

Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 190-26820-1 Client Project/Site: Bronson WWTP

For:

City of Bronson 141 S Matteson Street Bronson, Michigan 49028

Attn: Brandon Mersman

Sue Schafer

Authorized for release by: 9/23/2021 6:46:44 PM

Sue Schafer, Project Manager II (810)229-2763

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

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

Client: City of Bronson Project/Site: Bronson WWTP Laboratory Job ID: 190-26820-1

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Sample Summary

Client: City of Bronson Project/Site: Bronson WWTP

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
190-26820-1	EFFLUENT	Water	09/08/21 13:58	09/10/21 08:00
190-26820-2	STORAGE DIGESTOR	Solid	09/08/21 13:50	09/10/21 08:00

Job ID: 190-26820-1

Case Narrative

Client: City of Bronson

Job ID: 190-26820-1

Project/Site: Bronson WWTP

Job ID: 190-26820-1

Laboratory: Eurofins TestAmerica, Michigan

Narrative

Job Narrative 190-26820-1

Comments

No additional comments.

Receipt

The samples were received on 9/10/2021 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.9° C.

LCMS

Method 537 (modified): The "I" qualifier means the transition mass ratio for 8:2 FTS was outside of the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. However, analyst judgment was used to positively identify the analyte. The percent difference was within control limits; therefore there is no impact on the data due to the mass ration outside established ratio limits (CCVL 320-526594/2).

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

General Chemistry

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

Organic Prep

Method 3535: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-524846.

Method: 3535_PFC Matrix: Aqueous

Method 3535: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-526555.

Method: 3535 PFC/PFC IDA

Matrix: Water

preparation batch 320-526555

Method SHAKE: The following sample was yellow after extraction/final volume:

STORAGE DIGESTOR (190-26820-2)

PFC_IDA Solid

<AnalyticalBatch>

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

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Client: City of Bronson Job ID: 190-26820-1 Project/Site: Bronson WWTP

Client Sample ID: EFFLUENT

Lab Sample ID: 190-26820-1

Date Collected: 09/08/21 13:58 **Matrix: Water** Date Received: 09/10/21 08:00

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
9CI-PF3ONS	<1.6	1.6	ng/L		09/19/21 20:16	09/20/21 16:51	
11CI-PF3OUdS	<1.6	1.6	ng/L		09/19/21 20:16	09/20/21 16:51	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.6	1.6	ng/L		09/19/21 20:16	09/20/21 16:51	
4:2 FTS	<1.6	1.6	ng/L		09/19/21 20:16	09/20/21 16:51	
6:2 FTS	<4.0	4.0	ng/L		09/19/21 20:16	09/20/21 16:51	
8:2 FTS	<1.6	1.6	ng/L		09/19/21 20:16	09/20/21 16:51	
HFPO-DA (GenX)	<3.2	3.2	ng/L		09/19/21 20:16	09/20/21 16:51	
N-ethylperfluorooctanesulfonamidoac etic acid (NEtFOSAA)	<4.0	4.0	ng/L		09/19/21 20:16	09/20/21 16:51	
N-methylperfluorooctanesulfonamidoa cetic acid (NMeFOSAA)	<4.0	4.0	ng/L		09/19/21 20:16	09/20/21 16:51	
Perfluorobutanesulfonic acid (PFBS)	33	1.6	ng/L			09/20/21 16:51	
Perfluorobutanoic acid (PFBA)	7.8	4.0	ng/L		09/19/21 20:16	09/20/21 16:51	
Perfluorodecanesulfonic acid (PFDS)	<1.6	1.6	ng/L		09/19/21 20:16	09/20/21 16:51	
Perfluorodecanoic acid (PFDA)	<1.6	1.6	ng/L		09/19/21 20:16	09/20/21 16:51	
Perfluorododecanoic acid (PFDoA)	<1.6	1.6	ng/L		09/19/21 20:16	09/20/21 16:51	
Perfluoroheptanesulfonic Acid (PFHpS)	<1.6	1.6	ng/L			09/20/21 16:51	
Perfluoroheptanoic acid (PFHpA)	<1.6	1.6	ng/L		09/19/21 20:16	09/20/21 16:51	
Perfluorohexanesulfonic acid (PFHxS)	<1.6	1.6	ng/L		09/19/21 20:16	09/20/21 16:51	
Perfluorohexanoic acid (PFHxA)	14	1.6	ng/L		09/19/21 20:16	09/20/21 16:51	
Perfluorononanesulfonic acid (PFNS)	<1.6	1.6	ng/L		09/19/21 20:16	09/20/21 16:51	
Perfluorononanoic acid (PFNA)	<1.6	1.6	ng/L		09/19/21 20:16	09/20/21 16:51	
Perfluorooctanesulfonamide (FOSA)	<1.6	1.6	ng/L		09/19/21 20:16	09/20/21 16:51	
Perfluorooctanesulfonic acid PFOS)	5.7	1.6	ng/L		09/19/21 20:16	09/20/21 16:51	
Perfluorooctanoic acid (PFOA)	4.2	1.6	ng/L		09/19/21 20:16	09/20/21 16:51	
Perfluoropentanesulfonic acid PFPeS)	<1.6	1.6	ng/L		09/19/21 20:16	09/20/21 16:51	
Perfluoropentanoic acid (PFPeA)	10	1.6	ng/L			09/20/21 16:51	
Perfluorotetradecanoic acid (PFTeA)	<1.6	1.6	ng/L		09/19/21 20:16	09/20/21 16:51	
Perfluorotridecanoic acid (PFTriA)	<1.6	1.6	ng/L		09/19/21 20:16	09/20/21 16:51	
Perfluoroundecanoic acid (PFUnA)	<1.6	1.6	ng/L		09/19/21 20:16	09/20/21 16:51	
sotope Dilution	%Recovery Qualifier	Limits			Prepared	Analyzed	Dil Fa
3C8 FOSA	79	25 - 150			09/19/21 20:16	09/20/21 16:51	
13C3 HFPO-DA	74	25 - 150			09/19/21 20:16	09/20/21 16:51	
13C4 PFBA	77	25 - 150			09/19/21 20:16	09/20/21 16:51	
13C3 PFBS	58	25 - 150			09/19/21 20:16	09/20/21 16:51	
13C2 PFDA	79	25 - 150			09/19/21 20:16	09/20/21 16:51	
13C2 PFDoA	61	25 - 150			09/19/21 20:16	09/20/21 16:51	
3C4 PFHpA	78	25 - 150			09/19/21 20:16	09/20/21 16:51	
13C2 PFHxA	67	25 - 150			09/19/21 20:16	09/20/21 16:51	
3C5 PFNA	93	25 - 150			09/19/21 20:16	09/20/21 16:51	
3C4 PFOA	92	25 - 150			09/19/21 20:16	09/20/21 16:51	
3C4 PFOS	79	25 - 150				09/20/21 16:51	
13C5 PFPeA	87	25 - 150				09/20/21 16:51	
13C2 PFTeDA	70	25 - 150				09/20/21 16:51	
13C2 PFUnA	63	25 ₋ 150				09/20/21 16:51	
d5-NEtFOSAA	62	25 ₋ 150				09/20/21 16:51	

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Client: City of Bronson Job ID: 190-26820-1

Project/Site: Bronson WWTP

Client Sample ID: EFFLUENT Lab Sample ID: 190-26820-1 Date Collected: 09/08/21 13:58

