0.29	ng/L		05/04/22 04:44	05/04/22 17:20	1
Perfluorododecanesulfonic acid (PFDoS)	<0.88		1.8	0.88	ng/L		05/04/22 04:44	05/04/22 17:20	1
Perfluorooctanesulfonamide (FOSA)	<0.88		1.8	0.88	ng/L		05/04/22 04:44	05/04/22 17:20	1
NEtFOSA	<0.78		1.8	0.78	ng/L		05/04/22 04:44	05/04/22 17:20	1
NMeFOSA	<0.39		1.8	0.39	ng/L		05/04/22 04:44	05/04/22 17:20	1
NMeFOSAA	<1.1		4.5	1.1	ng/L		05/04/22 04:44	05/04/22 17:20	1
NEtFOSAA	<1.2		4.5	1.2	ng/L		05/04/22 04:44	05/04/22 17:20	1
NMeFOSE	<1.3		3.6	1.3	ng/L		05/04/22 04:44	05/04/22 17:20	1
NEtFOSE	<0.77		1.8	0.77	ng/L		05/04/22 04:44	05/04/22 17:20	1
4:2 FTS	<0.22		1.8	0.22	ng/L		05/04/22 04:44	05/04/22 17:20	1
6:2 FTS	<2.3		4.5	2.3	ng/L		05/04/22 04:44	05/04/22 17:20	1
8:2 FTS	<0.42		1.8	0.42	ng/L		05/04/22 04:44	05/04/22 17:20	1
10:2 FTS	<0.60		1.8	0.60	ng/L		05/04/22 04:44	05/04/22 17:20	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.36		1.8	0.36	ng/L		05/04/22 04:44	05/04/22 17:20	1
HFPO-DA (GenX)	<1.4		3.6	1.4	ng/L		05/04/22 04:44	05/04/22 17:20	1
9Cl-PF3ONS	<0.22		1.8	0.22	ng/L		05/04/22 04:44	05/04/22 17:20	1
11Cl-PF3OUdS	<0.29		1.8	0.29	ng/L		05/04/22 04:44	05/04/22 17:20	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*89*		*25 - 150*	*05/04/22 04:44*	*05/04/22 17:20*	*1*
13C5 PFPeA	*99*		*25 - 150*	*05/04/22 04:44*	*05/04/22 17:20*	*1*
13C2 PFHxA	*103*		*25 - 150*	*05/04/22 04:44*	*05/04/22 17:20*	*1*
13C4 PFHpA	*112*		*25 - 150*	*05/04/22 04:44*	*05/04/22 17:20*	*1*
13C4 PFOA	*106*		*25 - 150*	*05/04/22 04:44*	*05/04/22 17:20*	*1*

Client: City of Eau Claire
Project/Site: PFAS Testing

Job ID: 500-215329-1

Client Sample ID: WW Outfall
Date Collected: 04/20/22 11:36
Date Received: 04/20/22 12:44

Lab Sample ID: 500-215329-1
Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFNA	107		25 - 150	05/04/22 04:44	05/04/22 17:20	1
13C2 PFDA	101		25 - 150	05/04/22 04:44	05/04/22 17:20	1
13C2 PFUnA	99		25 - 150	05/04/22 04:44	05/04/22 17:20	1
13C2 PFDoA	94		25 - 150	05/04/22 04:44	05/04/22 17:20	1
13C2 PFTeDA	96		25 - 150	05/04/22 04:44	05/04/22 17:20	1
13C2 PFHxDA	92		25 - 150	05/04/22 04:44	05/04/22 17:20	1
13C3 PFBS	92		25 - 150	05/04/22 04:44	05/04/22 17:20	1
18O2 PFHxS	92		25 - 150	05/04/22 04:44	05/04/22 17:20	1
13C4 PFOS	84		25 - 150	05/04/22 04:44	05/04/22 17:20	1
13C8 FOSA	85		10 - 150	05/04/22 04:44	05/04/22 17:20	1
d3-NMeFOSAA	84		25 - 150	05/04/22 04:44	05/04/22 17:20	1
d5-NEtFOSAA	79		25 - 150	05/04/22 04:44	05/04/22 17:20	1
d-N-MeFOSA-M	78		10 - 150	05/04/22 04:44	05/04/22 17:20	1
d-N-EtFOSA-M	81		10 - 150	05/04/22 04:44	05/04/22 17:20	1
d7-N-MeFOSE-M	82		10 - 150	05/04/22 04:44	05/04/22 17:20	1
d9-N-EtFOSE-M	76		10 - 150	05/04/22 04:44	05/04/22 17:20	1
M2-4:2 FTS	120		25 - 150	05/04/22 04:44	05/04/22 17:20	1
M2-6:2 FTS	107		25 - 150	05/04/22 04:44	05/04/22 17:20	1
M2-8:2 FTS	110		25 - 150	05/04/22 04:44	05/04/22 17:20	1
13C3 HFPO-DA	108		25 - 150	05/04/22 04:44	05/04/22 17:20	1
13C2 10:2 FTS	86		25 - 150	05/04/22 04:44	05/04/22 17:20	1

