

ANALYTICAL REPORT

Eurofins Eaton Analytical - South Bend
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Laboratory Job ID: 810-6197-1
Client Project/Site: IL EPA PFAS18

For:

Illinois Environmental Protection Agency
1021 North Grand Avenue East
Springfield, Illinois 62794

Attn: Anthony Dulka



Authorized for release by:
11/17/2021 8:08:33 AM

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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: Illinois Environmental Protection Agency
Project/Site: IL EPA PFAS18

Job ID: 810-6197-1

Qualifiers

LCMS

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.

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: Illinois Environmental Protection Agency
Project/Site: IL EPA PFAS18

Job ID: 810-6197-1

Job ID: 810-6197-1

Laboratory: Eurofins Eaton Analytical - South Bend

Narrative

Job Narrative
810-6197-1

Comments

No additional comments.

Receipt

The samples were received on 10/28/2021 9:45 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 1.2° C.

LCMS

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.



Detection Summary

Client: Illinois Environmental Protection Agency
Project/Site: IL EPA PFAS18

Job ID: 810-6197-1

Client Sample ID: TM03

Lab Sample ID: 810-6197-1

PWSID Number: IL0270350

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	2.1		2.0	ng/L	1		537.1	Total/NA

Client Sample ID: TM03 FRB

Lab Sample ID: 810-6197-2

PWSID Number: IL0270350

No Detections.

This Detection Summary does not include radiochemical test results.

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Client Sample Results

Client: Illinois Environmental Protection Agency
Project/Site: IL EPA PFAS18

Job ID: 810-6197-1

Client Sample ID: TM03

Lab Sample ID: 810-6197-1

Date Collected: 10/27/21 11:20

Matrix: Drinking Water

Date Received: 10/28/21 09:45

PWSID Number: IL0270350

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	2.1		2.0	ng/L		11/01/21 08:19	11/02/21 05:03	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 05:03	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 05:03	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 05:03	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 05:03	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 05:03	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 05:03	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 05:03	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 05:03	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 05:03	1
Perfluorotetradecanoic acid (PFTeDA)	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 05:03	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 05:03	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 05:03	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 05:03	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 05:03	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 05:03	1
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 05:03	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 05:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	86		70 - 130	11/01/21 08:19	11/02/21 05:03	1
13C2 PFDA	96		70 - 130	11/01/21 08:19	11/02/21 05:03	1
13C3 HFPO-DA	92		70 - 130	11/01/21 08:19	11/02/21 05:03	1
d5-NEtFOSAA	89		70 - 130	11/01/21 08:19	11/02/21 05:03	1

Client Sample ID: TM03 FRB

Lab Sample ID: 810-6197-2

Date Collected: 10/27/21 11:20

Matrix: Drinking Water

Date Received: 10/28/21 09:45

PWSID Number: IL0270350

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		11/03/21 07:22	11/04/21 02:40	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		11/03/21 07:22	11/04/21 02:40	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		11/03/21 07:22	11/04/21 02:40	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		11/03/21 07:22	11/04/21 02:40	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		11/03/21 07:22	11/04/21 02:40	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		11/03/21 07:22	11/04/21 02:40	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		11/03/21 07:22	11/04/21 02:40	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		11/03/21 07:22	11/04/21 02:40	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		11/03/21 07:22	11/04/21 02:40	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		11/03/21 07:22	11/04/21 02:40	1
Perfluorotetradecanoic acid (PFTeDA)	<2.0		2.0	ng/L		11/03/21 07:22	11/04/21 02:40	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		11/03/21 07:22	11/04/21 02:40	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		11/03/21 07:22	11/04/21 02:40	1