Matrix: Water

Date Received: 09/10/21 08:00

Method: 537 (modified	d) - Fluorinated Alkyl Substa	nces (Continued)			
Isotope Dilution	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
d3-NMeFOSAA	58	25 - 150	09/19/21 20:16	09/20/21 16:51	1
M2-4:2 FTS	74	25 - 150	09/19/21 20:16	09/20/21 16:51	1
M2-6:2 FTS	101	25 - 150	09/19/21 20:16	09/20/21 16:51	1
M2-8:2 FTS	92	25 - 150	09/19/21 20:16	09/20/21 16:51	1
18O2 PFHxS	84	25 - 150	09/19/21 20:16	09/20/21 16:51	1

Client: City of Bronson Job ID: 190-26820-1 Project/Site: Bronson WWTP

Client Sample ID: STORAGE DIGESTOR

Lab Sample ID: 190-26820-2 Date Collected: 09/08/21 13:50 **Matrix: Solid** Date Received: 09/10/21 08:00 **Percent Solids: 3.7**

Method: 537 (modified) - Fluor	inated Alky	l Substan	ces					
Analyte	•	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
9CI-PF3ONS	<5.3		5.3	ug/Kg	<u></u>	09/12/21 18:55	09/14/21 21:27	
11CI-PF3OUdS	<5.3		5.3	ug/Kg	☼	09/12/21 18:55	09/14/21 21:27	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<5.3		5.3	ug/Kg	₩	09/12/21 18:55	09/14/21 21:27	•
4:2 FTS	<5.3		5.3	ug/Kg	₽	09/12/21 18:55	09/14/21 21:27	
6:2 FTS	<5.3		5.3	ug/Kg	₩	09/12/21 18:55	09/14/21 21:27	
8:2 FTS	5.5		5.3	ug/Kg	₩	09/12/21 18:55	09/14/21 21:27	
HFPO-DA (GenX)	<5.3		5.3	ug/Kg	₩	09/12/21 18:55	09/14/21 21:27	
N-ethylperfluorooctanesulfonami doacetic acid (NEtFOSAA)	12		5.3	ug/Kg	₩	09/12/21 18:55	09/14/21 21:27	
N-methylperfluorooctanesulfona midoacetic acid (NMeFOSAA)	20		5.3	ug/Kg	₩	09/12/21 18:55	09/14/21 21:27	,
Perfluorobutanesulfonic acid (PFBS)	9.1		5.3	ug/Kg	₩	09/12/21 18:55	09/14/21 21:27	
Perfluorobutanoic acid (PFBA)	<5.3		5.3	ug/Kg	☼	09/12/21 18:55	09/14/21 21:27	•
Perfluorodecanesulfonic acid (PFDS)	28		5.3	ug/Kg	₩	09/12/21 18:55	09/14/21 21:27	
Perfluorodecanoic acid (PFDA)	6.0		5.3	ug/Kg	₩	09/12/21 18:55	09/14/21 21:27	•
Perfluorododecanoic acid (PFDoA)	<5.3		5.3	ug/Kg	☼	09/12/21 18:55	09/14/21 21:27	•
Perfluoroheptanesulfonic Acid (PFHpS)	<5.3		5.3	ug/Kg	₩	09/12/21 18:55	09/14/21 21:27	•
Perfluoroheptanoic acid (PFHpA)	<5.3		5.3	ug/Kg	₩	09/12/21 18:55	09/14/21 21:27	
Perfluorohexanesulfonic acid (PFHxS)	<5.3		5.3	ug/Kg	☼	09/12/21 18:55	09/14/21 21:27	
Perfluorohexanoic acid (PFHxA)	<5.3		5.3	ug/Kg	₩	09/12/21 18:55	09/14/21 21:27	
Perfluorononanesulfonic acid (PFNS)	<5.3		5.3	ug/Kg	₩	09/12/21 18:55	09/14/21 21:27	
Perfluorononanoic acid (PFNA)	<5.3		5.3	ug/Kg	₩	09/12/21 18:55	09/14/21 21:27	
Perfluorooctanesulfonamide (FOSA)	<5.3		5.3	ug/Kg	☼	09/12/21 18:55	09/14/21 21:27	
Perfluorooctanesulfonic acid (PFOS)	120		5.3	ug/Kg	☼	09/12/21 18:55	09/14/21 21:27	
Perfluorooctanoic acid (PFOA)	<5.3		5.3	ug/Kg	≎	09/12/21 18:55	09/14/21 21:27	
Perfluoropentanesulfonic acid (PFPeS)	<5.3		5.3	ug/Kg	₩	09/12/21 18:55	09/14/21 21:27	•
Perfluoropentanoic acid (PFPeA)	<5.3		5.3	ug/Kg	₩	09/12/21 18:55	09/14/21 21:27	
Perfluorotetradecanoic acid (PFTeA)	<5.3		5.3	ug/Kg	☼	09/12/21 18:55	09/14/21 21:27	
Perfluorotridecanoic acid (PFTriA)	<5.3		5.3	ug/Kg	☼	09/12/21 18:55	09/14/21 21:27	
Perfluoroundecanoic acid (PFUnA)	<5.3		5.3	ug/Kg	₽	09/12/21 18:55	09/14/21 21:27	
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
13C8 FOSA	66		25 - 150			09/12/21 18:55	09/14/21 21:27	
13C3 HFPO-DA	66		25 - 150			09/12/21 18:55	09/14/21 21:27	
13C4 PFBA	33		25 - 150			09/12/21 18:55	09/14/21 21:27	
13C3 PFBS	53		25 - 150			09/12/21 18:55	09/14/21 21:27	
13C2 PFDA	62		25 - 150				09/14/21 21:27	
13C2 PFDoA	51		25 - 150				09/14/21 21:27	
13C4 PFHpA	66		25 - 150				09/14/21 21:27	
13C2 PFHxA	66		25 - 150				09/14/21 21:27	
13C5 PFNA	64		25 - 150				09/14/21 21:27	
13C4 PFOA	62		25 - 150				09/14/21 21:27	
13C4 PFOS	58		25 - 150				09/14/21 21:27	
13C5 PFPeA	64		25 - 150				09/14/21 21:27	•
13C2 PFTeDA	50		25 - 150				09/14/21 21:27	
	50		20 - 700			33, 12, 21, 10.00	J. J. I. Z. I. Z. I. Z. I	

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Client: City of Bronson Job ID: 190-26820-1

Project/Site: Bronson WWTP

Client Sample ID: STORAGE DIGESTOR

Lab Sample ID: 190-26820-2 Date Collected: 09/08/21 13:50 Date Received: 09/10/21 08:00 Percent S

itrix: Solia	
Solids: 3.7	

Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	51		25 - 150			09/12/21 18:55	09/14/21 21:27	1
d3-NMeFOSAA	49		25 - 150			09/12/21 18:55	09/14/21 21:27	1
M2-4:2 FTS	72		25 - 150			09/12/21 18:55	09/14/21 21:27	1
M2-6:2 FTS	85		25 - 150			09/12/21 18:55	09/14/21 21:27	1
M2-8:2 FTS	102		25 - 150			09/12/21 18:55	09/14/21 21:27	1
1802 PFHxS	61		25 - 150			09/12/21 18:55	09/14/21 21:27	1
General Chemistry								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	96.3		0.1	%			09/15/21 16:42	1
Percent Solids	3.7		0.1	%			09/15/21 16:42	1