Definitions/Glossary

Client: City of Eau Claire
Project/Site: PFAS Testing

Job ID: 500-215329-1

Qualifiers

LCMS

Qualifier	Qualifier Description
J	Reported value was between the limit of detection and the limit of quantitation.

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: City of Eau Claire
Project/Site: PFAS Testing

Job ID: 500-215329-1

LCMS

Prep Batch: 585036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-215329-1	WW Outfall	Total/NA	Water	3535	
MB 320-585036/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-585036/2-A	Lab Control Sample	Total/NA	Water	3535	

Analysis Batch: 585153

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-215329-1	WW Outfall	Total/NA	Water	537 (modified)	585036
MB 320-585036/1-A	Method Blank	Total/NA	Water	537 (modified)	585036
LCS 320-585036/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	585036

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-585036/1-A
Matrix: Water
Analysis Batch: 585153

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 585036

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.4		5.0	2.4	ng/L		05/04/22 04:44	05/04/22 13:48	1
Perfluoropentanoic acid (PFPeA)	<0.49		2.0	0.49	ng/L		05/04/22 04:44	05/04/22 13:48	1
Perfluorohexanoic acid (PFHxA)	<0.58		2.0	0.58	ng/L		05/04/22 04:44	05/04/22 13:48	1
Perfluoroheptanoic acid (PFHpA)	<0.25		2.0	0.25	ng/L		05/04/22 04:44	05/04/22 13:48	1
Perfluorooctanoic acid (PFOA)	<0.85		2.0	0.85	ng/L		05/04/22 04:44	05/04/22 13:48	1
Perfluorononanoic acid (PFNA)	<0.27		2.0	0.27	ng/L		05/04/22 04:44	05/04/22 13:48	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	0.31	ng/L		05/04/22 04:44	05/04/22 13:48	1
Perfluoroundecanoic acid (PFUnA)	<1.1		2.0	1.1	ng/L		05/04/22 04:44	05/04/22 13:48	1
Perfluorododecanoic acid (PFDoA)	<0.55		2.0	0.55	ng/L		05/04/22 04:44	05/04/22 13:48	1
Perfluorotridecanoic acid (PFTrDA)	<1.3		2.0	1.3	ng/L		05/04/22 04:44	05/04/22 13:48	1
Perfluorotetradecanoic acid (PFTeA)	<0.73		2.0	0.73	ng/L		05/04/22 04:44	05/04/22 13:48	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.89		2.0	0.89	ng/L		05/04/22 04:44	05/04/22 13:48	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.94		2.0	0.94	ng/L		05/04/22 04:44	05/04/22 13:48	1
Perfluorobutanesulfonic acid (PFBS)	<0.20		2.0	0.20	ng/L		05/04/22 04:44	05/04/22 13:48	1
Perfluoropentanesulfonic acid (PFPeS)	<0.30		2.0	0.30	ng/L		05/04/22 04:44	05/04/22 13:48	1
Perfluorohexanesulfonic acid (PFHxS)	<0.57		2.0	0.57	ng/L		05/04/22 04:44	05/04/22 13:48	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.19		2.0	0.19	ng/L		05/04/22 04:44	05/04/22 13:48	1
Perfluorooctanesulfonic acid (PFOS)	<0.54		2.0	0.54	ng/L		05/04/22 04:44	05/04/22 13:48	1
Perfluorononanesulfonic acid (PFNS)	<0.37		2.0	0.37	ng/L		05/04/22 04:44	05/04/22 13:48	1
Perfluorodecanesulfonic acid (PFDS)	<0.32		2.0	0.32	ng/L		05/04/22 04:44	05/04/22 13:48	1
Perfluorododecanesulfonic acid (PFDoS)	<0.97		2.0	0.97	ng/L		05/04/22 04:44	05/04/22 13:48	1
Perfluorooctanesulfonamide (FOSA)	<0.98		2.0	0.98	ng/L		05/04/22 04:44	05/04/22 13:48	1
NEtFOSA	<0.87		2.0	0.87	ng/L		05/04/22 04:44	05/04/22 13:48	1
NMeFOSA	<0.43		2.0	0.43	ng/L		05/04/22 04:44	05/04/22 13:48	1
NMeFOSAA	<1.2		5.0	1.2	ng/L		05/04/22 04:44	05/04/22 13:48	1
NEtFOSAA	<1.3		5.0	1.3	ng/L		05/04/22 04:44	05/04/22 13:48	1
NMeFOSE	<1.4		4.0	1.4	ng/L		05/04/22 04:44	05/04/22 13:48	1
NEtFOSE	<0.85		2.0	0.85	ng/L		05/04/22 04:44	05/04/22 13:48	1
4:2 FTS	<0.24		2.0	0.24	ng/L		05/04/22 04:44	05/04/22 13:48	1
6:2 FTS	<2.5		5.0	2.5	ng/L		05/04/22 04:44	05/04/22 13:48	1
8:2 FTS	<0.46		2.0	0.46	ng/L		05/04/22 04:44	05/04/22 13:48	1
10:2 FTS	<0.67		2.0	0.67	ng/L		05/04/22 04:44	05/04/22 13:48	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.40		2.0	0.40	ng/L		05/04/22 04:44	05/04/22 13:48	1
HFPO-DA (GenX)	<1.5		4.0	1.5	ng/L		05/04/22 04:44	05/04/22 13:48	1
9Cl-PF3ONS	<0.24		2.0	0.24	ng/L		05/04/22 04:44	05/04/22 13:48	1
11Cl-PF3OUdS	<0.32		2.0	0.32	ng/L		05/04/22 04:44	05/04/22 13:48	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*94*		*25 - 150*	*05/04/22 04:44*	*05/04/22 13:48*	*1*
13C5 PFPeA	*92*		*25 - 150*	*05/04/22 04:44*	*05/04/22 13:48*	*1*
13C2 PFHxA	*100*		*25 - 150*	*05/04/22 04:44*	*05/04/22 13:48*	*1*
13C4 PFHpA	*107*		*25 - 150*	*05/04/22 04:44*	*05/04/22 13:48*	*1*
13C4 PFOA	*106*		*25 - 150*	*05/04/22 04:44*	*05/04/22 13:48*	*1*
13C5 PFNA	*103*		*25 - 150*	*05/04/22 04:44*	*05/04/22 13:48*	*1*

