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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Kevin Tenk
City of Tarpon Springs
1624 L & R Industrial Blvd
Tarpon Springs, Florida 34689

Generated 4/12/2023 1:59:05 PM

JOB DESCRIPTION

UCMR5 - FL6521784 - SE1 - Grosse Avenue Plant

JOB NUMBER

810-54403-1

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend IN 46617

See page two for job notes and contact information.

myEOL

Job Notes

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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Eaton Analytical, LLC Project Manager.

Authorization

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Table of Contents

Definitions/Glossary

Client: City of Tarpon Springs
Job ID: 810-54403-1
Project/Site: UCMR5 - FL6521784 - SE1 - Grosse Avenue Plar

Qualifiers

Metals

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.
¤	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

Job ID: 810-54403-1

Laboratory: Eurofins Eaton Analytical South Bend

Narrative

Job Narrative
810-54403-1

Receipt
The sample was received on 2/22/2023 9:45 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice.

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

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

Detection Summary

Client: City of Tarpon Springs
Job ID: 810-54403-1
Project/Site: UCMR5 - FL6521784 - SE1 - Grosse Avenue Plar

Client Sample ID: 0001/Grosse Ave/TP/1784001/EP
Lab Sample ID: 810-54403-1
PWSID Number: FL6521784

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.0090		0.0050		ug/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	0.0082		0.0030		ug/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	0.0056		0.0030		ug/L	1		533	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.0039		0.0030		ug/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	0.0085		0.0040		ug/L	1		533	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.0132		0.0030		ug/L	1		533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.0076		0.0030		ug/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.0369		0.0040		ug/L	1		533	Total/NA

Client Sample ID: 0001/Grosse Ave/TP/1784001/EP
Lab Sample ID: 810-54403-1FRB
PWSID Number: FL6521784

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: 0001/Grosse Ave/TP/1784001/EP
Lab Sample ID: 810-54403-1
Date Collected: 02/21/23 09:50
Matrix: Drinking Water
Date Received: 02/22/23 09:45
PWSID Number: FL6521784

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**0.0090**		0.0050		ug/L		03/17/23 05:48	03/18/23 20:34	1
Perfluoropentanoic acid (PFPeA)	**0.0082**		0.0030		ug/L		03/17/23 05:48	03/18/23 20:34	1
Perfluorohexanoic acid (PFHxA)	**0.0056**		0.0030		ug/L		03/17/23 05:48	03/18/23 20:34	1
Perfluoroheptanoic acid (PFHpA)	**0.0039**		0.0030		ug/L		03/17/23 05:48	03/18/23 20:34	1
Perfluorooctanoic acid (PFOA)	**0.0085**		0.0040		ug/L		03/17/23 05:48	03/18/23 20:34	1
Perfluorononanoic acid (PFNA)	<0.0040		0.0040		ug/L		03/17/23 05:48	03/18/23 20:34	1
Perfluorodecanoic acid (PFDA)	<0.0030		0.0030		ug/L		03/17/23 05:48	03/18/23 20:34	1
Perfluoroundecanoic acid (PFUnA)	<0.0020		0.0020		ug/L		03/17/23 05:48	03/18/23 20:34	1
Perfluorododecanoic acid (PFDoA)	<0.0030		0.0030		ug/L		03/17/23 05:48	03/18/23 20:34	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0030		0.0030		ug/L		03/17/23 05:48	03/18/23 20:34	1
Perfluorobutanesulfonic acid (PFBS)	**0.0132**		0.0030		ug/L		03/17/23 05:48	03/18/23 20:34	1
Perfluorohexanesulfonic acid (PFHxS)	**0.0076**		0.0030		ug/L		03/17/23 05:48	03/18/23 20:34	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.0030		0.0030		ug/L		03/17/23 05:48	03/18/23 20:34	1
Perfluorooctanesulfonic acid (PFOS)	**0.0369**		0.0040		ug/L		03/17/23 05:48	03/18/23 20:34	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0040		0.0040		ug/L		03/17/23 05:48	03/18/23 20:34	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0050		0.0050		ug/L		03/17/23 05:48	03/18/23 20:34	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.0020		0.0020		ug/L		03/17/23 05:48	03/18/23 20:34	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.0050		0.0050		ug/L		03/17/23 05:48	03/18/23 20:34	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0030		0.0030		ug/L		03/17/23 05:48	03/18/23 20:34	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0050		0.0050		ug/L		03/17/23 05:48	03/18/23 20:34	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0050		0.0050		ug/L		03/17/23 05:48	03/18/23 20:34	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0200		0.0200		ug/L		03/17/23 05:48	03/18/23 20:34	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0040		0.0040		ug/L		03/17/23 05:48	03/18/23 20:34	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0030		0.0030		ug/L		03/17/23 05:48	03/18/23 20:34	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.0030		0.0030		ug/L		03/17/23 05:48	03/18/23 20:34	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*95*		*50 - 200*	*03/17/23 05:48*	*03/18/23 20:34*	*1*
13C4 PFBA	*89*		*50 - 200*	*03/17/23 05:48*	*03/18/23 20:34*	*1*
13C3 PFBS	*94*		*50 - 200*	*03/17/23 05:48*	*03/18/23 20:34*	*1*
13C5 PFPeA	*88*		*50 - 200*	*03/17/23 05:48*	*03/18/23 20:34*	*1*
13C5 PFHxA	*86*		*50 - 200*	*03/17/23 05:48*	*03/18/23 20:34*	*1*
13C4 PFHpA	*85*		*50 - 200*	*03/17/23 05:48*	*03/18/23 20:34*	*1*
13C8 PFOA	*82*		*50 - 200*	*03/17/23 05:48*	*03/18/23 20:34*	*1*
13C9 PFNA	*80*		*50 - 200*	*03/17/23 05:48*	*03/18/23 20:34*	*1*
13C6 PFDA	*76*		*50 - 200*	*03/17/23 05:48*	*03/18/23 20:34*	*1*
13C7 PFUnA	*74*		*50 - 200*	*03/17/23 05:48*	*03/18/23 20:34*	*1*
13C2 PFDoA	*73*		*50 - 200*	*03/17/23 05:48*	*03/18/23 20:34*	*1*

Client Sample ID: 0001/Grosse Ave/TP/1784001/EP
Lab Sample ID: 810-54403-1

Date Collected: 02/21/23 09:50
Matrix: Drinking Water
Date Received: 02/22/23 09:45
PWSID Number: FL6521784

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 PFOS	*91*		*50 - 200*	*03/17/23 05:48*	*03/18/23 20:34*	*1*
13C3 PFHxS	*93*		*50 - 200*	*03/17/23 05:48*	*03/18/23 20:34*	*1*
13C2-4:2-FTS	*98*		*50 - 200*	*03/17/23 05:48*	*03/18/23 20:34*	*1*
13C2-6:2-FTS	*102*		*50 - 200*	*03/17/23 05:48*	*03/18/23 20:34*	*1*
13C2-8:2-FTS	*90*		*50 - 200*	*03/17/23 05:48*	*03/18/23 20:34*	*1*

Method: EPA 537.1 UCMR5 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.0047		0.0047	ug/L		03/03/23 06:51	03/05/23 01:38	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.0056		0.0056	ug/L		03/03/23 06:51	03/05/23 01:38	1
Perfluorotetradecanoic acid (PFTA)	<0.0075		0.0075	ug/L		03/03/23 06:51	03/05/23 01:38	1
Perfluorotridecanoic acid (PFTrDA)	<0.0066		0.0066	ug/L		03/03/23 06:51	03/05/23 01:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*81*		*70 - 130*	*03/03/23 06:51*	*03/05/23 01:38*	*1*
13C2 PFHxA	*92*		*70 - 130*	*03/03/23 06:51*	*03/05/23 01:38*	*1*
13C2 PFDA	*87*		*70 - 130*	*03/03/23 06:51*	*03/05/23 01:38*	*1*
13C3 HFPO-DA	*90*		*70 - 130*	*03/03/23 06:51*	*03/05/23 01:38*	*1*

Method: EPA 200.7 UCMR5 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<9.00		9.00	ug/L		02/27/23 13:10	02/28/23 13:19	1

Client Sample ID: 0001/Grosse Ave/TP/1784001/EP
Lab Sample ID: 810-54403-1FRB

Date Collected: 02/21/23 09:50
Matrix: Drinking Water
Date Received: 02/22/23 09:45
PWSID Number: FL6521784

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.0005		0.0050	ug/L		03/17/23 05:48	03/18/23 22:21	1
Perfluoropentanoic acid (PFPeA)	<0.0004		0.0030	ug/L		03/17/23 05:48	03/18/23 22:21	1
Perfluorohexanoic acid (PFHxA)	<0.0004		0.0030	ug/L		03/17/23 05:48	03/18/23 22:21	1
Perfluoroheptanoic acid (PFHpA)	<0.0004		0.0030	ug/L		03/17/23 05:48	03/18/23 22:21	1
Perfluorooctanoic acid (PFOA)	<0.0004		0.0040	ug/L		03/17/23 05:48	03/18/23 22:21	1
Perfluorononanoic acid (PFNA)	<0.0004		0.0040	ug/L		03/17/23 05:48	03/18/23 22:21	1
Perfluorodecanoic acid (PFDA)	<0.0004		0.0030	ug/L		03/17/23 05:48	03/18/23 22:21	1
Perfluoroundecanoic acid (PFUnA)	<0.0004		0.0020	ug/L		03/17/23 05:48	03/18/23 22:21	1
Perfluorododecanoic acid (PFDoA)	<0.0004		0.0030	ug/L		03/17/23 05:48	03/18/23 22:21	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0004		0.0030	ug/L		03/17/23 05:48	03/18/23 22:21	1
Perfluorobutanesulfonic acid (PFBS)	<0.0004		0.0030	ug/L		03/17/23 05:48	03/18/23 22:21	1
Perfluorohexanesulfonic acid (PFHxS)	<0.0004		0.0030	ug/L		03/17/23 05:48	03/18/23 22:21	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.0004		0.0030	ug/L		03/17/23 05:48	03/18/23 22:21	1
Perfluorooctanesulfonic acid (PFOS)	<0.0004		0.0040	ug/L		03/17/23 05:48	03/18/23 22:21	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0004		0.0040	ug/L		03/17/23 05:48	03/18/23 22:21	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0005		0.0050	ug/L		03/17/23 05:48	03/18/23 22:21	1

Client Sample ID: 0001/Grosse Ave/TP/1784001/EP
Lab Sample ID: 810-54403-1FRB
Date Collected: 02/21/23 09:50
Matrix: Drinking Water
Date Received: 02/22/23 09:45
PWSID Number: FL6521784

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.0005		0.0020		ug/L		03/17/23 05:48	03/18/23 22:21	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.0005		0.0050		ug/L		03/17/23 05:48	03/18/23 22:21	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0006		0.0030		ug/L		03/17/23 05:48	03/18/23 22:21	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0007		0.0050		ug/L		03/17/23 05:48	03/18/23 22:21	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0006		0.0050		ug/L		03/17/23 05:48	03/18/23 22:21	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0009		0.0200		ug/L		03/17/23 05:48	03/18/23 22:21	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0003		0.0040		ug/L		03/17/23 05:48	03/18/23 22:21	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0004		0.0030		ug/L		03/17/23 05:48	03/18/23 22:21	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.0005		0.0030		ug/L		03/17/23 05:48	03/18/23 22:21	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*92*		*50 - 200*	*03/17/23 05:48*	*03/18/23 22:21*	*1*
13C4 PFBA	*97*		*50 - 200*	*03/17/23 05:48*	*03/18/23 22:21*	*1*
13C3 PFBS	*101*		*50 - 200*	*03/17/23 05:48*	*03/18/23 22:21*	*1*
13C5 PFPeA	*97*		*50 - 200*	*03/17/23 05:48*	*03/18/23 22:21*	*1*
13C5 PFHxA	*98*		*50 - 200*	*03/17/23 05:48*	*03/18/23 22:21*	*1*
13C4 PFHpA	*99*		*50 - 200*	*03/17/23 05:48*	*03/18/23 22:21*	*1*
13C8 PFOA	*99*		*50 - 200*	*03/17/23 05:48*	*03/18/23 22:21*	*1*
13C9 PFNA	*99*		*50 - 200*	*03/17/23 05:48*	*03/18/23 22:21*	*1*
13C6 PFDA	*96*		*50 - 200*	*03/17/23 05:48*	*03/18/23 22:21*	*1*
13C7 PFUnA	*93*		*50 - 200*	*03/17/23 05:48*	*03/18/23 22:21*	*1*
13C2 PFDoA	*90*		*50 - 200*	*03/17/23 05:48*	*03/18/23 22:21*	*1*
13C8 PFOS	*97*		*50 - 200*	*03/17/23 05:48*	*03/18/23 22:21*	*1*
13C3 PFHxS	*99*		*50 - 200*	*03/17/23 05:48*	*03/18/23 22:21*	*1*
13C2-4:2-FTS	*97*		*50 - 200*	*03/17/23 05:48*	*03/18/23 22:21*	*1*
13C2-6:2-FTS	*102*		*50 - 200*	*03/17/23 05:48*	*03/18/23 22:21*	*1*
13C2-8:2-FTS	*95*		*50 - 200*	*03/17/23 05:48*	*03/18/23 22:21*	*1*

Surrogate Summary

Client: City of Tarpon Springs
Project/Site: UCMR5 - FL6521784 - SE1 - Grosse Avenue Plar

Job ID: 810-54403-1

Method: 537.1 UCMR5 - Perfluorinated Alkyl Acids (LC/MS)

Matrix: Drinking Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		d5NEFOS	PFHxA	PFDA	HFPODA
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)	(70-130)
810-54403-1	0001/Grosse Ave/TP/1784001/E	81	92	87	90
LLCS 810-50172/2-A	Lab Control Sample	89	95	94	96
MBL 810-50172/1-A	Method Blank	86	93	89	89

Surrogate Legend

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

Isotope Dilution Summary

Client: City of Tarpon Springs
Job ID: 810-54403-1
Project/Site: UCMR5 - FL6521784 - SE1 - Grosse Avenue Plar

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Matrix: Drinking Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HFPODA (50-200)	PFBA (50-200)	C3PFBS (50-200)	PFPeA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)
810-54403-1	0001/Grosse Ave/TP/1784001/E	95	89	94	88	86	85	82	80
810-54403-1FRB	FRB	92	97	101	97	98	99	99	99
LLCS 810-52002/2-A	Lab Control Sample	100	97	97	96	96	95	95	94
MBL 810-52002/1-A	Method Blank	98	96	98	96	95	95	96	95

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	C6PFDA (50-200)	13C7PUA (50-200)	PFDoA (50-200)	C8PFOS (50-200)	C3PFHS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
810-54403-1	0001/Grosse Ave/TP/1784001/E	76	74	73	91	93	98	102	90
810-54403-1FRB	FRB	96	93	90	97	99	97	102	95
LLCS 810-52002/2-A	Lab Control Sample	90	88	87	91	95	94	95	91
MBL 810-52002/1-A	Method Blank	92	90	88	92	94	93	95	94

Surrogate Legend

HFPODA = 13C3 HFPO-DA
PFBA = 13C4 PFBA
C3PFBS = 13C3 PFBS
PFPeA = 13C5 PFPeA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFDoA = 13C2 PFDoA
C8PFOS = 13C8 PFOS
C3PFHS = 13C3 PFHxS
42FTS = 13C2-4:2-FTS
62FTS = 13C2-6:2-FTS
82FTS = 13C2-8:2-FTS

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Lab Sample ID: MBL 810-52002/1-A
Matrix: Drinking Water
Analysis Batch: 52103

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 52002

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.0005		0.0050		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluoropentanoic acid (PFPeA)	<0.0004		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluorohexanoic acid (PFHxA)	<0.0004		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluoroheptanoic acid (PFHpA)	<0.0004		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluorooctanoic acid (PFOA)	<0.0004		0.0040		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluorononanoic acid (PFNA)	<0.0004		0.0040		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluorodecanoic acid (PFDA)	<0.0004		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluoroundecanoic acid (PFUnA)	<0.0004		0.0020		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluorododecanoic acid (PFDoA)	<0.0004		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0004		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluorobutanesulfonic acid (PFBS)	<0.0004		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluorohexanesulfonic acid (PFHxS)	<0.0004		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.0004		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluorooctanesulfonic acid (PFOS)	<0.0004		0.0040		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0004		0.0040		ug/L		03/17/23 05:48	03/18/23 15:11	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0005		0.0050		ug/L		03/17/23 05:48	03/18/23 15:11	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.0005		0.0020		ug/L		03/17/23 05:48	03/18/23 15:11	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.0005		0.0050		ug/L		03/17/23 05:48	03/18/23 15:11	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0006		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0007		0.0050		ug/L		03/17/23 05:48	03/18/23 15:11	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0006		0.0050		ug/L		03/17/23 05:48	03/18/23 15:11	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0009		0.0200		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0003		0.0040		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0004		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.0005		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1

Isotope Dilution	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*98*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C4 PFBA	*96*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C3 PFBS	*98*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C5 PFPeA	*96*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C5 PFHxA	*95*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C4 PFHpA	*95*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C8 PFOA	*96*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C9 PFNA	*95*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C6 PFDA	*92*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C7 PFUnA	*90*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C2 PFDoA	*88*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C8 PFOS	*92*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: MBL 810-52002/1-A
Matrix: Drinking Water
Analysis Batch: 52103

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 52002

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFHxS	94		50 - 200	03/17/23 05:48	03/18/23 15:11	1
13C2-4:2-FTS	93		50 - 200	03/17/23 05:48	03/18/23 15:11	1
13C2-6:2-FTS	95		50 - 200	03/17/23 05:48	03/18/23 15:11	1
13C2-8:2-FTS	94		50 - 200	03/17/23 05:48	03/18/23 15:11	1

Lab Sample ID: LLCS 810-52002/2-A
Matrix: Drinking Water
Analysis Batch: 52103

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 52002

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	0.00200	0.0020		ug/L		98	50 - 150
Perfluoropentanoic acid (PFPeA)	0.00200	0.0020		ug/L		100	50 - 150
Perfluorohexanoic acid (PFHxA)	0.00200	0.0019		ug/L		96	50 - 150
Perfluoroheptanoic acid (PFHpA)	0.00200	0.0019		ug/L		94	50 - 150
Perfluorooctanoic acid (PFOA)	0.00200	0.0020		ug/L		99	50 - 150
Perfluorononanoic acid (PFNA)	0.00200	0.0019		ug/L		97	50 - 150
Perfluorodecanoic acid (PFDA)	0.00200	0.0019		ug/L		96	50 - 150
Perfluoroundecanoic acid (PFUnA)	0.00200	0.0019		ug/L		93	50 - 150
Perfluorododecanoic acid (PFDoA)	0.00200	0.0020		ug/L		98	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.00189	0.0018		ug/L		94	50 - 150
Perfluorobutanesulfonic acid (PFBS)	0.00178	0.0017		ug/L		93	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	0.00183	0.0017		ug/L		94	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	0.00191	0.0018		ug/L		96	50 - 150
Perfluorooctanesulfonic acid (PFOS)	0.00186	0.0018		ug/L		98	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	0.00188	0.0017		ug/L		89	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.00200	0.0017		ug/L		87	50 - 150
9-Chlorohexadecafluoro-3-oxan onane-1-sulfonic acid	0.00187	0.0017		ug/L		92	50 - 150
11-Chloroeicosafluoro-3-oxaund ecane-1-sulfonic acid	0.00189	0.0017		ug/L		89	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.00188	0.0020		ug/L		106	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.00190	0.0020		ug/L		105	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.00192	0.0021		ug/L		109	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.00200	0.0023		ug/L		114	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.00200	0.0019		ug/L		93	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.00200	0.0019		ug/L		93	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.00178	0.0016		ug/L		92	50 - 150

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Isotope Dilution	LLCS %Recovery	LLCS Qualifier	Limits
13C3 HFPO-DA	100		50 - 200
13C4 PFBA	97		50 - 200
13C3 PFBS	97		50 - 200
13C5 PFPeA	96		50 - 200
13C5 PFHxA	96		50 - 200
13C4 PFHpA	95		50 - 200
13C8 PFOA	95		50 - 200
13C9 PFNA	94		50 - 200
13C6 PFDA	90		50 - 200
13C7 PFUnA	88		50 - 200
13C2 PFDoA	87		50 - 200
13C8 PFOS	91		50 - 200
13C3 PFHxS	95		50 - 200
13C2-4:2-FTS	94		50 - 200
13C2-6:2-FTS	95		50 - 200
13C2-8:2-FTS	91		50 - 200

Method: 537.1 UCMR5 - Perfluorinated Alkyl Acids (LC/MS)

Lab Sample ID: MBL 810-50172/1-A
Matrix: Drinking Water
Analysis Batch: 50242

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 50172

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.0005		0.0050		ug/L		03/03/23 06:51	03/04/23 22:49	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.0006		0.0060		ug/L		03/03/23 06:51	03/04/23 22:49	1
Perfluorotetradecanoic acid (PFTA)	<0.0007		0.0080		ug/L		03/03/23 06:51	03/04/23 22:49	1
Perfluorotridecanoic acid (PFTrDA)	<0.0006		0.0070		ug/L		03/03/23 06:51	03/04/23 22:49	1

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	86		70 - 130	03/03/23 06:51	03/04/23 22:49	1
13C2 PFHxA	93		70 - 130	03/03/23 06:51	03/04/23 22:49	1
13C2 PFDA	89		70 - 130	03/03/23 06:51	03/04/23 22:49	1
13C3 HFPO-DA	89		70 - 130	03/03/23 06:51	03/04/23 22:49	1

Lab Sample ID: LLCS 810-50172/2-A
Matrix: Drinking Water
Analysis Batch: 50242

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 50172

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			0.00200	0.0019		ug/L		97	50 - 150		
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			0.00200	0.0019		ug/L		94	50 - 150		
Perfluorotetradecanoic acid (PFTA)			0.00200	0.0016		ug/L		82	50 - 150		
Perfluorotridecanoic acid (PFTrDA)			0.00200	0.0019		ug/L		96	50 - 150		

Surrogate	LLCS %Recovery	LLCS Qualifier	Limits
d5-NEtFOSAA	89		70 - 130

Method: 537.1 UCMR5 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: LLCS 810-50172/2-A
Matrix: Drinking Water
Analysis Batch: 50242

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 50172

Surrogate	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
13C2 PFHxA	*95*		*70 - 130*
13C2 PFDA	*94*		*70 - 130*
13C3 HFPO-DA	*96*		*70 - 130*

Method: 200.7 UCMR5 - Metals (ICP)

Lab Sample ID: MBL 810-49552/1-A
Matrix: Drinking Water
Analysis Batch: 49679

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 49552

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.520		9.00		ug/L		02/27/23 13:10	02/28/23 12:41	1

Lab Sample ID: LLCS 810-49552/2-A
Matrix: Drinking Water
Analysis Batch: 49679

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 49552

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Lithium			9.00	8.59	J	ug/L		95	50 - 150		

QC Association Summary

Client: City of Tarpon Springs
Project/Site: UCMR5 - FL6521784 - SE1 - Grosse Avenue Plar

Job ID: 810-54403-1

LCMS

Prep Batch: 50172

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-54403-1	0001/Grosse Ave/TP/1784001/EP	Total/NA	Drinking Water	537.1 DW	
MBL 810-50172/1-A	Method Blank	Total/NA	Drinking Water	537.1 DW	
LLCS 810-50172/2-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	

Analysis Batch: 50242

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-54403-1	0001/Grosse Ave/TP/1784001/EP	Total/NA	Drinking Water	537.1 UCMR5	50172
MBL 810-50172/1-A	Method Blank	Total/NA	Drinking Water	537.1 UCMR5	50172
LLCS 810-50172/2-A	Lab Control Sample	Total/NA	Drinking Water	537.1 UCMR5	50172

Prep Batch: 52002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-54403-1	0001/Grosse Ave/TP/1784001/EP	Total/NA	Drinking Water	533	
810-54403-1FRB	FRB	Total/NA	Drinking Water	533	
MBL 810-52002/1-A	Method Blank	Total/NA	Drinking Water	533	
LLCS 810-52002/2-A	Lab Control Sample	Total/NA	Drinking Water	533	

Analysis Batch: 52103

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-54403-1	0001/Grosse Ave/TP/1784001/EP	Total/NA	Drinking Water	533	52002
810-54403-1FRB	FRB	Total/NA	Drinking Water	533	52002
MBL 810-52002/1-A	Method Blank	Total/NA	Drinking Water	533	52002
LLCS 810-52002/2-A	Lab Control Sample	Total/NA	Drinking Water	533	52002

Metals

Prep Batch: 49552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-54403-1	0001/Grosse Ave/TP/1784001/EP	Total/NA	Drinking Water	200.7 UCMR5	
MBL 810-49552/1-A	Method Blank	Total/NA	Drinking Water	200.7 UCMR5	
LLCS 810-49552/2-A	Lab Control Sample	Total/NA	Drinking Water	200.7 UCMR5	

Analysis Batch: 49679

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-54403-1	0001/Grosse Ave/TP/1784001/EP	Total/NA	Drinking Water	200.7 UCMR5	49552
MBL 810-49552/1-A	Method Blank	Total/NA	Drinking Water	200.7 UCMR5	49552
LLCS 810-49552/2-A	Lab Control Sample	Total/NA	Drinking Water	200.7 UCMR5	49552

Lab Chronicle

Client: City of Tarpon Springs
Job ID: 810-54403-1
Project/Site: UCMR5 - FL6521784 - SE1 - Grosse Avenue Plar

Client Sample ID: 0001/Grosse Ave/TP/1784001/EP
Lab Sample ID: 810-54403-1
Date Collected: 02/21/23 09:50
Matrix: Drinking Water
Date Received: 02/22/23 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			52002	NR	EA SB	03/17/23 05:48
Total/NA	Analysis	533		1	52103	CM	EA SB	03/18/23 20:34
Total/NA	Prep	537.1 DW			50172	AD	EA SB	03/03/23 06:51
Total/NA	Analysis	537.1 UCMR5		1	50242	MH	EA SB	03/05/23 01:38
Total/NA	Prep	200.7 UCMR5			49552	NB	EA SB	02/27/23 13:10
Total/NA	Analysis	200.7 UCMR5		1	49679	NB	EA SB	02/28/23 13:19

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: City of Tarpon Springs
Job ID: 810-54403-1
Project/Site: UCMR5 - FL6521784 - SE1 - Grosse Avenue Plar

Laboratory: Eurofins Eaton Analytical South Bend

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

Authority	Program	Identification Number	Expiration Date
USEPA UCMR 5	US Federal Programs	IN00035	12-31-25

Method Summary

Client: City of Tarpon Springs
Job ID: 810-54403-1
Project/Site: UCMR5 - FL6521784 - SE1 - Grosse Avenue Plar

Method	Method Description	Protocol	Laboratory
533	Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water	EPA	EA SB
537.1 UCMR5	Perfluorinated Alkyl Acids (LC/MS)	EPA	EA SB
200.7 UCMR5	Metals (ICP)	EPA	EA SB
200.7 UCMR5	Preparation, Total Recoverable Metals	EPA	EA SB
533	Extraction of Perfluorinated and Polyfluorinated Alkyl Acids	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: City of Tarpon Springs
Job ID: 810-54403-1
Project/Site: UCMR5 - FL6521784 - SE1 - Grosse Avenue Plant

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
810-54403-1	0001/Grosse Ave/TP/1784001/EP	Drinking Water	02/21/23 09:50	02/22/23 09:45	FL6521784
810-54403-1FRB	0001/Grosse Ave/TP/1784001/EP	Drinking Water	02/21/23 09:50	02/22/23 09:45	FL6521784

South Bend, IN
110 S Hill Street
South Bend, IN 46617
Phone (574) 233-4777; Phone (574) 233-8207

"UCMR 5 Sampling Form for Single Collectio

(Separate form is needed for each collection site)

810-54403 Chain of Custody

Company Contact: Kevin Tenk
Company Name: City of Tarpon Springs
Company Address: 1624 Lth Industrial Blvd
Tarpon Springs FL 34689
Phone: (727) 937-2557
Email: ktenk@ctsfl.us
Purchase Order: N/A

Lab PM(name): Pamela Brown
PM Email: Pamela.Brown@et.eurofins.com
EEA Project: UCMR5

PWSID: 6521784
FacID:
SPID:
FacName:
SPName:
Sampling Event:

Water System Name: City of Tarpon Springs RO Water Treatment Facility
Collection Location: 0001/Grosse Ave/TP/1784001/EP - (Grosse WTP) POE
Scheduled Collection Date: 2/21/2023

Sampler Name (Print): Kevin Tenk
Date/Time Sampled: 2/21/2023 0950

Client Storage temp, if >2 days from collection: N/A

AREA BELOW FOR LAB USE ONLY

For UCMR 5 specific criteria see: REC-WI55108 Guidance Document for UCMR 5 Sample Receiving Requirements and QA-SOP-SOP48964 UCMR 5 QAPP

IR Gun#: 29
Ice: Wet / Blue

Method	Type	# Bot	Temp °C (10°C within 2 days of collection, 6°C for > 2 days) Initial / Corrected	pH* value	✓if receipt pH acceptable	✓if pH needs adjustment	Cl (P/A) **	Sample Comments	✓if sample is invalid
200.7	FS	1	[redacted]	<2	✓		[redacted]	0.8/1.6 temps	
~~200.7~~	~~FS~~	~~2~~							
533	FS	1	0.0 / 0.8	7.0					
533	FS	2	N/A	7.0					
533	FS	3	N/A	7.0					
533	FRB	1	1.0 / 1.8	7.5					
537.1	FS	1	0.0 / 0.8	7.0		[redacted]			
537.1	FS	2	N/A	7.0					
537.1	FS	3	N/A	7.0					
537.1	FRB	1	1.6 / 2.4	7.0					

* pH <2 for 200.7. pH 6-8 for 533 & 537.1. *Note: 200.7 & 533 pH may be adjusted upon receipt.*

** A = Absent if Free Cl <0.1 mg/L; P = Chlorine is present

Received By [signature] ***Date/Time*** 2/22/23 0945

South Bend, IN
110 S Hill Street
South Bend, IN 46617
Phone. 574-233-4777 Fax: 574-233-8207

Chain of Custody Record

eurofins Environment Testing

Client Information	Sampler: Kevin Tenk	Lab PM: Brown, Pamela	Carrier Tracking No(s):	COC No: 810-20640-6080 1
Client Contact: Mr. Kevin Tenk	Phone: 727 - 937- 2557	E-Mail: Pamela.Brown@et.eurofinsus.com	State of Origin:	Page: Page 1 of 1
Company: City of Tarpon Springs	PWSID: 6521784			Job #:

Address: 1624 L & R Industrial Blvd	Due Date Requested:
City: Tarpon Springs	TAT Requested (days):
State, Zip: FL, 34689	Compliance Project: Δ Yes Δ No
Phone: 727-946-4641(Tel)	PO #: Purchase Order not required
Email: ktenk@ctsfl.us	WO #:
Project Name: UCMR5	Project #: 81004900
Site:	SSOW#:

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, Y - Trizma, 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)	200.7_UCMR5 - UCMR5_200.7	537.1_UCMR5 - Local Method	533_UCMR5 - Local Method	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	Y	N		
0001/Grosse Ave/TP/1784001/EP	2/21/23	0950	G	Drinking Wate							
0003/Highland/TP/1784003/EP	2/21/23	0920	G	Drinking Wate							
0004/RO Fac/TP/R01/EP	2/21/23	1015	G	Drinking Wate							
				Drinking Wate							

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: Kevin Tenk	Date/Time: 2/21/2023	Company: CTS	Received by:	Date/Time: 2/22/23 0945	Company: EEH
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

4/12/2023

Login Sample Receipt Checklist

Client: City of Tarpon Springs

Job Number: 810-54403-1

Login Number: 54403
List Number: 1
Creator: Wojcik, Mary

List Source: Eurofins Eaton Analytical South Bend

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	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Kevin Tenk
City of Tarpon Springs
1624 L & R Industrial Blvd
Tarpon Springs, Florida 34689

Generated 9/22/2023 2:54:43 PM

JOB DESCRIPTION

UCMR5 - FL6521784 - SE2 - Grosse Avenue Plant

JOB NUMBER

810-74934-1

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend IN 46617

See page two for job notes and contact information.

myEOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Eaton Analytical, LLC Project Manager.