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Client Sample Results

Client: Illinois Environmental Protection Agency
 Project/Site: IL EPA PFAS18

Job ID: 810-6197-1

Client Sample ID: TM03 FRB

Lab Sample ID: 810-6197-2

Date Collected: 10/27/21 11:20

Matrix: Drinking Water

Date Received: 10/28/21 09:45

PWSID Number: IL0270350

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		11/03/21 07:22	11/04/21 02:40	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<2.0		2.0	ng/L		11/03/21 07:22	11/04/21 02:40	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<2.0		2.0	ng/L		11/03/21 07:22	11/04/21 02:40	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<2.0		2.0	ng/L		11/03/21 07:22	11/04/21 02:40	1
4,8-Dioxo-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		11/03/21 07:22	11/04/21 02:40	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C2 PFHxA	94		70 - 130			11/03/21 07:22	11/04/21 02:40	1
13C2 PFDA	88		70 - 130			11/03/21 07:22	11/04/21 02:40	1
13C3 HFPO-DA	90		70 - 130			11/03/21 07:22	11/04/21 02:40	1
d5-NEtFOSAA	81		70 - 130			11/03/21 07:22	11/04/21 02:40	1

Surrogate Summary

Client: Illinois Environmental Protection Agency
 Project/Site: IL EPA PFAS18

Job ID: 810-6197-1

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS)

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		PFHxA (70-130)	PFDA (70-130)	HFPODA (70-130)	d5NEFOS (70-130)
810-6197-1	TM03	86	96	92	89
810-6197-2	TM03 FRB	94	88	90	81
LCS 810-6294/3-A	Lab Control Sample	87	85	87	79
LCS 810-6450/3-A	Lab Control Sample	92	85	92	83
LLCS 810-6294/2-A	Lab Control Sample	93	92	93	86
LLCS 810-6450/2-A	Lab Control Sample	94	91	94	89
MB 810-6294/1-A	Method Blank	92	89	88	88
MB 810-6450/1-A	Method Blank	92	90	90	88

Surrogate Legend

PFHxA = 13C2 PFHxA
 PFDA = 13C2 PFDA
 HFPODA = 13C3 HFPO-DA
 d5NEFOS = d5-NEtFOSAA



QC Sample Results

Client: Illinois Environmental Protection Agency
Project/Site: IL EPA PFAS18

Job ID: 810-6197-1

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS)

Lab Sample ID: MB 810-6294/1-A
Matrix: Drinking Water
Analysis Batch: 6356

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 6294

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 02:46	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 02:46	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 02:46	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 02:46	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 02:46	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 02:46	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 02:46	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 02:46	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 02:46	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 02:46	1
Perfluorotetradecanoic acid (PFTeDA)	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 02:46	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 02:46	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 02:46	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 02:46	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 02:46	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 02:46	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 02:46	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		11/01/21 08:19	11/02/21 02:46	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C2 PFHxA	92		70 - 130	11/01/21 08:19	11/02/21 02:46	1
13C2 PFDA	89		70 - 130	11/01/21 08:19	11/02/21 02:46	1
13C3 HFPO-DA	88		70 - 130	11/01/21 08:19	11/02/21 02:46	1
d5-NEtFOSAA	88		70 - 130	11/01/21 08:19	11/02/21 02:46	1

Lab Sample ID: LCS 810-6294/3-A
Matrix: Drinking Water
Analysis Batch: 6356

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 6294

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluoroundecanoic acid (PFUnA)	185	146		ng/L		79	70 - 130
Perfluorohexanoic acid (PFHxA)	185	166		ng/L		90	70 - 130
Perfluorododecanoic acid (PFDoA)	185	153		ng/L		83	70 - 130
Perfluorooctanoic acid (PFOA)	185	170		ng/L		92	70 - 130
Perfluorodecanoic acid (PFDA)	185	164		ng/L		89	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	185	170		ng/L		92	70 - 130
Perfluorobutanesulfonic acid (PFBS)	185	166		ng/L		90	70 - 130
Perfluoroheptanoic acid (PFHpA)	185	165		ng/L		89	70 - 130
Perfluorononanoic acid (PFNA)	185	170		ng/L		92	70 - 130