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

Lab Sample ID: MB 320-585036/1-A
Matrix: Water
Analysis Batch: 585153

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 585036

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	102		25 - 150	05/04/22 04:44	05/04/22 13:48	1
13C2 PFUnA	98		25 - 150	05/04/22 04:44	05/04/22 13:48	1
13C2 PFDoA	100		25 - 150	05/04/22 04:44	05/04/22 13:48	1
13C2 PFTeDA	97		25 - 150	05/04/22 04:44	05/04/22 13:48	1
13C2 PFHxDA	98		25 - 150	05/04/22 04:44	05/04/22 13:48	1
13C3 PFBS	88		25 - 150	05/04/22 04:44	05/04/22 13:48	1
18O2 PFHxS	95		25 - 150	05/04/22 04:44	05/04/22 13:48	1
13C4 PFOS	88		25 - 150	05/04/22 04:44	05/04/22 13:48	1
13C8 FOSA	87		10 - 150	05/04/22 04:44	05/04/22 13:48	1
d3-NMeFOSAA	84		25 - 150	05/04/22 04:44	05/04/22 13:48	1
d5-NEtFOSAA	84		25 - 150	05/04/22 04:44	05/04/22 13:48	1
d-N-MeFOSA-M	80		10 - 150	05/04/22 04:44	05/04/22 13:48	1
d-N-EtFOSA-M	81		10 - 150	05/04/22 04:44	05/04/22 13:48	1
d7-N-MeFOSE-M	83		10 - 150	05/04/22 04:44	05/04/22 13:48	1
d9-N-EtFOSE-M	73		10 - 150	05/04/22 04:44	05/04/22 13:48	1
M2-4:2 FTS	117		25 - 150	05/04/22 04:44	05/04/22 13:48	1
M2-6:2 FTS	106		25 - 150	05/04/22 04:44	05/04/22 13:48	1
M2-8:2 FTS	108		25 - 150	05/04/22 04:44	05/04/22 13:48	1
13C3 HFPO-DA	103		25 - 150	05/04/22 04:44	05/04/22 13:48	1
13C2 10:2 FTS	96		25 - 150	05/04/22 04:44	05/04/22 13:48	1