Authorization

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Authorized for release by
Pamela Brown, Project Manager
Pamela.Brown@et.eurofinsus.com
(574)233-4777

Table of Contents

Definitions/Glossary

Client: City of Tarpon Springs
Job ID: 810-74934-1
Project/Site: UCMR5 - FL6521784 - SE2 - Grosse Avenue Plar

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

Case Narrative

Client: City of Tarpon Springs
Job ID: 810-74934-1
Project/Site: UCMR5 - FL6521784 - SE2 - Grosse Avenue Plant

Job ID: 810-74934-1

Laboratory: Eurofins Eaton Analytical South Bend

Narrative

Job Narrative
810-74934-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The sample was received on 8/23/2023 9:30 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice.

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

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

Detection Summary

Client: City of Tarpon Springs
Job ID: 810-74934-1
Project/Site: UCMR5 - FL6521784 - SE2 - Grosse Avenue Plar

Client Sample ID: 00001/Grosse Ave/TP/1784001/EP
Lab Sample ID: 810-74934-1
PWSID Number: FL6521784

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Eaton Analytical South Bend

Client Sample Results

Client: City of Tarpon Springs
Project/Site: UCMR5 - FL6521784 - SE2 - Grosse Avenue Plar

Job ID: 810-74934-1

Client Sample ID: 00001/Grosse Ave/TP/1784001/EP
Date Collected: 08/22/23 09:45
Date Received: 08/23/23 09:30

Lab Sample ID: 810-74934-1
Matrix: Drinking Water
PWSID Number: FL6521784

Method: EPA 537.1 UCMR5 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.0050		0.0050		ug/L		08/29/23 07:32	08/30/23 05:53	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.0060		0.0060		ug/L		08/29/23 07:32	08/30/23 05:53	1
Perfluorotetradecanoic acid (PFTA)	<0.0080		0.0080		ug/L		08/29/23 07:32	08/30/23 05:53	1
Perfluorotridecanoic acid (PFTrDA)	<0.0070		0.0070		ug/L		08/29/23 07:32	08/30/23 05:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*116*		*70 - 130*	*08/29/23 07:32*	*08/30/23 05:53*	*1*
13C2 PFHxA	*100*		*70 - 130*	*08/29/23 07:32*	*08/30/23 05:53*	*1*
13C2 PFDA	*111*		*70 - 130*	*08/29/23 07:32*	*08/30/23 05:53*	*1*
13C3 HFPO-DA	*101*		*70 - 130*	*08/29/23 07:32*	*08/30/23 05:53*	*1*

Method: EPA 200.7 UCMR5 - Metals (ICP)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<9.00		9.00		ug/L		08/29/23 10:04	08/30/23 18:06	1

Surrogate Summary

Client: City of Tarpon Springs
Job ID: 810-74934-1
Project/Site: UCMR5 - FL6521784 - SE2 - Grosse Avenue Plar

Method: 537.1 UCMR5 - Perfluorinated Alkyl Acids (LC/MS)

Matrix: Drinking Water
Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		d5NEFOS	PFHxA	PFDA	HFPODA
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)	(70-130)
810-74934-1	00001/Grosse Ave/TP/1784001/	116	100	111	101
LLCS 810-71560/2-A	Lab Control Sample	93	107	102	100
MBL 810-71560/1-A	Method Blank	103	106	102	101

Surrogate Legend

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

Isotope Dilution Summary

Client: City of Tarpon Springs
Job ID: 810-74934-1
Project/Site: UCMR5 - FL6521784 - SE2 - Grosse Avenue Plant

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Matrix: Drinking Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		HFPODA	PFBA	C3PFBS	PFPeA	13C5PHA	C4PFHA	C8PFOA	C9PFNA
Lab Sample ID	Client Sample ID	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)
810-74934-1	0001/Grosse Ave/TP/1784001/EP	79	88	85	86	79	82	84	88
LLCS 810-72696/2-A	Lab Control Sample	83	93	92	100	90	92	94	98
MBL 810-72696/1-A	Method Blank	78	87	85	95	87	87	89	96

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		C6PFDA	13C7PUA	PFDoA	C8PFOS	C3PFHS	42FTS	62FTS	82FTS
Lab Sample ID	Client Sample ID	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)
810-74934-1	0001/Grosse Ave/TP/1784001/EP	82	79	79	86	87	76	96	108
LLCS 810-72696/2-A	Lab Control Sample	97	95	96	92	93	120	119	125
MBL 810-72696/1-A	Method Blank	91	92	93	87	88	110	106	119

Surrogate Legend

HFPODA = 13C3 HFPO-DA
PFBA = 13C4 PFBA
C3PFBS = 13C3 PFBS
PFPeA = 13C5 PFPeA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFDoA = 13C2 PFDoA
C8PFOS = 13C8 PFOS
C3PFHS = 13C3 PFHxS
42FTS = 13C2-4:2-FTS
62FTS = 13C2-6:2-FTS
82FTS = 13C2-8:2-FTS

Method: 537.1 UCMR5 - Perfluorinated Alkyl Acids (LC/MS)

Lab Sample ID: MBL 810-71560/1-A
Matrix: Drinking Water
Analysis Batch: 71664

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 71560

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.0005		0.0050		ug/L		08/29/23 07:32	08/30/23 03:14	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.0006		0.0060		ug/L		08/29/23 07:32	08/30/23 03:14	1
Perfluorotetradecanoic acid (PFTA)	<0.0007		0.0080		ug/L		08/29/23 07:32	08/30/23 03:14	1
Perfluorotridecanoic acid (PFTrDA)	<0.0006		0.0070		ug/L		08/29/23 07:32	08/30/23 03:14	1

Surrogate	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*103*		*70 - 130*	*08/29/23 07:32*	*08/30/23 03:14*	*1*
13C2 PFHxA	*106*		*70 - 130*	*08/29/23 07:32*	*08/30/23 03:14*	*1*
13C2 PFDA	*102*		*70 - 130*	*08/29/23 07:32*	*08/30/23 03:14*	*1*
13C3 HFPO-DA	*101*		*70 - 130*	*08/29/23 07:32*	*08/30/23 03:14*	*1*

Lab Sample ID: LLCS 810-71560/2-A
Matrix: Drinking Water
Analysis Batch: 71664

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 71560

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			0.00200	0.0016		ug/L		82	50 - 150		
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			0.00200	0.0015		ug/L		77	50 - 150		
Perfluorotetradecanoic acid (PFTA)			0.00200	0.0011		ug/L		56	50 - 150		
Perfluorotridecanoic acid (PFTrDA)			0.00200	0.0020		ug/L		99	50 - 150		

Surrogate	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
d5-NEtFOSAA	*93*		*70 - 130*
13C2 PFHxA	*107*		*70 - 130*
13C2 PFDA	*102*		*70 - 130*
13C3 HFPO-DA	*100*		*70 - 130*

Method: 200.7 UCMR5 - Metals (ICP)

Lab Sample ID: MBL 810-71615/1-A
Matrix: Drinking Water
Analysis Batch: 71894

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 71615

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.520		9.00		ug/L		08/29/23 10:04	08/30/23 17:32	1

Lab Sample ID: LLCS 810-71615/2-A
Matrix: Drinking Water
Analysis Batch: 71894

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 71615

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Lithium			9.00	9.35		ug/L		104	50 - 150		

QC Association Summary

Client: City of Tarpon Springs
Job ID: 810-74934-1
Project/Site: UCMR5 - FL6521784 - SE2 - Grosse Avenue Plar

LCMS

Prep Batch: 71560

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-74934-1	00001/Grosse Ave/TP/1784001/EP	Total/NA	Drinking Water	537.1 DW	
MBL 810-71560/1-A	Method Blank	Total/NA	Drinking Water	537.1 DW	
LLCS 810-71560/2-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	

Analysis Batch: 71664

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-74934-1	00001/Grosse Ave/TP/1784001/EP	Total/NA	Drinking Water	537.1 UCMR5	71560
MBL 810-71560/1-A	Method Blank	Total/NA	Drinking Water	537.1 UCMR5	71560
LLCS 810-71560/2-A	Lab Control Sample	Total/NA	Drinking Water	537.1 UCMR5	71560

Metals

Prep Batch: 71615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-74934-1	00001/Grosse Ave/TP/1784001/EP	Total/NA	Drinking Water	200.7 UCMR5	
MBL 810-71615/1-A	Method Blank	Total/NA	Drinking Water	200.7 UCMR5	
LLCS 810-71615/2-A	Lab Control Sample	Total/NA	Drinking Water	200.7 UCMR5	

Analysis Batch: 71894

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-74934-1	00001/Grosse Ave/TP/1784001/EP	Total/NA	Drinking Water	200.7 UCMR5	71615
MBL 810-71615/1-A	Method Blank	Total/NA	Drinking Water	200.7 UCMR5	71615
LLCS 810-71615/2-A	Lab Control Sample	Total/NA	Drinking Water	200.7 UCMR5	71615

Lab Chronicle

Client: City of Tarpon Springs
Job ID: 810-74934-1
Project/Site: UCMR5 - FL6521784 - SE2 - Grosse Avenue Plar

Client Sample ID: 00001/Grosse Ave/TP/1784001/EP
Lab Sample ID: 810-74934-1
Date Collected: 08/22/23 09:45
Matrix: Drinking Water
Date Received: 08/23/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			71560	SS	EA SB	08/29/23 07:32
Total/NA	Analysis	537.1 UCMR5		1	71664	PP	EA SB	08/30/23 05:53
Total/NA	Prep	200.7 UCMR5			71615	AC	EA SB	08/29/23 10:04
Total/NA	Analysis	200.7 UCMR5		1	71894	AC	EA SB	08/30/23 18:06

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: City of Tarpon Springs
Job ID: 810-74934-1
Project/Site: UCMR5 - FL6521784 - SE2 - Grosse Avenue Plar

Laboratory: Eurofins Eaton Analytical South Bend

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

Authority	Program	Identification Number	Expiration Date
USEPA UCMR 5	US Federal Programs	IN00035	12-31-25

Method Summary

Client: City of Tarpon Springs
Job ID: 810-74934-1
Project/Site: UCMR5 - FL6521784 - SE2 - Grosse Avenue Plar

Method	Method Description	Protocol	Laboratory
537.1 UCMR5	Perfluorinated Alkyl Acids (LC/MS)	EPA	EA SB
200.7 UCMR5	Metals (ICP)	EPA	EA SB
200.7 UCMR5	Preparation, Total Recoverable Metals	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: City of Tarpon Springs
Job ID: 810-74934-1
Project/Site: UCMR5 - FL6521784 - SE2 - Grosse Avenue Plar

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
810-74934-1	00001/Grosse Ave/TP/1784001/EP	Drinking Water	08/22/23 09:45	08/23/23 09:30	FL6521784

South Bend, IN
110 S Hill Street
South Bend, IN 46617
Phone (574) 233-4777; Phone (574) 233-8207

"UCMR 5 Sampling Form for Single Collection Site"

(Separate form is needed for each collection site)

eurofins | Environment Testing America

Company Contact: Kevin Tenk
Company Name: City of Tarpon Springs
Company Address: 1624 L&R Industrial Blvd
Tarpon Springs FL, 34689
Phone: (727) 937-2557
Email: ktenk@ctsfl.us
Purchase Order: N/A

Lab PM(name): Pamela Brown
PM Email: Pamela.Brown@et.eurofins.com
EEA Project: UCMR 5

PWSID: 6521784
FacID:
SPID:
FacName:
SPName:
Sampling Event:

Water System Name: City of Tarpon Springs RO Water Treatment Facility
Collection Location: 0001 / Grosse Ave / TP / 1784001 / EP - Grosse WTP POE
Scheduled Collection Date: 8/22/2023

Sampler Name (Print): Kevin Tenk
Date/Time Sampled: 8/22/2023 0945

Client Storage temp, if >2 days from collection: N/A

AREA BELOW FOR LAB USE ONLY

For UCMR 5 specific criteria see: REC-WI55108 Guidance Document for UCMR 5 Sample Receiving Requirements and QA-SOP-SOP48964 UCMR 5 QAPP

IR Gun#: 25
Ice: Wet / Blue

Method	Type	# Bot	Temp °C (10°C within 2 days of collection, 6°C for > 2 days) Initial / Corrected	pH* value	✓if receipt pH acceptable	✓if pH needs adjustment	Cl (P/A) **	Sample Comments	✓if sample is invalid
200.7	FS	1	[redacted]		✓		[redacted]	810-74934 Chain of Custody	
200.7	FS	2							
533	FS	1	0.6 / 0.8		✓		A		
533	FS	2	0.6 / 0.8		✓		A		
533	FS	3	0.6 / 0.8		✓		A		
533	FRB	1	0.4 / 0.6		✓		A		
537.1	FS	1	0.4 / 0.6		✓	[redacted]	A		
537.1	FS	2	0.4 / 0.6		✓		A		
537.1	FS	3	0.4 / 0.6		✓		A		
537.1	FRB	1	0.4 / 0.6		✓		A		

* pH <2 for 200.7. pH 6-8 for 533 & 537.1. *Note: 200.7 & 533 pH may be adjusted upon receipt.*

** A = Absent if Free Cl <0.1 mg/L; P = Chlorine is present

Received By Kameron Williams ***Date/Time*** 08/23/23 0930

Login Sample Receipt Checklist

Client: City of Tarpon Springs

Job Number: 810-74934-1

Login Number: 74934
List Number: 1
Creator: Williams, Kameron

List Source: Eurofins Eaton Analytical South Bend

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	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Kevin Tenk
City of Tarpon Springs
1624 L & R Industrial Blvd
Tarpon Springs, Florida 34689

Generated 10/27/2023 9:55:21 AM

JOB DESCRIPTION

UCMR5 - FL6521784 - SE2 - Grosse Avenue Plant

JOB NUMBER

810-79542-1

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend IN 46617

See page two for job notes and contact information.

myEOL

Job Notes

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Authorization

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10/27/2023 9:55:21 AM

Authorized for release by
Pamela Brown, Project Manager
Pamela.Brown@et.eurofinsus.com
(574)233-4777

Table of Contents

Definitions/Glossary

Client: City of Tarpon Springs
Job ID: 810-79542-1
Project/Site: UCMR5 - FL6521784 - SE2 - Grosse Avenue Plar

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

Job ID: 810-79542-1

Laboratory: Eurofins Eaton Analytical South Bend

Narrative

Job Narrative
810-79542-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The sample was received on 9/29/2023 9:00 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice.

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

Detection Summary

Client: City of Tarpon Springs
Job ID: 810-79542-1
Project/Site: UCMR5 - FL6521784 - SE2 - Grosse Avenue Plar

Client Sample ID: City okf Tarpan Springs Rowato Treatment Facility/001/Grosse Ave/TP/1784001EP
Lab Sample ID: 810-79542-1

PWSID Number: FL6521784

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.0105		0.0050		ug/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	0.0102		0.0030		ug/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	0.0070		0.0030		ug/L	1		533	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.0044		0.0030		ug/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	0.0105		0.0040		ug/L	1		533	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.0146		0.0030		ug/L	1		533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.0075		0.0030		ug/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.0363		0.0040		ug/L	1		533	Total/NA

Client Sample ID: City okf Tarpan Springs Rowato Treatment Facility/001/Grosse Ave/TP/1784001EP
Lab Sample ID: 810-79542-1FRB

PWSID Number: FL6521784

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: City okf Tarpan Springs Rowato Treatment Facility/001/Grosse Ave/TP/1784001EP
Lab Sample ID: 810-79542-1
Date Collected: 09/28/23 08:48
Matrix: Drinking Water
Date Received: 09/29/23 09:00
PWSID Number: FL6521784

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**0.0105**		0.0050		ug/L		10/13/23 07:47	10/14/23 14:32	1
Perfluoropentanoic acid (PFPeA)	**0.0102**		0.0030		ug/L		10/13/23 07:47	10/14/23 14:32	1
Perfluorohexanoic acid (PFHxA)	**0.0070**		0.0030		ug/L		10/13/23 07:47	10/14/23 14:32	1
Perfluoroheptanoic acid (PFHpA)	**0.0044**		0.0030		ug/L		10/13/23 07:47	10/14/23 14:32	1
Perfluorooctanoic acid (PFOA)	**0.0105**		0.0040		ug/L		10/13/23 07:47	10/14/23 14:32	1
Perfluorononanoic acid (PFNA)	<0.0040		0.0040		ug/L		10/13/23 07:47	10/14/23 14:32	1
Perfluorodecanoic acid (PFDA)	<0.0030		0.0030		ug/L		10/13/23 07:47	10/14/23 14:32	1
Perfluoroundecanoic acid (PFUnA)	<0.0020		0.0020		ug/L		10/13/23 07:47	10/14/23 14:32	1
Perfluorododecanoic acid (PFDoA)	<0.0030		0.0030		ug/L		10/13/23 07:47	10/14/23 14:32	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0030		0.0030		ug/L		10/13/23 07:47	10/14/23 14:32	1
Perfluorobutanesulfonic acid (PFBS)	**0.0146**		0.0030		ug/L		10/13/23 07:47	10/14/23 14:32	1
Perfluorohexanesulfonic acid (PFHxS)	**0.0075**		0.0030		ug/L		10/13/23 07:47	10/14/23 14:32	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.0030		0.0030		ug/L		10/13/23 07:47	10/14/23 14:32	1
Perfluorooctanesulfonic acid (PFOS)	**0.0363**		0.0040		ug/L		10/13/23 07:47	10/14/23 14:32	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0040		0.0040		ug/L		10/13/23 07:47	10/14/23 14:32	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0050		0.0050		ug/L		10/13/23 07:47	10/14/23 14:32	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.0020		0.0020		ug/L		10/13/23 07:47	10/14/23 14:32	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.0050		0.0050		ug/L		10/13/23 07:47	10/14/23 14:32	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0030		0.0030		ug/L		10/13/23 07:47	10/14/23 14:32	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0050		0.0050		ug/L		10/13/23 07:47	10/14/23 14:32	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0050		0.0050		ug/L		10/13/23 07:47	10/14/23 14:32	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0200		0.0200		ug/L		10/13/23 07:47	10/14/23 14:32	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0040		0.0040		ug/L		10/13/23 07:47	10/14/23 14:32	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0030		0.0030		ug/L		10/13/23 07:47	10/14/23 14:32	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.0030		0.0030		ug/L		10/13/23 07:47	10/14/23 14:32	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*91*		*50 - 200*	*10/13/23 07:47*	*10/14/23 14:32*	*1*
13C4 PFBA	*98*		*50 - 200*	*10/13/23 07:47*	*10/14/23 14:32*	*1*
13C3 PFBS	*98*		*50 - 200*	*10/13/23 07:47*	*10/14/23 14:32*	*1*
13C5 PFPeA	*98*		*50 - 200*	*10/13/23 07:47*	*10/14/23 14:32*	*1*
13C5 PFHxA	*96*		*50 - 200*	*10/13/23 07:47*	*10/14/23 14:32*	*1*
13C4 PFHpA	*97*		*50 - 200*	*10/13/23 07:47*	*10/14/23 14:32*	*1*
13C8 PFOA	*97*		*50 - 200*	*10/13/23 07:47*	*10/14/23 14:32*	*1*
13C9 PFNA	*99*		*50 - 200*	*10/13/23 07:47*	*10/14/23 14:32*	*1*
13C6 PFDA	*101*		*50 - 200*	*10/13/23 07:47*	*10/14/23 14:32*	*1*
13C7 PFUnA	*96*		*50 - 200*	*10/13/23 07:47*	*10/14/23 14:32*	*1*

Client Sample ID: City okf Tarpan Springs Rowato Treatment Facility/001/Grosse Ave/TP/1784001EP

Lab Sample ID: 810-79542-1

Date Collected: 09/28/23 08:48
Matrix: Drinking Water
Date Received: 09/29/23 09:00
PWSID Number: FL6521784

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDoA	*92*		*50 - 200*	*10/13/23 07:47*	*10/14/23 14:32*	*1*
13C8 PFOS	*99*		*50 - 200*	*10/13/23 07:47*	*10/14/23 14:32*	*1*
13C3 PFHxS	*99*		*50 - 200*	*10/13/23 07:47*	*10/14/23 14:32*	*1*
13C2-4:2-FTS	*98*		*50 - 200*	*10/13/23 07:47*	*10/14/23 14:32*	*1*
13C2-6:2-FTS	*99*		*50 - 200*	*10/13/23 07:47*	*10/14/23 14:32*	*1*
13C2-8:2-FTS	*100*		*50 - 200*	*10/13/23 07:47*	*10/14/23 14:32*	*1*

Client Sample ID: City okf Tarpan Springs Rowato Treatment Facility/001/Grosse Ave/TP/1784001EP

Lab Sample ID: 810-79542-1FRB

Date Collected: 09/28/23 08:48
Matrix: Drinking Water
Date Received: 09/29/23 09:00
PWSID Number: FL6521784

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.0005		0.0049		ug/L		10/20/23 10:20	10/21/23 13:02	1
Perfluoropentanoic acid (PFPeA)	<0.0004		0.0029		ug/L		10/20/23 10:20	10/21/23 13:02	1
Perfluorohexanoic acid (PFHxA)	<0.0004		0.0029		ug/L		10/20/23 10:20	10/21/23 13:02	1
Perfluoroheptanoic acid (PFHpA)	<0.0004		0.0029		ug/L		10/20/23 10:20	10/21/23 13:02	1
Perfluorooctanoic acid (PFOA)	<0.0004		0.0039		ug/L		10/20/23 10:20	10/21/23 13:02	1
Perfluorononanoic acid (PFNA)	<0.0004		0.0039		ug/L		10/20/23 10:20	10/21/23 13:02	1
Perfluorodecanoic acid (PFDA)	<0.0004		0.0029		ug/L		10/20/23 10:20	10/21/23 13:02	1
Perfluoroundecanoic acid (PFUnA)	<0.0004		0.0020		ug/L		10/20/23 10:20	10/21/23 13:02	1
Perfluorododecanoic acid (PFDoA)	<0.0003		0.0029		ug/L		10/20/23 10:20	10/21/23 13:02	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0004		0.0029		ug/L		10/20/23 10:20	10/21/23 13:02	1
Perfluorobutanesulfonic acid (PFBS)	<0.0004		0.0029		ug/L		10/20/23 10:20	10/21/23 13:02	1
Perfluorohexanesulfonic acid (PFHxS)	<0.0004		0.0029		ug/L		10/20/23 10:20	10/21/23 13:02	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.0004		0.0029		ug/L		10/20/23 10:20	10/21/23 13:02	1
Perfluorooctanesulfonic acid (PFOS)	<0.0004		0.0039		ug/L		10/20/23 10:20	10/21/23 13:02	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0004		0.0039		ug/L		10/20/23 10:20	10/21/23 13:02	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0005		0.0049		ug/L		10/20/23 10:20	10/21/23 13:02	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.0004		0.0020		ug/L		10/20/23 10:20	10/21/23 13:02	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.0005		0.0049		ug/L		10/20/23 10:20	10/21/23 13:02	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0005		0.0029		ug/L		10/20/23 10:20	10/21/23 13:02	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0007		0.0049		ug/L		10/20/23 10:20	10/21/23 13:02	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0006		0.0049		ug/L		10/20/23 10:20	10/21/23 13:02	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0009		0.0195		ug/L		10/20/23 10:20	10/21/23 13:02	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0003		0.0039		ug/L		10/20/23 10:20	10/21/23 13:02	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0003		0.0029		ug/L		10/20/23 10:20	10/21/23 13:02	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.0004		0.0029		ug/L		10/20/23 10:20	10/21/23 13:02	1

Client: City of Tarpon Springs
Job ID: 810-79542-1
Project/Site: UCMR5 - FL6521784 - SE2 - Grosse Avenue Plar

Client Sample ID: City okf Tarpan Springs Rowato Treatment Facility/001/Grosse Ave/TP/1784001EP
Lab Sample ID: 810-79542-1FRB

Date Collected: 09/28/23 08:48
Matrix: Drinking Water
Date Received: 09/29/23 09:00
PWSID Number: FL6521784

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	92		50 - 200	10/20/23 10:20	10/21/23 13:02	1
13C4 PFBA	97		50 - 200	10/20/23 10:20	10/21/23 13:02	1
13C3 PFBS	98		50 - 200	10/20/23 10:20	10/21/23 13:02	1
13C5 PFPeA	99		50 - 200	10/20/23 10:20	10/21/23 13:02	1
13C5 PFHxA	94		50 - 200	10/20/23 10:20	10/21/23 13:02	1
13C4 PFHpA	98		50 - 200	10/20/23 10:20	10/21/23 13:02	1
13C8 PFOA	100		50 - 200	10/20/23 10:20	10/21/23 13:02	1
13C9 PFNA	100		50 - 200	10/20/23 10:20	10/21/23 13:02	1
13C6 PFDA	97		50 - 200	10/20/23 10:20	10/21/23 13:02	1
13C7 PFUnA	93		50 - 200	10/20/23 10:20	10/21/23 13:02	1
13C2 PFDoA	90		50 - 200	10/20/23 10:20	10/21/23 13:02	1
13C8 PFOS	99		50 - 200	10/20/23 10:20	10/21/23 13:02	1
13C3 PFHxS	98		50 - 200	10/20/23 10:20	10/21/23 13:02	1
13C2-4:2-FTS	88		50 - 200	10/20/23 10:20	10/21/23 13:02	1
13C2-6:2-FTS	95		50 - 200	10/20/23 10:20	10/21/23 13:02	1
13C2-8:2-FTS	89		50 - 200	10/20/23 10:20	10/21/23 13:02	1

Isotope Dilution Summary

Client: City of Tarpon Springs
Job ID: 810-79542-1
Project/Site: UCMR5 - FL6521784 - SE2 - Grosse Avenue Plar

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Matrix: Drinking Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HFPODA (50-200)	PFBA (50-200)	C3PFBS (50-200)	PFPeA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)
810-79542-1	City okf Tarpan Springs Rowato	91	98	98	98	96	97	97	99
810-79542-1FRB	FRB	92	97	98	99	94	98	100	100
LLCS 810-76749/2-A	Lab Control Sample	95	100	98	101	98	101	103	103
LLCS 810-77494/2-A	Lab Control Sample	92	99	96	102	96	101	101	102
MBL 810-76749/1-A	Method Blank	93	102	99	104	96	98	103	103
MBL 810-77494/1-A	Method Blank	91	100	95	103	99	102	103	104