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QC Sample Results

Client: Illinois Environmental Protection Agency
Project/Site: IL EPA PFAS18

Job ID: 810-6197-1

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: LCS 810-6294/3-A

Matrix: Drinking Water

Analysis Batch: 6356

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 6294

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorotetradecanoic acid (PFTeDA)	185	146		ng/L		79	70 - 130
Perfluorotridecanoic acid (PFTrDA)	185	152		ng/L		82	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	185	155		ng/L		84	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	185	151		ng/L		82	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	185	166		ng/L		90	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	185	166		ng/L		90	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	185	152		ng/L		82	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	185	164		ng/L		89	70 - 130
LCS LCS							
Surrogate	%Recovery	Qualifier	Limits				
13C2 PFHxA	87		70 - 130				
13C2 PFDA	85		70 - 130				
13C3 HFPO-DA	87		70 - 130				
d5-NEtFOSAA	79		70 - 130				

Lab Sample ID: LLCS 810-6294/2-A

Matrix: Drinking Water

Analysis Batch: 6356

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 6294

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorooctanesulfonic acid (PFOS)	1.87	1.91	J	ng/L		102	50 - 150
Perfluoroundecanoic acid (PFUnA)	1.87	1.75	J	ng/L		93	50 - 150
Perfluorohexanoic acid (PFHxA)	1.87	1.79	J	ng/L		95	50 - 150
Perfluorododecanoic acid (PFDoA)	1.87	1.66	J	ng/L		88	50 - 150
Perfluorooctanoic acid (PFOA)	1.87	1.95	J	ng/L		104	50 - 150
Perfluorodecanoic acid (PFDA)	1.87	1.78	J	ng/L		95	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	1.87	1.83	J	ng/L		98	50 - 150
Perfluorobutanesulfonic acid (PFBS)	1.87	1.78	J	ng/L		95	50 - 150
Perfluoroheptanoic acid (PFHpA)	1.87	2.02		ng/L		108	50 - 150
Perfluorononanoic acid (PFNA)	1.87	1.71	J	ng/L		91	50 - 150
Perfluorotetradecanoic acid (PFTeDA)	1.87	1.54	J	ng/L		82	50 - 150
Perfluorotridecanoic acid (PFTrDA)	1.87	1.61	J	ng/L		86	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.87	1.68	J	ng/L		90	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.87	1.51	J	ng/L		81	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	1.87	1.69	J	ng/L		90	50 - 150

Eurofins Eaton Analytical - South Bend

QC Sample Results

Client: Illinois Environmental Protection Agency
Project/Site: IL EPA PFAS18

Job ID: 810-6197-1

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: LLCS 810-6294/2-A

Matrix: Drinking Water

Analysis Batch: 6356

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 6294

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec. Limits
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	1.87	1.67	J	ng/L		89	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	1.87	1.65	J	ng/L		88	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.87	1.74	J	ng/L		93	50 - 150

Surrogate	LLCS %Recovery	LLCS Qualifier	Limits
13C2 PFHxA	93		70 - 130
13C2 PFDA	92		70 - 130
13C3 HFPO-DA	93		70 - 130
d5-NEtFOSAA	86		70 - 130

Lab Sample ID: MB 810-6450/1-A

Matrix: Drinking Water

Analysis Batch: 6524

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 6450

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		11/03/21 06:20	11/03/21 20:18	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		11/03/21 06:20	11/03/21 20:18	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		11/03/21 06:20	11/03/21 20:18	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		11/03/21 06:20	11/03/21 20:18	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		11/03/21 06:20	11/03/21 20:18	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		11/03/21 06:20	11/03/21 20:18	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		11/03/21 06:20	11/03/21 20:18	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		11/03/21 06:20	11/03/21 20:18	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		11/03/21 06:20	11/03/21 20:18	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		11/03/21 06:20	11/03/21 20:18	1
Perfluorotetradecanoic acid (PFTeDA)	<2.0		2.0	ng/L		11/03/21 06:20	11/03/21 20:18	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		11/03/21 06:20	11/03/21 20:18	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		11/03/21 06:20	11/03/21 20:18	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		11/03/21 06:20	11/03/21 20:18	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<2.0		2.0	ng/L		11/03/21 06:20	11/03/21 20:18	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<2.0		2.0	ng/L		11/03/21 06:20	11/03/21 20:18	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<2.0		2.0	ng/L		11/03/21 06:20	11/03/21 20:18	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		11/03/21 06:20	11/03/21 20:18	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	92		70 - 130	11/03/21 06:20	11/03/21 20:18	1
13C2 PFDA	90		70 - 130	11/03/21 06:20	11/03/21 20:18	1
13C3 HFPO-DA	90		70 - 130	11/03/21 06:20	11/03/21 20:18	1
d5-NEtFOSAA	88		70 - 130	11/03/21 06:20	11/03/21 20:18	1