Client: City of Bronson

Job ID: 190-26820-1

Project/Site: Bronson WWTP

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Solid Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)								
		PFOSA	HFPODA	PFBA	C3PFBS	PFDA	PFDoA	C4PFHA	PFHxA	
Lab Sample ID	Client Sample ID	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	
190-26820-2	STORAGE DIGESTOR	66	66	33	53	62	51	66	66	
LCS 320-524479/2-A	Lab Control Sample	69	68	59	55	64	62	70	62	
MB 320-524479/1-A	Method Blank	65	66	60	50	64	56	68	64	
			Perce	ent Isotope	Dilution Re	covery (Ac	ceptance L	.imits)		
		PFNA	PFOA	PFOS	PFPeA	PFTDA	PFUnA	d5NEFOS	d3NMFOS	
Lab Sample ID	Client Sample ID	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	
190-26820-2	STORAGE DIGESTOR	64	62	58	64	50	62	51	49	
LCS 320-524479/2-A	Lab Control Sample	69	65	59	65	59	62	62	63	
MB 320-524479/1-A	Method Blank	65	63	59	61	58	57	61	61	
			Perce	ent Isotope	Dilution Re	covery (Ac	ceptance L	.imits)		
		M242FTS	M262FTS	M282FTS	PFHxS					
Lab Sample ID	Client Sample ID	(25-150)	(25-150)	(25-150)	(25-150)					
190-26820-2	STORAGE DIGESTOR	72	85	102	61					
LCS 320-524479/2-A	Lab Control Sample	72	78	78	65					
MB 320-524479/1-A	Method Blank	72	75	78	61					

Surrogate Legend

PFOSA = 13C8 FOSA

HFPODA = 13C3 HFPO-DA

PFBA = 13C4 PFBA

C3PFBS = 13C3 PFBS

PFDA = 13C2 PFDA

PFDoA = 13C2 PFDoA

C4PFHA = 13C4 PFHpA

PFHxA = 13C2 PFHxA

PFNA = 13C5 PFNA

PFOA = 13C4 PFOA

PFOS = 13C4 PFOS

PFPeA = 13C5 PFPeA PFTDA = 13C2 PFTeDA

PFUnA = 13C2 PFUnA

d5NEFOS = d5-NEtFOSAA

d3NMFOS = d3-NMeFOSAA

M242FTS = M2-4:2 FTS

M262FTS = M2-6:2 FTS

M282FTS = M2-8:2 FTS

PFHxS = 18O2 PFHxS

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)								
		PFOSA	HFPODA	PFBA	C3PFBS	PFDA	PFDoA	C4PFHA	PFHxA	
Lab Sample ID	Client Sample ID	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	
190-26820-1	EFFLUENT	79	74	77	58	79	61	78	67	
LCS 320-526555/2-A	Lab Control Sample	72	79	94	59	87	85	81	73	
LCSD 320-526555/3-A	Lab Control Sample Dup	75	85	98	61	87	83	81	82	
MB 320-526555/1-A	Method Blank	75	76	89	57	82	84	87	73	

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Isotope Dilution Summary

Client: City of Bronson

Job ID: 190-26820-1

Project/Site: Bronson WWTP

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

Matrix: Water Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)									
		PFNA	PFOA	PFOS	PFPeA	PFTDA	PFUnA	d5NEFOS	d3NMFOS		
Lab Sample ID	Client Sample ID	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)		
190-26820-1	EFFLUENT	93	92	79	87	70	63	62	58		
LCS 320-526555/2-A	Lab Control Sample	90	87	77	89	90	79	79	80		
LCSD 320-526555/3-A	Lab Control Sample Dup	90	88	80	91	85	82	81	81		
MB 320-526555/1-A	Method Blank	88	84	73	84	87	75	85	83		
		Percent Isotope Dilution Recovery (Acceptance Limits)									
		M242FTS	M262FTS	M282FTS	PFHxS						
Lab Sample ID	Client Sample ID	(25-150)	(25-150)	(25-150)	(25-150)						
190-26820-1	EFFLUENT	74	101	92	84						
LCS 320-526555/2-A	Lab Control Sample	70	103	90	82						
LCSD 320-526555/3-A	Lab Control Sample Dup	78	98	96	86						
MB 320-526555/1-A	Method Blank	70	100	99	82						

Surrogate Legend

PFOSA = 13C8 FOSA

HFPODA = 13C3 HFPO-DA

PFBA = 13C4 PFBA

C3PFBS = 13C3 PFBS

PFDA = 13C2 PFDA

PFDoA = 13C2 PFDoA

C4PFHA = 13C4 PFHpA

PFHxA = 13C2 PFHxA

PFNA = 13C5 PFNA

PFOA = 13C4 PFOA

PFOS = 13C4 PFOS

PFPeA = 13C5 PFPeA

PFTDA = 13C2 PFTeDA

PFUnA = 13C2 PFUnA

d5NEFOS = d5-NEtFOSAA

d3NMFOS = d3-NMeFOSAA

M242FTS = M2-4:2 FTS

M262FTS = M2-6:2 FTS

M282FTS = M2-8:2 FTSPFHxS = 18O2 PFHxS

Eurofins TestAmerica, Michigan

QC Sample Results

Client: City of Bronson

Job ID: 190-26820-1

Project/Site: Bronson WWTP

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample	ID: MB	320-524479/1-A
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Matrix: Solid