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	C6PFDA (50-200)	13C7PUA (50-200)	PFDoA (50-200)	C8PFOS (50-200)	C3PFHS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
810-79542-1	City okf Tarpan Springs Rowato	101	96	92	99	99	98	99	100
810-79542-1FRB	FRB	97	93	90	99	98	88	95	89
LLCS 810-76749/2-A	Lab Control Sample	101	93	88	100	101	93	99	97
LLCS 810-77494/2-A	Lab Control Sample	100	99	98	102	100	96	101	94
MBL 810-76749/1-A	Method Blank	100	93	88	101	99	92	99	98
MBL 810-77494/1-A	Method Blank	101	97	97	99	102	94	100	95

Surrogate Legend

HFPODA = 13C3 HFPO-DA
PFBA = 13C4 PFBA
C3PFBS = 13C3 PFBS
PFPeA = 13C5 PFPeA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFDoA = 13C2 PFDoA
C8PFOS = 13C8 PFOS
C3PFHS = 13C3 PFHxS
42FTS = 13C2-4:2-FTS
62FTS = 13C2-6:2-FTS
82FTS = 13C2-8:2-FTS

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Lab Sample ID: MBL 810-76749/1-A
Matrix: Drinking Water
Analysis Batch: 76804

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 76749

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.0005		0.0050		ug/L		10/13/23 07:47	10/14/23 12:57	1
Perfluoropentanoic acid (PFPeA)	<0.0004		0.0030		ug/L		10/13/23 07:47	10/14/23 12:57	1
Perfluorohexanoic acid (PFHxA)	<0.0004		0.0030		ug/L		10/13/23 07:47	10/14/23 12:57	1
Perfluoroheptanoic acid (PFHpA)	<0.0004		0.0030		ug/L		10/13/23 07:47	10/14/23 12:57	1
Perfluorooctanoic acid (PFOA)	<0.0004		0.0040		ug/L		10/13/23 07:47	10/14/23 12:57	1
Perfluorononanoic acid (PFNA)	<0.0004		0.0040		ug/L		10/13/23 07:47	10/14/23 12:57	1
Perfluorodecanoic acid (PFDA)	<0.0004		0.0030		ug/L		10/13/23 07:47	10/14/23 12:57	1
Perfluoroundecanoic acid (PFUnA)	<0.0004		0.0020		ug/L		10/13/23 07:47	10/14/23 12:57	1
Perfluorododecanoic acid (PFDoA)	<0.0004		0.0030		ug/L		10/13/23 07:47	10/14/23 12:57	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0004		0.0030		ug/L		10/13/23 07:47	10/14/23 12:57	1
Perfluorobutanesulfonic acid (PFBS)	<0.0004		0.0030		ug/L		10/13/23 07:47	10/14/23 12:57	1
Perfluorohexanesulfonic acid (PFHxS)	<0.0004		0.0030		ug/L		10/13/23 07:47	10/14/23 12:57	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.0004		0.0030		ug/L		10/13/23 07:47	10/14/23 12:57	1
Perfluorooctanesulfonic acid (PFOS)	<0.0004		0.0040		ug/L		10/13/23 07:47	10/14/23 12:57	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0004		0.0040		ug/L		10/13/23 07:47	10/14/23 12:57	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0005		0.0050		ug/L		10/13/23 07:47	10/14/23 12:57	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.0005		0.0020		ug/L		10/13/23 07:47	10/14/23 12:57	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.0005		0.0050		ug/L		10/13/23 07:47	10/14/23 12:57	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0006		0.0030		ug/L		10/13/23 07:47	10/14/23 12:57	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0007		0.0050		ug/L		10/13/23 07:47	10/14/23 12:57	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0006		0.0050		ug/L		10/13/23 07:47	10/14/23 12:57	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0009		0.0200		ug/L		10/13/23 07:47	10/14/23 12:57	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0003		0.0040		ug/L		10/13/23 07:47	10/14/23 12:57	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0004		0.0030		ug/L		10/13/23 07:47	10/14/23 12:57	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.0005		0.0030		ug/L		10/13/23 07:47	10/14/23 12:57	1

Isotope Dilution	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*93*		*50 - 200*	*10/13/23 07:47*	*10/14/23 12:57*	*1*
13C4 PFBA	*102*		*50 - 200*	*10/13/23 07:47*	*10/14/23 12:57*	*1*
13C3 PFBS	*99*		*50 - 200*	*10/13/23 07:47*	*10/14/23 12:57*	*1*
13C5 PFPeA	*104*		*50 - 200*	*10/13/23 07:47*	*10/14/23 12:57*	*1*
13C5 PFHxA	*96*		*50 - 200*	*10/13/23 07:47*	*10/14/23 12:57*	*1*
13C4 PFHpA	*98*		*50 - 200*	*10/13/23 07:47*	*10/14/23 12:57*	*1*
13C8 PFOA	*103*		*50 - 200*	*10/13/23 07:47*	*10/14/23 12:57*	*1*
13C9 PFNA	*103*		*50 - 200*	*10/13/23 07:47*	*10/14/23 12:57*	*1*
13C6 PFDA	*100*		*50 - 200*	*10/13/23 07:47*	*10/14/23 12:57*	*1*
13C7 PFUnA	*93*		*50 - 200*	*10/13/23 07:47*	*10/14/23 12:57*	*1*
13C2 PFDoA	*88*		*50 - 200*	*10/13/23 07:47*	*10/14/23 12:57*	*1*
13C8 PFOS	*101*		*50 - 200*	*10/13/23 07:47*	*10/14/23 12:57*	*1*

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: MBL 810-76749/1-A
Matrix: Drinking Water
Analysis Batch: 76804

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 76749

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFHxS	99		50 - 200	10/13/23 07:47	10/14/23 12:57	1
13C2-4:2-FTS	92		50 - 200	10/13/23 07:47	10/14/23 12:57	1
13C2-6:2-FTS	99		50 - 200	10/13/23 07:47	10/14/23 12:57	1
13C2-8:2-FTS	98		50 - 200	10/13/23 07:47	10/14/23 12:57	1

Lab Sample ID: LLCS 810-76749/2-A
Matrix: Drinking Water
Analysis Batch: 76804

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 76749

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	0.00200	0.0021		ug/L		103	50 - 150
Perfluoropentanoic acid (PFPeA)	0.00200	0.0021		ug/L		107	50 - 150
Perfluorohexanoic acid (PFHxA)	0.00200	0.0021		ug/L		105	50 - 150
Perfluoroheptanoic acid (PFHpA)	0.00200	0.0021		ug/L		103	50 - 150
Perfluorooctanoic acid (PFOA)	0.00200	0.0021		ug/L		105	50 - 150
Perfluorononanoic acid (PFNA)	0.00200	0.0022		ug/L		108	50 - 150
Perfluorodecanoic acid (PFDA)	0.00200	0.0023		ug/L		114	50 - 150
Perfluoroundecanoic acid (PFUnA)	0.00200	0.0022		ug/L		109	50 - 150
Perfluorododecanoic acid (PFDoA)	0.00200	0.0021		ug/L		107	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.00189	0.0020		ug/L		107	50 - 150
Perfluorobutanesulfonic acid (PFBS)	0.00178	0.0018		ug/L		99	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	0.00183	0.0018		ug/L		97	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	0.00191	0.0019		ug/L		99	50 - 150
Perfluorooctanesulfonic acid (PFOS)	0.00186	0.0019		ug/L		101	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	0.00188	0.0018		ug/L		95	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.00200	0.0021		ug/L		106	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	0.00187	0.0017		ug/L		92	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	0.00189	0.0017		ug/L		88	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.00188	0.0021		ug/L		113	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.00190	0.0022		ug/L		116	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.00192	0.0022		ug/L		116	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.00200	0.0020		ug/L		102	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.00200	0.0022		ug/L		109	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.00200	0.0021		ug/L		103	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.00178	0.0020		ug/L		112	50 - 150

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Isotope Dilution	LLCS %Recovery	LLCS Qualifier	Limits
13C3 HFPO-DA	95		50 - 200
13C4 PFBA	100		50 - 200
13C3 PFBS	98		50 - 200
13C5 PFPeA	101		50 - 200
13C5 PFHxA	98		50 - 200
13C4 PFHpA	101		50 - 200
13C8 PFOA	103		50 - 200
13C9 PFNA	103		50 - 200
13C6 PFDA	101		50 - 200
13C7 PFUnA	93		50 - 200
13C2 PFDoA	88		50 - 200
13C8 PFOS	100		50 - 200
13C3 PFHxS	101		50 - 200
13C2-4:2-FTS	93		50 - 200
13C2-6:2-FTS	99		50 - 200
13C2-8:2-FTS	97		50 - 200

Lab Sample ID: MBL 810-77494/1-A
Matrix: Drinking Water
Analysis Batch: 77542

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 77494

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.0005		0.0050		ug/L		10/20/23 10:20	10/21/23 04:12	1
Perfluoropentanoic acid (PFPeA)	<0.0004		0.0030		ug/L		10/20/23 10:20	10/21/23 04:12	1
Perfluorohexanoic acid (PFHxA)	<0.0004		0.0030		ug/L		10/20/23 10:20	10/21/23 04:12	1
Perfluoroheptanoic acid (PFHpA)	<0.0004		0.0030		ug/L		10/20/23 10:20	10/21/23 04:12	1
Perfluorooctanoic acid (PFOA)	<0.0004		0.0040		ug/L		10/20/23 10:20	10/21/23 04:12	1
Perfluorononanoic acid (PFNA)	<0.0004		0.0040		ug/L		10/20/23 10:20	10/21/23 04:12	1
Perfluorodecanoic acid (PFDA)	<0.0004		0.0030		ug/L		10/20/23 10:20	10/21/23 04:12	1
Perfluoroundecanoic acid (PFUnA)	<0.0004		0.0020		ug/L		10/20/23 10:20	10/21/23 04:12	1
Perfluorododecanoic acid (PFDoA)	<0.0004		0.0030		ug/L		10/20/23 10:20	10/21/23 04:12	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0004		0.0030		ug/L		10/20/23 10:20	10/21/23 04:12	1
Perfluorobutanesulfonic acid (PFBS)	<0.0004		0.0030		ug/L		10/20/23 10:20	10/21/23 04:12	1
Perfluorohexanesulfonic acid (PFHxS)	<0.0004		0.0030		ug/L		10/20/23 10:20	10/21/23 04:12	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.0004		0.0030		ug/L		10/20/23 10:20	10/21/23 04:12	1
Perfluorooctanesulfonic acid (PFOS)	<0.0004		0.0040		ug/L		10/20/23 10:20	10/21/23 04:12	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0004		0.0040		ug/L		10/20/23 10:20	10/21/23 04:12	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0005		0.0050		ug/L		10/20/23 10:20	10/21/23 04:12	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.0005		0.0020		ug/L		10/20/23 10:20	10/21/23 04:12	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.0005		0.0050		ug/L		10/20/23 10:20	10/21/23 04:12	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0006		0.0030		ug/L		10/20/23 10:20	10/21/23 04:12	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0007		0.0050		ug/L		10/20/23 10:20	10/21/23 04:12	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0006		0.0050		ug/L		10/20/23 10:20	10/21/23 04:12	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0009		0.0200		ug/L		10/20/23 10:20	10/21/23 04:12	1

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: MBL 810-77494/1-A
Matrix: Drinking Water
Analysis Batch: 77542

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 77494

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0003		0.0040		ug/L		10/20/23 10:20	10/21/23 04:12	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0004		0.0030		ug/L		10/20/23 10:20	10/21/23 04:12	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.0005		0.0030		ug/L		10/20/23 10:20	10/21/23 04:12	1

Isotope Dilution	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*91*		*50 - 200*	*10/20/23 10:20*	*10/21/23 04:12*	*1*
13C4 PFBA	*100*		*50 - 200*	*10/20/23 10:20*	*10/21/23 04:12*	*1*
13C3 PFBS	*95*		*50 - 200*	*10/20/23 10:20*	*10/21/23 04:12*	*1*
13C5 PFPeA	*103*		*50 - 200*	*10/20/23 10:20*	*10/21/23 04:12*	*1*
13C5 PFHxA	*99*		*50 - 200*	*10/20/23 10:20*	*10/21/23 04:12*	*1*
13C4 PFHpA	*102*		*50 - 200*	*10/20/23 10:20*	*10/21/23 04:12*	*1*
13C8 PFOA	*103*		*50 - 200*	*10/20/23 10:20*	*10/21/23 04:12*	*1*
13C9 PFNA	*104*		*50 - 200*	*10/20/23 10:20*	*10/21/23 04:12*	*1*
13C6 PFDA	*101*		*50 - 200*	*10/20/23 10:20*	*10/21/23 04:12*	*1*
13C7 PFUnA	*97*		*50 - 200*	*10/20/23 10:20*	*10/21/23 04:12*	*1*
13C2 PFDoA	*97*		*50 - 200*	*10/20/23 10:20*	*10/21/23 04:12*	*1*
13C8 PFOS	*99*		*50 - 200*	*10/20/23 10:20*	*10/21/23 04:12*	*1*
13C3 PFHxS	*102*		*50 - 200*	*10/20/23 10:20*	*10/21/23 04:12*	*1*
13C2-4:2-FTS	*94*		*50 - 200*	*10/20/23 10:20*	*10/21/23 04:12*	*1*
13C2-6:2-FTS	*100*		*50 - 200*	*10/20/23 10:20*	*10/21/23 04:12*	*1*
13C2-8:2-FTS	*95*		*50 - 200*	*10/20/23 10:20*	*10/21/23 04:12*	*1*

Lab Sample ID: LLCS 810-77494/2-A
Matrix: Drinking Water
Analysis Batch: 77542

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 77494

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	0.00200	0.0019		ug/L		94	50 - 150
Perfluoropentanoic acid (PFPeA)	0.00200	0.0019		ug/L		95	50 - 150
Perfluorohexanoic acid (PFHxA)	0.00200	0.0019		ug/L		95	50 - 150
Perfluoroheptanoic acid (PFHpA)	0.00200	0.0019		ug/L		96	50 - 150
Perfluorooctanoic acid (PFOA)	0.00200	0.0019		ug/L		95	50 - 150
Perfluorononanoic acid (PFNA)	0.00200	0.0020		ug/L		100	50 - 150
Perfluorodecanoic acid (PFDA)	0.00200	0.0020		ug/L		100	50 - 150
Perfluoroundecanoic acid (PFUnA)	0.00200	0.0020		ug/L		102	50 - 150
Perfluorododecanoic acid (PFDoA)	0.00200	0.0020		ug/L		98	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.00189	0.0018		ug/L		94	50 - 150
Perfluorobutanesulfonic acid (PFBS)	0.00178	0.0016		ug/L		92	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	0.00183	0.0016		ug/L		90	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	0.00191	0.0017		ug/L		88	50 - 150
Perfluorooctanesulfonic acid (PFOS)	0.00186	0.0017		ug/L		90	50 - 150

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: LLCS 810-77494/2-A
Matrix: Drinking Water
Analysis Batch: 77542

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 77494

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Perfluoropentanesulfonic acid (PFPeS)			0.00188	0.0016		ug/L		86	50 - 150		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)			0.00200	0.0018		ug/L		91	50 - 150		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid			0.00187	0.0017		ug/L		89	50 - 150		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid			0.00189	0.0016		ug/L		86	50 - 150		
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)			0.00188	0.0020		ug/L		106	50 - 150		
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)			0.00190	0.0020		ug/L		104	50 - 150		
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)			0.00192	0.0021		ug/L		108	50 - 150		
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)			0.00200	0.0019		ug/L		94	50 - 150		
Perfluoro-3-methoxypropanoic acid (PFMPA)			0.00200	0.0019		ug/L		94	50 - 150		
Perfluoro-4-methoxybutanoic acid (PFMBA)			0.00200	0.0018		ug/L		92	50 - 150		
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)			0.00178	0.0017		ug/L		98	50 - 150		

Isotope Dilution	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
13C3 HFPO-DA	*92*		*50 - 200*
13C4 PFBA	*99*		*50 - 200*
13C3 PFBS	*96*		*50 - 200*
13C5 PFPeA	*102*		*50 - 200*
13C5 PFHxA	*96*		*50 - 200*
13C4 PFHpA	*101*		*50 - 200*
13C8 PFOA	*101*		*50 - 200*
13C9 PFNA	*102*		*50 - 200*
13C6 PFDA	*100*		*50 - 200*
13C7 PFUnA	*99*		*50 - 200*
13C2 PFDoA	*98*		*50 - 200*
13C8 PFOS	*102*		*50 - 200*
13C3 PFHxS	*100*		*50 - 200*
13C2-4:2-FTS	*96*		*50 - 200*
13C2-6:2-FTS	*101*		*50 - 200*
13C2-8:2-FTS	*94*		*50 - 200*

QC Association Summary

Client: City of Tarpon Springs
Job ID: 810-79542-1
Project/Site: UCMR5 - FL6521784 - SE2 - Grosse Avenue Plar

LCMS

Prep Batch: 76749

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-79542-1	City okf Tarpan Springs Rowato Treatment Facilit	Total/NA	Drinking Water	533	
MBL 810-76749/1-A	Method Blank	Total/NA	Drinking Water	533	
LLCS 810-76749/2-A	Lab Control Sample	Total/NA	Drinking Water	533	

Analysis Batch: 76804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-79542-1	City okf Tarpan Springs Rowato Treatment Facilit	Total/NA	Drinking Water	533	76749
MBL 810-76749/1-A	Method Blank	Total/NA	Drinking Water	533	76749
LLCS 810-76749/2-A	Lab Control Sample	Total/NA	Drinking Water	533	76749

Prep Batch: 77494

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-79542-1FRB	FRB	Total/NA	Drinking Water	533	
MBL 810-77494/1-A	Method Blank	Total/NA	Drinking Water	533	
LLCS 810-77494/2-A	Lab Control Sample	Total/NA	Drinking Water	533	

Analysis Batch: 77542

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-79542-1FRB	FRB	Total/NA	Drinking Water	533	77494
MBL 810-77494/1-A	Method Blank	Total/NA	Drinking Water	533	77494
LLCS 810-77494/2-A	Lab Control Sample	Total/NA	Drinking Water	533	77494

Lab Chronicle

Client: City of Tarpon Springs
Job ID: 810-79542-1
Project/Site: UCMR5 - FL6521784 - SE2 - Grosse Avenue Plar

Client Sample ID: City okf Tarpan Springs Rowato Treatment Facility/001/Grosse Ave/TP/1784001EP
Lab Sample ID: 810-79542-1
Date Collected: 09/28/23 08:48
Matrix: Drinking Water
Date Received: 09/29/23 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			76749	KB	EA SB	10/13/23 07:47
Total/NA	Analysis	533		1	76804	KB	EA SB	10/14/23 14:32

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: City of Tarpon Springs
Job ID: 810-79542-1
Project/Site: UCMR5 - FL6521784 - SE2 - Grosse Avenue Plar

Laboratory: Eurofins Eaton Analytical South Bend

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

Authority	Program	Identification Number	Expiration Date
USEPA UCMR 5	US Federal Programs	IN00035	12-31-25

Method Summary

Client: City of Tarpon Springs
Job ID: 810-79542-1
Project/Site: UCMR5 - FL6521784 - SE2 - Grosse Avenue Plar

Method	Method Description	Protocol	Laboratory
533	Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water	EPA	EA SB
533	Extraction of Perfluorinated and Polyfluorinated 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: City of Tarpon Springs
Job ID: 810-79542-1
Project/Site: UCMR5 - FL6521784 - SE2 - Grosse Avenue Plar

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
810-79542-1	City okf Tarpan Springs Rowato Treatment Facility/001/Grosse Ave/TP/1784001EP	Drinking Water	09/28/23 08:48	09/29/23 09:00	FL6521784
810-79542-1FRB	City okf Tarpan Springs Rowato Treatment Facility/001/Grosse Ave/TP/1784001EP	Drinking Water	09/28/23 08:48	09/29/23 09:00	FL6521784

South Bend, IN
110 S Hill Street
South Bend, IN 46617
Phone (574) 233-4777; Phone (574) 233-8207

"UCMR 5 Sampling Form for Single Collection Site"

(Separate form is needed for each collection site)

eurofins | Environment Testing America

9:00

Company Contact: Kevin Tenk
Company Name: City of Tarpon Springs
Company Address: 1624 L&A Industrial Blvd
Tarpon Springs FL 34689
Phone: (727) 937-2557
Email: Ktenk@ctsfl.us
Purchase Order: N/A

Lab PM(name): Pamela Brown
PM Email: Pamela.Braun@et.eurofins.com
EEA Project: UCMR 5

PWSID: 6521784
FacID:
SPID:
FacName:
SPName:
Sampling Event:

Water System Name: City of Tarpon Springs Rowater Treatment Facility
Collection Location: 0001 Grosse Ave / TP1784001EP ← Grosse WTP POE
Scheduled Collection Date: Re-collected 9/28/2023

Sampler Name (Print): Kevin Tenk

Date/Time Sampled: 9/28/2023 0848

Client Storage temp, if > 2 days from collection: N/A

B10-79542 Chain of Custody

AREA BELOW FOR LAB USE ONLY

For UCMR 5 specific criteria see: REC-WI55108 Guidance Document for UCMR 5 Sample Receiving Req

IR Gun#: 23

Ice: ~~Wet~~ / Blue

Method	Type	# Bot	Temp °C (10°C within 2 days of collection, 6°C for > 2 days) Initial / Corrected	pH* value	✓if receipt pH acceptable	✓if pH needs adjustment	Cl (P/A) **	Sample Comments	✓if sample is invalid
200.7	FS	1	[redacted]				[redacted]		
200.7	FS	2	[redacted]				[redacted]		
533	FS	1	4.4 / 3.6		✓		A		
533	FS	2	/				A		
533	FS	3	/				A		
533	FRB	1	3.0 / 2.2		✓		A		
537.1	FS	1	/			[redacted]			
537.1	FS	2	/						
537.1	FS	3	/						
537.1	FRB	1	/						

* pH <2 for 200.7. pH 6-8 for 533 & 537.1. *Note: 200.7 & 533 pH may be adjusted upon receipt.*

** A = Absent if Free Cl <0.1 mg/L; P = Chlorine is present

Received By: Debbie Arter Date/Time: 9.29.23 9:00 AM

Login Sample Receipt Checklist

Client: City of Tarpon Springs

Job Number: 810-79542-1

Login Number: 79542
List Number: 1
Creator: Alfred, Robbin

List Source: Eurofins Eaton Analytical South Bend

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	False	Client provided containers

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Kevin Tenk
City of Tarpon Springs
1624 L & R Industrial Blvd
Tarpon Springs, Florida 34689

Generated 4/12/2023 9:21:59 AM

JOB DESCRIPTION

UCMR5 - FL6521784 - SE1 - Highland Avenue Plant

JOB NUMBER

810-54393-1

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend IN 46617

See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Eaton Analytical, LLC Project Manager.

Authorization

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4/12/2023 9:21:59 AM

Authorized for release by
Pamela Brown, Project Manager
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(574)233-4777

Table of Contents

Definitions/Glossary

Client: City of Tarpon Springs
Job ID: 810-54393-1
Project/Site: UCMR5 - FL6521784 - SE1 - Highland Avenue
Plant

Qualifiers

LCMS

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Metals

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.
¤	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: City of Tarpon Springs
Job ID: 810-54393-1
Project/Site: UCMR5 - FL6521784 - SE1 - Highland Avenue Plant

Job ID: 810-54393-1

Laboratory: Eurofins Eaton Analytical South Bend

Narrative

Job Narrative
810-54393-1

Receipt
The sample was received on 2/22/2023 9:45 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice.

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

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

Detection Summary

Client: City of Tarpon Springs
Job ID: 810-54393-1
Project/Site: UCMR5 - FL6521784 - SE1 - Highland Avenue Plant

Client Sample ID: 0003/Highland/TP/1784003/EP
Lab Sample ID: 810-54393-1
PWSID Number: FL6521784

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.0072		0.0050		ug/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	0.0058		0.0030		ug/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	0.0048		0.0030		ug/L	1		533	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.0034		0.0030		ug/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	0.0097		0.0040		ug/L	1		533	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.0055		0.0030		ug/L	1		533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.0070		0.0030		ug/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.0334		0.0040		ug/L	1		533	Total/NA

Client Sample ID: 0003/Highland/TP/1784003/EP
Lab Sample ID: 810-54393-1FRB
PWSID Number: FL6521784

No Detections.

This Detection Summary does not include radiochemical test results.

Client: City of Tarpon Springs
Job ID: 810-54393-1
Project/Site: UCMR5 - FL6521784 - SE1 - Highland Avenue Plant

Client Sample ID: 0003/Highland/TP/1784003/EP
Lab Sample ID: 810-54393-1
Date Collected: 02/21/23 09:20
Matrix: Drinking Water
Date Received: 02/22/23 09:45
PWSID Number: FL6521784

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**0.0072**		0.0050		ug/L		03/17/23 05:48	03/18/23 19:40	1
Perfluoropentanoic acid (PFPeA)	**0.0058**		0.0030		ug/L		03/17/23 05:48	03/18/23 19:40	1
Perfluorohexanoic acid (PFHxA)	**0.0048**		0.0030		ug/L		03/17/23 05:48	03/18/23 19:40	1
Perfluoroheptanoic acid (PFHpA)	**0.0034**		0.0030		ug/L		03/17/23 05:48	03/18/23 19:40	1
Perfluorooctanoic acid (PFOA)	**0.0097**		0.0040		ug/L		03/17/23 05:48	03/18/23 19:40	1
Perfluorononanoic acid (PFNA)	<0.0040		0.0040		ug/L		03/17/23 05:48	03/18/23 19:40	1
Perfluorodecanoic acid (PFDA)	<0.0030		0.0030		ug/L		03/17/23 05:48	03/18/23 19:40	1
Perfluoroundecanoic acid (PFUnA)	<0.0020		0.0020		ug/L		03/17/23 05:48	03/18/23 19:40	1
Perfluorododecanoic acid (PFDoA)	<0.0030		0.0030		ug/L		03/17/23 05:48	03/18/23 19:40	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0030		0.0030		ug/L		03/17/23 05:48	03/18/23 19:40	1
Perfluorobutanesulfonic acid (PFBS)	**0.0055**		0.0030		ug/L		03/17/23 05:48	03/18/23 19:40	1
Perfluorohexanesulfonic acid (PFHxS)	**0.0070**		0.0030		ug/L		03/17/23 05:48	03/18/23 19:40	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.0030		0.0030		ug/L		03/17/23 05:48	03/18/23 19:40	1
Perfluorooctanesulfonic acid (PFOS)	**0.0334**		0.0040		ug/L		03/17/23 05:48	03/18/23 19:40	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0040		0.0040		ug/L		03/17/23 05:48	03/18/23 19:40	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0050		0.0050		ug/L		03/17/23 05:48	03/18/23 19:40	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.0020		0.0020		ug/L		03/17/23 05:48	03/18/23 19:40	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.0050		0.0050		ug/L		03/17/23 05:48	03/18/23 19:40	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0030		0.0030		ug/L		03/17/23 05:48	03/18/23 19:40	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0050		0.0050		ug/L		03/17/23 05:48	03/18/23 19:40	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0050		0.0050		ug/L		03/17/23 05:48	03/18/23 19:40	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0200		0.0200		ug/L		03/17/23 05:48	03/18/23 19:40	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0040		0.0040		ug/L		03/17/23 05:48	03/18/23 19:40	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0030		0.0030		ug/L		03/17/23 05:48	03/18/23 19:40	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.0030		0.0030		ug/L		03/17/23 05:48	03/18/23 19:40	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*101*		*50 - 200*	*03/17/23 05:48*	*03/18/23 19:40*	*1*
13C4 PFBA	*99*		*50 - 200*	*03/17/23 05:48*	*03/18/23 19:40*	*1*
13C3 PFBS	*104*		*50 - 200*	*03/17/23 05:48*	*03/18/23 19:40*	*1*
13C5 PFPeA	*101*		*50 - 200*	*03/17/23 05:48*	*03/18/23 19:40*	*1*
13C5 PFHxA	*95*		*50 - 200*	*03/17/23 05:48*	*03/18/23 19:40*	*1*
13C4 PFHpA	*96*		*50 - 200*	*03/17/23 05:48*	*03/18/23 19:40*	*1*
13C8 PFOA	*92*		*50 - 200*	*03/17/23 05:48*	*03/18/23 19:40*	*1*
13C9 PFNA	*90*		*50 - 200*	*03/17/23 05:48*	*03/18/23 19:40*	*1*
13C6 PFDA	*86*		*50 - 200*	*03/17/23 05:48*	*03/18/23 19:40*	*1*
13C7 PFUnA	*83*		*50 - 200*	*03/17/23 05:48*	*03/18/23 19:40*	*1*

Client Sample ID: 0003/Highland/TP/1784003/EP
Lab Sample ID: 810-54393-1

Date Collected: 02/21/23 09:20
Matrix: Drinking Water
Date Received: 02/22/23 09:45
PWSID Number: FL6521784

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDoA	*82*		*50 - 200*	*03/17/23 05:48*	*03/18/23 19:40*	*1*
13C8 PFOS	*101*		*50 - 200*	*03/17/23 05:48*	*03/18/23 19:40*	*1*
13C3 PFHxS	*103*		*50 - 200*	*03/17/23 05:48*	*03/18/23 19:40*	*1*
13C2-4:2-FTS	*108*		*50 - 200*	*03/17/23 05:48*	*03/18/23 19:40*	*1*
13C2-6:2-FTS	*110*		*50 - 200*	*03/17/23 05:48*	*03/18/23 19:40*	*1*
13C2-8:2-FTS	*99*		*50 - 200*	*03/17/23 05:48*	*03/18/23 19:40*	*1*