QC Sample Results

Client: Illinois Environmental Protection Agency
Project/Site: IL EPA PFAS18

Job ID: 810-6197-1

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: LCS 810-6450/3-A

Matrix: Drinking Water

Analysis Batch: 6524

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 6450

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorooctanesulfonic acid (PFOS)	97.3	87.7		ng/L		90	70 - 130
Perfluoroundecanoic acid (PFUnA)	97.3	86.2		ng/L		89	70 - 130
Perfluorohexanoic acid (PFHxA)	97.3	97.4		ng/L		100	70 - 130
Perfluorododecanoic acid (PFDoA)	97.3	87.8		ng/L		90	70 - 130
Perfluorooctanoic acid (PFOA)	97.3	97.2		ng/L		100	70 - 130
Perfluorodecanoic acid (PFDA)	97.3	90.4		ng/L		93	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	97.3	94.4		ng/L		97	70 - 130
Perfluorobutanesulfonic acid (PFBS)	97.3	95.9		ng/L		99	70 - 130
Perfluoroheptanoic acid (PFHpA)	97.3	103		ng/L		106	70 - 130
Perfluorononanoic acid (PFNA)	97.3	98.1		ng/L		101	70 - 130
Perfluorotetradecanoic acid (PFTeDA)	97.3	73.0		ng/L		75	70 - 130
Perfluorotridecanoic acid (PFTrDA)	97.3	84.3		ng/L		87	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	97.3	82.8		ng/L		85	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	97.3	84.7		ng/L		87	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	97.3	96.5		ng/L		99	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	97.3	85.3		ng/L		88	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	97.3	80.5		ng/L		83	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	97.3	95.2		ng/L		98	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
13C2 PFHxA	92		70 - 130
13C2 PFDA	85		70 - 130
13C3 HFPO-DA	92		70 - 130
d5-NEtFOSAA	83		70 - 130

Lab Sample ID: LLCS 810-6450/2-A

Matrix: Drinking Water

Analysis Batch: 6524

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 6450

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorooctanesulfonic acid (PFOS)	2.09	1.97	J	ng/L		95	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.09	1.84	J	ng/L		88	50 - 150
Perfluorohexanoic acid (PFHxA)	2.09	2.03		ng/L		97	50 - 150
Perfluorododecanoic acid (PFDoA)	2.09	1.84	J	ng/L		88	50 - 150
Perfluorooctanoic acid (PFOA)	2.09	2.02		ng/L		97	50 - 150
Perfluorodecanoic acid (PFDA)	2.09	1.87	J	ng/L		89	50 - 150

Eurofins Eaton Analytical - South Bend

QC Sample Results

Client: Illinois Environmental Protection Agency
Project/Site: IL EPA PFAS18

Job ID: 810-6197-1

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: LLCS 810-6450/2-A

Matrix: Drinking Water

Analysis Batch: 6524

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 6450

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorohexanesulfonic acid (PFHxS)	2.09	1.94	J	ng/L		93	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.09	1.68	J	ng/L		81	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.09	1.97	J	ng/L		95	50 - 150
Perfluorononanoic acid (PFNA)	2.09	2.03	J	ng/L		98	50 - 150
Perfluorotetradecanoic acid (PFTeDA)	2.09	1.47	J	ng/L		70	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.09	1.69	J	ng/L		81	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.09	1.77	J	ng/L		85	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.09	1.87	J	ng/L		90	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	2.09	1.84	J	ng/L		88	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	2.09	1.65	J	ng/L		79	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	2.09	1.43	J	ng/L		69	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.09	2.03	J	ng/L		97	50 - 150

Surrogate	LLCS %Recovery	LLCS Qualifier	Limits
13C2 PFHxA	94		70 - 130
13C2 PFDA	91		70 - 130
13C3 HFPO-DA	94		70 - 130
d5-NEtFOSAA	89		70 - 130