Lab Sample ID: LCS 320-585036/2-A
Matrix: Water
Analysis Batch: 585153

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 585036

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	40.0	41.8		ng/L		104	60 - 135
Perfluoropentanoic acid (PFPeA)	40.0	43.0		ng/L		107	60 - 135
Perfluorohexanoic acid (PFHxA)	40.0	40.4		ng/L		101	60 - 135
Perfluoroheptanoic acid (PFHpA)	40.0	40.4		ng/L		101	60 - 135
Perfluorooctanoic acid (PFOA)	40.0	42.2		ng/L		105	60 - 135
Perfluorononanoic acid (PFNA)	40.0	43.3		ng/L		108	60 - 135
Perfluorodecanoic acid (PFDA)	40.0	39.9		ng/L		100	60 - 135
Perfluoroundecanoic acid (PFUnA)	40.0	42.0		ng/L		105	60 - 135
Perfluorododecanoic acid (PFDoA)	40.0	41.9		ng/L		105	60 - 135
Perfluorotridecanoic acid (PFTrDA)	40.0	42.0		ng/L		105	60 - 135
Perfluorotetradecanoic acid (PFTeA)	40.0	43.2		ng/L		108	60 - 135
Perfluoro-n-hexadecanoic acid (PFHxDA)	40.0	39.4		ng/L		99	60 - 135
Perfluoro-n-octadecanoic acid (PFODA)	40.0	32.8		ng/L		82	60 - 135
Perfluorobutanesulfonic acid (PFBS)	35.4	37.9		ng/L		107	60 - 135
Perfluoropentanesulfonic acid (PFPeS)	37.5	42.4		ng/L		113	60 - 135
Perfluorohexanesulfonic acid (PFHxS)	36.4	35.9		ng/L		99	60 - 135

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

Lab Sample ID: LCS 320-585036/2-A
Matrix: Water
Analysis Batch: 585153

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 585036

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroheptanesulfonic acid (PFHpS)	38.1	42.8		ng/L		112	60 - 135
Perfluorooctanesulfonic acid (PFOS)	37.1	41.5		ng/L		112	60 - 135
Perfluorononanesulfonic acid (PFNS)	38.4	41.8		ng/L		109	60 - 135
Perfluorodecanesulfonic acid (PFDS)	38.6	41.8		ng/L		108	60 - 135
Perfluorododecanesulfonic acid (PFDoS)	38.7	40.6		ng/L		105	60 - 135
Perfluorooctanesulfonamide (FOSA)	40.0	41.4		ng/L		103	60 - 135
NEtFOSA	40.0	41.9		ng/L		105	60 - 135
NMeFOSA	40.0	44.6		ng/L		111	60 - 135
NMeFOSAA	40.0	39.7		ng/L		99	60 - 135
NEtFOSAA	40.0	40.0		ng/L		100	60 - 135
NMeFOSE	40.0	39.1		ng/L		98	60 - 135
NEtFOSE	40.0	42.9		ng/L		107	60 - 135
4:2 FTS	37.4	39.4		ng/L		106	60 - 135
6:2 FTS	37.9	42.2		ng/L		111	60 - 135
8:2 FTS	38.3	41.7		ng/L		109	60 - 135
10:2 FTS	38.6	38.3		ng/L		99	60 - 135
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.7	48.0		ng/L		127	60 - 135
HFPO-DA (GenX)	40.0	42.8		ng/L		107	60 - 135
9Cl-PF3ONS	37.3	42.7		ng/L		115	60 - 135
11Cl-PF3OUdS	37.7	40.5		ng/L		108	60 - 135