Analysis Batch: 525000

Client Sample ID: Method Blank

Prep Type: Total/NA Prep Batch: 524479

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
9CI-PF3ONS	<0.20		0.20	ug/Kg		09/12/21 18:55	09/14/21 19:47	1
11CI-PF3OUdS	<0.20		0.20	ug/Kg		09/12/21 18:55	09/14/21 19:47	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.20		0.20	ug/Kg		09/12/21 18:55	09/14/21 19:47	1
4:2 FTS	<0.20		0.20	ug/Kg		09/12/21 18:55	09/14/21 19:47	1
6:2 FTS	<0.20		0.20	ug/Kg		09/12/21 18:55	09/14/21 19:47	1
8:2 FTS	<0.20		0.20	ug/Kg		09/12/21 18:55	09/14/21 19:47	1
HFPO-DA (GenX)	<0.20		0.20	ug/Kg		09/12/21 18:55	09/14/21 19:47	1
N-ethylperfluorooctanesulfonamidoac etic acid (NEtFOSAA)	<0.20		0.20	ug/Kg		09/12/21 18:55	09/14/21 19:47	1
N-methylperfluorooctanesulfonamidoa cetic acid (NMeFOSAA)	<0.20		0.20	ug/Kg		09/12/21 18:55	09/14/21 19:47	1
Perfluorobutanesulfonic acid (PFBS)	<0.20		0.20	ug/Kg		09/12/21 18:55	09/14/21 19:47	1
Perfluorobutanoic acid (PFBA)	<0.20		0.20	ug/Kg		09/12/21 18:55	09/14/21 19:47	1
Perfluorodecanesulfonic acid (PFDS)	<0.20		0.20	ug/Kg		09/12/21 18:55	09/14/21 19:47	1
Perfluorodecanoic acid (PFDA)	<0.20		0.20	ug/Kg		09/12/21 18:55	09/14/21 19:47	1
Perfluorododecanoic acid (PFDoA)	<0.20		0.20	ug/Kg		09/12/21 18:55	09/14/21 19:47	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.20		0.20	ug/Kg		09/12/21 18:55	09/14/21 19:47	1
Perfluoroheptanoic acid (PFHpA)	<0.20		0.20	ug/Kg		09/12/21 18:55	09/14/21 19:47	1
Perfluorohexanesulfonic acid (PFHxS)	<0.20		0.20	ug/Kg		09/12/21 18:55	09/14/21 19:47	1
Perfluorohexanoic acid (PFHxA)	<0.20		0.20	ug/Kg		09/12/21 18:55	09/14/21 19:47	1
Perfluorononanesulfonic acid (PFNS)	<0.20		0.20	ug/Kg		09/12/21 18:55	09/14/21 19:47	1
Perfluorononanoic acid (PFNA)	<0.20		0.20	ug/Kg		09/12/21 18:55	09/14/21 19:47	1
Perfluorooctanesulfonamide (FOSA)	<0.20		0.20	ug/Kg		09/12/21 18:55	09/14/21 19:47	1
Perfluorooctanesulfonic acid (PFOS)	<0.20		0.20	ug/Kg		09/12/21 18:55	09/14/21 19:47	1
Perfluorooctanoic acid (PFOA)	<0.20		0.20	ug/Kg		09/12/21 18:55	09/14/21 19:47	1
Perfluoropentanesulfonic acid (PFPeS)	<0.20		0.20	ug/Kg		09/12/21 18:55	09/14/21 19:47	1
Perfluoropentanoic acid (PFPeA)	<0.20		0.20	ug/Kg		09/12/21 18:55	09/14/21 19:47	1
Perfluorotetradecanoic acid (PFTeA)	<0.20		0.20	ug/Kg		09/12/21 18:55	09/14/21 19:47	1
Perfluorotridecanoic acid (PFTriA)	<0.20		0.20	ug/Kg		09/12/21 18:55	09/14/21 19:47	1
Perfluoroundecanoic acid (PFUnA)	<0.20		0.20	ug/Kg		09/12/21 18:55	09/14/21 19:47	1
	MB	MB						
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Isotope Dilution %Rec	overy Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	65	25 - 150	09/12/21 18:55	09/14/21 19:47	1
13C3 HFPO-DA	66	25 - 150	09/12/21 18:55	09/14/21 19:47	1
13C4 PFBA	60	25 - 150	09/12/21 18:55	09/14/21 19:47	1
13C3 PFBS	50	25 - 150	09/12/21 18:55	09/14/21 19:47	1
13C2 PFDA	64	25 - 150	09/12/21 18:55	09/14/21 19:47	1
13C2 PFDoA	56	25 - 150	09/12/21 18:55	09/14/21 19:47	1
13C4 PFHpA	68	25 - 150	09/12/21 18:55	09/14/21 19:47	1
13C2 PFHxA	64	25 - 150	09/12/21 18:55	09/14/21 19:47	1
13C5 PFNA	65	25 - 150	09/12/21 18:55	09/14/21 19:47	1
13C4 PFOA	63	25 - 150	09/12/21 18:55	09/14/21 19:47	1
13C4 PFOS	59	25 - 150	09/12/21 18:55	09/14/21 19:47	1
13C5 PFPeA	61	25 - 150	09/12/21 18:55	09/14/21 19:47	1
13C2 PFTeDA	58	25 - 150	09/12/21 18:55	09/14/21 19:47	1
13C2 PFUnA	57	25 - 150	09/12/21 18:55	09/14/21 19:47	1
d5-NEtFOSAA	61	25 - 150	09/12/21 18:55	09/14/21 19:47	1

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QC Sample Results

Limits

25 - 150

25 - 150

25 - 150

25 - 150

25 - 150

Client: City of Bronson

Job ID: 190-26820-1

Project/Site: Bronson WWTP

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

MB MB

61

72

75

78

61

Qualifier

%Recovery

Lab Sample ID: MB 320-524479/1-A

Matrix: Solid

Isotope Dilution

d3-NMeFOSAA

M2-4:2 FTS

M2-6:2 FTS

M2-8:2 FTS

1802 PFHxS

Analysis Batch: 525000

Client Sample ID: Method Blank

Prep Type: Total/NA Prep Batch: 524479

 Prepared
 Analyzed
 Dil Fac

 09/12/21 18:55
 09/14/21 19:47
 1

 09/12/21 18:55
 09/14/21 19:47
 1

 09/12/21 18:55
 09/14/21 19:47
 1

09/12/21 18:55 09/14/21 19:47 1

Lab Sample ID: LCS 320-524479/2-A

Matrix: Solid

Analysis Batch: 525000

Client Sample ID: Lab Control Sample

09/12/21 18:55 09/14/21 19:47

Prep Type: Total/NA

Prep Batch: 524479

Analysis Batch: 525000	Spike	LCS	1.00	%Rec.	
Analyte	Added		Qualifier Unit	D %Rec	Limits
9CI-PF3ONS	1.86	1.96	ug/Kg	<u>D %Rec</u> 105	74 - 134
11CI-PF3OUdS	1.88	1.90	ug/Kg	103	66 - 136
	1.88	2.19	ug/Kg ug/Kg	116	79 - 139
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.00	2.19	ug/Kg	110	79 - 139
4:2 FTS	1.87	1.81	ug/Kg	97	68 - 143
6:2 FTS	1.90	1.84	ug/Kg	97	73 - 139
8:2 FTS	1.92	1.79	ug/Kg	94	75 - 135
HFPO-DA (GenX)	2.00	2.05	ug/Kg	103	53 - 158
N-ethylperfluorooctanesulfonami	2.00	1.96	ug/Kg	98	72 - 132
doacetic acid (NEtFOSAA)	2.00		g/. tg		v_
N-methylperfluorooctanesulfona	2.00	1.95	ug/Kg	98	72 - 132
midoacetic acid (NMeFOSAA)					
Perfluorobutanesulfonic acid	1.77	2.02	ug/Kg	114	69 - 129
(PFBS)	2.00	2.13	///	107	76 - 136
Perfluorobutanoic acid (PFBA)			ug/Kg		
Perfluorodecanesulfonic acid (PFDS)	1.93	1.90	ug/Kg	98	71 - 131
Perfluorodecanoic acid (PFDA)	2.00	1.88	ug/Kg	94	72 - 132
Perfluorododecanoic acid	2.00	1.94	ug/Kg	97	71 - 131
(PFDoA)			9.1.9		
Perfluoroheptanesulfonic Acid	1.90	1.99	ug/Kg	105	76 - 136
(PFHpS)					
Perfluoroheptanoic acid (PFHpA)	2.00	1.89	ug/Kg	94	71 - 131
Perfluorohexanesulfonic acid	1.82	1.73	ug/Kg	95	62 - 122
(PFHxS)	0.00	4.00	/1/	00	74 404
Perfluorohexanoic acid (PFHxA)	2.00	1.96	ug/Kg	98	71 - 131
Perfluorononanesulfonic acid (PFNS)	1.92	1.97	ug/Kg	103	72 - 132
Perfluorononanoic acid (PFNA)	2.00	2.04	ug/Kg	102	73 - 133
Perfluorooctanesulfonamide	2.00	1.92	ug/Kg	96	77 - 137
(FOSA)	2.00		g/. tg		
Perfluorooctanesulfonic acid	1.86	2.02	ug/Kg	109	68 - 141
(PFOS)					
Perfluorooctanoic acid (PFOA)	2.00	2.19	ug/Kg	110	72 - 132
Perfluoropentanesulfonic acid	1.88	2.28	ug/Kg	122	66 - 126
(PFPeS)	2.00	4 00		91	60 400
Perfluoropentanoic acid (PFPeA)	2.00	1.82	ug/Kg		69 - 129
Perfluorotetradecanoic acid (PFTeA)	2.00	2.28	ug/Kg	114	67 - 127
Perfluorotridecanoic acid	2.00	2.03	ug/Kg	101	71 - 131
(PFTriA)	2.00	2.00	~g,, ,g	.01	
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Client: City of Bronson

Job ID: 190-26820-1

Project/Site: Bronson WWTP

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

Lab Sample ID: LCS 320-524479/2-A

Matrix: Solid

Analysis Batch: 525000

Spike

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524479
%Rec.