QC Association Summary

Client: Illinois Environmental Protection Agency
 Project/Site: IL EPA PFAS18

Job ID: 810-6197-1

LCMS

Prep Batch: 6294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-6197-1	TM03	Total/NA	Drinking Water	537.1 DW	
MB 810-6294/1-A	Method Blank	Total/NA	Drinking Water	537.1 DW	
LCS 810-6294/3-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	
LLCS 810-6294/2-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	

Analysis Batch: 6356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-6197-1	TM03	Total/NA	Drinking Water	537.1	6294
MB 810-6294/1-A	Method Blank	Total/NA	Drinking Water	537.1	6294
LCS 810-6294/3-A	Lab Control Sample	Total/NA	Drinking Water	537.1	6294
LLCS 810-6294/2-A	Lab Control Sample	Total/NA	Drinking Water	537.1	6294

Prep Batch: 6450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-6197-2	TM03 FRB	Total/NA	Drinking Water	537.1 DW	
MB 810-6450/1-A	Method Blank	Total/NA	Drinking Water	537.1 DW	
LCS 810-6450/3-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	
LLCS 810-6450/2-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	

Analysis Batch: 6524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-6197-2	TM03 FRB	Total/NA	Drinking Water	537.1	6450
MB 810-6450/1-A	Method Blank	Total/NA	Drinking Water	537.1	6450
LCS 810-6450/3-A	Lab Control Sample	Total/NA	Drinking Water	537.1	6450
LLCS 810-6450/2-A	Lab Control Sample	Total/NA	Drinking Water	537.1	6450

Lab Chronicle

Client: Illinois Environmental Protection Agency
 Project/Site: IL EPA PFAS18

Job ID: 810-6197-1

Client Sample ID: TM03

Lab Sample ID: 810-6197-1

Date Collected: 10/27/21 11:20

Matrix: Drinking Water

Date Received: 10/28/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW			6294	11/01/21 08:19	CM	EA SB
Total/NA	Analysis	537.1		1	6356	11/02/21 05:03	MH	EA SB

Client Sample ID: TM03 FRB

Lab Sample ID: 810-6197-2

Date Collected: 10/27/21 11:20

Matrix: Drinking Water

Date Received: 10/28/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW			6450	11/03/21 07:22	TR	EA SB
Total/NA	Analysis	537.1		1	6524	11/04/21 02:40	MH	EA SB

Laboratory References:

EA SB = Eurofins Eaton Analytical - South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777



Accreditation/Certification Summary

Client: Illinois Environmental Protection Agency
 Project/Site: IL EPA PFAS18

Job ID: 810-6197-1

Laboratory: Eurofins Eaton Analytical - South Bend

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Illinois	NELAP	200001	09-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
537.1	537.1 DW	Drinking Water	11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid
537.1	537.1 DW	Drinking Water	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
537.1	537.1 DW	Drinking Water	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid
537.1	537.1 DW	Drinking Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)
537.1	537.1 DW	Drinking Water	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)
537.1	537.1 DW	Drinking Water	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)
537.1	537.1 DW	Drinking Water	Perfluorobutanesulfonic acid (PFBS)
537.1	537.1 DW	Drinking Water	Perfluorodecanoic acid (PFDA)
537.1	537.1 DW	Drinking Water	Perfluorododecanoic acid (PFDoA)
537.1	537.1 DW	Drinking Water	Perfluoroheptanoic acid (PFHpA)
537.1	537.1 DW	Drinking Water	Perfluorohexanesulfonic acid (PFHxS)
537.1	537.1 DW	Drinking Water	Perfluorohexanoic acid (PFHxA)
537.1	537.1 DW	Drinking Water	Perfluorononanoic acid (PFNA)
537.1	537.1 DW	Drinking Water	Perfluorooctanesulfonic acid (PFOS)
537.1	537.1 DW	Drinking Water	Perfluorooctanoic acid (PFOA)
537.1	537.1 DW	Drinking Water	Perfluorotetradecanoic acid (PFTeDA)
537.1	537.1 DW	Drinking Water	Perfluorotridecanoic acid (PFTTrDA)
537.1	537.1 DW	Drinking Water	Perfluoroundecanoic acid (PFUnA)