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*97*		*25 - 150*
13C5 PFPeA	*90*		*25 - 150*
13C2 PFHxA	*99*		*25 - 150*
13C4 PFHpA	*106*		*25 - 150*
13C4 PFOA	*103*		*25 - 150*
13C5 PFNA	*102*		*25 - 150*
13C2 PFDA	*102*		*25 - 150*
13C2 PFUnA	*102*		*25 - 150*
13C2 PFDoA	*99*		*25 - 150*
13C2 PFTeDA	*95*		*25 - 150*
13C2 PFHxDA	*107*		*25 - 150*
13C3 PFBS	*85*		*25 - 150*
18O2 PFHxS	*89*		*25 - 150*
13C4 PFOS	*86*		*25 - 150*
13C8 FOSA	*86*		*10 - 150*
d3-NMeFOSAA	*88*		*25 - 150*
d5-NEtFOSAA	*89*		*25 - 150*
d-N-MeFOSA-M	*79*		*10 - 150*
d-N-EtFOSA-M	*83*		*10 - 150*
d7-N-MeFOSE-M	*87*		*10 - 150*
d9-N-EtFOSE-M	*78*		*10 - 150*

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

Lab Sample ID: LCS 320-585036/2-A
Matrix: Water
Analysis Batch: 585153

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 585036

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
M2-4:2 FTS	120		25 - 150
M2-6:2 FTS	114		25 - 150
M2-8:2 FTS	109		25 - 150
13C3 HFPO-DA	97		25 - 150
13C2 10:2 FTS	92		25 - 150

Lab Chronicle

Client: City of Eau Claire
Project/Site: PFAS Testing

Job ID: 500-215329-1

Client Sample ID: WW Outfall

Date Collected: 04/20/22 11:36
Date Received: 04/20/22 12:44

Lab Sample ID: 500-215329-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			585036	05/04/22 04:44	HK	TAL SAC
Total/NA	Analysis	537 (modified)		1	585153	05/04/22 17:20	K1S	TAL SAC

Laboratory References:

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

Accreditation/Certification Summary

Client: City of Eau Claire
Project/Site: PFAS Testing

Job ID: 500-215329-1

Laboratory: Eurofins Sacramento

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998204680	08-31-22

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone: 916-373-5600 Fax: 916-372-1059

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: Tyler Fadness	Lab PM: Fredrick, Sandie	Carrier Tracking No(s):	COC No: 320-42610-10138.1
Client Contact: Ty Fadness	Phone: 715-839-6121	E-Mail: sandra.fredrick@eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: City of Eau Claire	PWSID:	Due Date Requested: 4/29/22		Job #: 500-215329
Address: 203 S Farwell		TAT Requested (days): STANDARD		
City: Eau Claire	500-215329 COC	Compliance Project: Δ Yes Δ No		
State, Zip: WI 54701		PO #: 50210878-00		
Phone:		WO #:		
Email: Tyler Fadness@EauclaireWi Gov		Project #: 32012617		
Project Name: PFAS Testing		SSOW#:		
Site:				

Analysis Requested

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

Sample Identification	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)	PFC_IDA - PFAS, Extended List (36 Analytes)	PFC_IDA_WI - PFAS, Standard List (18 Analytes)	Total Number of containers	Special Instructions/Note:
	Preservation Code:									
WI Outfall	4/20/22	1136	G	Water			X			
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						

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

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Ty Fadness	4/20/22 1200	City of EC			
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone 916-373-5600 Fax: 916-372-1059

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Tyler Fadness	Lab PM: Fredrick, Sandie	Carrier Tracking No(s):	COC No: 320-42610-10138.1
Client Contact: Ty Fadness	Phone: 715-839-6121	E-Mail: sandra.fredrick@eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: City of Eau Claire	PWSID:			Job #:
Address: 203 S Farwell	Due Date Requested: 4/29/22			
City: Eau Claire	TAT Requested (days): STANDARD			
State, Zip: WI, 54701	Compliance Project: Δ Yes Δ No			
Phone:	PO #: 50210879-00			
Email: Tyler.Fadness@EauclaireWi.Gov	WO #:			
Project Name: PFAS Testing	Project #: 32012617			
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	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)	PFC_IDA - PFAS, Extended List (36 Analytes)	PFC_IDA_WI - PFAS, Standard List (16 Analytes)	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
WI Outfall	4/20/22	1136	6	Water			X			
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						

500-215329 Chain of Custody

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

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

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

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	Tyler Fadness	4/20/22 1200	C. of EC	[signature]	4/21/22 940	[illegible]
	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: ☒ Yes Δ No	Custody Seal No.: 1831527 / 1831526	Cooler Temperature(s) °C and Other Remarks: 2.2c

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: City of Eau Claire

Job Number: 500-215329-1

Login Number: 215329
List Number: 2
Creator: Her, David A

List Source: Eurofins Sacramento
List Creation: 04/21/22 10:42 AM

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	1831527/1831526
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	2.7 c
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?	True	
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	

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Sacramento Sample Receiving Notes

500-215329 Field Sheet

Job: _____

Tracking # : 5632 2169 7221

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier

GSO / OnTrac / Goldstreak / USPS / Other _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations. File in the job folder with the COC.