Method: EPA 537.1 UCMR5 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.0050		0.0050	ug/L		03/03/23 06:51	03/04/23 23:10	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.0060		0.0060	ug/L		03/03/23 06:51	03/04/23 23:10	1
Perfluorotetradecanoic acid (PFTA)	<0.0080		0.0080	ug/L		03/03/23 06:51	03/04/23 23:10	1
Perfluorotridecanoic acid (PFTrDA)	<0.0070		0.0070	ug/L		03/03/23 06:51	03/04/23 23:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*77*		*70 - 130*	*03/03/23 06:51*	*03/04/23 23:10*	*1*
13C2 PFHxA	*92*		*70 - 130*	*03/03/23 06:51*	*03/04/23 23:10*	*1*
13C2 PFDA	*85*		*70 - 130*	*03/03/23 06:51*	*03/04/23 23:10*	*1*
13C3 HFPO-DA	*92*		*70 - 130*	*03/03/23 06:51*	*03/04/23 23:10*	*1*

Method: EPA 200.7 UCMR5 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<9.00		9.00	ug/L		02/27/23 13:10	02/28/23 13:15	1

Client Sample ID: 0003/Highland/TP/1784003/EP
Lab Sample ID: 810-54393-1FRB

Date Collected: 02/21/23 09:20
Matrix: Drinking Water
Date Received: 02/22/23 09:45
PWSID Number: FL6521784

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.0005		0.0047	ug/L		03/17/23 05:48	03/18/23 21:55	1
Perfluoropentanoic acid (PFPeA)	<0.0004		0.0028	ug/L		03/17/23 05:48	03/18/23 21:55	1
Perfluorohexanoic acid (PFHxA)	<0.0004		0.0028	ug/L		03/17/23 05:48	03/18/23 21:55	1
Perfluoroheptanoic acid (PFHpA)	<0.0004		0.0028	ug/L		03/17/23 05:48	03/18/23 21:55	1
Perfluorooctanoic acid (PFOA)	<0.0004		0.0038	ug/L		03/17/23 05:48	03/18/23 21:55	1
Perfluorononanoic acid (PFNA)	<0.0004		0.0038	ug/L		03/17/23 05:48	03/18/23 21:55	1
Perfluorodecanoic acid (PFDA)	<0.0003		0.0028	ug/L		03/17/23 05:48	03/18/23 21:55	1
Perfluoroundecanoic acid (PFUnA)	<0.0004		0.0019	ug/L		03/17/23 05:48	03/18/23 21:55	1
Perfluorododecanoic acid (PFDoA)	<0.0003		0.0028	ug/L		03/17/23 05:48	03/18/23 21:55	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0004		0.0028	ug/L		03/17/23 05:48	03/18/23 21:55	1
Perfluorobutanesulfonic acid (PFBS)	<0.0004		0.0028	ug/L		03/17/23 05:48	03/18/23 21:55	1
Perfluorohexanesulfonic acid (PFHxS)	<0.0004		0.0028	ug/L		03/17/23 05:48	03/18/23 21:55	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.0004		0.0028	ug/L		03/17/23 05:48	03/18/23 21:55	1
Perfluorooctanesulfonic acid (PFOS)	<0.0004		0.0038	ug/L		03/17/23 05:48	03/18/23 21:55	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0004		0.0038	ug/L		03/17/23 05:48	03/18/23 21:55	1

Client: City of Tarpon Springs
Job ID: 810-54393-1
Project/Site: UCMR5 - FL6521784 - SE1 - Highland Avenue Plant

Client Sample ID: 0003/Highland/TP/1784003/EP
Lab Sample ID: 810-54393-1FRB
Date Collected: 02/21/23 09:20
Matrix: Drinking Water
Date Received: 02/22/23 09:45
PWSID Number: FL6521784

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0005		0.0047		ug/L		03/17/23 05:48	03/18/23 21:55	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.0004		0.0019		ug/L		03/17/23 05:48	03/18/23 21:55	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.0005		0.0047		ug/L		03/17/23 05:48	03/18/23 21:55	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0005		0.0028		ug/L		03/17/23 05:48	03/18/23 21:55	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0006		0.0047		ug/L		03/17/23 05:48	03/18/23 21:55	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0005		0.0047		ug/L		03/17/23 05:48	03/18/23 21:55	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0009		0.0189		ug/L		03/17/23 05:48	03/18/23 21:55	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0003		0.0038		ug/L		03/17/23 05:48	03/18/23 21:55	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0003		0.0028		ug/L		03/17/23 05:48	03/18/23 21:55	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.0004		0.0028		ug/L		03/17/23 05:48	03/18/23 21:55	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*82*		*50 - 200*	*03/17/23 05:48*	*03/18/23 21:55*	*1*
13C4 PFBA	*95*		*50 - 200*	*03/17/23 05:48*	*03/18/23 21:55*	*1*
13C3 PFBS	*95*		*50 - 200*	*03/17/23 05:48*	*03/18/23 21:55*	*1*
13C5 PFPeA	*94*		*50 - 200*	*03/17/23 05:48*	*03/18/23 21:55*	*1*
13C5 PFHxA	*93*		*50 - 200*	*03/17/23 05:48*	*03/18/23 21:55*	*1*
13C4 PFHpA	*95*		*50 - 200*	*03/17/23 05:48*	*03/18/23 21:55*	*1*
13C8 PFOA	*95*		*50 - 200*	*03/17/23 05:48*	*03/18/23 21:55*	*1*
13C9 PFNA	*94*		*50 - 200*	*03/17/23 05:48*	*03/18/23 21:55*	*1*
13C6 PFDA	*91*		*50 - 200*	*03/17/23 05:48*	*03/18/23 21:55*	*1*
13C7 PFUnA	*89*		*50 - 200*	*03/17/23 05:48*	*03/18/23 21:55*	*1*
13C2 PFDoA	*87*		*50 - 200*	*03/17/23 05:48*	*03/18/23 21:55*	*1*
13C8 PFOS	*93*		*50 - 200*	*03/17/23 05:48*	*03/18/23 21:55*	*1*
13C3 PFHxS	*94*		*50 - 200*	*03/17/23 05:48*	*03/18/23 21:55*	*1*
13C2-4:2-FTS	*93*		*50 - 200*	*03/17/23 05:48*	*03/18/23 21:55*	*1*
13C2-6:2-FTS	*96*		*50 - 200*	*03/17/23 05:48*	*03/18/23 21:55*	*1*
13C2-8:2-FTS	*89*		*50 - 200*	*03/17/23 05:48*	*03/18/23 21:55*	*1*

Surrogate Summary

Client: City of Tarpon Springs
Project/Site: UCMR5 - FL6521784 - SE1 - Highland Avenue Plant

Job ID: 810-54393-1

Method: 537.1 UCMR5 - Perfluorinated Alkyl Acids (LC/MS)

Matrix: Drinking Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	d5NEFOS (70-130)	PFHxA (70-130)	PFDA (70-130)	HFPODA (70-130)
810-54393-1	0003/Highland/TP/1784003/EP	77	92	85	92
810-54393-1 MS	0003/Highland/TP/1784003/EP	75	93	95	95
810-54393-1 MSD	0003/Highland/TP/1784003/EP	83	91	86	91
LLCS 810-50172/2-A	Lab Control Sample	89	95	94	96
MBL 810-50172/1-A	Method Blank	86	93	89	89

Surrogate Legend

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

Isotope Dilution Summary

Client: City of Tarpon Springs
Job ID: 810-54393-1
Project/Site: UCMR5 - FL6521784 - SE1 - Highland Avenue Plant

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Matrix: Drinking Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HFPODA (50-200)	PFBA (50-200)	C3PFBS (50-200)	PFPeA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)
810-54393-1	0003/Highland/TP/1784003/EP	101	99	104	101	95	96	92	90
810-54393-1 LMS	0003/Highland/TP/1784003/EP	103	100	102	102	97	98	95	89
810-54393-1 LMSD	0003/Highland/TP/1784003/EP	96	92	93	93	88	87	81	70
810-54393-1FRB	FRB	82	95	95	94	93	95	95	94
LLCS 810-52002/2-A	Lab Control Sample	100	97	97	96	96	95	95	94
MBL 810-52002/1-A	Method Blank	98	96	98	96	95	95	96	95

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	C6PFDA (50-200)	13C7PUA (50-200)	PFDoA (50-200)	C8PFOS (50-200)	C3PFHS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
810-54393-1	0003/Highland/TP/1784003/EP	86	83	82	101	103	108	110	99
810-54393-1 LMS	0003/Highland/TP/1784003/EP	79	73	70	95	102	107	107	87
810-54393-1 LMSD	0003/Highland/TP/1784003/EP	57	51	52	90	95	97	99	86
810-54393-1FRB	FRB	91	89	87	93	94	93	96	89
LLCS 810-52002/2-A	Lab Control Sample	90	88	87	91	95	94	95	91
MBL 810-52002/1-A	Method Blank	92	90	88	92	94	93	95	94

Surrogate Legend

HFPODA = 13C3 HFPO-DA
PFBA = 13C4 PFBA
C3PFBS = 13C3 PFBS
PFPeA = 13C5 PFPeA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFDoA = 13C2 PFDoA
C8PFOS = 13C8 PFOS
C3PFHS = 13C3 PFHxS
42FTS = 13C2-4:2-FTS
62FTS = 13C2-6:2-FTS
82FTS = 13C2-8:2-FTS

Client: City of Tarpon Springs
Job ID: 810-54393-1
Project/Site: UCMR5 - FL6521784 - SE1 - Highland Avenue Plant

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Lab Sample ID: MBL 810-52002/1-A
Matrix: Drinking Water
Analysis Batch: 52103

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 52002

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.0005		0.0050		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluoropentanoic acid (PFPeA)	<0.0004		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluorohexanoic acid (PFHxA)	<0.0004		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluoroheptanoic acid (PFHpA)	<0.0004		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluorooctanoic acid (PFOA)	<0.0004		0.0040		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluorononanoic acid (PFNA)	<0.0004		0.0040		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluorodecanoic acid (PFDA)	<0.0004		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluoroundecanoic acid (PFUnA)	<0.0004		0.0020		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluorododecanoic acid (PFDoA)	<0.0004		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0004		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluorobutanesulfonic acid (PFBS)	<0.0004		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluorohexanesulfonic acid (PFHxS)	<0.0004		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.0004		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluorooctanesulfonic acid (PFOS)	<0.0004		0.0040		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0004		0.0040		ug/L		03/17/23 05:48	03/18/23 15:11	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0005		0.0050		ug/L		03/17/23 05:48	03/18/23 15:11	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.0005		0.0020		ug/L		03/17/23 05:48	03/18/23 15:11	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.0005		0.0050		ug/L		03/17/23 05:48	03/18/23 15:11	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0006		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0007		0.0050		ug/L		03/17/23 05:48	03/18/23 15:11	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0006		0.0050		ug/L		03/17/23 05:48	03/18/23 15:11	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0009		0.0200		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0003		0.0040		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0004		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.0005		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1

Isotope Dilution	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*98*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C4 PFBA	*96*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C3 PFBS	*98*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C5 PFPeA	*96*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C5 PFHxA	*95*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C4 PFHpA	*95*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C8 PFOA	*96*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C9 PFNA	*95*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C6 PFDA	*92*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C7 PFUnA	*90*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C2 PFDoA	*88*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: MBL 810-52002/1-A
Matrix: Drinking Water
Analysis Batch: 52103

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 52002

Isotope Dilution	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 PFOS	*92*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C3 PFHxS	*94*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C2-4:2-FTS	*93*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C2-6:2-FTS	*95*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C2-8:2-FTS	*94*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*

Lab Sample ID: LLCS 810-52002/2-A
Matrix: Drinking Water
Analysis Batch: 52103

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 52002

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	0.00200	0.0020		ug/L		98	50 - 150
Perfluoropentanoic acid (PFPeA)	0.00200	0.0020		ug/L		100	50 - 150
Perfluorohexanoic acid (PFHxA)	0.00200	0.0019		ug/L		96	50 - 150
Perfluoroheptanoic acid (PFHpA)	0.00200	0.0019		ug/L		94	50 - 150
Perfluorooctanoic acid (PFOA)	0.00200	0.0020		ug/L		99	50 - 150
Perfluorononanoic acid (PFNA)	0.00200	0.0019		ug/L		97	50 - 150
Perfluorodecanoic acid (PFDA)	0.00200	0.0019		ug/L		96	50 - 150
Perfluoroundecanoic acid (PFUnA)	0.00200	0.0019		ug/L		93	50 - 150
Perfluorododecanoic acid (PFDoA)	0.00200	0.0020		ug/L		98	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.00189	0.0018		ug/L		94	50 - 150
Perfluorobutanesulfonic acid (PFBS)	0.00178	0.0017		ug/L		93	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	0.00183	0.0017		ug/L		94	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	0.00191	0.0018		ug/L		96	50 - 150
Perfluorooctanesulfonic acid (PFOS)	0.00186	0.0018		ug/L		98	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	0.00188	0.0017		ug/L		89	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.00200	0.0017		ug/L		87	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	0.00187	0.0017		ug/L		92	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	0.00189	0.0017		ug/L		89	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.00188	0.0020		ug/L		106	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.00190	0.0020		ug/L		105	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.00192	0.0021		ug/L		109	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.00200	0.0023		ug/L		114	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.00200	0.0019		ug/L		93	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.00200	0.0019		ug/L		93	50 - 150

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: LLCS 810-52002/2-A
Matrix: Drinking Water
Analysis Batch: 52103

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 52002

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)			0.00178	0.0016		ug/L		92	50 - 150		

Isotope Dilution	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
13C3 HFPO-DA	*100*		*50 - 200*
13C4 PFBA	*97*		*50 - 200*
13C3 PFBS	*97*		*50 - 200*
13C5 PFPeA	*96*		*50 - 200*
13C5 PFHxA	*96*		*50 - 200*
13C4 PFHpA	*95*		*50 - 200*
13C8 PFOA	*95*		*50 - 200*
13C9 PFNA	*94*		*50 - 200*
13C6 PFDA	*90*		*50 - 200*
13C7 PFUnA	*88*		*50 - 200*
13C2 PFDoA	*87*		*50 - 200*
13C8 PFOS	*91*		*50 - 200*
13C3 PFHxS	*95*		*50 - 200*
13C2-4:2-FTS	*94*		*50 - 200*
13C2-6:2-FTS	*95*		*50 - 200*
13C2-8:2-FTS	*91*		*50 - 200*

Lab Sample ID: 810-54393-1 LMS
Matrix: Drinking Water
Analysis Batch: 52103

Client Sample ID: 0003/Highland/TP/1784003/EP
Prep Type: Total/NA
Prep Batch: 52002

Analyte	Sample Result	Sample Qualifier	Spike Added	LMS Result	LMS Qualifier	Unit	D	%Rec	%Rec Limits		
Perfluorobutanoic acid (PFBA)	0.0072		0.00190	0.0086		ug/L		77			
Perfluoropentanoic acid (PFPeA)	0.0058		0.00190	0.0074		ug/L		82			
Perfluorohexanoic acid (PFHxA)	0.0048		0.00190	0.0062		ug/L		78			
Perfluoroheptanoic acid (PFHpA)	0.0034		0.00190	0.0049		ug/L		80			
Perfluorooctanoic acid (PFOA)	0.0097		0.00190	0.0110	4	ug/L		68			
Perfluorononanoic acid (PFNA)	<0.0040		0.00190	0.0027		ug/L		92			
Perfluorodecanoic acid (PFDA)	<0.0030		0.00190	0.0021		ug/L		109			
Perfluoroundecanoic acid (PFUnA)	<0.0020		0.00190	0.0018		ug/L		93			
Perfluorododecanoic acid (PFDoA)	<0.0030		0.00190	0.0019		ug/L		99			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0030		0.00180	0.0016		ug/L		89			
Perfluorobutanesulfonic acid (PFBS)	0.0055		0.00169	0.0068		ug/L		75			
Perfluorohexanesulfonic acid (PFHxS)	0.0070		0.00173	0.0084	4	ug/L		80			
Perfluoroheptanesulfonic acid (PFHpS)	<0.0030		0.00181	0.0025		ug/L		93			
Perfluorooctanesulfonic acid (PFOS)	0.0334		0.00176	0.0348	4	ug/L		79			
Perfluoropentanesulfonic acid (PFPeS)	<0.0040		0.00178	0.0024		ug/L		86			

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: 810-54393-1 LMS
Matrix: Drinking Water
Analysis Batch: 52103

Client Sample ID: 0003/Highland/TP/1784003/EP
Prep Type: Total/NA
Prep Batch: 52002

Analyte	Sample Result	Sample Qualifier	Spike Added	LMS Result	LMS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0050		0.00190	0.0016		ug/L		84	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.0020		0.00177	0.0015		ug/L		85	
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.0050		0.00179	0.0014		ug/L		76	
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0030		0.00178	0.0019		ug/L		107	
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0050		0.00181	0.0019		ug/L		102	
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0050		0.00182	0.0019		ug/L		103	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0200		0.00190	0.0018		ug/L		95	
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0040		0.00190	0.0018		ug/L		92	
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0030		0.00190	0.0017		ug/L		89	
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.0030		0.00169	0.0015		ug/L		89	

Isotope Dilution	*LMS %Recovery*	*LMS Qualifier*	*Limits*
13C3 HFPO-DA	*103*		*50 - 200*
13C4 PFBA	*100*		*50 - 200*
13C3 PFBS	*102*		*50 - 200*
13C5 PFPeA	*102*		*50 - 200*
13C5 PFHxA	*97*		*50 - 200*
13C4 PFHpA	*98*		*50 - 200*
13C8 PFOA	*95*		*50 - 200*
13C9 PFNA	*89*		*50 - 200*
13C6 PFDA	*79*		*50 - 200*
13C7 PFUnA	*73*		*50 - 200*
13C2 PFDoA	*70*		*50 - 200*
13C8 PFOS	*95*		*50 - 200*
13C3 PFHxS	*102*		*50 - 200*
13C2-4:2-FTS	*107*		*50 - 200*
13C2-6:2-FTS	*107*		*50 - 200*
13C2-8:2-FTS	*87*		*50 - 200*

Lab Sample ID: 810-54393-1 LMSD
Matrix: Drinking Water
Analysis Batch: 52103

Client Sample ID: 0003/Highland/TP/1784003/EP
Prep Type: Total/NA
Prep Batch: 52002

Analyte	Sample Result	Sample Qualifier	Spike Added	LMSD Result	LMSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	0.0072		0.00188	0.0088		ug/L		89		3	
Perfluoropentanoic acid (PFPeA)	0.0058		0.00188	0.0074		ug/L		84		0	
Perfluorohexanoic acid (PFHxA)	0.0048		0.00188	0.0064		ug/L		86		2	
Perfluoroheptanoic acid (PFHpA)	0.0034		0.00188	0.0050		ug/L		86		2	
Perfluorooctanoic acid (PFOA)	0.0097		0.00188	0.0113	4	ug/L		85		3	
Perfluorononanoic acid (PFNA)	<0.0040		0.00188	0.0028		ug/L		95		2	

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: 810-54393-1 LMSD
Matrix: Drinking Water
Analysis Batch: 52103

Client Sample ID: 0003/Highland/TP/1784003/EP
Prep Type: Total/NA
Prep Batch: 52002

Analyte	Sample Result	Sample Qualifier	Spike Added	LMSD Result	LMSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorodecanoic acid (PFDA)	<0.0030		0.00188	0.0021		ug/L		114		3	
Perfluoroundecanoic acid (PFUnA)	<0.0020		0.00188	0.0018		ug/L		97		2	
Perfluorododecanoic acid (PFDoA)	<0.0030		0.00188	0.0019		ug/L		102		2	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0030		0.00178	0.0016		ug/L		92		2	
Perfluorobutanesulfonic acid (PFBS)	0.0055		0.00167	0.0070		ug/L		86		3	
Perfluorohexanesulfonic acid (PFHxS)	0.0070		0.00172	0.0085	4	ug/L		85		1	
Perfluoroheptanesulfonic acid (PFHpS)	<0.0030		0.00179	0.0025		ug/L		93		0	
Perfluorooctanesulfonic acid (PFOS)	0.0334		0.00175	0.0350	4	ug/L		89		0	
Perfluoropentanesulfonic acid (PFPeS)	<0.0040		0.00177	0.0024		ug/L		91		3	
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0050		0.00188	0.0016		ug/L		86		1	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.0020		0.00176	0.0016		ug/L		91		6	
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.0050		0.00178	0.0015		ug/L		86		11	
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0030		0.00176	0.0019		ug/L		109		1	
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0050		0.00179	0.0020		ug/L		109		6	
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0050		0.00181	0.0019		ug/L		106		2	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0200		0.00188	0.0022		ug/L		118		21	
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0040		0.00188	0.0018		ug/L		96		3	
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0030		0.00188	0.0017		ug/L		92		2	
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.0030		0.00168	0.0016		ug/L		93		3	

Isotope Dilution	*LMSD %Recovery*	*LMSD Qualifier*	*Limits*
13C3 HFPO-DA	*96*		*50 - 200*
13C4 PFBA	*92*		*50 - 200*
13C3 PFBS	*93*		*50 - 200*
13C5 PFPeA	*93*		*50 - 200*
13C5 PFHxA	*88*		*50 - 200*
13C4 PFHpA	*87*		*50 - 200*
13C8 PFOA	*81*		*50 - 200*
13C9 PFNA	*70*		*50 - 200*
13C6 PFDA	*57*		*50 - 200*
13C7 PFUnA	*51*		*50 - 200*
13C2 PFDoA	*52*		*50 - 200*
13C8 PFOS	*90*		*50 - 200*
13C3 PFHxS	*95*		*50 - 200*

Client: City of Tarpon Springs
Project/Site: UCMR5 - FL6521784 - SE1 - Highland Avenue
Plant

Job ID: 810-54393-1

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: 810-54393-1 LMSD
Matrix: Drinking Water
Analysis Batch: 52103

Client Sample ID: 0003/Highland/TP/1784003/EP
Prep Type: Total/NA
Prep Batch: 52002

Isotope Dilution	*LMSD %Recovery*	*LMSD Qualifier*	*Limits*
13C2-4:2-FTS	*97*		*50 - 200*
13C2-6:2-FTS	*99*		*50 - 200*
13C2-8:2-FTS	*86*		*50 - 200*

Method: 537.1 UCMR5 - Perfluorinated Alkyl Acids (LC/MS)

Lab Sample ID: MBL 810-50172/1-A
Matrix: Drinking Water
Analysis Batch: 50242

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 50172

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.0005		0.0050		ug/L		03/03/23 06:51	03/04/23 22:49	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.0006		0.0060		ug/L		03/03/23 06:51	03/04/23 22:49	1
Perfluorotetradecanoic acid (PFTA)	<0.0007		0.0080		ug/L		03/03/23 06:51	03/04/23 22:49	1
Perfluorotridecanoic acid (PFTrDA)	<0.0006		0.0070		ug/L		03/03/23 06:51	03/04/23 22:49	1

Surrogate	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*86*		*70 - 130*	*03/03/23 06:51*	*03/04/23 22:49*	*1*
13C2 PFHxA	*93*		*70 - 130*	*03/03/23 06:51*	*03/04/23 22:49*	*1*
13C2 PFDA	*89*		*70 - 130*	*03/03/23 06:51*	*03/04/23 22:49*	*1*
13C3 HFPO-DA	*89*		*70 - 130*	*03/03/23 06:51*	*03/04/23 22:49*	*1*

Lab Sample ID: LLCS 810-50172/2-A
Matrix: Drinking Water
Analysis Batch: 50242

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 50172

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			0.00200	0.0019		ug/L		97	50 - 150		
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			0.00200	0.0019		ug/L		94	50 - 150		
Perfluorotetradecanoic acid (PFTA)			0.00200	0.0016		ug/L		82	50 - 150		
Perfluorotridecanoic acid (PFTrDA)			0.00200	0.0019		ug/L		96	50 - 150		

Surrogate	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
d5-NEtFOSAA	*89*		*70 - 130*
13C2 PFHxA	*95*		*70 - 130*
13C2 PFDA	*94*		*70 - 130*
13C3 HFPO-DA	*96*		*70 - 130*

Method: 537.1 UCMR5 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: 810-54393-1 MS
Matrix: Drinking Water
Analysis Batch: 50242

Client Sample ID: 0003/Highland/TP/1784003/EP
Prep Type: Total/NA
Prep Batch: 50172

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.0050		0.0950	0.0813		ug/L		86	
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.0060		0.0950	0.0790		ug/L		83	
Perfluorotetradecanoic acid (PFTA)	<0.0080		0.0950	0.0836		ug/L		88	
Perfluorotridecanoic acid (PFTrDA)	<0.0070		0.0950	0.0901		ug/L		95	

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
d5-NEtFOSAA	*75*		*70 - 130*
13C2 PFHxA	*93*		*70 - 130*
13C2 PFDA	*95*		*70 - 130*
13C3 HFPO-DA	*95*		*70 - 130*

Lab Sample ID: 810-54393-1 MSD
Matrix: Drinking Water
Analysis Batch: 50242

Client Sample ID: 0003/Highland/TP/1784003/EP
Prep Type: Total/NA
Prep Batch: 50172

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.0050		0.0936	0.0816		ug/L		87		0	
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.0060		0.0936	0.0837		ug/L		89		6	
Perfluorotetradecanoic acid (PFTA)	<0.0080		0.0936	0.0784		ug/L		84		6	
Perfluorotridecanoic acid (PFTrDA)	<0.0070		0.0936	0.0848		ug/L		91		6	

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
d5-NEtFOSAA	*83*		*70 - 130*
13C2 PFHxA	*91*		*70 - 130*
13C2 PFDA	*86*		*70 - 130*
13C3 HFPO-DA	*91*		*70 - 130*

Method: 200.7 UCMR5 - Metals (ICP)

Lab Sample ID: MBL 810-49552/1-A
Matrix: Drinking Water
Analysis Batch: 49679

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 49552

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.520		9.00		ug/L		02/27/23 13:10	02/28/23 12:41	1

Client: City of Tarpon Springs
Job ID: 810-54393-1
Project/Site: UCMR5 - FL6521784 - SE1 - Highland Avenue
Plant

Method: 200.7 UCMR5 - Metals (ICP) (Continued)

Lab Sample ID: LLCS 810-49552/2-A
Matrix: Drinking Water
Analysis Batch: 49679

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 49552

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Lithium			9.00	8.59	J	ug/L		95	50 - 150		

QC Association Summary

Client: City of Tarpon Springs
Project/Site: UCMR5 - FL6521784 - SE1 - Highland Avenue Plant

Job ID: 810-54393-1

LCMS

Prep Batch: 50172

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-54393-1	0003/Highland/TP/1784003/EP	Total/NA	Drinking Water	537.1 DW	
MBL 810-50172/1-A	Method Blank	Total/NA	Drinking Water	537.1 DW	
LLCS 810-50172/2-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	
810-54393-1 MS	0003/Highland/TP/1784003/EP	Total/NA	Drinking Water	537.1 DW	
810-54393-1 MSD	0003/Highland/TP/1784003/EP	Total/NA	Drinking Water	537.1 DW	

Analysis Batch: 50242

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-54393-1	0003/Highland/TP/1784003/EP	Total/NA	Drinking Water	537.1 UCMR5	50172
MBL 810-50172/1-A	Method Blank	Total/NA	Drinking Water	537.1 UCMR5	50172
LLCS 810-50172/2-A	Lab Control Sample	Total/NA	Drinking Water	537.1 UCMR5	50172
810-54393-1 MS	0003/Highland/TP/1784003/EP	Total/NA	Drinking Water	537.1 UCMR5	50172
810-54393-1 MSD	0003/Highland/TP/1784003/EP	Total/NA	Drinking Water	537.1 UCMR5	50172

Prep Batch: 52002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-54393-1	0003/Highland/TP/1784003/EP	Total/NA	Drinking Water	533	
810-54393-1FRB	FRB	Total/NA	Drinking Water	533	
MBL 810-52002/1-A	Method Blank	Total/NA	Drinking Water	533	
LLCS 810-52002/2-A	Lab Control Sample	Total/NA	Drinking Water	533	
810-54393-1 LMS	0003/Highland/TP/1784003/EP	Total/NA	Drinking Water	533	
810-54393-1 LMSD	0003/Highland/TP/1784003/EP	Total/NA	Drinking Water	533	

Analysis Batch: 52103

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-54393-1	0003/Highland/TP/1784003/EP	Total/NA	Drinking Water	533	52002
810-54393-1FRB	FRB	Total/NA	Drinking Water	533	52002
MBL 810-52002/1-A	Method Blank	Total/NA	Drinking Water	533	52002
LLCS 810-52002/2-A	Lab Control Sample	Total/NA	Drinking Water	533	52002
810-54393-1 LMS	0003/Highland/TP/1784003/EP	Total/NA	Drinking Water	533	52002
810-54393-1 LMSD	0003/Highland/TP/1784003/EP	Total/NA	Drinking Water	533	52002