 Analyte
 Added Perfluoroundecanoic acid (PFUnA)
 Accepted Perfluoroundecanoic acid (PFUnA)
 LCS LCS (PRec. Qualifier Qualifier Unit ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg
 Unit ug/Kg ug/Kg ug/Kg ug/Kg
 D 97 66 - 126

	LCS	LCS	
Isotope Dilution	%Recovery	Qualifier	Limits
13C8 FOSA	69		25 - 150
13C3 HFPO-DA	68		25 - 150
13C4 PFBA	59		25 - 150
13C3 PFBS	55		25 - 150
13C2 PFDA	64		25 - 150
13C2 PFDoA	62		25 - 150
13C4 PFHpA	70		25 - 150
13C2 PFHxA	62		25 - 150
13C5 PFNA	69		25 - 150
13C4 PFOA	65		25 - 150
13C4 PFOS	59		25 - 150
13C5 PFPeA	65		25 - 150
13C2 PFTeDA	59		25 - 150
13C2 PFUnA	62		25 - 150
d5-NEtFOSAA	62		25 - 150
d3-NMeFOSAA	63		25 - 150
M2-4:2 FTS	72		25 - 150
M2-6:2 FTS	78		25 - 150
M2-8:2 FTS	78		25 - 150
1802 PFHxS	65		25 - 150

Lab Sample ID: MB 320-526555/1-A

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 526689

MB MB

Prep Type: Total/NA

Prep Batch: 526555

	MB	MR						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
9CI-PF3ONS	<2.0		2.0	ng/L		09/19/21 12:13	09/20/21 12:46	1
11CI-PF3OUdS	<2.0		2.0	ng/L		09/19/21 12:13	09/20/21 12:46	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/19/21 12:13	09/20/21 12:46	1
4:2 FTS	<2.0		2.0	ng/L		09/19/21 12:13	09/20/21 12:46	1
6:2 FTS	<5.0		5.0	ng/L		09/19/21 12:13	09/20/21 12:46	1
8:2 FTS	<2.0		2.0	ng/L		09/19/21 12:13	09/20/21 12:46	1
HFPO-DA (GenX)	<4.0		4.0	ng/L		09/19/21 12:13	09/20/21 12:46	1
N-ethylperfluorooctanesulfonamidoac etic acid (NEtFOSAA)	<5.0		5.0	ng/L		09/19/21 12:13	09/20/21 12:46	1
N-methylperfluorooctanesulfonamidoa cetic acid (NMeFOSAA)	<5.0		5.0	ng/L		09/19/21 12:13	09/20/21 12:46	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/19/21 12:13	09/20/21 12:46	1
Perfluorobutanoic acid (PFBA)	<5.0		5.0	ng/L		09/19/21 12:13	09/20/21 12:46	1
Perfluorodecanesulfonic acid (PFDS)	<2.0		2.0	ng/L		09/19/21 12:13	09/20/21 12:46	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/19/21 12:13	09/20/21 12:46	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/19/21 12:13	09/20/21 12:46	1
Perfluoroheptanesulfonic Acid (PFHpS)	<2.0		2.0	ng/L		09/19/21 12:13	09/20/21 12:46	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/19/21 12:13	09/20/21 12:46	1

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Client: City of Bronson Job ID: 190-26820-1

Project/Site: Bronson WWTP

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

Lab Sample ID: MB 320-526555/1-A Client Sample ID: Method Blank Prep Type: Total/NA **Matrix: Water Analysis Batch: 526689 Prep Batch: 526555**

Analysis Daton. 020000							i icp Batcii.	320000
	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/19/21 12:13	09/20/21 12:46	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/19/21 12:13	09/20/21 12:46	1
Perfluorononanesulfonic acid (PFNS)	<2.0		2.0	ng/L		09/19/21 12:13	09/20/21 12:46	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/19/21 12:13	09/20/21 12:46	1
Perfluorooctanesulfonamide (FOSA)	<2.0		2.0	ng/L		09/19/21 12:13	09/20/21 12:46	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/19/21 12:13	09/20/21 12:46	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/19/21 12:13	09/20/21 12:46	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		09/19/21 12:13	09/20/21 12:46	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		09/19/21 12:13	09/20/21 12:46	1
Perfluorotetradecanoic acid (PFTeA)	<2.0		2.0	ng/L		09/19/21 12:13	09/20/21 12:46	1
Perfluorotridecanoic acid (PFTriA)	<2.0		2.0	ng/L		09/19/21 12:13	09/20/21 12:46	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/19/21 12:13	09/20/21 12:46	1
	MB	MB						
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C8 FOSA	75		25 - 150			09/19/21 12:13	09/20/21 12:46	1
13C3 HFPO-DA	76		25 - 150			09/19/21 12:13	09/20/21 12:46	1

	MB	MB				
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	75		25 - 150	09/19/21 12:13	09/20/21 12:46	1
13C3 HFPO-DA	76		25 - 150	09/19/21 12:13	09/20/21 12:46	1
13C4 PFBA	89		25 - 150	09/19/21 12:13	09/20/21 12:46	1
13C3 PFBS	57		25 - 150	09/19/21 12:13	09/20/21 12:46	1
13C2 PFDA	82		25 - 150	09/19/21 12:13	09/20/21 12:46	1
13C2 PFDoA	84		25 - 150	09/19/21 12:13	09/20/21 12:46	1
13C4 PFHpA	87		25 - 150	09/19/21 12:13	09/20/21 12:46	1
13C2 PFHxA	73		25 - 150	09/19/21 12:13	09/20/21 12:46	1
13C5 PFNA	88		25 - 150	09/19/21 12:13	09/20/21 12:46	1
13C4 PFOA	84		25 - 150	09/19/21 12:13	09/20/21 12:46	1
13C4 PFOS	73		25 - 150	09/19/21 12:13	09/20/21 12:46	1
13C5 PFPeA	84		25 - 150	09/19/21 12:13	09/20/21 12:46	1
13C2 PFTeDA	87		25 - 150	09/19/21 12:13	09/20/21 12:46	1
13C2 PFUnA	75		25 - 150	09/19/21 12:13	09/20/21 12:46	1
d5-NEtFOSAA	85		25 - 150	09/19/21 12:13	09/20/21 12:46	1
d3-NMeFOSAA	83		25 - 150	09/19/21 12:13	09/20/21 12:46	1
M2-4:2 FTS	70		25 - 150	09/19/21 12:13	09/20/21 12:46	1
M2-6:2 FTS	100		25 - 150	09/19/21 12:13	09/20/21 12:46	1
M2-8:2 FTS	99		25 - 150	09/19/21 12:13	09/20/21 12:46	1
1802 PFHxS	82		25 - 150	09/19/21 12:13	09/20/21 12:46	1
	~-		_0 = .00	00/10/21 12/10	00/20/21 12/10	