Therm. ID: L-4 Corr. Factor: (+ / -) _____ °C

Ice X Wet X Gel _____ Other _____

Cooler Custody Seal: 1631527 / 1631526

Cooler ID: _____

Temp Observed: 2.7 °C Corrected: 2.7 °C

From: Temp Blank ☒ Sample ☐

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	☐	☒	☐
Cooler Temperature is acceptable?	☒	☐	☐
Frozen samples show signs of thaw?	☐	☐	☒

Initials: DM Date: 4/21/22

Unpacking/Labeling The Samples	Yes	No	NA
CoC is complete w/o discrepancies?	☒	☐	☐
Samples compromised/tampered with?	☐	☒	☐
Sample containers have legible labels?	☒	☐	☐
Sample custody seal?	☐	☐	☒
Containers are not broken or leaking?	☒	☐	☐
Sample date/times are provided?	☒	☐	☐
Appropriate containers are used?	☒	☐	☐
Sample bottles are completely filled?	☒	☐	☐
Sample preservatives verified?	☐	☐	☒
Samples w/o discrepancies?	☒	☐	☐
Zero headspace?*	☐	☐	☒
Alkalinity has no headspace?	☐	☐	☒
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☒
Multiphasic samples are not present?	☒	☐	☐

*Containers requiring zero headspace have no headspace or bubble < 6 mm (1/4")

Initials: DM Date: 4/21/22

Notes: _____

Trizma Lot #(s): _____

Login Completion	Yes	No	NA
Receipt Temperature on COC?	☒	☐	☐
Samples received within hold time?	☒	☐	☐
NCM Filed?	☐	☐	☒
Log Release checked in TALS?	☒	☐	☐

Initials: DM Date: 4/21/22

Isotope Dilution Summary

Client: City of Eau Claire
Project/Site: PFAS Testing

Job ID: 500-215329-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water **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)
500-215329-1	WW Outfall	89	99	103	112	106	107	101	99
LCS 320-585036/2-A	Lab Control Sample	97	90	99	106	103	102	102	102
MB 320-585036/1-A	Method Blank	94	92	100	107	106	103	102	98

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFDoA	PFTDA	PFHxDA	C3PFBS	PFHxS	PFOS	PFOSA	d3NMFOS
Lab Sample ID	Client Sample ID	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(10-150)	(25-150)
500-215329-1	WW Outfall	94	96	92	92	92	84	85	84
LCS 320-585036/2-A	Lab Control Sample	99	95	107	85	89	86	86	88
MB 320-585036/1-A	Method Blank	100	97	98	88	95	88	87	84

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		d5NEFOS	dMeFOSA	dEtFOSA	NMFM	NEFM	M242FTS	M262FTS	M282FTS
Lab Sample ID	Client Sample ID	(25-150)	(10-150)	(10-150)	(10-150)	(10-150)	(25-150)	(25-150)	(25-150)
500-215329-1	WW Outfall	79	78	81	82	76	120	107	110
LCS 320-585036/2-A	Lab Control Sample	89	79	83	87	78	120	114	109
MB 320-585036/1-A	Method Blank	84	80	81	83	73	117	106	108

		Percent Isotope Dilution Recovery (Acceptance Limits)	
		HFPODA	M102FTS
Lab Sample ID	Client Sample ID	(25-150)	(25-150)
500-215329-1	WW Outfall	108	86
LCS 320-585036/2-A	Lab Control Sample	97	92
MB 320-585036/1-A	Method Blank	103	96

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
PFHxDA = 13C2 PFHxDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
dMeFOSA = d-N-MeFOSA-M
dEtFOSA = d-N-EtFOSA-M
NMFM = d7-N-MeFOSE-M
NEFM = d9-N-EtFOSE-M
M242FTS = M2-4:2 FTS
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
HFPODA = 13C3 HFPO-DA
M102FTS = 13C2 10:2 FTS