Metals

Prep Batch: 49552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-54393-1	0003/Highland/TP/1784003/EP	Total/NA	Drinking Water	200.7 UCMR5	
MBL 810-49552/1-A	Method Blank	Total/NA	Drinking Water	200.7 UCMR5	
LLCS 810-49552/2-A	Lab Control Sample	Total/NA	Drinking Water	200.7 UCMR5	

Analysis Batch: 49679

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-54393-1	0003/Highland/TP/1784003/EP	Total/NA	Drinking Water	200.7 UCMR5	49552
MBL 810-49552/1-A	Method Blank	Total/NA	Drinking Water	200.7 UCMR5	49552
LLCS 810-49552/2-A	Lab Control Sample	Total/NA	Drinking Water	200.7 UCMR5	49552

Lab Chronicle

Client: City of Tarpon Springs
Job ID: 810-54393-1
Project/Site: UCMR5 - FL6521784 - SE1 - Highland Avenue Plant

Client Sample ID: 0003/Highland/TP/1784003/EP
Lab Sample ID: 810-54393-1

Date Collected: 02/21/23 09:20
Matrix: Drinking Water

Date Received: 02/22/23 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			52002	NR	EA SB	03/17/23 05:48
Total/NA	Analysis	533		1	52103	CM	EA SB	03/18/23 19:40
Total/NA	Prep	537.1 DW			50172	AD	EA SB	03/03/23 06:51
Total/NA	Analysis	537.1 UCMR5		1	50242	MH	EA SB	03/04/23 23:10
Total/NA	Prep	200.7 UCMR5			49552	NB	EA SB	02/27/23 13:10
Total/NA	Analysis	200.7 UCMR5		1	49679	NB	EA SB	02/28/23 13:15

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: City of Tarpon Springs
Job ID: 810-54393-1
Project/Site: UCMR5 - FL6521784 - SE1 - Highland Avenue Plant

Laboratory: Eurofins Eaton Analytical South Bend

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

Authority	Program	Identification Number	Expiration Date
USEPA UCMR 5	US Federal Programs	IN00035	12-31-25

Method Summary

Client: City of Tarpon Springs
Job ID: 810-54393-1
Project/Site: UCMR5 - FL6521784 - SE1 - Highland Avenue
Plant

Method	Method Description	Protocol	Laboratory
533	Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water	EPA	EA SB
537.1 UCMR5	Perfluorinated Alkyl Acids (LC/MS)	EPA	EA SB
200.7 UCMR5	Metals (ICP)	EPA	EA SB
200.7 UCMR5	Preparation, Total Recoverable Metals	EPA	EA SB
533	Extraction of Perfluorinated and Polyfluorinated Alkyl Acids	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: City of Tarpon Springs
Job ID: 810-54393-1
Project/Site: UCMR5 - FL6521784 - SE1 - Highland Avenue Plant

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
810-54393-1	0003/Highland/TP/1784003/EP	Drinking Water	02/21/23 09:20	02/22/23 09:45	FL6521784
810-54393-1FRB	0003/Highland/TP/1784003/EP	Drinking Water	02/21/23 09:20	02/22/23 09:45	FL6521784

South Bend, IN
110 S Hill Street
South Bend, IN 46617
Phone (574) 233-4777; Phone (574) 233-8207

"UCMR 5 Sampling Form for Single Collectio

(Separate form is needed for each collection site)

810-54393 Chain of Custody

Company Contact: Kevin Tenk
Company Name: City of Tarpon Springs
Company Address: 1624 L&R Industrial Blvd
Tarpon Springs FL, 34689
Phone: (727) 937-2557
Email: ktenk@ctsfl.us
Purchase Order: N/A

Lab PM(name): Pamela Brown
PM Email: Pamela.Brown@et.eurofins.com
EEA Project: UCMR5

PWSID: 6521784
FacID:
SPID:
FacName:
SPName:
Sampling Event:

Water System Name: City of Tarpon Springs RO Water Treatment Facility
Collection Location: 0003/Highland/TP/1784003/EP - (Highland WTP) PoE
Scheduled Collection Date: 2/21/2023

Sampler Name (Print): Kevin Tenk

Date/Time Sampled: 2/21/2023 0920

Client Storage temp, if > 2 days from collection: N/A

AREA BELOW FOR LAB USE ONLY

For UCMR 5 specific criteria see: REC-WI55108 Guidance Document for UCMR 5 Sample Receiving Requirements and QA-SOP-SOP48964 UCMR 5 QAPP

IR Gun#: 29 | Ice: Wet / Blue

Method	Type	# Bot	Temp °C (10°C within 2 days of collection, 6°C for > 2 days) Initial / Corrected	pH* value	✓if receipt pH acceptable	✓if pH needs adjustment	Cl (P/A) **	Sample Comments	✓if sample is invalid
200.7	FS	1	[redacted]	<2	✓		[redacted]	0.4/1.2 temps	
~~200.7~~	~~FS~~	~~2~~							
533	FS	1	0.0 / 0.8	7.0	✓				
533	FS	2	N/A	7.0	✓				
533	FS	3	N/A	7.0	✓				
533	FRB	1	0.2 / 1.0	7.5	✓				
537.1	FS	1	0.2 / 1.0	7.0	✓	[redacted]			
537.1	FS	2	N/A	7.0	✓				
537.1	FS	3	N/A	7.0	✓				
537.1	FRB	1	0.2 / 1.0	7.0	✓				

* pH <2 for 200.7. pH 6-8 for 533 & 537.1. *Note: 200.7 & 533 pH may be adjusted upon receipt.*

** A = Absent if Free Cl <0.1 mg/L; P = Chlorine is present

Received By [signature] ***Date/Time*** 2/22/23 0945

South Bend, IN
110 S Hill Street
South Bend, IN 46617
Phone: 574-233-4777 Fax: 574-233-8207

Chain of Custody Record

eurofins Environment Testing

Client Information	Sampler: Kevin Tenk	Lab PM: Brown, Pamela	Carrier Tracking No(s):	COC No: 810-20640-6080 1
Client Contact: Mr. Kevin Tenk	Phone: 727 - 937- 2557	E-Mail: Pamela.Brown@et.eurofinsus.com	State of Origin:	Page: Page 1 of 1
Company: City of Tarpon Springs	PWSID: 6521784	Analysis Requested		Job #:
Address: 1624 L & R Industrial Blvd	Due Date 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, Y - Trizma, Z - other (specify)
City: Tarpon Springs	TAT Requested (days):			
State, Zip: FL, 34689	Compliance Project: Δ Yes Δ No			
Phone: 727-946-4641(Tel)	PO #: Purchase Order not required			Other:
Email: ktenk@ctsfl.us	WO #:			
Project Name: UCMR5	Project #: 81004900			
Site:	SSOW#:			

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)	200.7_UCMR5 - UCMR5_200.7	537.1_UCMR5 - Local Method	533_UCMR5 - Local Method	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	Y	N		
0001/Grosse Ave/TP/1784001/EP	2/21/23	0950	G	Drinking Wate							
0003/Highland/TP/1784003/EP	2/21/23	0920	G	Drinking Wate							
0004/RO Fac/TP/R01/EP	2/21/23	1015	G	Drinking Wate							
				Drinking Wate							

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
Kevin Tenk	2/21/2023	CTS		2/22/23 0945	ECH
~~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

Login Sample Receipt Checklist

Client: City of Tarpon Springs

Job Number: 810-54393-1

Login Number: 54393
List Number: 1
Creator: Wojcik, Mary

List Source: Eurofins Eaton Analytical South Bend

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	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Kevin Tenk
City of Tarpon Springs
1624 L & R Industrial Blvd
Tarpon Springs, Florida 34689

Generated 10/27/2023 10:00:37 AM

JOB DESCRIPTION

UCMR5 - FL6521784 - SE2 - Highland Avenue Plant

JOB NUMBER

810-79546-1

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend IN 46617

See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Eaton Analytical, LLC Project Manager.

Authorization

Generated
10/27/2023 10:00:37 AM

Authorized for release by
Pamela Brown, Project Manager
Pamela.Brown@et.eurofinsus.com
(574)233-4777

Table of Contents

Definitions/Glossary

Client: City of Tarpon Springs
Job ID: 810-79546-1
Project/Site: UCMR5 - FL6521784 - SE2 - Highland Avenue
Plant

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

Case Narrative

Client: City of Tarpon Springs
Job ID: 810-79546-1
Project/Site: UCMR5 - FL6521784 - SE2 - Highland Avenue Plant

Job ID: 810-79546-1

Laboratory: Eurofins Eaton Analytical South Bend

Narrative

Job Narrative
810-79546-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The sample was received on 9/29/2023 9:00 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice.

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

Detection Summary

Client: City of Tarpon Springs
Job ID: 810-79546-1
Project/Site: UCMR5 - FL6521784 - SE2 - Highland Avenue Plant

Client Sample ID: 0003/Highland/TP 1784003/EP
Lab Sample ID: 810-79546-1
PWSID Number: FL6521784

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.0082		0.0050		ug/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	0.0060		0.0030		ug/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	0.0046		0.0030		ug/L	1		533	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.0031		0.0030		ug/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	0.0103		0.0040		ug/L	1		533	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.0060		0.0030		ug/L	1		533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.0091		0.0030		ug/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.0338		0.0040		ug/L	1		533	Total/NA

Client Sample ID: 0003/Highland/TP 1784003/EP
Lab Sample ID: 810-79546-1FRB
PWSID Number: FL6521784

No Detections.

This Detection Summary does not include radiochemical test results.

Client: City of Tarpon Springs
Job ID: 810-79546-1
Project/Site: UCMR5 - FL6521784 - SE2 - Highland Avenue Plant

Client Sample ID: 0003/Highland/TP 1784003/EP
Lab Sample ID: 810-79546-1
Date Collected: 09/28/23 09:10
Matrix: Drinking Water
Date Received: 09/29/23 09:00
PWSID Number: FL6521784

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**0.0082**		0.0050		ug/L		10/13/23 07:47	10/14/23 13:24	1
Perfluoropentanoic acid (PFPeA)	**0.0060**		0.0030		ug/L		10/13/23 07:47	10/14/23 13:24	1
Perfluorohexanoic acid (PFHxA)	**0.0046**		0.0030		ug/L		10/13/23 07:47	10/14/23 13:24	1
Perfluoroheptanoic acid (PFHpA)	**0.0031**		0.0030		ug/L		10/13/23 07:47	10/14/23 13:24	1
Perfluorooctanoic acid (PFOA)	**0.0103**		0.0040		ug/L		10/13/23 07:47	10/14/23 13:24	1
Perfluorononanoic acid (PFNA)	<0.0040		0.0040		ug/L		10/13/23 07:47	10/14/23 13:24	1
Perfluorodecanoic acid (PFDA)	<0.0030		0.0030		ug/L		10/13/23 07:47	10/14/23 13:24	1
Perfluoroundecanoic acid (PFUnA)	<0.0020		0.0020		ug/L		10/13/23 07:47	10/14/23 13:24	1
Perfluorododecanoic acid (PFDoA)	<0.0030		0.0030		ug/L		10/13/23 07:47	10/14/23 13:24	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0030		0.0030		ug/L		10/13/23 07:47	10/14/23 13:24	1
Perfluorobutanesulfonic acid (PFBS)	**0.0060**		0.0030		ug/L		10/13/23 07:47	10/14/23 13:24	1
Perfluorohexanesulfonic acid (PFHxS)	**0.0091**		0.0030		ug/L		10/13/23 07:47	10/14/23 13:24	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.0030		0.0030		ug/L		10/13/23 07:47	10/14/23 13:24	1
Perfluorooctanesulfonic acid (PFOS)	**0.0338**		0.0040		ug/L		10/13/23 07:47	10/14/23 13:24	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0040		0.0040		ug/L		10/13/23 07:47	10/14/23 13:24	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0050		0.0050		ug/L		10/13/23 07:47	10/14/23 13:24	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.0020		0.0020		ug/L		10/13/23 07:47	10/14/23 13:24	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.0050		0.0050		ug/L		10/13/23 07:47	10/14/23 13:24	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0030		0.0030		ug/L		10/13/23 07:47	10/14/23 13:24	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0050		0.0050		ug/L		10/13/23 07:47	10/14/23 13:24	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0050		0.0050		ug/L		10/13/23 07:47	10/14/23 13:24	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0200		0.0200		ug/L		10/13/23 07:47	10/14/23 13:24	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0040		0.0040		ug/L		10/13/23 07:47	10/14/23 13:24	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0030		0.0030		ug/L		10/13/23 07:47	10/14/23 13:24	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.0030		0.0030		ug/L		10/13/23 07:47	10/14/23 13:24	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*91*		*50 - 200*	*10/13/23 07:47*	*10/14/23 13:24*	*1*
13C4 PFBA	*101*		*50 - 200*	*10/13/23 07:47*	*10/14/23 13:24*	*1*
13C3 PFBS	*98*		*50 - 200*	*10/13/23 07:47*	*10/14/23 13:24*	*1*
13C5 PFPeA	*100*		*50 - 200*	*10/13/23 07:47*	*10/14/23 13:24*	*1*
13C5 PFHxA	*97*		*50 - 200*	*10/13/23 07:47*	*10/14/23 13:24*	*1*
13C4 PFHpA	*99*		*50 - 200*	*10/13/23 07:47*	*10/14/23 13:24*	*1*
13C8 PFOA	*100*		*50 - 200*	*10/13/23 07:47*	*10/14/23 13:24*	*1*
13C9 PFNA	*100*		*50 - 200*	*10/13/23 07:47*	*10/14/23 13:24*	*1*
13C6 PFDA	*102*		*50 - 200*	*10/13/23 07:47*	*10/14/23 13:24*	*1*
13C7 PFUnA	*92*		*50 - 200*	*10/13/23 07:47*	*10/14/23 13:24*	*1*

Client Sample ID: 0003/Highland/TP 1784003/EP
Lab Sample ID: 810-79546-1
Date Collected: 09/28/23 09:10
Matrix: Drinking Water
Date Received: 09/29/23 09:00
PWSID Number: FL6521784

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDoA	*88*		*50 - 200*	*10/13/23 07:47*	*10/14/23 13:24*	*1*
13C8 PFOS	*99*		*50 - 200*	*10/13/23 07:47*	*10/14/23 13:24*	*1*
13C3 PFHxS	*98*		*50 - 200*	*10/13/23 07:47*	*10/14/23 13:24*	*1*
13C2-4:2-FTS	*97*		*50 - 200*	*10/13/23 07:47*	*10/14/23 13:24*	*1*
13C2-6:2-FTS	*96*		*50 - 200*	*10/13/23 07:47*	*10/14/23 13:24*	*1*
13C2-8:2-FTS	*99*		*50 - 200*	*10/13/23 07:47*	*10/14/23 13:24*	*1*

Client Sample ID: 0003/Highland/TP 1784003/EP
Lab Sample ID: 810-79546-1FRB
Date Collected: 09/28/23 09:10
Matrix: Drinking Water
Date Received: 09/29/23 09:00
PWSID Number: FL6521784

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.0005		0.0048		ug/L		10/20/23 10:20	10/21/23 13:16	1
Perfluoropentanoic acid (PFPeA)	<0.0004		0.0029		ug/L		10/20/23 10:20	10/21/23 13:16	1
Perfluorohexanoic acid (PFHxA)	<0.0004		0.0029		ug/L		10/20/23 10:20	10/21/23 13:16	1
Perfluoroheptanoic acid (PFHpA)	<0.0004		0.0029		ug/L		10/20/23 10:20	10/21/23 13:16	1
Perfluorooctanoic acid (PFOA)	<0.0004		0.0039		ug/L		10/20/23 10:20	10/21/23 13:16	1
Perfluorononanoic acid (PFNA)	<0.0004		0.0039		ug/L		10/20/23 10:20	10/21/23 13:16	1
Perfluorodecanoic acid (PFDA)	<0.0003		0.0029		ug/L		10/20/23 10:20	10/21/23 13:16	1
Perfluoroundecanoic acid (PFUnA)	<0.0004		0.0019		ug/L		10/20/23 10:20	10/21/23 13:16	1
Perfluorododecanoic acid (PFDoA)	<0.0003		0.0029		ug/L		10/20/23 10:20	10/21/23 13:16	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0004		0.0029		ug/L		10/20/23 10:20	10/21/23 13:16	1
Perfluorobutanesulfonic acid (PFBS)	<0.0004		0.0029		ug/L		10/20/23 10:20	10/21/23 13:16	1
Perfluorohexanesulfonic acid (PFHxS)	<0.0004		0.0029		ug/L		10/20/23 10:20	10/21/23 13:16	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.0004		0.0029		ug/L		10/20/23 10:20	10/21/23 13:16	1
Perfluorooctanesulfonic acid (PFOS)	<0.0004		0.0039		ug/L		10/20/23 10:20	10/21/23 13:16	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0004		0.0039		ug/L		10/20/23 10:20	10/21/23 13:16	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0005		0.0048		ug/L		10/20/23 10:20	10/21/23 13:16	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.0004		0.0019		ug/L		10/20/23 10:20	10/21/23 13:16	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.0005		0.0048		ug/L		10/20/23 10:20	10/21/23 13:16	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0005		0.0029		ug/L		10/20/23 10:20	10/21/23 13:16	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0007		0.0048		ug/L		10/20/23 10:20	10/21/23 13:16	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0006		0.0048		ug/L		10/20/23 10:20	10/21/23 13:16	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0009		0.0193		ug/L		10/20/23 10:20	10/21/23 13:16	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0003		0.0039		ug/L		10/20/23 10:20	10/21/23 13:16	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0003		0.0029		ug/L		10/20/23 10:20	10/21/23 13:16	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.0004		0.0029		ug/L		10/20/23 10:20	10/21/23 13:16	1

Client: City of Tarpon Springs
Job ID: 810-79546-1
Project/Site: UCMR5 - FL6521784 - SE2 - Highland Avenue Plant

Client Sample ID: 0003/Highland/TP 1784003/EP
Lab Sample ID: 810-79546-1FRB
Date Collected: 09/28/23 09:10
Matrix: Drinking Water
Date Received: 09/29/23 09:00
PWSID Number: FL6521784

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	92		50 - 200	10/20/23 10:20	10/21/23 13:16	1
13C4 PFBA	97		50 - 200	10/20/23 10:20	10/21/23 13:16	1
13C3 PFBS	93		50 - 200	10/20/23 10:20	10/21/23 13:16	1
13C5 PFPeA	97		50 - 200	10/20/23 10:20	10/21/23 13:16	1
13C5 PFHxA	97		50 - 200	10/20/23 10:20	10/21/23 13:16	1
13C4 PFHpA	100		50 - 200	10/20/23 10:20	10/21/23 13:16	1
13C8 PFOA	101		50 - 200	10/20/23 10:20	10/21/23 13:16	1
13C9 PFNA	102		50 - 200	10/20/23 10:20	10/21/23 13:16	1
13C6 PFDA	99		50 - 200	10/20/23 10:20	10/21/23 13:16	1
13C7 PFUnA	95		50 - 200	10/20/23 10:20	10/21/23 13:16	1
13C2 PFDoA	90		50 - 200	10/20/23 10:20	10/21/23 13:16	1
13C8 PFOS	99		50 - 200	10/20/23 10:20	10/21/23 13:16	1
13C3 PFHxS	100		50 - 200	10/20/23 10:20	10/21/23 13:16	1
13C2-4:2-FTS	96		50 - 200	10/20/23 10:20	10/21/23 13:16	1
13C2-6:2-FTS	95		50 - 200	10/20/23 10:20	10/21/23 13:16	1
13C2-8:2-FTS	88		50 - 200	10/20/23 10:20	10/21/23 13:16	1

Isotope Dilution Summary

Client: City of Tarpon Springs
Job ID: 810-79546-1
Project/Site: UCMR5 - FL6521784 - SE2 - Highland Avenue Plant

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Matrix: Drinking Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HFPODA (50-200)	PFBA (50-200)	C3PFBS (50-200)	PFPeA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)
810-79546-1	0003/Highland/TP 1784003/EP	91	101	98	100	97	99	100	100
810-79546-1 MS	0003/Highland/TP 1784003/EP	99	102	102	101	101	101	101	98
810-79546-1 MSD	0003/Highland/TP 1784003/EP	97	102	101	101	100	103	99	99
810-79546-1FRB	FRB	92	97	93	97	97	100	101	102
LLCS 810-76749/2-A	Lab Control Sample	95	100	98	101	98	101	103	103
LLCS 810-77494/2-A	Lab Control Sample	92	99	96	102	96	101	101	102
MBL 810-76749/1-A	Method Blank	93	102	99	104	96	98	103	103
MBL 810-77494/1-A	Method Blank	91	100	95	103	99	102	103	104

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	C6PFDA (50-200)	13C7PUA (50-200)	PFDoA (50-200)	C8PFOS (50-200)	C3PFHS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
810-79546-1	0003/Highland/TP 1784003/EP	102	92	88	99	98	97	96	99
810-79546-1 MS	0003/Highland/TP 1784003/EP	98	90	87	99	101	109	112	102
810-79546-1 MSD	0003/Highland/TP 1784003/EP	98	90	85	96	101	110	105	100
810-79546-1FRB	FRB	99	95	90	99	100	96	95	88
LLCS 810-76749/2-A	Lab Control Sample	101	93	88	100	101	93	99	97
LLCS 810-77494/2-A	Lab Control Sample	100	99	98	102	100	96	101	94
MBL 810-76749/1-A	Method Blank	100	93	88	101	99	92	99	98
MBL 810-77494/1-A	Method Blank	101	97	97	99	102	94	100	95

Surrogate Legend

HFPODA = 13C3 HFPO-DA
PFBA = 13C4 PFBA
C3PFBS = 13C3 PFBS
PFPeA = 13C5 PFPeA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFDoA = 13C2 PFDoA
C8PFOS = 13C8 PFOS
C3PFHS = 13C3 PFHxS
42FTS = 13C2-4:2-FTS
62FTS = 13C2-6:2-FTS
82FTS = 13C2-8:2-FTS

Client: City of Tarpon Springs
Job ID: 810-79546-1
Project/Site: UCMR5 - FL6521784 - SE2 - Highland Avenue Plant

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Lab Sample ID: MBL 810-76749/1-A
Matrix: Drinking Water
Analysis Batch: 76804

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 76749

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.0005		0.0050		ug/L		10/13/23 07:47	10/14/23 12:57	1
Perfluoropentanoic acid (PFPeA)	<0.0004		0.0030		ug/L		10/13/23 07:47	10/14/23 12:57	1
Perfluorohexanoic acid (PFHxA)	<0.0004		0.0030		ug/L		10/13/23 07:47	10/14/23 12:57	1
Perfluoroheptanoic acid (PFHpA)	<0.0004		0.0030		ug/L		10/13/23 07:47	10/14/23 12:57	1
Perfluorooctanoic acid (PFOA)	<0.0004		0.0040		ug/L		10/13/23 07:47	10/14/23 12:57	1
Perfluorononanoic acid (PFNA)	<0.0004		0.0040		ug/L		10/13/23 07:47	10/14/23 12:57	1
Perfluorodecanoic acid (PFDA)	<0.0004		0.0030		ug/L		10/13/23 07:47	10/14/23 12:57	1
Perfluoroundecanoic acid (PFUnA)	<0.0004		0.0020		ug/L		10/13/23 07:47	10/14/23 12:57	1
Perfluorododecanoic acid (PFDoA)	<0.0004		0.0030		ug/L		10/13/23 07:47	10/14/23 12:57	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0004		0.0030		ug/L		10/13/23 07:47	10/14/23 12:57	1
Perfluorobutanesulfonic acid (PFBS)	<0.0004		0.0030		ug/L		10/13/23 07:47	10/14/23 12:57	1
Perfluorohexanesulfonic acid (PFHxS)	<0.0004		0.0030		ug/L		10/13/23 07:47	10/14/23 12:57	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.0004		0.0030		ug/L		10/13/23 07:47	10/14/23 12:57	1
Perfluorooctanesulfonic acid (PFOS)	<0.0004		0.0040		ug/L		10/13/23 07:47	10/14/23 12:57	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0004		0.0040		ug/L		10/13/23 07:47	10/14/23 12:57	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0005		0.0050		ug/L		10/13/23 07:47	10/14/23 12:57	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.0005		0.0020		ug/L		10/13/23 07:47	10/14/23 12:57	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.0005		0.0050		ug/L		10/13/23 07:47	10/14/23 12:57	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0006		0.0030		ug/L		10/13/23 07:47	10/14/23 12:57	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0007		0.0050		ug/L		10/13/23 07:47	10/14/23 12:57	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0006		0.0050		ug/L		10/13/23 07:47	10/14/23 12:57	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0009		0.0200		ug/L		10/13/23 07:47	10/14/23 12:57	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0003		0.0040		ug/L		10/13/23 07:47	10/14/23 12:57	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0004		0.0030		ug/L		10/13/23 07:47	10/14/23 12:57	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.0005		0.0030		ug/L		10/13/23 07:47	10/14/23 12:57	1

Isotope Dilution	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*93*		*50 - 200*	*10/13/23 07:47*	*10/14/23 12:57*	*1*
13C4 PFBA	*102*		*50 - 200*	*10/13/23 07:47*	*10/14/23 12:57*	*1*
13C3 PFBS	*99*		*50 - 200*	*10/13/23 07:47*	*10/14/23 12:57*	*1*
13C5 PFPeA	*104*		*50 - 200*	*10/13/23 07:47*	*10/14/23 12:57*	*1*
13C5 PFHxA	*96*		*50 - 200*	*10/13/23 07:47*	*10/14/23 12:57*	*1*
13C4 PFHpA	*98*		*50 - 200*	*10/13/23 07:47*	*10/14/23 12:57*	*1*
13C8 PFOA	*103*		*50 - 200*	*10/13/23 07:47*	*10/14/23 12:57*	*1*
13C9 PFNA	*103*		*50 - 200*	*10/13/23 07:47*	*10/14/23 12:57*	*1*
13C6 PFDA	*100*		*50 - 200*	*10/13/23 07:47*	*10/14/23 12:57*	*1*
13C7 PFUnA	*93*		*50 - 200*	*10/13/23 07:47*	*10/14/23 12:57*	*1*
13C2 PFDoA	*88*		*50 - 200*	*10/13/23 07:47*	*10/14/23 12:57*	*1*

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: MBL 810-76749/1-A
Matrix: Drinking Water
Analysis Batch: 76804

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 76749

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	101		50 - 200	10/13/23 07:47	10/14/23 12:57	1
13C3 PFHxS	99		50 - 200	10/13/23 07:47	10/14/23 12:57	1
13C2-4:2-FTS	92		50 - 200	10/13/23 07:47	10/14/23 12:57	1
13C2-6:2-FTS	99		50 - 200	10/13/23 07:47	10/14/23 12:57	1
13C2-8:2-FTS	98		50 - 200	10/13/23 07:47	10/14/23 12:57	1

Lab Sample ID: LLCS 810-76749/2-A
Matrix: Drinking Water
Analysis Batch: 76804

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 76749

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	0.00200	0.0021		ug/L		103	50 - 150
Perfluoropentanoic acid (PFPeA)	0.00200	0.0021		ug/L		107	50 - 150
Perfluorohexanoic acid (PFHxA)	0.00200	0.0021		ug/L		105	50 - 150
Perfluoroheptanoic acid (PFHpA)	0.00200	0.0021		ug/L		103	50 - 150
Perfluorooctanoic acid (PFOA)	0.00200	0.0021		ug/L		105	50 - 150
Perfluorononanoic acid (PFNA)	0.00200	0.0022		ug/L		108	50 - 150
Perfluorodecanoic acid (PFDA)	0.00200	0.0023		ug/L		114	50 - 150
Perfluoroundecanoic acid (PFUnA)	0.00200	0.0022		ug/L		109	50 - 150
Perfluorododecanoic acid (PFDoA)	0.00200	0.0021		ug/L		107	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.00189	0.0020		ug/L		107	50 - 150
Perfluorobutanesulfonic acid (PFBS)	0.00178	0.0018		ug/L		99	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	0.00183	0.0018		ug/L		97	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	0.00191	0.0019		ug/L		99	50 - 150
Perfluorooctanesulfonic acid (PFOS)	0.00186	0.0019		ug/L		101	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	0.00188	0.0018		ug/L		95	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.00200	0.0021		ug/L		106	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	0.00187	0.0017		ug/L		92	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	0.00189	0.0017		ug/L		88	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.00188	0.0021		ug/L		113	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.00190	0.0022		ug/L		116	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.00192	0.0022		ug/L		116	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.00200	0.0020		ug/L		102	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.00200	0.0022		ug/L		109	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.00200	0.0021		ug/L		103	50 - 150

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: LLCS 810-76749/2-A
Matrix: Drinking Water
Analysis Batch: 76804

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 76749

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)			0.00178	0.0020		ug/L		112	50 - 150		

Isotope Dilution	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
13C3 HFPO-DA	*95*		*50 - 200*
13C4 PFBA	*100*		*50 - 200*
13C3 PFBS	*98*		*50 - 200*
13C5 PFPeA	*101*		*50 - 200*
13C5 PFHxA	*98*		*50 - 200*
13C4 PFHpA	*101*		*50 - 200*
13C8 PFOA	*103*		*50 - 200*
13C9 PFNA	*103*		*50 - 200*
13C6 PFDA	*101*		*50 - 200*
13C7 PFUnA	*93*		*50 - 200*
13C2 PFDoA	*88*		*50 - 200*
13C8 PFOS	*100*		*50 - 200*
13C3 PFHxS	*101*		*50 - 200*
13C2-4:2-FTS	*93*		*50 - 200*
13C2-6:2-FTS	*99*		*50 - 200*
13C2-8:2-FTS	*97*		*50 - 200*