Lab Sample ID: LCS 320-526555/2-A

						Prep Batch: 526555
Spike	LCS	LCS				%Rec.
Added	Result	Qualifier	Unit	D	%Rec	Limits
37.3	38.3		ng/L		103	75 - 135
37.7	42.8		ng/L		114	54 - 114
37.7	42.5		ng/L		113	79 - 139
37.4	36.6		ng/L		98	79 - 139
37.9	39.7		ng/L		105	59 - 175
38.3	42.0		ng/L		110	75 - 135
40.0	41.0		ng/L		102	51 - 173
	Added 37.3 37.7 37.7 37.4 37.9 38.3	Added Result 37.3 38.3 37.7 42.8 37.7 42.5 37.4 36.6 37.9 39.7 38.3 42.0	Added Result Qualifier 37.3 38.3 37.7 42.8 37.7 42.5 37.4 36.6 37.9 39.7 38.3 42.0	Added Result Qualifier Unit 37.3 38.3 ng/L 37.7 42.8 ng/L 37.7 42.5 ng/L 37.4 36.6 ng/L 37.9 39.7 ng/L 38.3 42.0 ng/L	Added Result Qualifier Unit D 37.3 38.3 ng/L 37.7 42.8 ng/L 37.7 42.5 ng/L 37.4 36.6 ng/L 37.9 39.7 ng/L 38.3 42.0 ng/L	Added Result Qualifier Unit D %Rec 37.3 38.3 ng/L 103 37.7 42.8 ng/L 114 37.7 42.5 ng/L 113 37.4 36.6 ng/L 98 37.9 39.7 ng/L 105 38.3 42.0 ng/L 110

Eurofins TestAmerica, Michigan

Client Sample ID: Lab Control Sample

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Spike

Client: City of Bronson

Job ID: 190-26820-1

Project/Site: Bronson WWTP

LCS LCS

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

Lab Sample ID: LCS 320-526555/2	2-A
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Matrix: Water

(PFUnA)

Analysis Batch: 526689

Client Sample ID: Lab Control Sample

Prep Type: Total/NA
Prep Batch: 526555
%Rec.

Analyte	Added	Result Qualifie	r Unit	D %Rec	Limits	
N-ethylperfluorooctanesulfonami doacetic acid (NEtFOSAA)	40.0	41.2	ng/L	103	76 - 136	
N-methylperfluorooctanesulfona midoacetic acid (NMeFOSAA)	40.0	44.8	ng/L	112	76 - 136	
Perfluorobutanesulfonic acid (PFBS)	35.4	40.0	ng/L	113	67 - 127	
Perfluorobutanoic acid (PFBA)	40.0	38.9	ng/L	97	76 - 136	
Perfluorodecanesulfonic acid (PFDS)	38.6	36.8	ng/L	95	71 - 131	
Perfluorodecanoic acid (PFDA)	40.0	39.2	ng/L	98	76 - 136	
Perfluorododecanoic acid (PFDoA)	40.0	40.0	ng/L	100	71 - 131	
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	43.3	ng/L	114	76 - 136	
Perfluoroheptanoic acid (PFHpA)	40.0	39.0	ng/L	98	72 - 132	
Perfluorohexanesulfonic acid (PFHxS)	36.4	33.2	ng/L	91	59 - 119	
Perfluorohexanoic acid (PFHxA)	40.0	36.1	ng/L	90	73 - 133	
Perfluorononanesulfonic acid (PFNS)	38.4	37.8	ng/L	98	75 - 135	
Perfluorononanoic acid (PFNA)	40.0	40.1	ng/L	100	75 - 135	
Perfluorooctanesulfonamide (FOSA)	40.0	42.4	ng/L	106	73 - 133	
Perfluorooctanesulfonic acid (PFOS)	37.1	40.2	ng/L	108	70 - 130	
Perfluorooctanoic acid (PFOA)	40.0	41.7	ng/L	104	70 - 130	
Perfluoropentanesulfonic acid (PFPeS)	37.5	44.5	ng/L	119	66 - 126	
Perfluoropentanoic acid (PFPeA)	40.0	37.3	ng/L	93	71 - 131	
Perfluorotetradecanoic acid (PFTeA)	40.0	40.7	ng/L	102	70 - 130	
Perfluorotridecanoic acid (PFTriA)	40.0	41.6	ng/L	104	71 - 131	
Perfluoroundecanoic acid	40.0	39.6	ng/L	99	68 - 128	

Isotope Dilution	%Recovery Qualifie	r Limits		
13C8 FOSA	72	25 - 150		
13C3 HFPO-DA	79	25 - 150		
13C4 PFBA	94	25 - 150		
13C3 PFBS	59	25 - 150		
13C2 PFDA	87	25 - 150		
13C2 PFDoA	85	25 - 150		
13C4 PFHpA	81	25 - 150		
13C2 PFHxA	73	25 - 150		
13C5 PFNA	90	25 - 150		
13C4 PFOA	87	25 - 150		
13C4 PFOS	77	25 - 150		
13C5 PFPeA	89	25 - 150		
13C2 PFTeDA	90	25 - 150		
13C2 PFUnA	79	25 - 150		
d5-NEtFOSAA	79	25 - 150		
US-NEIFUSAA	79	25 - 150		

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QC Sample Results

Client: City of Bronson Job ID: 190-26820-1 Project/Site: Bronson WWTP

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

Lab Sample ID: LCS 320-526555/2-A

Lab Sample ID: LCSD 320-526555/3-A

Matrix: Water

Analysis Batch: 526689

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 526555

LCS LCS

Isotope Dilution	%Recovery	Qualifier	Limits
d3-NMeFOSAA	80		25 - 150
M2-4:2 FTS	70		25 - 150
M2-6:2 FTS	103		25 - 150
M2-8:2 FTS	90		25 - 150
18O2 PFHxS	82		25 - 150

Client Sample ID: Lab Control Sample Dup

Matrix: Water

Prep Type: Total/NA

Prep Batch: 526555 %Rec. **RPD**

Analysis Batch: 526689 LCSD LCSD Spike Analyte Added Result Qualifier Unit D %Rec Limits **RPD** Limit 9CI-PF3ONS 37.3 37.8 30 ng/L 101 75 - 135 11CI-PF3OUdS 37.7 40.2 ng/L 107 54 - 114 6 30 43.3 ng/L 79 - 139 30 4,8-Dioxa-3H-perfluorononanoic 37.7 115 2 acid (ADONA) 4:2 FTS 37.4 34.8 ng/L 93 79 - 139 5 30 6:2 FTS 37.9 30 43.5 ng/L 115 59 - 175 9 8:2 FTS 38.3 40.1 ng/L 105 75 - 135 5 30 51 - 173 HFPO-DA (GenX) 40.0 33.5 ng/L 84 20 30 N-ethylperfluorooctanesulfonami 40.0 37.9 ng/L 95 76 - 136 9 30 doacetic acid (NEtFOSAA) N-methylperfluorooctanesulfona 40.0 46.6 116 ng/L 76 - 136 30 midoacetic acid (NMeFOSAA) Perfluorobutanesulfonic acid 35.4 39.5 ng/L 112 67 - 127 30 (PFBS) 40.0 39.3 30 Perfluorobutanoic acid (PFBA) ng/L 98 76 - 136 30

Perfluorododecanoic acid 40.0 (PFDoA) Perfluoroheptanesulfonic Acid 38.1 (PFHpS) 40.0

(PFTriA)

Perfluorodecanesulfonic acid 38.6 35.0 ng/L 91 71 - 13140.0 2 Perfluorodecanoic acid (PFDA) 40.1 ng/L 100 76 - 136 30 ng/L 38.9 97 71 - 1313 30 42.6 ng/L 112 76 - 136 30 Perfluoroheptanoic acid (PFHpA) 41.2 ng/L 103 72 - 132 5 30 Perfluorohexanesulfonic acid 36.4 33.0 91 59 - 119 30 ng/L (PFHxS) Perfluorohexanoic acid (PFHxA) 40.0 35.4 ng/L 88 73 - 133 2 30 102 30 Perfluorononanesulfonic acid 38.4 39.1 75 - 135 3 ng/L (PFNS) Perfluorononanoic acid (PFNA) 40.0 42 5 106 6 30 ng/L 75 - 135 Perfluorooctanesulfonamide 40.0 39.8 ng/L 100 73 - 133 30 (FOSA) Perfluorooctanesulfonic acid 37.1 40.6 ng/L 109 70 - 130 30 (PFOS) 40.0 43.6 109 5 30 Perfluorooctanoic acid (PFOA) ng/L 70 - 130Perfluoropentanesulfonic acid 37.5 43.3 ng/L 115 66 - 126 3 30 (PFPeS) 2 Perfluoropentanoic acid (PFPeA) 40.0 37.9 95 30 ng/L 71 - 131ng/L Perfluorotetradecanoic acid 40.0 41.7 104 70 - 130 2 30 (PFTeA) Perfluorotridecanoic acid 40.0 43.9 110 71 - 131 30 ng/L