Method Summary

Client: Illinois Environmental Protection Agency
Project/Site: IL EPA PFAS18

Job ID: 810-6197-1

Method	Method Description	Protocol	Laboratory
537.1	Perfluorinated Alkyl Acids (LC/MS)	EPA	EA SB
537.1 DW	Extraction of Perfluorinated Alkyl Acids	EPA	EA SB

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EA SB = Eurofins Eaton Analytical - South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777



Sample Summary

Client: Illinois Environmental Protection Agency
Project/Site: IL EPA PFAS18

Job ID: 810-6197-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
810-6197-1	TM03	Drinking Water	10/27/21 11:20	10/28/21 09:45	IL0270350
810-6197-2	TM03 FRB	Drinking Water	10/27/21 11:20	10/28/21 09:45	IL0270350

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Eaton Analytical



810-6197 Chain of Custody

110 S. Hill Street
South Bend, IN 46617
T: 1.800.332.4345
F: 1.574.233.8207

Order # 81000191
Batch # _____

www.EurofinsUS.com/Eaton

CHAIN OF CUSTODY RECORD

Page ___ of ___

Shaded area for EEA use only

PWS Name				SAMPLER (Signature)				PWS ID #		STATE (sample origin)		Region		PO#		# OF CONTAINERS	MATRIX CODE	TURNAROUND TIME		
GERMANTOWN				KAREN BRIDGES				IL0270350		IL		Springfield		20-532EPA-Water-P-17351						
BILL TO: IL EPA Fiscal Services Mail Code #2 1021 North Grand Avenue East Springfield, IL 62794				COMPLIANCE MONITORING		Yes No		POPULATION SERVED		SOURCE WATER		Preservative Checks								
LAB Number		COLLECTION				SAMPLING SITE				TEST NAME				pH acceptable? √	Residual Chlorine (P/A)	CHLORINATED		# OF CONTAINERS	MATRIX CODE	TURNAROUND TIME
		DATE	TIME	AM	PM											YES	NO			
1		10/27/2021	11:20	X		TM03				PFAS (18 compounds) - Method 537.1						X		2	DW	SW
2		10/27/2021	11:20	X		FRB											X	1		
3																				
4																				
5																				
6																				
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8																				
9																				
10																				
11																				
12																				
13																				
14																				

RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME	LAB RESERVES THE RIGHT TO RETURN UNUSED PORTIONS OF NON-AQUEOUS SAMPLES TO CLIENT	
	10-27-21	3:00				LAB COMMENTS	
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME		
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED FOR LABORATORY BY:	DATE	TIME	CONDITIONS UPON RECEIPT (check one):	
				10-28-2021	0945	Iced/Wet/Blue _____ Ambient _____ 1.2 °C Upon Receipt _____ N/A	
MATRIX CODES: DW-DRINKING WATER RW-REAGENT WATER GW- GROUND WATER EW-EXPOSURE WATER SW- SURFACE WATER PW-POOL WATER WW-WASTE WATER		TURN-AROUND TIME (TAT) - SURCHARGES SW = Standard Written: (15 working days) 0% RV* = Rush Verbal (5 working days) 50% RW* = Rush Written: (5 working days) 75% * Please call, expedited service not available for all testing		IV* = Immediate Verbal: (3 working days) IW* = Immediate Written: (3 working days) SP* = Weekend, Holiday STAT* = Less than 48 hours		100% 125% CALL CALL	

Sample analysis will be provided according to the standard EEA/Water Services Terms, which are available upon request. Any other terms proposed by Customer are deemed material alterations and are rejected unless expressly agreed to in writing by EEA.

Login Sample Receipt Checklist

Client: Illinois Environmental Protection Agency

Job Number: 810-6197-1

Login Number: 6197

List Source: Eurofins Eaton Analytical - South Bend

List Number: 1

Creator: Pehling-Wright, Penny

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	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	
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	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	