Lab Sample ID: 810-79546-1 MS
Matrix: Drinking Water
Analysis Batch: 76804

Client Sample ID: 0003/Highland/TP 1784003/EP
Prep Type: Total/NA
Prep Batch: 76749

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Perfluorobutanoic acid (PFBA)	0.0082		0.200	0.2072		ug/L		99			
Perfluoropentanoic acid (PFPeA)	0.0060		0.200	0.2115		ug/L		103			
Perfluorohexanoic acid (PFHxA)	0.0046		0.200	0.2061		ug/L		101			
Perfluoroheptanoic acid (PFHpA)	0.0031		0.200	0.2055		ug/L		101			
Perfluorooctanoic acid (PFOA)	0.0103		0.200	0.2071		ug/L		98			
Perfluorononanoic acid (PFNA)	<0.0040		0.200	0.2093		ug/L		104			
Perfluorodecanoic acid (PFDA)	<0.0030		0.200	0.2131		ug/L		106			
Perfluoroundecanoic acid (PFUnA)	<0.0020		0.200	0.2088		ug/L		104			
Perfluorododecanoic acid (PFDoA)	<0.0030		0.200	0.2088		ug/L		104			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0030		0.189	0.1941		ug/L		103			
Perfluorobutanesulfonic acid (PFBS)	0.0060		0.178	0.1862		ug/L		102			
Perfluorohexanesulfonic acid (PFHxS)	0.0091		0.183	0.1907		ug/L		99			
Perfluoroheptanesulfonic acid (PFHpS)	<0.0030		0.191	0.1943		ug/L		101			
Perfluorooctanesulfonic acid (PFOS)	0.0338		0.186	0.2169		ug/L		99			
Perfluoropentanesulfonic acid (PFPeS)	<0.0040		0.188	0.1908		ug/L		101			

Client: City of Tarpon Springs
Project/Site: UCMR5 - FL6521784 - SE2 - Highland Avenue Plant

Job ID: 810-79546-1

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: 810-79546-1 MS
Matrix: Drinking Water
Analysis Batch: 76804

Client Sample ID: 0003/Highland/TP 1784003/EP
Prep Type: Total/NA
Prep Batch: 76749

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0050		0.200	0.2055		ug/L		103	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.0020		0.187	0.1801		ug/L		96	
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.0050		0.189	0.1672		ug/L		89	
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0030		0.188	0.2024		ug/L		108	
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0050		0.190	0.2048		ug/L		108	
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0050		0.192	0.2093		ug/L		109	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0200		0.200	0.1932		ug/L		97	
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0040		0.200	0.2112		ug/L		106	
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0030		0.200	0.2086		ug/L		104	
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.0030		0.178	0.1716		ug/L		96	

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C3 HFPO-DA	*99*		*50 - 200*
13C4 PFBA	*102*		*50 - 200*
13C3 PFBS	*102*		*50 - 200*
13C5 PFPeA	*101*		*50 - 200*
13C5 PFHxA	*101*		*50 - 200*
13C4 PFHpA	*101*		*50 - 200*
13C8 PFOA	*101*		*50 - 200*
13C9 PFNA	*98*		*50 - 200*
13C6 PFDA	*98*		*50 - 200*
13C7 PFUnA	*90*		*50 - 200*
13C2 PFDoA	*87*		*50 - 200*
13C8 PFOS	*99*		*50 - 200*
13C3 PFHxS	*101*		*50 - 200*
13C2-4:2-FTS	*109*		*50 - 200*
13C2-6:2-FTS	*112*		*50 - 200*
13C2-8:2-FTS	*102*		*50 - 200*

Lab Sample ID: 810-79546-1 MSD
Matrix: Drinking Water
Analysis Batch: 76804

Client Sample ID: 0003/Highland/TP 1784003/EP
Prep Type: Total/NA
Prep Batch: 76749

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	0.0082		0.200	0.2163		ug/L		104		4	
Perfluoropentanoic acid (PFPeA)	0.0060		0.200	0.2138		ug/L		104		1	
Perfluorohexanoic acid (PFHxA)	0.0046		0.200	0.2163		ug/L		106		5	
Perfluoroheptanoic acid (PFHpA)	0.0031		0.200	0.2079		ug/L		102		1	
Perfluorooctanoic acid (PFOA)	0.0103		0.200	0.2166		ug/L		103		4	
Perfluorononanoic acid (PFNA)	<0.0040		0.200	0.2137		ug/L		106		2	

Client: City of Tarpon Springs
Project/Site: UCMR5 - FL6521784 - SE2 - Highland Avenue Plant

Job ID: 810-79546-1

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: 810-79546-1 MSD
Matrix: Drinking Water
Analysis Batch: 76804

Client Sample ID: 0003/Highland/TP 1784003/EP
Prep Type: Total/NA
Prep Batch: 76749

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorodecanoic acid (PFDA)	<0.0030		0.200	0.2178		ug/L		109		2	
Perfluoroundecanoic acid (PFUnA)	<0.0020		0.200	0.2213		ug/L		111		6	
Perfluorododecanoic acid (PFDoA)	<0.0030		0.200	0.2179		ug/L		109		4	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0030		0.189	0.1980		ug/L		105		2	
Perfluorobutanesulfonic acid (PFBS)	0.0060		0.178	0.1880		ug/L		102		1	
Perfluorohexanesulfonic acid (PFHxS)	0.0091		0.183	0.1989		ug/L		104		4	
Perfluoroheptanesulfonic acid (PFHpS)	<0.0030		0.191	0.2010		ug/L		105		3	
Perfluorooctanesulfonic acid (PFOS)	0.0338		0.186	0.2241		ug/L		103		3	
Perfluoropentanesulfonic acid (PFPeS)	<0.0040		0.188	0.1965		ug/L		104		3	
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0050		0.200	0.2159		ug/L		108		5	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.0020		0.187	0.1900		ug/L		102		5	
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.0050		0.189	0.1696		ug/L		90		1	
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0030		0.188	0.2039		ug/L		109		1	
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0050		0.190	0.2144		ug/L		113		5	
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0050		0.192	0.2104		ug/L		110		1	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0200		0.200	0.2020		ug/L		101		4	
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0040		0.200	0.2089		ug/L		104		1	
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0030		0.200	0.2070		ug/L		104		1	
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.0030		0.178	0.1780		ug/L		100		4	

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C3 HFPO-DA	*97*		*50 - 200*
13C4 PFBA	*102*		*50 - 200*
13C3 PFBS	*101*		*50 - 200*
13C5 PFPeA	*101*		*50 - 200*
13C5 PFHxA	*100*		*50 - 200*
13C4 PFHpA	*103*		*50 - 200*
13C8 PFOA	*99*		*50 - 200*
13C9 PFNA	*99*		*50 - 200*
13C6 PFDA	*98*		*50 - 200*
13C7 PFUnA	*90*		*50 - 200*
13C2 PFDoA	*85*		*50 - 200*
13C8 PFOS	*96*		*50 - 200*
13C3 PFHxS	*101*		*50 - 200*

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: 810-79546-1 MSD
Matrix: Drinking Water
Analysis Batch: 76804

Client Sample ID: 0003/Highland/TP 1784003/EP
Prep Type: Total/NA
Prep Batch: 76749

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C2-4:2-FTS	*110*		*50 - 200*
13C2-6:2-FTS	*105*		*50 - 200*
13C2-8:2-FTS	*100*		*50 - 200*

Lab Sample ID: MBL 810-77494/1-A
Matrix: Drinking Water
Analysis Batch: 77542

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 77494

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.0005		0.0050		ug/L		10/20/23 10:20	10/21/23 04:12	1
Perfluoropentanoic acid (PFPeA)	<0.0004		0.0030		ug/L		10/20/23 10:20	10/21/23 04:12	1
Perfluorohexanoic acid (PFHxA)	<0.0004		0.0030		ug/L		10/20/23 10:20	10/21/23 04:12	1
Perfluoroheptanoic acid (PFHpA)	<0.0004		0.0030		ug/L		10/20/23 10:20	10/21/23 04:12	1
Perfluorooctanoic acid (PFOA)	<0.0004		0.0040		ug/L		10/20/23 10:20	10/21/23 04:12	1
Perfluorononanoic acid (PFNA)	<0.0004		0.0040		ug/L		10/20/23 10:20	10/21/23 04:12	1
Perfluorodecanoic acid (PFDA)	<0.0004		0.0030		ug/L		10/20/23 10:20	10/21/23 04:12	1
Perfluoroundecanoic acid (PFUnA)	<0.0004		0.0020		ug/L		10/20/23 10:20	10/21/23 04:12	1
Perfluorododecanoic acid (PFDoA)	<0.0004		0.0030		ug/L		10/20/23 10:20	10/21/23 04:12	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0004		0.0030		ug/L		10/20/23 10:20	10/21/23 04:12	1
Perfluorobutanesulfonic acid (PFBS)	<0.0004		0.0030		ug/L		10/20/23 10:20	10/21/23 04:12	1
Perfluorohexanesulfonic acid (PFHxS)	<0.0004		0.0030		ug/L		10/20/23 10:20	10/21/23 04:12	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.0004		0.0030		ug/L		10/20/23 10:20	10/21/23 04:12	1
Perfluorooctanesulfonic acid (PFOS)	<0.0004		0.0040		ug/L		10/20/23 10:20	10/21/23 04:12	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0004		0.0040		ug/L		10/20/23 10:20	10/21/23 04:12	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0005		0.0050		ug/L		10/20/23 10:20	10/21/23 04:12	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.0005		0.0020		ug/L		10/20/23 10:20	10/21/23 04:12	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.0005		0.0050		ug/L		10/20/23 10:20	10/21/23 04:12	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0006		0.0030		ug/L		10/20/23 10:20	10/21/23 04:12	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0007		0.0050		ug/L		10/20/23 10:20	10/21/23 04:12	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0006		0.0050		ug/L		10/20/23 10:20	10/21/23 04:12	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0009		0.0200		ug/L		10/20/23 10:20	10/21/23 04:12	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0003		0.0040		ug/L		10/20/23 10:20	10/21/23 04:12	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0004		0.0030		ug/L		10/20/23 10:20	10/21/23 04:12	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.0005		0.0030		ug/L		10/20/23 10:20	10/21/23 04:12	1

Isotope Dilution	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*91*		*50 - 200*	*10/20/23 10:20*	*10/21/23 04:12*	*1*
13C4 PFBA	*100*		*50 - 200*	*10/20/23 10:20*	*10/21/23 04:12*	*1*

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: MBL 810-77494/1-A
Matrix: Drinking Water
Analysis Batch: 77542

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 77494

Isotope Dilution	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 PFBS	*95*		*50 - 200*	*10/20/23 10:20*	*10/21/23 04:12*	*1*
13C5 PFPeA	*103*		*50 - 200*	*10/20/23 10:20*	*10/21/23 04:12*	*1*
13C5 PFHxA	*99*		*50 - 200*	*10/20/23 10:20*	*10/21/23 04:12*	*1*
13C4 PFHpA	*102*		*50 - 200*	*10/20/23 10:20*	*10/21/23 04:12*	*1*
13C8 PFOA	*103*		*50 - 200*	*10/20/23 10:20*	*10/21/23 04:12*	*1*
13C9 PFNA	*104*		*50 - 200*	*10/20/23 10:20*	*10/21/23 04:12*	*1*
13C6 PFDA	*101*		*50 - 200*	*10/20/23 10:20*	*10/21/23 04:12*	*1*
13C7 PFUnA	*97*		*50 - 200*	*10/20/23 10:20*	*10/21/23 04:12*	*1*
13C2 PFDoA	*97*		*50 - 200*	*10/20/23 10:20*	*10/21/23 04:12*	*1*
13C8 PFOS	*99*		*50 - 200*	*10/20/23 10:20*	*10/21/23 04:12*	*1*
13C3 PFHxS	*102*		*50 - 200*	*10/20/23 10:20*	*10/21/23 04:12*	*1*
13C2-4:2-FTS	*94*		*50 - 200*	*10/20/23 10:20*	*10/21/23 04:12*	*1*
13C2-6:2-FTS	*100*		*50 - 200*	*10/20/23 10:20*	*10/21/23 04:12*	*1*
13C2-8:2-FTS	*95*		*50 - 200*	*10/20/23 10:20*	*10/21/23 04:12*	*1*

Lab Sample ID: LLCS 810-77494/2-A
Matrix: Drinking Water
Analysis Batch: 77542

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 77494

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	0.00200	0.0019		ug/L		94	50 - 150
Perfluoropentanoic acid (PFPeA)	0.00200	0.0019		ug/L		95	50 - 150
Perfluorohexanoic acid (PFHxA)	0.00200	0.0019		ug/L		95	50 - 150
Perfluoroheptanoic acid (PFHpA)	0.00200	0.0019		ug/L		96	50 - 150
Perfluorooctanoic acid (PFOA)	0.00200	0.0019		ug/L		95	50 - 150
Perfluorononanoic acid (PFNA)	0.00200	0.0020		ug/L		100	50 - 150
Perfluorodecanoic acid (PFDA)	0.00200	0.0020		ug/L		100	50 - 150
Perfluoroundecanoic acid (PFUnA)	0.00200	0.0020		ug/L		102	50 - 150
Perfluorododecanoic acid (PFDoA)	0.00200	0.0020		ug/L		98	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.00189	0.0018		ug/L		94	50 - 150
Perfluorobutanesulfonic acid (PFBS)	0.00178	0.0016		ug/L		92	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	0.00183	0.0016		ug/L		90	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	0.00191	0.0017		ug/L		88	50 - 150
Perfluorooctanesulfonic acid (PFOS)	0.00186	0.0017		ug/L		90	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	0.00188	0.0016		ug/L		86	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.00200	0.0018		ug/L		91	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	0.00187	0.0017		ug/L		89	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	0.00189	0.0016		ug/L		86	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.00188	0.0020		ug/L		106	50 - 150

Client: City of Tarpon Springs
Job ID: 810-79546-1
Project/Site: UCMR5 - FL6521784 - SE2 - Highland Avenue
Plant

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: LLCS 810-77494/2-A
Matrix: Drinking Water
Analysis Batch: 77542

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 77494

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)			0.00190	0.0020		ug/L		104	50 - 150		
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)			0.00192	0.0021		ug/L		108	50 - 150		
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)			0.00200	0.0019		ug/L		94	50 - 150		
Perfluoro-3-methoxypropanoic acid (PFMPA)			0.00200	0.0019		ug/L		94	50 - 150		
Perfluoro-4-methoxybutanoic acid (PFMBA)			0.00200	0.0018		ug/L		92	50 - 150		
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)			0.00178	0.0017		ug/L		98	50 - 150		

Isotope Dilution	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
13C3 HFPO-DA	*92*		*50 - 200*
13C4 PFBA	*99*		*50 - 200*
13C3 PFBS	*96*		*50 - 200*
13C5 PFPeA	*102*		*50 - 200*
13C5 PFHxA	*96*		*50 - 200*
13C4 PFHpA	*101*		*50 - 200*
13C8 PFOA	*101*		*50 - 200*
13C9 PFNA	*102*		*50 - 200*
13C6 PFDA	*100*		*50 - 200*
13C7 PFUnA	*99*		*50 - 200*
13C2 PFDoA	*98*		*50 - 200*
13C8 PFOS	*102*		*50 - 200*
13C3 PFHxS	*100*		*50 - 200*
13C2-4:2-FTS	*96*		*50 - 200*
13C2-6:2-FTS	*101*		*50 - 200*
13C2-8:2-FTS	*94*		*50 - 200*

QC Association Summary

Client: City of Tarpon Springs
Job ID: 810-79546-1
Project/Site: UCMR5 - FL6521784 - SE2 - Highland Avenue
Plant

LCMS

Prep Batch: 76749

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-79546-1	0003/Highland/TP 1784003/EP	Total/NA	Drinking Water	533	
MBL 810-76749/1-A	Method Blank	Total/NA	Drinking Water	533	
LLCS 810-76749/2-A	Lab Control Sample	Total/NA	Drinking Water	533	
810-79546-1 MS	0003/Highland/TP 1784003/EP	Total/NA	Drinking Water	533	
810-79546-1 MSD	0003/Highland/TP 1784003/EP	Total/NA	Drinking Water	533	

Analysis Batch: 76804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-79546-1	0003/Highland/TP 1784003/EP	Total/NA	Drinking Water	533	76749
MBL 810-76749/1-A	Method Blank	Total/NA	Drinking Water	533	76749
LLCS 810-76749/2-A	Lab Control Sample	Total/NA	Drinking Water	533	76749
810-79546-1 MS	0003/Highland/TP 1784003/EP	Total/NA	Drinking Water	533	76749
810-79546-1 MSD	0003/Highland/TP 1784003/EP	Total/NA	Drinking Water	533	76749

Prep Batch: 77494

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-79546-1FRB	FRB	Total/NA	Drinking Water	533	
MBL 810-77494/1-A	Method Blank	Total/NA	Drinking Water	533	
LLCS 810-77494/2-A	Lab Control Sample	Total/NA	Drinking Water	533	

Analysis Batch: 77542

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-79546-1FRB	FRB	Total/NA	Drinking Water	533	77494
MBL 810-77494/1-A	Method Blank	Total/NA	Drinking Water	533	77494
LLCS 810-77494/2-A	Lab Control Sample	Total/NA	Drinking Water	533	77494

Lab Chronicle

Client: City of Tarpon Springs
Project/Site: UCMR5 - FL6521784 - SE2 - Highland Avenue Plant

Job ID: 810-79546-1

Client Sample ID: 0003/Highland/TP 1784003/EP

Date Collected: 09/28/23 09:10
Date Received: 09/29/23 09:00

Lab Sample ID: 810-79546-1

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			76749	KB	EA SB	10/13/23 07:47
Total/NA	Analysis	533		1	76804	KB	EA SB	10/14/23 13:24

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: City of Tarpon Springs
Job ID: 810-79546-1
Project/Site: UCMR5 - FL6521784 - SE2 - Highland Avenue Plant

Laboratory: Eurofins Eaton Analytical South Bend

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

Authority	Program	Identification Number	Expiration Date
USEPA UCMR 5	US Federal Programs	IN00035	12-31-25

Method Summary

Client: City of Tarpon Springs
Job ID: 810-79546-1
Project/Site: UCMR5 - FL6521784 - SE2 - Highland Avenue
Plant

Method	Method Description	Protocol	Laboratory
533	Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water	EPA	EA SB
533	Extraction of Perfluorinated and Polyfluorinated 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: City of Tarpon Springs
Job ID: 810-79546-1
Project/Site: UCMR5 - FL6521784 - SE2 - Highland Avenue Plant

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
810-79546-1	0003/Highland/TP 1784003/EP	Drinking Water	09/28/23 09:10	09/29/23 09:00	FL6521784
810-79546-1FRB	0003/Highland/TP 1784003/EP	Drinking Water	09/28/23 09:10	09/29/23 09:00	FL6521784

4900

South Bend, IN
110 S Hill Street
South Bend, IN 46617
Phone (574) 233-4777; Phone (574) 233-8207

"UCMR 5 Sampling Form for Single Collection Site"

(Separate form is needed for each collection site)

eurofins | Environment Testing America

Company Contact: Kevin Tenk
Company Name: City of Tarpon Springs
Company Address: 1624 L&R Industrial Blvd
Tarpon Springs FL 34689
Phone: (727) 937-2557
Email: ktenk@ctsfl.us
Purchase Order: N/A

Lab PM(name): Pamela Brown
PM Email: Pamela.Brown@et.eurofins.com
EEA Project: UCMR5

PWSID: 652 1784
FacID:
SPID:
FacName:
SPName:
Sampling Event:

Water System Name: City of Tarpon Springs RO Water Treatment Facility
Collection Location: 0003/Highland/TP/1784003/EP ← Highland WTP POE
Scheduled Collection Date: Re-collected 9/28/2023

Sampler Name (Print): Kevin Tenk
Date/Time Sampled: 9/28/2023 0910

Client Storage temp, if > 2 days from collection: N/A

810-79546 Chain of Custody

AREA BELOW FOR LAB USE ONLY

For UCMR 5 specific criteria see: REC-WI55108 Guidance Document for UCMR 5 Sample Receiving

IR Gun#: 23 Ice: Wet / Blue

Method	Type	# Bot	Temp °C (10°C within 2 days of collection, 6°C for > 2 days) Initial / Corrected	pH* value	✓if receipt pH acceptable	✓if pH needs adjustment	Cl (P/A) **	Sample Comments	✓if sample is invalid
200.7	FS	1	[redacted]				[redacted]		
200.7	FS	2			✓				
533	FS	1	4.0 / 3.2		✓		A		
533	FS	2	/				A		
533	FS	3	/				A		
533	FRB	1	3.6 / 2.8		✓		A		
537.1	FS	1	/			[redacted]			
537.1	FS	2	/						
537.1	FS	3	/						
537.1	FRB	1	/						

* pH <2 for 200.7. pH 6-8 for 533 & 537.1. *Note: 200.7 & 533 pH may be adjusted upon receipt.*

** A = Absent if Free Cl <0.1 mg/L; P = Chlorine is present

Received By: [signature] Date/Time: 9/29/23 900

Login Sample Receipt Checklist

Client: City of Tarpon Springs

Job Number: 810-79546-1

Login Number: 79546
List Number: 1
Creator: Alfred, Robbin

List Source: Eurofins Eaton Analytical South Bend

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	False	Client provided containers

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Kevin Tenk
City of Tarpon Springs
1624 L & R Industrial Blvd
Tarpon Springs, Florida 34689

Generated 9/22/2023 2:59:17 PM

JOB DESCRIPTION

UCMR5 - FL6521784 - SE2 - Highland Avenue Plant

JOB NUMBER

810-74938-1

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend IN 46617

See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Eaton Analytical, LLC Project Manager.

Authorization

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Authorized for release by
Pamela Brown, Project Manager
Pamela.Brown@et.eurofinsus.com
(574)233-4777

Table of Contents

Definitions/Glossary

Client: City of Tarpon Springs
Job ID: 810-74938-1
Project/Site: UCMR5 - FL6521784 - SE2 - Highland Avenue
Plant

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

Case Narrative

Client: City of Tarpon Springs
Job ID: 810-74938-1
Project/Site: UCMR5 - FL6521784 - SE2 - Highland Avenue Plant

Job ID: 810-74938-1

Laboratory: Eurofins Eaton Analytical South Bend

Narrative

Job Narrative
810-74938-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The sample was received on 8/23/2023 9:30 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice.

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

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

Detection Summary

Client: City of Tarpon Springs
Job ID: 810-74938-1
Project/Site: UCMR5 - FL6521784 - SE2 - Highland Avenue Plant

Client Sample ID: 00003/Highland/TP/1784003/EP
Lab Sample ID: 810-74938-1
PWSID Number: FL6521784

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Eaton Analytical South Bend

9/22/2023

Client Sample Results

Client: City of Tarpon Springs
Project/Site: UCMR5 - FL6521784 - SE2 - Highland Avenue Plant

Job ID: 810-74938-1

Client Sample ID: 00003/Highland/TP/1784003/EP

Date Collected: 08/22/23 09:15
Date Received: 08/23/23 09:30

Lab Sample ID: 810-74938-1

Matrix: Drinking Water
PWSID Number: FL6521784

Method: EPA 537.1 UCMR5 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.0047		0.0047		ug/L		08/29/23 07:32	08/30/23 06:03	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.0057		0.0057		ug/L		08/29/23 07:32	08/30/23 06:03	1
Perfluorotetradecanoic acid (PFTA)	<0.0076		0.0076		ug/L		08/29/23 07:32	08/30/23 06:03	1
Perfluorotridecanoic acid (PFTrDA)	<0.0066		0.0066		ug/L		08/29/23 07:32	08/30/23 06:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*101*		*70 - 130*	*08/29/23 07:32*	*08/30/23 06:03*	*1*
13C2 PFHxA	*92*		*70 - 130*	*08/29/23 07:32*	*08/30/23 06:03*	*1*
13C2 PFDA	*103*		*70 - 130*	*08/29/23 07:32*	*08/30/23 06:03*	*1*
13C3 HFPO-DA	*95*		*70 - 130*	*08/29/23 07:32*	*08/30/23 06:03*	*1*

Method: EPA 200.7 UCMR5 - Metals (ICP)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<9.00		9.00		ug/L		08/29/23 10:04	08/30/23 18:08	1

Surrogate Summary

Client: City of Tarpon Springs
Project/Site: UCMR5 - FL6521784 - SE2 - Highland Avenue Plant

Job ID: 810-74938-1

Method: 537.1 UCMR5 - Perfluorinated Alkyl Acids (LC/MS)

Matrix: Drinking Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	d5NEFOS (70-130)	PFHxA (70-130)	PFDA (70-130)	HFPODA (70-130)
810-74938-1	00003/Highland/TP/1784003/EP	101	92	103	95
LLCS 810-71560/2-A	Lab Control Sample	93	107	102	100
MBL 810-71560/1-A	Method Blank	103	106	102	101

Surrogate Legend

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

Isotope Dilution Summary

Client: City of Tarpon Springs
Job ID: 810-74938-1
Project/Site: UCMR5 - FL6521784 - SE2 - Highland Avenue
Plant

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Matrix: Drinking Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		HFPODA	PFBA	C3PFBS	PFPeA	13C5PHA	C4PFHA	C8PFOA	C9PFNA
Lab Sample ID	Client Sample ID	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)
810-74938-1	0003/Highland/TP/1784003/EP	83	93	91	92	84	86	92	96
LLCS 810-72696/2-A	Lab Control Sample	83	93	92	100	90	92	94	98
MBL 810-72696/1-A	Method Blank	78	87	85	95	87	87	89	96

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		C6PFDA	13C7PUA	PFDoA	C8PFOS	C3PFHS	42FTS	62FTS	82FTS
Lab Sample ID	Client Sample ID	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)
810-74938-1	0003/Highland/TP/1784003/EP	98	100	100	94	93	83	100	120
LLCS 810-72696/2-A	Lab Control Sample	97	95	96	92	93	120	119	125
MBL 810-72696/1-A	Method Blank	91	92	93	87	88	110	106	119

Surrogate Legend

HFPODA = 13C3 HFPO-DA
PFBA = 13C4 PFBA
C3PFBS = 13C3 PFBS
PFPeA = 13C5 PFPeA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFDoA = 13C2 PFDoA
C8PFOS = 13C8 PFOS
C3PFHS = 13C3 PFHxS
42FTS = 13C2-4:2-FTS
62FTS = 13C2-6:2-FTS
82FTS = 13C2-8:2-FTS

Client: City of Tarpon Springs
Project/Site: UCMR5 - FL6521784 - SE2 - Highland Avenue Plant

Job ID: 810-74938-1

Method: 537.1 UCMR5 - Perfluorinated Alkyl Acids (LC/MS)

Lab Sample ID: MBL 810-71560/1-A
Matrix: Drinking Water
Analysis Batch: 71664

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 71560

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.0005		0.0050		ug/L		08/29/23 07:32	08/30/23 03:14	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.0006		0.0060		ug/L		08/29/23 07:32	08/30/23 03:14	1
Perfluorotetradecanoic acid (PFTA)	<0.0007		0.0080		ug/L		08/29/23 07:32	08/30/23 03:14	1
Perfluorotridecanoic acid (PFTrDA)	<0.0006		0.0070		ug/L		08/29/23 07:32	08/30/23 03:14	1

Surrogate	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*103*		*70 - 130*	*08/29/23 07:32*	*08/30/23 03:14*	*1*
13C2 PFHxA	*106*		*70 - 130*	*08/29/23 07:32*	*08/30/23 03:14*	*1*
13C2 PFDA	*102*		*70 - 130*	*08/29/23 07:32*	*08/30/23 03:14*	*1*
13C3 HFPO-DA	*101*		*70 - 130*	*08/29/23 07:32*	*08/30/23 03:14*	*1*

Lab Sample ID: LLCS 810-71560/2-A
Matrix: Drinking Water
Analysis Batch: 71664

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 71560

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			0.00200	0.0016		ug/L		82	50 - 150		
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			0.00200	0.0015		ug/L		77	50 - 150		
Perfluorotetradecanoic acid (PFTA)			0.00200	0.0011		ug/L		56	50 - 150		
Perfluorotridecanoic acid (PFTrDA)			0.00200	0.0020		ug/L		99	50 - 150		

Surrogate	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
d5-NEtFOSAA	*93*		*70 - 130*
13C2 PFHxA	*107*		*70 - 130*
13C2 PFDA	*102*		*70 - 130*
13C3 HFPO-DA	*100*		*70 - 130*

Method: 200.7 UCMR5 - Metals (ICP)

Lab Sample ID: MBL 810-71615/1-A
Matrix: Drinking Water
Analysis Batch: 71894

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 71615

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.520		9.00		ug/L		08/29/23 10:04	08/30/23 17:32	1

Lab Sample ID: LLCS 810-71615/2-A
Matrix: Drinking Water
Analysis Batch: 71894

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 71615

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Lithium			9.00	9.35		ug/L		104	50 - 150		

QC Association Summary

Client: City of Tarpon Springs
Job ID: 810-74938-1
Project/Site: UCMR5 - FL6521784 - SE2 - Highland Avenue Plant