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QC Sample Results

Client: City of Bronson Job ID: 190-26820-1 Project/Site: Bronson WWTP

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

82

81

81

78

98

96

86

Lab Sample ID: LCSD 320-526555/3-A	
Matrix: Water	

Analysis Batch: 526689

13C2 PFUnA

d5-NEtFOSAA

d3-NMeFOSAA

M2-4:2 FTS

M2-6:2 FTS

M2-8:2 FTS

1802 PFHxS

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 526555

•	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Perfluoroundecanoic acid	40.0	39.9		ng/L		100	68 - 128	1	30
(DELInA)									

(PFUnA)		
	LCSD LCSD)
Isotope Dilution	%Recovery Quali	ifier Limits
13C8 FOSA	75	25 - 150
13C3 HFPO-DA	85	25 - 150
13C4 PFBA	98	25 - 150
13C3 PFBS	61	25 - 150
13C2 PFDA	87	25 - 150
13C2 PFDoA	83	25 - 150
13C4 PFHpA	81	25 - 150
13C2 PFHxA	82	25 - 150
13C5 PFNA	90	25 - 150
13C4 PFOA	88	25 - 150
13C4 PFOS	80	25 - 150
13C5 PFPeA	91	25 - 150
13C2 PFTeDA	85	25 - 150

25 - 150

25 - 150

25 - 150

25 - 150

25 - 150

25 - 150

25 - 150

QC Association Summary

Client: City of Bronson

Job ID: 190-26820-1

Project/Site: Bronson WWTP

LCMS

Prei	o Bat	tch:	5244	79

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-26820-2	STORAGE DIGESTOR	Total/NA	Solid	SHAKE	
MB 320-524479/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 320-524479/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 525000

Lab Sample ID 190-26820-2	Client Sample ID STORAGE DIGESTOR	Prep Type Total/NA	Matrix Solid	Method 537 (modified)	Prep Batch 524479
MB 320-524479/1-A	Method Blank	Total/NA	Solid	537 (modified)	524479
LCS 320-524479/2-A	Lab Control Sample	Total/NA	Solid	537 (modified)	524479

Prep Batch: 526555

Lab Sample ID 190-26820-1	Client Sample ID EFFLUENT	Prep Type Total/NA	Matrix Water	Method 3535	Prep Batch
MB 320-526555/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-526555/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-526555/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 526689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-526555/1-A	Method Blank	Total/NA	Water	537 (modified)	526555
LCS 320-526555/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	526555
LCSD 320-526555/3-A	Lab Control Sample Dup	Total/NA	Water	537 (modified)	526555

Analysis Batch: 526720

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-26820-1	EFFLUENT	Total/NA	Water	537 (modified)	526555

General Chemistry

Analysis Batch: 525414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-26820-2	STORAGE DIGESTOR	Total/NA	Solid	D 2216	

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9/23/2021

Lab Chronicle

Client: City of Bronson Job ID: 190-26820-1

Project/Site: Bronson WWTP

Client Sample ID: EFFLUENT Lab Sample ID: 190-26820-1

Date Collected: 09/08/21 13:58 **Matrix: Water** Date Received: 09/10/21 08:00

Batch Batch Dilution Batch **Prepared** Method or Analyzed **Prep Type** Type Run **Factor** Number Analyst Lab Total/NA 3535 09/19/21 20:16 PV TAL SAC Prep 526555 Total/NA 537 (modified) 526720 09/20/21 16:51 AEC TAL SAC Analysis 1

Client Sample ID: STORAGE DIGESTOR

Lab Sample ID: 190-26820-2 Date Collected: 09/08/21 13:50 Matrix: Solid

Date Received: 09/10/21 08:00

Batch Batch Dilution Batch Prepared **Prep Type** Method **Factor** Number or Analyzed Type Run Analyst Lab TAL SAC Total/NA Analysis D 2216 525414 09/15/21 16:42 TCS

Client Sample ID: STORAGE DIGESTOR

Lab Sample ID: 190-26820-2 Date Collected: 09/08/21 13:50 **Matrix: Solid**

Date Received: 09/10/21 08:00 Percent Solids: 3.7

Batch **Batch** Dilution Batch **Prepared Prep Type** Method Run Factor Number or Analyzed Lab Type Analyst Total/NA SHAKE 524479 TAL SAC Prep 09/12/21 18:55 AM Total/NA Analysis 537 (modified) 1 525000 09/14/21 21:27 RS1 TAL SAC

Laboratory References:

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

Analyst References:

Lab: TAL SAC

Batch Type: Prep

AM = Andrew Martin

PV = Pheng Vue

Batch Type: Analysis

AEC = Erika Contreras

RS1 = Rungtip Sanjumnai

TCS = Tammy Saechao

Eurofins TestAmerica, Michigan

9/23/2021

Definitions/Glossary

Client: City of Bronson

Job ID: 190-26820-1

Project/Site: Bronson WWTP

Glossary

CFU

J	
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

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)

Colony Forming Unit

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

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Accreditation/Certification Summary

Client: City of Bronson Job ID: 190-26820-1 Project/Site: Bronson WWTP

Laboratory: Eurofins TestAmerica, Sacramento

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

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

 $^{^{\}star} \ \text{Accreditation/Certification renewal pending - accreditation/certification considered valid}.$

Detection Summary

Client: City of Bronson Job ID: 190-26820-1

Project/Site: Bronson WWTP

Client Sample ID: EFFLUENT Lab Sample ID: 190-26820-1

Analyte	Result Qualifier	RL	Unit	Dil Fac D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	33	1.6	ng/L		537 (modified)	Total/NA
Perfluorobutanoic acid (PFBA)	7.8	4.0	ng/L	1	537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	14	1.6	ng/L	1	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	5.7	1.6	ng/L	1	537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	4.2	1.6	ng/L	1	537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	10	1.6	ng/L	1	537 (modified)	Total/NA

Client Sample ID: STORAGE DIGESTOR

-							
- Analyte	Result Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
8:2 FTS	5.5	5.3	ug/Kg	1	₩	537 (modified)	Total/NA
N-ethylperfluorooctanesulfonamidoac etic acid (NEtFOSAA)	12	5.3	ug/Kg	1	₩	537 (modified)	Total/NA
N-methylperfluorooctanesulfonamidoa cetic acid (NMeFOSAA)	20	5.3	ug/Kg	1	≎	537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	9.1	5.3	ug/Kg	1	₩	537 (modified)	Total/NA
Perfluorodecanesulfonic acid (PFDS)	28	5.3	ug/Kg	1	₩	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	6.0	5.3	ug/Kg	1	₩	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	120	5.3	ug/Kg	1	₩	537 (modified)	Total/NA