LCMS

Prep Batch: 71560

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-74938-1	00003/Highland/TP/1784003/EP	Total/NA	Drinking Water	537.1 DW	
MBL 810-71560/1-A	Method Blank	Total/NA	Drinking Water	537.1 DW	
LLCS 810-71560/2-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	

Analysis Batch: 71664

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-74938-1	00003/Highland/TP/1784003/EP	Total/NA	Drinking Water	537.1 UCMR5	71560
MBL 810-71560/1-A	Method Blank	Total/NA	Drinking Water	537.1 UCMR5	71560
LLCS 810-71560/2-A	Lab Control Sample	Total/NA	Drinking Water	537.1 UCMR5	71560

Metals

Prep Batch: 71615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-74938-1	00003/Highland/TP/1784003/EP	Total/NA	Drinking Water	200.7 UCMR5	
MBL 810-71615/1-A	Method Blank	Total/NA	Drinking Water	200.7 UCMR5	
LLCS 810-71615/2-A	Lab Control Sample	Total/NA	Drinking Water	200.7 UCMR5	

Analysis Batch: 71894

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-74938-1	00003/Highland/TP/1784003/EP	Total/NA	Drinking Water	200.7 UCMR5	71615
MBL 810-71615/1-A	Method Blank	Total/NA	Drinking Water	200.7 UCMR5	71615
LLCS 810-71615/2-A	Lab Control Sample	Total/NA	Drinking Water	200.7 UCMR5	71615

Lab Chronicle

Client: City of Tarpon Springs
Job ID: 810-74938-1
Project/Site: UCMR5 - FL6521784 - SE2 - Highland Avenue Plant

Client Sample ID: 00003/Highland/TP/1784003/EP
Lab Sample ID: 810-74938-1
Date Collected: 08/22/23 09:15
Matrix: Drinking Water
Date Received: 08/23/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			71560	SS	EA SB	08/29/23 07:32
Total/NA	Analysis	537.1 UCMR5		1	71664	PP	EA SB	08/30/23 06:03
Total/NA	Prep	200.7 UCMR5			71615	AC	EA SB	08/29/23 10:04
Total/NA	Analysis	200.7 UCMR5		1	71894	AC	EA SB	08/30/23 18:08

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: City of Tarpon Springs
Job ID: 810-74938-1
Project/Site: UCMR5 - FL6521784 - SE2 - Highland Avenue Plant

Laboratory: Eurofins Eaton Analytical South Bend

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

Authority	Program	Identification Number	Expiration Date
USEPA UCMR 5	US Federal Programs	IN00035	12-31-25

Method Summary

Client: City of Tarpon Springs
Job ID: 810-74938-1
Project/Site: UCMR5 - FL6521784 - SE2 - Highland Avenue
Plant

Method	Method Description	Protocol	Laboratory
537.1 UCMR5	Perfluorinated Alkyl Acids (LC/MS)	EPA	EA SB
200.7 UCMR5	Metals (ICP)	EPA	EA SB
200.7 UCMR5	Preparation, Total Recoverable Metals	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: City of Tarpon Springs
Job ID: 810-74938-1
Project/Site: UCMR5 - FL6521784 - SE2 - Highland Avenue Plant

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
810-74938-1	00003/Highland/TP/1784003/EP	Drinking Water	08/22/23 09:15	08/23/23 09:30	FL6521784

South Bend, IN
110 S Hill Street
South Bend, IN 46617
Phone (574) 233-4777; Phone (574) 233-8207

"UCMR 5 Sampling Form for Single Collection Site"
(Separate form is needed for each collection site)

eurofins | Environment Testing America

Company Contact: Kevin Tenk
Company Name: City of Tarpon Springs
Company Address: 1624 L&R Industrial Blvd
Tarpon Springs FL, 34689

Phone: (727) 937-2557
Email: ktenk@ctsfl.us
Purchase Order: N/A

Lab PM(name): Pamela Brown
PM Email: Pamela.Brown@et.eurofins.com
EEA Project: UCMR5

PWSID: 6521784
FacID:
SPID:
FacName:
SPName:
Sampling Event:

Water System Name: City of Tarpon Springs RO Water Treatment Facility
Collection Location: 0003/Highland/TP/1784003/EP → Highland WTP PoE
Scheduled Collection Date: 8/22/2023

Sampler Name (Print): Kevin Tenk
Date/Time Sampled: 8/22/2023 0915

Client Storage temp, if >2 days from collection: N/A

AREA BELOW FOR LAB USE ONLY

For UCMR 5 specific criteria see: REC-WI55108 Guidance Document for UCMR 5 Sample Receiving Requirements and QA-SOP-SOP48964 UCMR 5 QAPP

IR Gun#: 25
Ice: Wet / Blue

Method	Type	# Bot	Temp °C (10°C within 2 days of collection, 6°C for > 2 days) Initial / Corrected	pH* value	✓if receipt pH acceptable	✓if pH needs adjustment	Cl (P/A) **	Sample Comments	✓if sample is invalid
200.7	FS	1	[redacted]		✓		[redacted]	810-74938 Chain of Custody	
200.7	FS	2							
533	FS	1	0.4 / 0.6		✓		A		
533	FS	2	0.4 / 0.6		✓		A		
533	FS	3	0.4 / 0.6		✓		A		
533	FRB	1	0.4 / 0.6		✓		A		
537.1	FS	1	0.4 / 0.6		✓	[redacted]	A		
537.1	FS	2	0.4 / 0.6		✓		A		
537.1	FS	3	0.4 / 0.6		✓		A		
537.1	FRB	1	0.4 / 0.6		✓		A		

* pH <2 for 200.7. pH 6-8 for 533 & 537.1. *Note: 200.7 & 533 pH may be adjusted upon receipt.*

** A = Absent if Free Cl <0.1 mg/L; P = Chlorine is present

Received By Kameron Williams **Date/Time** 8/23/23 0830

Login Sample Receipt Checklist

Client: City of Tarpon Springs

Job Number: 810-74938-1

Login Number: 74938
List Number: 1
Creator: Williams, Kameron

List Source: Eurofins Eaton Analytical South Bend

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	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Kevin Tenk
City of Tarpon Springs
1624 L & R Industrial Blvd
Tarpon Springs, Florida 34689

Generated 4/12/2023 10:49:38 AM

JOB DESCRIPTION

UCMR5 - FL6521784 - SE1 - RO Facility

JOB NUMBER

810-54396-1

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend IN 46617

See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Eaton Analytical, LLC Project Manager.

Authorization

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Authorized for release by
Pamela Brown, Project Manager
Pamela.Brown@et.eurofinsus.com
(574)233-4777

Table of Contents

Definitions/Glossary

Client: City of Tarpon Springs
Job ID: 810-54396-1
Project/Site: UCMR5 - FL6521784 - SE1 - RO Facility

Qualifiers

Metals

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.
¤	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: City of Tarpon Springs
Job ID: 810-54396-1
Project/Site: UCMR5 - FL6521784 - SE1 - RO Facility

Job ID: 810-54396-1

Laboratory: Eurofins Eaton Analytical South Bend

Narrative

Job Narrative
810-54396-1

Receipt
The sample was received on 2/22/2023 9:45 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice.

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

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

Detection Summary

Client: City of Tarpon Springs
Job ID: 810-54396-1
Project/Site: UCMR5 - FL6521784 - SE1 - RO Facility

Client Sample ID: 0004/RO Fac/TP/RO1/EP
Lab Sample ID: 810-54396-1
PWSID Number: FL06521784

No Detections.

This Detection Summary does not include radiochemical test results.

Client: City of Tarpon Springs
Project/Site: UCMR5 - FL6521784 - SE1 - RO Facility

Job ID: 810-54396-1

Client Sample ID: 0004/RO Fac/TP/RO1/EP
Date Collected: 02/21/23 10:15
Date Received: 02/22/23 09:45

Lab Sample ID: 810-54396-1
Matrix: Drinking Water
PWSID Number: FL06521784

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.0050		0.0050		ug/L		03/17/23 05:48	03/18/23 20:21	1
Perfluoropentanoic acid (PFPeA)	<0.0030		0.0030		ug/L		03/17/23 05:48	03/18/23 20:21	1
Perfluorohexanoic acid (PFHxA)	<0.0030		0.0030		ug/L		03/17/23 05:48	03/18/23 20:21	1
Perfluoroheptanoic acid (PFHpA)	<0.0030		0.0030		ug/L		03/17/23 05:48	03/18/23 20:21	1
Perfluorooctanoic acid (PFOA)	<0.0040		0.0040		ug/L		03/17/23 05:48	03/18/23 20:21	1
Perfluorononanoic acid (PFNA)	<0.0040		0.0040		ug/L		03/17/23 05:48	03/18/23 20:21	1
Perfluorodecanoic acid (PFDA)	<0.0030		0.0030		ug/L		03/17/23 05:48	03/18/23 20:21	1
Perfluoroundecanoic acid (PFUnA)	<0.0020		0.0020		ug/L		03/17/23 05:48	03/18/23 20:21	1
Perfluorododecanoic acid (PFDoA)	<0.0030		0.0030		ug/L		03/17/23 05:48	03/18/23 20:21	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0030		0.0030		ug/L		03/17/23 05:48	03/18/23 20:21	1
Perfluorobutanesulfonic acid (PFBS)	<0.0030		0.0030		ug/L		03/17/23 05:48	03/18/23 20:21	1
Perfluorohexanesulfonic acid (PFHxS)	<0.0030		0.0030		ug/L		03/17/23 05:48	03/18/23 20:21	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.0030		0.0030		ug/L		03/17/23 05:48	03/18/23 20:21	1
Perfluorooctanesulfonic acid (PFOS)	<0.0040		0.0040		ug/L		03/17/23 05:48	03/18/23 20:21	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0040		0.0040		ug/L		03/17/23 05:48	03/18/23 20:21	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0050		0.0050		ug/L		03/17/23 05:48	03/18/23 20:21	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.0020		0.0020		ug/L		03/17/23 05:48	03/18/23 20:21	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.0050		0.0050		ug/L		03/17/23 05:48	03/18/23 20:21	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0030		0.0030		ug/L		03/17/23 05:48	03/18/23 20:21	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0050		0.0050		ug/L		03/17/23 05:48	03/18/23 20:21	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0050		0.0050		ug/L		03/17/23 05:48	03/18/23 20:21	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0200		0.0200		ug/L		03/17/23 05:48	03/18/23 20:21	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0040		0.0040		ug/L		03/17/23 05:48	03/18/23 20:21	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0030		0.0030		ug/L		03/17/23 05:48	03/18/23 20:21	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.0030		0.0030		ug/L		03/17/23 05:48	03/18/23 20:21	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*83*		*50 - 200*	*03/17/23 05:48*	*03/18/23 20:21*	*1*
13C4 PFBA	*92*		*50 - 200*	*03/17/23 05:48*	*03/18/23 20:21*	*1*
13C3 PFBS	*98*		*50 - 200*	*03/17/23 05:48*	*03/18/23 20:21*	*1*
13C5 PFPeA	*92*		*50 - 200*	*03/17/23 05:48*	*03/18/23 20:21*	*1*
13C5 PFHxA	*91*		*50 - 200*	*03/17/23 05:48*	*03/18/23 20:21*	*1*
13C4 PFHpA	*93*		*50 - 200*	*03/17/23 05:48*	*03/18/23 20:21*	*1*
13C8 PFOA	*94*		*50 - 200*	*03/17/23 05:48*	*03/18/23 20:21*	*1*
13C9 PFNA	*95*		*50 - 200*	*03/17/23 05:48*	*03/18/23 20:21*	*1*
13C6 PFDA	*91*		*50 - 200*	*03/17/23 05:48*	*03/18/23 20:21*	*1*
13C7 PFUnA	*90*		*50 - 200*	*03/17/23 05:48*	*03/18/23 20:21*	*1*
13C2 PFDoA	*88*		*50 - 200*	*03/17/23 05:48*	*03/18/23 20:21*	*1*
13C8 PFOS	*95*		*50 - 200*	*03/17/23 05:48*	*03/18/23 20:21*	*1*
13C3 PFHxS	*98*		*50 - 200*	*03/17/23 05:48*	*03/18/23 20:21*	*1*

Client Sample ID: 0004/RO Fac/TP/RO1/EP
Lab Sample ID: 810-54396-1
Date Collected: 02/21/23 10:15
Matrix: Drinking Water
Date Received: 02/22/23 09:45
PWSID Number: FL06521784

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2-4:2-FTS	*100*		*50 - 200*	*03/17/23 05:48*	*03/18/23 20:21*	*1*
13C2-6:2-FTS	*102*		*50 - 200*	*03/17/23 05:48*	*03/18/23 20:21*	*1*
13C2-8:2-FTS	*91*		*50 - 200*	*03/17/23 05:48*	*03/18/23 20:21*	*1*

Method: EPA 537.1 UCMR5 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.0050		0.0050	ug/L		03/03/23 06:51	03/05/23 01:27	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.0060		0.0060	ug/L		03/03/23 06:51	03/05/23 01:27	1
Perfluorotetradecanoic acid (PFTA)	<0.0080		0.0080	ug/L		03/03/23 06:51	03/05/23 01:27	1
Perfluorotridecanoic acid (PFTrDA)	<0.0070		0.0070	ug/L		03/03/23 06:51	03/05/23 01:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*85*		*70 - 130*	*03/03/23 06:51*	*03/05/23 01:27*	*1*
13C2 PFHxA	*99*		*70 - 130*	*03/03/23 06:51*	*03/05/23 01:27*	*1*
13C2 PFDA	*99*		*70 - 130*	*03/03/23 06:51*	*03/05/23 01:27*	*1*
13C3 HFPO-DA	*101*		*70 - 130*	*03/03/23 06:51*	*03/05/23 01:27*	*1*

Method: EPA 200.7 UCMR5 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<9.00		9.00	ug/L		02/27/23 13:10	02/28/23 13:17	1

Surrogate Summary

Client: City of Tarpon Springs
Project/Site: UCMR5 - FL6521784 - SE1 - RO Facility

Job ID: 810-54396-1

Method: 537.1 UCMR5 - Perfluorinated Alkyl Acids (LC/MS)

Matrix: Drinking Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		d5NEFOS	PFHxA	PFDA	HFPODA
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)	(70-130)
810-54396-1	0004/RO Fac/TP/RO1/EP	85	99	99	101
LLCS 810-50172/2-A	Lab Control Sample	89	95	94	96
MBL 810-50172/1-A	Method Blank	86	93	89	89

Surrogate Legend

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

Isotope Dilution Summary

Client: City of Tarpon Springs
Job ID: 810-54396-1
Project/Site: UCMR5 - FL6521784 - SE1 - RO Facility

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Matrix: Drinking Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		HFPODA	PFBA	C3PFBS	PFPeA	13C5PHA	C4PFHA	C8PFOA	C9PFNA
Lab Sample ID	Client Sample ID	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)
810-54396-1	0004/RO Fac/TP/RO1/EP	83	92	98	92	91	93	94	95
LLCS 810-52002/2-A	Lab Control Sample	100	97	97	96	96	95	95	94
MBL 810-52002/1-A	Method Blank	98	96	98	96	95	95	96	95

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		C6PFDA	13C7PUA	PFDoA	C8PFOS	C3PFHS	42FTS	62FTS	82FTS
Lab Sample ID	Client Sample ID	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)
810-54396-1	0004/RO Fac/TP/RO1/EP	91	90	88	95	98	100	102	91
LLCS 810-52002/2-A	Lab Control Sample	90	88	87	91	95	94	95	91
MBL 810-52002/1-A	Method Blank	92	90	88	92	94	93	95	94

Surrogate Legend

HFPODA = 13C3 HFPO-DA
PFBA = 13C4 PFBA
C3PFBS = 13C3 PFBS
PFPeA = 13C5 PFPeA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFDoA = 13C2 PFDoA
C8PFOS = 13C8 PFOS
C3PFHS = 13C3 PFHxS
42FTS = 13C2-4:2-FTS
62FTS = 13C2-6:2-FTS
82FTS = 13C2-8:2-FTS

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Lab Sample ID: MBL 810-52002/1-A
Matrix: Drinking Water
Analysis Batch: 52103

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 52002

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.0005		0.0050		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluoropentanoic acid (PFPeA)	<0.0004		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluorohexanoic acid (PFHxA)	<0.0004		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluoroheptanoic acid (PFHpA)	<0.0004		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluorooctanoic acid (PFOA)	<0.0004		0.0040		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluorononanoic acid (PFNA)	<0.0004		0.0040		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluorodecanoic acid (PFDA)	<0.0004		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluoroundecanoic acid (PFUnA)	<0.0004		0.0020		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluorododecanoic acid (PFDoA)	<0.0004		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0004		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluorobutanesulfonic acid (PFBS)	<0.0004		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluorohexanesulfonic acid (PFHxS)	<0.0004		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.0004		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluorooctanesulfonic acid (PFOS)	<0.0004		0.0040		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0004		0.0040		ug/L		03/17/23 05:48	03/18/23 15:11	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0005		0.0050		ug/L		03/17/23 05:48	03/18/23 15:11	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.0005		0.0020		ug/L		03/17/23 05:48	03/18/23 15:11	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.0005		0.0050		ug/L		03/17/23 05:48	03/18/23 15:11	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0006		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0007		0.0050		ug/L		03/17/23 05:48	03/18/23 15:11	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0006		0.0050		ug/L		03/17/23 05:48	03/18/23 15:11	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0009		0.0200		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0003		0.0040		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0004		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.0005		0.0030		ug/L		03/17/23 05:48	03/18/23 15:11	1

Isotope Dilution	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*98*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C4 PFBA	*96*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C3 PFBS	*98*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C5 PFPeA	*96*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C5 PFHxA	*95*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C4 PFHpA	*95*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C8 PFOA	*96*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C9 PFNA	*95*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C6 PFDA	*92*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C7 PFUnA	*90*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C2 PFDoA	*88*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*
13C8 PFOS	*92*		*50 - 200*	*03/17/23 05:48*	*03/18/23 15:11*	*1*

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: MBL 810-52002/1-A
Matrix: Drinking Water
Analysis Batch: 52103

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 52002

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFHxS	94		50 - 200	03/17/23 05:48	03/18/23 15:11	1
13C2-4:2-FTS	93		50 - 200	03/17/23 05:48	03/18/23 15:11	1
13C2-6:2-FTS	95		50 - 200	03/17/23 05:48	03/18/23 15:11	1
13C2-8:2-FTS	94		50 - 200	03/17/23 05:48	03/18/23 15:11	1

Lab Sample ID: LLCS 810-52002/2-A
Matrix: Drinking Water
Analysis Batch: 52103

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 52002

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	0.00200	0.0020		ug/L		98	50 - 150
Perfluoropentanoic acid (PFPeA)	0.00200	0.0020		ug/L		100	50 - 150
Perfluorohexanoic acid (PFHxA)	0.00200	0.0019		ug/L		96	50 - 150
Perfluoroheptanoic acid (PFHpA)	0.00200	0.0019		ug/L		94	50 - 150
Perfluorooctanoic acid (PFOA)	0.00200	0.0020		ug/L		99	50 - 150
Perfluorononanoic acid (PFNA)	0.00200	0.0019		ug/L		97	50 - 150
Perfluorodecanoic acid (PFDA)	0.00200	0.0019		ug/L		96	50 - 150
Perfluoroundecanoic acid (PFUnA)	0.00200	0.0019		ug/L		93	50 - 150
Perfluorododecanoic acid (PFDoA)	0.00200	0.0020		ug/L		98	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.00189	0.0018		ug/L		94	50 - 150
Perfluorobutanesulfonic acid (PFBS)	0.00178	0.0017		ug/L		93	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	0.00183	0.0017		ug/L		94	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	0.00191	0.0018		ug/L		96	50 - 150
Perfluorooctanesulfonic acid (PFOS)	0.00186	0.0018		ug/L		98	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	0.00188	0.0017		ug/L		89	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.00200	0.0017		ug/L		87	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	0.00187	0.0017		ug/L		92	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	0.00189	0.0017		ug/L		89	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.00188	0.0020		ug/L		106	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.00190	0.0020		ug/L		105	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.00192	0.0021		ug/L		109	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.00200	0.0023		ug/L		114	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.00200	0.0019		ug/L		93	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.00200	0.0019		ug/L		93	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.00178	0.0016		ug/L		92	50 - 150

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Isotope Dilution	LLCS %Recovery	LLCS Qualifier	Limits
13C3 HFPO-DA	100		50 - 200
13C4 PFBA	97		50 - 200
13C3 PFBS	97		50 - 200
13C5 PFPeA	96		50 - 200
13C5 PFHxA	96		50 - 200
13C4 PFHpA	95		50 - 200
13C8 PFOA	95		50 - 200
13C9 PFNA	94		50 - 200
13C6 PFDA	90		50 - 200
13C7 PFUnA	88		50 - 200
13C2 PFDoA	87		50 - 200
13C8 PFOS	91		50 - 200
13C3 PFHxS	95		50 - 200
13C2-4:2-FTS	94		50 - 200
13C2-6:2-FTS	95		50 - 200
13C2-8:2-FTS	91		50 - 200

Method: 537.1 UCMR5 - Perfluorinated Alkyl Acids (LC/MS)

Lab Sample ID: MBL 810-50172/1-A
Matrix: Drinking Water
Analysis Batch: 50242

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 50172

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.0005		0.0050		ug/L		03/03/23 06:51	03/04/23 22:49	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.0006		0.0060		ug/L		03/03/23 06:51	03/04/23 22:49	1
Perfluorotetradecanoic acid (PFTA)	<0.0007		0.0080		ug/L		03/03/23 06:51	03/04/23 22:49	1
Perfluorotridecanoic acid (PFTrDA)	<0.0006		0.0070		ug/L		03/03/23 06:51	03/04/23 22:49	1

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	86		70 - 130	03/03/23 06:51	03/04/23 22:49	1
13C2 PFHxA	93		70 - 130	03/03/23 06:51	03/04/23 22:49	1
13C2 PFDA	89		70 - 130	03/03/23 06:51	03/04/23 22:49	1
13C3 HFPO-DA	89		70 - 130	03/03/23 06:51	03/04/23 22:49	1

Lab Sample ID: LLCS 810-50172/2-A
Matrix: Drinking Water
Analysis Batch: 50242

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 50172

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			0.00200	0.0019		ug/L		97	50 - 150		
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			0.00200	0.0019		ug/L		94	50 - 150		
Perfluorotetradecanoic acid (PFTA)			0.00200	0.0016		ug/L		82	50 - 150		
Perfluorotridecanoic acid (PFTrDA)			0.00200	0.0019		ug/L		96	50 - 150		

Surrogate	LLCS %Recovery	LLCS Qualifier	Limits
d5-NEtFOSAA	89		70 - 130

Method: 537.1 UCMR5 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: LLCS 810-50172/2-A
Matrix: Drinking Water
Analysis Batch: 50242

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 50172

Surrogate	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
13C2 PFHxA	*95*		*70 - 130*
13C2 PFDA	*94*		*70 - 130*
13C3 HFPO-DA	*96*		*70 - 130*

Method: 200.7 UCMR5 - Metals (ICP)

Lab Sample ID: MBL 810-49552/1-A
Matrix: Drinking Water
Analysis Batch: 49679

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 49552

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.520		9.00		ug/L		02/27/23 13:10	02/28/23 12:41	1

Lab Sample ID: LLCS 810-49552/2-A
Matrix: Drinking Water
Analysis Batch: 49679

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 49552

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Lithium			9.00	8.59	J	ug/L		95	50 - 150		

QC Association Summary

Client: City of Tarpon Springs
Job ID: 810-54396-1
Project/Site: UCMR5 - FL6521784 - SE1 - RO Facility

LCMS

Prep Batch: 50172

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-54396-1	0004/RO Fac/TP/RO1/EP	Total/NA	Drinking Water	537.1 DW	
MBL 810-50172/1-A	Method Blank	Total/NA	Drinking Water	537.1 DW	
LLCS 810-50172/2-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	

Analysis Batch: 50242

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-54396-1	0004/RO Fac/TP/RO1/EP	Total/NA	Drinking Water	537.1 UCMR5	50172
MBL 810-50172/1-A	Method Blank	Total/NA	Drinking Water	537.1 UCMR5	50172
LLCS 810-50172/2-A	Lab Control Sample	Total/NA	Drinking Water	537.1 UCMR5	50172

Prep Batch: 52002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-54396-1	0004/RO Fac/TP/RO1/EP	Total/NA	Drinking Water	533	
MBL 810-52002/1-A	Method Blank	Total/NA	Drinking Water	533	
LLCS 810-52002/2-A	Lab Control Sample	Total/NA	Drinking Water	533	

Analysis Batch: 52103

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-54396-1	0004/RO Fac/TP/RO1/EP	Total/NA	Drinking Water	533	52002
MBL 810-52002/1-A	Method Blank	Total/NA	Drinking Water	533	52002
LLCS 810-52002/2-A	Lab Control Sample	Total/NA	Drinking Water	533	52002

Metals

Prep Batch: 49552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-54396-1	0004/RO Fac/TP/RO1/EP	Total/NA	Drinking Water	200.7 UCMR5	
MBL 810-49552/1-A	Method Blank	Total/NA	Drinking Water	200.7 UCMR5	
LLCS 810-49552/2-A	Lab Control Sample	Total/NA	Drinking Water	200.7 UCMR5	

Analysis Batch: 49679

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-54396-1	0004/RO Fac/TP/RO1/EP	Total/NA	Drinking Water	200.7 UCMR5	49552
MBL 810-49552/1-A	Method Blank	Total/NA	Drinking Water	200.7 UCMR5	49552
LLCS 810-49552/2-A	Lab Control Sample	Total/NA	Drinking Water	200.7 UCMR5	49552

Lab Chronicle

Client: City of Tarpon Springs
Job ID: 810-54396-1
Project/Site: UCMR5 - FL6521784 - SE1 - RO Facility

Client Sample ID: 0004/RO Fac/TP/RO1/EP
Lab Sample ID: 810-54396-1

Date Collected: 02/21/23 10:15
Matrix: Drinking Water
Date Received: 02/22/23 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			52002	NR	EA SB	03/17/23 05:48
Total/NA	Analysis	533		1	52103	CM	EA SB	03/18/23 20:21
Total/NA	Prep	537.1 DW			50172	AD	EA SB	03/03/23 06:51
Total/NA	Analysis	537.1 UCMR5		1	50242	MH	EA SB	03/05/23 01:27
Total/NA	Prep	200.7 UCMR5			49552	NB	EA SB	02/27/23 13:10
Total/NA	Analysis	200.7 UCMR5		1	49679	NB	EA SB	02/28/23 13:17

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: City of Tarpon Springs
Job ID: 810-54396-1
Project/Site: UCMR5 - FL6521784 - SE1 - RO Facility

Laboratory: Eurofins Eaton Analytical South Bend

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

Authority	Program	Identification Number	Expiration Date
USEPA UCMR 5	US Federal Programs	IN00035	12-31-25

Method Summary

Client: City of Tarpon Springs
Job ID: 810-54396-1
Project/Site: UCMR5 - FL6521784 - SE1 - RO Facility

Method	Method Description	Protocol	Laboratory
533	Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water	EPA	EA SB
537.1 UCMR5	Perfluorinated Alkyl Acids (LC/MS)	EPA	EA SB
200.7 UCMR5	Metals (ICP)	EPA	EA SB
200.7 UCMR5	Preparation, Total Recoverable Metals	EPA	EA SB
533	Extraction of Perfluorinated and Polyfluorinated Alkyl Acids	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: City of Tarpon Springs
Job ID: 810-54396-1
Project/Site: UCMR5 - FL6521784 - SE1 - RO Facility

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
810-54396-1	0004/RO Fac/TP/RO1/EP	Drinking Water	02/21/23 10:15	02/22/23 09:45	FL06521784

South Bend, IN
110 S Hill Street
South Bend, IN 46617
Phone (574) 233-4777; Phone (574) 233-8207

"UCMR 5 Sampling Form for Single Collecti

(Separate form is needed for each collection site)

Company Contact: Kevin Tenk
Company Name: City of Tarpan Springs
Company Address: 1624 L&R Industrial Blvd
Tarpan Springs FL, 34689

Phone: (727) 937-2557
Email: ktenk@ctsfl.us
Purchase Order: N/A

Lab PM(name): Pamela Brown
PM Email: Pamela.Brown@et.eurofins.com
EEA Project: UCMR5

PWSID: 6521784
FacID:
SPID:
FacName:
SPName:
Sampling Event:

Water System Name: City of Tarpan Springs RO water Treatment Facility
Collection Location: 0004 / RO Fac / TP / ROI/EP - (RO Plant) PoE
Scheduled Collection Date: 2/21/2023

Sampler Name (Print): Kevin Tenk

Date/Time Sampled: 2/21/2023 1015

Client Storage temp, if > 2 days from collection: N/A

AREA BELOW FOR LAB USE ONLY

For UCMR 5 specific criteria see: REC-WI55108 Guidance Document for UCMR 5 Sample Receiving Requirements and QA-SOP-SOP48964 UCMR 5 QAPP

IR Gun#: 29

Ice: Wet / Blue

Method	Type	# Bot	Temp °C (10°C within 2 days of collection, 6°C for > 2 days) Initial / Corrected	pH* value	✓if receipt pH acceptable	✓if pH needs adjustment	Cl (P/A) **	Sample Comments	✓if sample is invalid
200.7	FS	1	[redacted]	7.0	✓		[redacted]	0.2/1.0 trips.	
~~200.7~~	~~FS~~	~~2~~	[redacted]		✓		[redacted]		
533	FS	1	0.0 / 0.8	6.5	✓				
533	FS	2	N/A	6.5	✓				
533	FS	3	N/A	6.5	✓				
533	FRB	1	1.0 / 1.8	7.5	✓				
537.1	FS	1	2.2 / 3.0	7.0	✓	[redacted]			
537.1	FS	2	N/A	7.0	✓				
537.1	FS	3	N/A	7.0	✓				
537.1	FRB	1	0.6 / 1.4	7.0	✓				

* pH <2 for 200.7. pH 6-8 for 533 & 537.1. *Note: 200.7 & 533 pH may be adjusted upon receipt.*

** A = Absent if Free Cl <0.1 mg/L; P = Chlorine is present

Received By [signature] Date/Time 2/22/23 0945

South Bend, IN
110 S Hill Street
South Bend, IN 46617
Phone: 574-233-4777 Fax: 574-233-8207

Chain of Custody Record

eurofins Environment Testing

Client Information	Sampler: Kevin Tenk	Lab PM: Brown, Pamela	Carrier Tracking No(s):	COC No: 810-20640-6080 1
Client Contact: Mr. Kevin Tenk	Phone: 727 - 937 - 2557	E-Mail: Pamela.Brown@et.eurofinsus.com	State of Origin:	Page: Page 1 of 1
Company: City of Tarpon Springs	PWSID: 6521784			Job #:
Address: 1624 L & R Industrial Blvd	Due Date Requested:			
City: Tarpon Springs	TAT Requested (days):			
State, Zip: FL, 34689	Compliance Project: Δ Yes Δ No			
Phone: 727-946-4641(Tel)	PO #: Purchase Order not required			
Email: ktenk@ctsfl.us	WO #:			
Project Name: UCMR5	Project #: 81004900			
Site:	SSOW#:			

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, Y - Trizma, 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)	200.7_UCMR5 - UCMR5_200.7	537.1_UCMR5 - Local Method	533_UCMR5 - Local Method	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	Y	N		
0001/Grosse Ave/TP/1784001/EP	2/21/23	0950	G	Drinking Wate							
0003/Highland/TP/1784003/EP	2/21/23	0920	G	Drinking Wate							
0004/RO Fac/TP/R01/EP	2/21/23	1015	G	Drinking Wate							
				Drinking Wate							

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
Kevin Tenk	2/21/2023	CTS		2/22/23 0945	ECH
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

4/12/2023

Login Sample Receipt Checklist

Client: City of Tarpon Springs

Job Number: 810-54396-1

Login Number: 54396
List Number: 1
Creator: Wojcik, Mary

List Source: Eurofins Eaton Analytical South Bend

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	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Kevin Tenk
City of Tarpon Springs
1624 L & R Industrial Blvd
Tarpon Springs, Florida 34689

Generated 9/14/2023 8:58:45 AM

JOB DESCRIPTION

UCMR5 - FL6521784 - SE2 - RO Facility POE

JOB NUMBER

810-74941-1

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend IN 46617

See page two for job notes and contact information.

myEOL

Job Notes

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Authorization

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9/14/2023 8:58:45 AM

Authorized for release by
Pamela Brown, Project Manager
Pamela.Brown@et.eurofinsus.com
(574)233-4777

Table of Contents

Definitions/Glossary

Client: City of Tarpon Springs
Job ID: 810-74941-1
Project/Site: UCMR5 - FL6521784 - SE2 - RO Facility POE

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

Case Narrative

Client: City of Tarpon Springs
Job ID: 810-74941-1
Project/Site: UCMR5 - FL6521784 - SE2 - RO Facility POE

Job ID: 810-74941-1

Laboratory: Eurofins Eaton Analytical South Bend

Narrative

Job Narrative
810-74941-1

Receipt
The sample was received on 8/23/2023 9:30 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice.

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

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

Detection Summary

Client: City of Tarpon Springs
Job ID: 810-74941-1
Project/Site: UCMR5 - FL6521784 - SE2 - RO Facility POE

Client Sample ID: 0004/ROFAC/TP/R01/EP
Lab Sample ID: 810-74941-1
PWSID Number: FL6521784

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Eaton Analytical South Bend

Client Sample ID: 0004/ROFAC/TP/R01/EP
Lab Sample ID: 810-74941-1
Date Collected: 08/22/23 10:20
Matrix: Drinking Water
Date Received: 08/23/23 09:30
PWSID Number: FL6521784

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.0050		0.0050		ug/L		09/08/23 06:13	09/10/23 04:37	1
Perfluoropentanoic acid (PFPeA)	<0.0030		0.0030		ug/L		09/08/23 06:13	09/10/23 04:37	1
Perfluorohexanoic acid (PFHxA)	<0.0030		0.0030		ug/L		09/08/23 06:13	09/10/23 04:37	1
Perfluoroheptanoic acid (PFHpA)	<0.0030		0.0030		ug/L		09/08/23 06:13	09/10/23 04:37	1
Perfluorooctanoic acid (PFOA)	<0.0040		0.0040		ug/L		09/08/23 06:13	09/10/23 04:37	1
Perfluorononanoic acid (PFNA)	<0.0040		0.0040		ug/L		09/08/23 06:13	09/10/23 04:37	1
Perfluorodecanoic acid (PFDA)	<0.0030		0.0030		ug/L		09/08/23 06:13	09/10/23 04:37	1
Perfluoroundecanoic acid (PFUnA)	<0.0020		0.0020		ug/L		09/08/23 06:13	09/10/23 04:37	1
Perfluorododecanoic acid (PFDoA)	<0.0030		0.0030		ug/L		09/08/23 06:13	09/10/23 04:37	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0030		0.0030		ug/L		09/08/23 06:13	09/10/23 04:37	1
Perfluorobutanesulfonic acid (PFBS)	<0.0030		0.0030		ug/L		09/08/23 06:13	09/10/23 04:37	1
Perfluorohexanesulfonic acid (PFHxS)	<0.0030		0.0030		ug/L		09/08/23 06:13	09/10/23 04:37	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.0030		0.0030		ug/L		09/08/23 06:13	09/10/23 04:37	1
Perfluorooctanesulfonic acid (PFOS)	<0.0040		0.0040		ug/L		09/08/23 06:13	09/10/23 04:37	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0040		0.0040		ug/L		09/08/23 06:13	09/10/23 04:37	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0050		0.0050		ug/L		09/08/23 06:13	09/10/23 04:37	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.0020		0.0020		ug/L		09/08/23 06:13	09/10/23 04:37	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.0050		0.0050		ug/L		09/08/23 06:13	09/10/23 04:37	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0030		0.0030		ug/L		09/08/23 06:13	09/10/23 04:37	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0050		0.0050		ug/L		09/08/23 06:13	09/10/23 04:37	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0050		0.0050		ug/L		09/08/23 06:13	09/10/23 04:37	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0200		0.0200		ug/L		09/08/23 06:13	09/10/23 04:37	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0040		0.0040		ug/L		09/08/23 06:13	09/10/23 04:37	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0030		0.0030		ug/L		09/08/23 06:13	09/10/23 04:37	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.0030		0.0030		ug/L		09/08/23 06:13	09/10/23 04:37	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*89*		*50 - 200*	*09/08/23 06:13*	*09/10/23 04:37*	*1*
13C4 PFBA	*96*		*50 - 200*	*09/08/23 06:13*	*09/10/23 04:37*	*1*
13C3 PFBS	*95*		*50 - 200*	*09/08/23 06:13*	*09/10/23 04:37*	*1*
13C5 PFPeA	*103*		*50 - 200*	*09/08/23 06:13*	*09/10/23 04:37*	*1*
13C5 PFHxA	*95*		*50 - 200*	*09/08/23 06:13*	*09/10/23 04:37*	*1*
13C4 PFHpA	*96*		*50 - 200*	*09/08/23 06:13*	*09/10/23 04:37*	*1*
13C8 PFOA	*97*		*50 - 200*	*09/08/23 06:13*	*09/10/23 04:37*	*1*
13C9 PFNA	*104*		*50 - 200*	*09/08/23 06:13*	*09/10/23 04:37*	*1*
13C6 PFDA	*98*		*50 - 200*	*09/08/23 06:13*	*09/10/23 04:37*	*1*
13C7 PFUnA	*101*		*50 - 200*	*09/08/23 06:13*	*09/10/23 04:37*	*1*
13C2 PFDoA	*98*		*50 - 200*	*09/08/23 06:13*	*09/10/23 04:37*	*1*
13C8 PFOS	*94*		*50 - 200*	*09/08/23 06:13*	*09/10/23 04:37*	*1*
13C3 PFHxS	*97*		*50 - 200*	*09/08/23 06:13*	*09/10/23 04:37*	*1*

Client Sample ID: 0004/ROFAC/TP/R01/EP
Lab Sample ID: 810-74941-1
Date Collected: 08/22/23 10:20
Matrix: Drinking Water
Date Received: 08/23/23 09:30
PWSID Number: FL6521784

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2-4:2-FTS	*124*		*50 - 200*	*09/08/23 06:13*	*09/10/23 04:37*	*1*
13C2-6:2-FTS	*122*		*50 - 200*	*09/08/23 06:13*	*09/10/23 04:37*	*1*
13C2-8:2-FTS	*132*		*50 - 200*	*09/08/23 06:13*	*09/10/23 04:37*	*1*

Method: EPA 537.1 UCMR5 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.0047		0.0047	ug/L		08/29/23 07:32	08/30/23 06:14	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.0056		0.0056	ug/L		08/29/23 07:32	08/30/23 06:14	1
Perfluorotetradecanoic acid (PFTA)	<0.0075		0.0075	ug/L		08/29/23 07:32	08/30/23 06:14	1
Perfluorotridecanoic acid (PFTrDA)	<0.0066		0.0066	ug/L		08/29/23 07:32	08/30/23 06:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*110*		*70 - 130*	*08/29/23 07:32*	*08/30/23 06:14*	*1*
13C2 PFHxA	*110*		*70 - 130*	*08/29/23 07:32*	*08/30/23 06:14*	*1*
13C2 PFDA	*106*		*70 - 130*	*08/29/23 07:32*	*08/30/23 06:14*	*1*
13C3 HFPO-DA	*102*		*70 - 130*	*08/29/23 07:32*	*08/30/23 06:14*	*1*

Method: EPA 200.7 UCMR5 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<9.00		9.00	ug/L		08/29/23 10:04	08/30/23 18:10	1

Surrogate Summary

Client: City of Tarpon Springs
Project/Site: UCMR5 - FL6521784 - SE2 - RO Facility POE

Job ID: 810-74941-1

Method: 537.1 UCMR5 - Perfluorinated Alkyl Acids (LC/MS)

Matrix: Drinking Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		d5NEFOS	PFHxA	PFDA	HFPODA
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)	(70-130)
810-74941-1	0004/ROFAC/TP/R01/EP	110	110	106	102
LLCS 810-71560/2-A	Lab Control Sample	93	107	102	100
MBL 810-71560/1-A	Method Blank	103	106	102	101

Surrogate Legend

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

Isotope Dilution Summary

Client: City of Tarpon Springs
Job ID: 810-74941-1
Project/Site: UCMR5 - FL6521784 - SE2 - RO Facility POE

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Matrix: Drinking Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		HFPODA	PFBA	C3PFBS	PFPeA	13C5PHA	C4PFHA	C8PFOA	C9PFNA
Lab Sample ID	Client Sample ID	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)
810-74941-1	0004/ROFAC/TP/R01/EP	89	96	95	103	95	96	97	104
LLCS 810-72696/2-A	Lab Control Sample	83	93	92	100	90	92	94	98
MBL 810-72696/1-A	Method Blank	78	87	85	95	87	87	89	96

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		C6PFDA	13C7PUA	PFDoA	C8PFOS	C3PFHS	42FTS	62FTS	82FTS
Lab Sample ID	Client Sample ID	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)
810-74941-1	0004/ROFAC/TP/R01/EP	98	101	98	94	97	124	122	132
LLCS 810-72696/2-A	Lab Control Sample	97	95	96	92	93	120	119	125
MBL 810-72696/1-A	Method Blank	91	92	93	87	88	110	106	119

Surrogate Legend

HFPODA = 13C3 HFPO-DA
PFBA = 13C4 PFBA
C3PFBS = 13C3 PFBS
PFPeA = 13C5 PFPeA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFDoA = 13C2 PFDoA
C8PFOS = 13C8 PFOS
C3PFHS = 13C3 PFHxS
42FTS = 13C2-4:2-FTS
62FTS = 13C2-6:2-FTS
82FTS = 13C2-8:2-FTS

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Lab Sample ID: MBL 810-72696/1-A
Matrix: Drinking Water
Analysis Batch: 72828

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 72696

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.0005		0.0050		ug/L		09/08/23 06:13	09/10/23 00:32	1
Perfluoropentanoic acid (PFPeA)	<0.0004		0.0030		ug/L		09/08/23 06:13	09/10/23 00:32	1
Perfluorohexanoic acid (PFHxA)	<0.0004		0.0030		ug/L		09/08/23 06:13	09/10/23 00:32	1
Perfluoroheptanoic acid (PFHpA)	<0.0004		0.0030		ug/L		09/08/23 06:13	09/10/23 00:32	1
Perfluorooctanoic acid (PFOA)	<0.0004		0.0040		ug/L		09/08/23 06:13	09/10/23 00:32	1
Perfluorononanoic acid (PFNA)	<0.0004		0.0040		ug/L		09/08/23 06:13	09/10/23 00:32	1
Perfluorodecanoic acid (PFDA)	<0.0004		0.0030		ug/L		09/08/23 06:13	09/10/23 00:32	1
Perfluoroundecanoic acid (PFUnA)	<0.0004		0.0020		ug/L		09/08/23 06:13	09/10/23 00:32	1
Perfluorododecanoic acid (PFDoA)	<0.0004		0.0030		ug/L		09/08/23 06:13	09/10/23 00:32	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0004		0.0030		ug/L		09/08/23 06:13	09/10/23 00:32	1
Perfluorobutanesulfonic acid (PFBS)	<0.0004		0.0030		ug/L		09/08/23 06:13	09/10/23 00:32	1
Perfluorohexanesulfonic acid (PFHxS)	<0.0004		0.0030		ug/L		09/08/23 06:13	09/10/23 00:32	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.0004		0.0030		ug/L		09/08/23 06:13	09/10/23 00:32	1
Perfluorooctanesulfonic acid (PFOS)	<0.0004		0.0040		ug/L		09/08/23 06:13	09/10/23 00:32	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0004		0.0040		ug/L		09/08/23 06:13	09/10/23 00:32	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0005		0.0050		ug/L		09/08/23 06:13	09/10/23 00:32	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.0005		0.0020		ug/L		09/08/23 06:13	09/10/23 00:32	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.0005		0.0050		ug/L		09/08/23 06:13	09/10/23 00:32	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0006		0.0030		ug/L		09/08/23 06:13	09/10/23 00:32	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0007		0.0050		ug/L		09/08/23 06:13	09/10/23 00:32	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0006		0.0050		ug/L		09/08/23 06:13	09/10/23 00:32	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0009		0.0200		ug/L		09/08/23 06:13	09/10/23 00:32	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0003		0.0040		ug/L		09/08/23 06:13	09/10/23 00:32	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0004		0.0030		ug/L		09/08/23 06:13	09/10/23 00:32	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.0005		0.0030		ug/L		09/08/23 06:13	09/10/23 00:32	1

Isotope Dilution	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*78*		*50 - 200*	*09/08/23 06:13*	*09/10/23 00:32*	*1*
13C4 PFBA	*87*		*50 - 200*	*09/08/23 06:13*	*09/10/23 00:32*	*1*
13C3 PFBS	*85*		*50 - 200*	*09/08/23 06:13*	*09/10/23 00:32*	*1*
13C5 PFPeA	*95*		*50 - 200*	*09/08/23 06:13*	*09/10/23 00:32*	*1*
13C5 PFHxA	*87*		*50 - 200*	*09/08/23 06:13*	*09/10/23 00:32*	*1*
13C4 PFHpA	*87*		*50 - 200*	*09/08/23 06:13*	*09/10/23 00:32*	*1*
13C8 PFOA	*89*		*50 - 200*	*09/08/23 06:13*	*09/10/23 00:32*	*1*
13C9 PFNA	*96*		*50 - 200*	*09/08/23 06:13*	*09/10/23 00:32*	*1*
13C6 PFDA	*91*		*50 - 200*	*09/08/23 06:13*	*09/10/23 00:32*	*1*
13C7 PFUnA	*92*		*50 - 200*	*09/08/23 06:13*	*09/10/23 00:32*	*1*
13C2 PFDoA	*93*		*50 - 200*	*09/08/23 06:13*	*09/10/23 00:32*	*1*
13C8 PFOS	*87*		*50 - 200*	*09/08/23 06:13*	*09/10/23 00:32*	*1*

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: MBL 810-72696/1-A
Matrix: Drinking Water
Analysis Batch: 72828

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 72696

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFHxS	88		50 - 200	09/08/23 06:13	09/10/23 00:32	1
13C2-4:2-FTS	110		50 - 200	09/08/23 06:13	09/10/23 00:32	1
13C2-6:2-FTS	106		50 - 200	09/08/23 06:13	09/10/23 00:32	1
13C2-8:2-FTS	119		50 - 200	09/08/23 06:13	09/10/23 00:32	1

Lab Sample ID: LLCS 810-72696/2-A
Matrix: Drinking Water
Analysis Batch: 72828

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 72696

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	0.00200	0.0021		ug/L		104	50 - 150
Perfluoropentanoic acid (PFPeA)	0.00200	0.0021		ug/L		104	50 - 150
Perfluorohexanoic acid (PFHxA)	0.00200	0.0021		ug/L		107	50 - 150
Perfluoroheptanoic acid (PFHpA)	0.00200	0.0022		ug/L		111	50 - 150
Perfluorooctanoic acid (PFOA)	0.00200	0.0021		ug/L		103	50 - 150
Perfluorononanoic acid (PFNA)	0.00200	0.0022		ug/L		110	50 - 150
Perfluorodecanoic acid (PFDA)	0.00200	0.0021		ug/L		107	50 - 150
Perfluoroundecanoic acid (PFUnA)	0.00200	0.0022		ug/L		109	50 - 150
Perfluorododecanoic acid (PFDoA)	0.00200	0.0022		ug/L		110	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.00189	0.0021		ug/L		109	50 - 150
Perfluorobutanesulfonic acid (PFBS)	0.00178	0.0018		ug/L		104	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	0.00183	0.0019		ug/L		104	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	0.00191	0.0020		ug/L		103	50 - 150
Perfluorooctanesulfonic acid (PFOS)	0.00186	0.0019		ug/L		105	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	0.00188	0.0019		ug/L		99	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.00200	0.0021		ug/L		106	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	0.00187	0.0018		ug/L		95	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	0.00189	0.0020		ug/L		106	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.00188	0.0022		ug/L		119	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.00190	0.0028		ug/L		149	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.00192	0.0022		ug/L		113	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.00200	0.0022		ug/L		109	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.00200	0.0022		ug/L		108	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.00200	0.0020		ug/L		102	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.00178	0.0022		ug/L		124	50 - 150

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Isotope Dilution	LLCS %Recovery	LLCS Qualifier	Limits
13C3 HFPO-DA	83		50 - 200
13C4 PFBA	93		50 - 200
13C3 PFBS	92		50 - 200
13C5 PFPeA	100		50 - 200
13C5 PFHxA	90		50 - 200
13C4 PFHpA	92		50 - 200
13C8 PFOA	94		50 - 200
13C9 PFNA	98		50 - 200
13C6 PFDA	97		50 - 200
13C7 PFUnA	95		50 - 200
13C2 PFDoA	96		50 - 200
13C8 PFOS	92		50 - 200
13C3 PFHxS	93		50 - 200
13C2-4:2-FTS	120		50 - 200
13C2-6:2-FTS	119		50 - 200
13C2-8:2-FTS	125		50 - 200

Method: 537.1 UCMR5 - Perfluorinated Alkyl Acids (LC/MS)

Lab Sample ID: MBL 810-71560/1-A
Matrix: Drinking Water
Analysis Batch: 71664

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 71560

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.0005		0.0050		ug/L		08/29/23 07:32	08/30/23 03:14	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.0006		0.0060		ug/L		08/29/23 07:32	08/30/23 03:14	1
Perfluorotetradecanoic acid (PFTA)	<0.0007		0.0080		ug/L		08/29/23 07:32	08/30/23 03:14	1
Perfluorotridecanoic acid (PFTrDA)	<0.0006		0.0070		ug/L		08/29/23 07:32	08/30/23 03:14	1

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	103		70 - 130	08/29/23 07:32	08/30/23 03:14	1
13C2 PFHxA	106		70 - 130	08/29/23 07:32	08/30/23 03:14	1
13C2 PFDA	102		70 - 130	08/29/23 07:32	08/30/23 03:14	1
13C3 HFPO-DA	101		70 - 130	08/29/23 07:32	08/30/23 03:14	1

Lab Sample ID: LLCS 810-71560/2-A
Matrix: Drinking Water
Analysis Batch: 71664

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 71560

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			0.00200	0.0016		ug/L		82	50 - 150		
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			0.00200	0.0015		ug/L		77	50 - 150		
Perfluorotetradecanoic acid (PFTA)			0.00200	0.0011		ug/L		56	50 - 150		
Perfluorotridecanoic acid (PFTrDA)			0.00200	0.0020		ug/L		99	50 - 150		

Surrogate	LLCS %Recovery	LLCS Qualifier	Limits
d5-NEtFOSAA	93		70 - 130

Method: 537.1 UCMR5 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: LLCS 810-71560/2-A
Matrix: Drinking Water
Analysis Batch: 71664

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 71560

Surrogate	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
13C2 PFHxA	*107*		*70 - 130*
13C2 PFDA	*102*		*70 - 130*
13C3 HFPO-DA	*100*		*70 - 130*

Method: 200.7 UCMR5 - Metals (ICP)

Lab Sample ID: MBL 810-71615/1-A
Matrix: Drinking Water
Analysis Batch: 71894

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 71615

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.520		9.00		ug/L		08/29/23 10:04	08/30/23 17:32	1

Lab Sample ID: LLCS 810-71615/2-A
Matrix: Drinking Water
Analysis Batch: 71894

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 71615

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Lithium			9.00	9.35		ug/L		104	50 - 150		

LCMS

Prep Batch: 71560

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-74941-1	0004/ROFAC/TP/R01/EP	Total/NA	Drinking Water	537.1 DW	
MBL 810-71560/1-A	Method Blank	Total/NA	Drinking Water	537.1 DW	
LLCS 810-71560/2-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	

Analysis Batch: 71664

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-74941-1	0004/ROFAC/TP/R01/EP	Total/NA	Drinking Water	537.1 UCMR5	71560
MBL 810-71560/1-A	Method Blank	Total/NA	Drinking Water	537.1 UCMR5	71560
LLCS 810-71560/2-A	Lab Control Sample	Total/NA	Drinking Water	537.1 UCMR5	71560

Prep Batch: 72696

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-74941-1	0004/ROFAC/TP/R01/EP	Total/NA	Drinking Water	533	
MBL 810-72696/1-A	Method Blank	Total/NA	Drinking Water	533	
LLCS 810-72696/2-A	Lab Control Sample	Total/NA	Drinking Water	533	

Analysis Batch: 72828

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-74941-1	0004/ROFAC/TP/R01/EP	Total/NA	Drinking Water	533	72696
MBL 810-72696/1-A	Method Blank	Total/NA	Drinking Water	533	72696
LLCS 810-72696/2-A	Lab Control Sample	Total/NA	Drinking Water	533	72696

Metals

Prep Batch: 71615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-74941-1	0004/ROFAC/TP/R01/EP	Total/NA	Drinking Water	200.7 UCMR5	
MBL 810-71615/1-A	Method Blank	Total/NA	Drinking Water	200.7 UCMR5	
LLCS 810-71615/2-A	Lab Control Sample	Total/NA	Drinking Water	200.7 UCMR5	

Analysis Batch: 71894

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-74941-1	0004/ROFAC/TP/R01/EP	Total/NA	Drinking Water	200.7 UCMR5	71615
MBL 810-71615/1-A	Method Blank	Total/NA	Drinking Water	200.7 UCMR5	71615
LLCS 810-71615/2-A	Lab Control Sample	Total/NA	Drinking Water	200.7 UCMR5	71615

Lab Chronicle

Client: City of Tarpon Springs
Job ID: 810-74941-1
Project/Site: UCMR5 - FL6521784 - SE2 - RO Facility POE

Client Sample ID: 0004/ROFAC/TP/R01/EP
Lab Sample ID: 810-74941-1
Date Collected: 08/22/23 10:20
Matrix: Drinking Water
Date Received: 08/23/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			72696	KL	EA SB	09/08/23 06:13
Total/NA	Analysis	533		1	72828	KB	EA SB	09/10/23 04:37
Total/NA	Prep	537.1 DW			71560	SS	EA SB	08/29/23 07:32
Total/NA	Analysis	537.1 UCMR5		1	71664	PP	EA SB	08/30/23 06:14
Total/NA	Prep	200.7 UCMR5			71615	AC	EA SB	08/29/23 10:04
Total/NA	Analysis	200.7 UCMR5		1	71894	AC	EA SB	08/30/23 18:10

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: City of Tarpon Springs
Job ID: 810-74941-1
Project/Site: UCMR5 - FL6521784 - SE2 - RO Facility POE

Laboratory: Eurofins Eaton Analytical South Bend

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

Authority	Program	Identification Number	Expiration Date
USEPA UCMR 5	US Federal Programs	IN00035	12-31-25

Method Summary

Client: City of Tarpon Springs
Job ID: 810-74941-1
Project/Site: UCMR5 - FL6521784 - SE2 - RO Facility POE

Method	Method Description	Protocol	Laboratory
533	Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water	EPA	EA SB
537.1 UCMR5	Perfluorinated Alkyl Acids (LC/MS)	EPA	EA SB
200.7 UCMR5	Metals (ICP)	EPA	EA SB
200.7 UCMR5	Preparation, Total Recoverable Metals	EPA	EA SB
533	Extraction of Perfluorinated and Polyfluorinated Alkyl Acids	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: City of Tarpon Springs
Job ID: 810-74941-1
Project/Site: UCMR5 - FL6521784 - SE2 - RO Facility POE

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
810-74941-1	0004/ROFAC/TP/R01/EP	Drinking Water	08/22/23 10:20	08/23/23 09:30	FL6521784

South Bend, IN
110 S Hill Street
South Bend, IN 46617
Phone (574) 233-4777; Phone (574) 233-8207

"UCMR 5 Sampling Form for Single Collection Site"

(Separate form is needed for each collection site)

eurofins | Environment Testing America

Company Contact: Kevin Tenk
Company Name: City of Tarpon Springs
Company Address: 1624 L&R Industrial Blvd
Tarpon Springs FL, 34689

Phone: (727) 937-2557
Email: ktenk@ctsfl.us
Purchase Order: NIA

Lab PM(name): Pamela Brown
PM Email: Pamela.Brown@et.eurofins.com
EEA Project: UCMR 5

PWSID: 6521784
FacID:
SPID:
FacName:
SPName:
Sampling Event:

Water System Name: City of Tarpon Springs RO Water Treatment Facility
Collection Location: 0004/ROFac/TP/RO1/EP – RO Plant POE
Scheduled Collection Date: 8122/2023

Sampler Name (Print): Kevin Tenk
Date/Time Sampled: 8122/2023 1020

Client Storage temp, if > 2 days from collection: NIA

AREA BELOW FOR LAB USE ONLY

For UCMR 5 specific criteria see: REC-WI55108 Guidance Document for UCMR 5 Sample Receiving Requirements and QA-SOP-SOP48964 UCMR 5 QAPP

IR Gun#: 25
Ice: Wet / Blue

Method	Type	# Bot	Temp °C (10°C within 2 days of collection, 6°C for > 2 days) Initial / Corrected	pH* value	✓if receipt pH acceptable	✓if pH needs adjustment	Cl (P/A) **	Sample Comments	✓if sample is invalid
200.7	FS	1	[redacted]		✓		[redacted]	810-74941 Chain of Custody	
200.7	FS	2	[redacted]						
533	FS	1	2.4 / 2.6		✓		A		
533	FS	2	2.4 / 2.6		✓		A		
533	FS	3	2.4 / 2.6		✓		A		
533	FRB	1	2.2 / 2.4		✓		A		
537.1	FS	1	2.4 / 2.6		✓	[redacted]	A		
537.1	FS	2	2.4 / 2.6		✓		A		
537.1	FS	3	2.4 / 2.6		✓		A		
537.1	FRB	1	2.4 / 2.6		✓		A		

* pH <2 for 200.7. pH 6-8 for 533 & 537.1. *Note: 200.7 & 533 pH may be adjusted upon receipt.*

** A = Absent if Free Cl <0.1 mg/L; P = Chlorine is present

Received By Kameron Williams ***Date/Time*** 08/23/23 0930

Login Sample Receipt Checklist

Client: City of Tarpon Springs

Job Number: 810-74941-1

Login Number: 74941
List Number: 1
Creator: Williams, Kameron

List Source: Eurofins Eaton Analytical South Bend

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	