Lab Sample ID: 190-26820-2

Environment Testing America P - Na204S Q - Na2503 R - Na2503 S - H2504 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Special Instructions/Note Z - other (specify) Months Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return To Client Disposal By Lab Archive For Month
Special Instructions/QC Requirements: Company Preservation Codes COC No: 190-27258-1467.1 H - Ascorbic Acid 800 Page: Page 1 of 1 Job#: C - Zn Acetate D - Nitric Acid J - DI Water Total Number of containers O. Method of Shipment MICHIGAN 190 Carrier Tracking No(s): State of Origin: Analysis Requested merature(s) "C and Other Remarks. E-Mail: Sue.Schafer@Eurofinset.com (MOD) PFAS, Standard List (24 Analytes) Chain of Custody Record Lab PM: Schafer, Sue Time: Preservation Code. Company Matrix Water Water Solid Radiological Sample (C=comp, G=grab) Type Compliance Project: (A Yes) A No Porchase Order not required 1,58 Sample Time 240 Unknown TAT Requested (days) Due Date Requested: Sample Date Project #: 19001688 SSOW#: Poison B Skin Irritant Deliverable Requested: I, II, III, IV, Other (specify) Eurofins TestAmerica, Michigan Seals Intact: Custody Seal No.: Phone: 810-229-2763 Fax: 810-229-0000 10448 Citation Drive Suite 200 mpty Kit Relinquished by: pronsonh2o@hotmail.com Project Name: City of Bronson - PFAS Client Information 4ddress: 141 S Matteson Street Sample Identification SICHAGO Brighton, MI 48116 whed by: City of Bronson Chuck Buckley State, Zip: MI, 49028 Bronson

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	No clothing or boots containing Gore-Tex™ All safety boots made from polyurethane	P	Coolers filled with regular ice only. No chemical (blue) ice packs in possession
, D	and PVC No materials containing Tyvek®	Sa.	mple Containers: All sample containers made of HDPE or
Ø	Field crew has not used fabric softener on clothing	ø	polypropylene Caps are unlined and made of HDPE or
P	Field crew has not used cosmetics, moisturizers, hand cream, or other related	We	polypropylene et Weather (as applicable):
Ø	products this morning Field crew has not applied unauthorized sunscreen or insect repellant		Wet weather gear made of polyurethane and PVC only
Fie	Id Equipment:		uipment Decontamination:
P	No Teflon® or LDPE containing materials on-site		"PFC-free" water on-site for decontamination of sample equipment. No other water sources to be used.
Ø	All sample materials made from stainless steel, HDPE, acetate, silicon, or		Alconox and Liquinox to be used as decontamination materials
	polypropylene	Foo	od Considerations:
Ø	No waterproof field books on-site		No food or drink on-site with exception of
P	No plastic clipboards, binders, or spiral hard cover notebooks on-site		bottled water and/or hydration drinks (i.e., Gatorade and Powerade) that is available
Ø	No adhesives (Post-It Notes) on-site		for consumption only in the staging area
erson	able boxes cannot be checked, the Field Lead sha nel to address noncompliance issues prior to con oval of noncompliance items from the site or ren	nmence	ment of that day's work. Corrective action shal
e the	e noncompliance issues (include personnel not in	compli	ance) and action/outcome of noncompliance:
		·····	

PFCs Sampling Checklist

Eurofins TestAmerica Canton Sample Receipt Form/Narrative Canton Facility	Login # : 26 820
Client City of Bronson Site Name	Cooler unpacked by:
Cooler Received on 9/10/21 Opened on 9/10/21	Trent
	Other
Receipt After-hours: Drop-off Date/Time Storage Location	
TestAmerica Cooler # Foam Box Client Cooler Box Other	
Packing material used: Foam Plastic Bag None Other	
COOLANT: Wet Ice Blue Ice Dry Ice Water None	
1. Cooler temperature upon receipt IR GUN# IR-11 (CF +0.1 °C) Observed Cooler Temp. // 8 °C Corrected Cooler TIR GUN #IR-12 (CF +0.2 °C) Observed Cooler Temp °C Corrected Cooler TIR GUN #IR-12 (CF +0.2 °C) Observed Cooler Temp °C Corrected Cooler TIR GUN#IR-12 (CF +0.2 °C) Observed Cooler Temp °C Corrected Cooler TIR GUN#IR-12 (CF +0.2 °C) Observed Cooler Temp °C Corrected Cooler TIR GUN#IR-12 (CF +0.2 °C) Observed Cooler Temp °C Corrected Cooler TIR GUN#IR-12 (CF +0.2 °C) Observed Cooler Temp °C Corrected Cooler TIR GUN#IR-12 (CF +0.2 °C) Observed Cooler Temp °C Corrected Cooler TIR GUN#IR-12 (CF +0.2 °C) Observed Cooler Temp °C Corrected Cooler TIR GUN#IR-12 (CF +0.2 °C) Observed Cooler Temp °C Corrected Cooler TIR GUN#IR-12 (CF +0.2 °C) Observed Cooler Temp °C Corrected Cooler TIR GUN#IR-12 (CF +0.2 °C) Observed Cooler Temp °C Corrected Cooler TIR GUN#IR-12 (CF +0.2 °C) Observed Cooler Temp °C Corrected Cooler TIR GUN#IR-12 (CF +0.2 °C) Observed Cooler Temp °C Corrected Cooler TIR GUN#IR-12 (CF +0.2 °C) Observed Cooler Temp °C Corrected Cooler TIR GUN#IR-12 (CF +0.2 °C) Observed Cooler Temp °C Corrected Cooler TIR GUN#IR-12 (CF +0.2 °C) Observed Cooler Temp °C Corrected Cooler TIR GUN#IR-12 (CF +0.2 °C) Observed Cooler Temp °C Corrected Cooler TIR GUN#IR-12 (CF +0.2 °C) Observed Cooler Temp °C Corrected Cooler TIR GUN#IR-12 (CF +0.2 °C) Observed Cooler Temp °C Corrected Cooler TIR GUN#IR-12 (CF +0.2 °C) Observed Cooler Temp °C Corrected Cooler TIR GUN#IR-12 (CF +0.2 °C) Observed Cooler Temp °C Corrected Cooler TIR GUN#IR-12 (CF +0.2 °C) Observed Cooler Temp °C Corrected Cooler TIR GUN#IR-12 (CF +0.2 °C) Observed Cooler Tir Gu	Cemp.
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes	No NA Tests that are not checked for pH by Receiving:
	VOAs VOAs
4. Did custody papers accompany the sample(s)?	TOC
	No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes	
 7. Did all bottles arrive in good condition (Unbroken)? 8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? 	
9. For each sample, does the COC specify preservatives (N), # of containers (Y), and sai	
10. Were correct bottle(s) used for the test(s) indicated?	
11. Sufficient quantity received to perform indicated analyses?	No.
· · · · · · · · · · · · · · · · · · ·	(No)
If yes, Questions 13-17 have been checked at the originating laboratory.	
	No D pH Strip Lot# HC157842
14. Were VOAs on the COC? Yes	
15. Were air bubbles >6 mm in any VOA vials? Larger than this. Yes 16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # Yes	No No
17. Was a LL Hg or Me Hg trip blank present?Yes	
Contacted PM Date by via Verbal Vo	pice Mail Other
Concerning	
18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES	Samples processed by:
19. SAMPLE CONDITION	
Sample(s) were received after the recommended holding	ng time had expired.
Sample(s) were received sample(s) were received with bubble >6 mm in	in a broken container.
Sample(s) were received with bubble >6 mm in	diameter. (Notify PM)
20. SAMPLE PRESERVATION	
Sample(s) were furti	her preserved in the laboratory.
Sample(s) were furt Time preserved: Preservative(s) added/Lot number(s):	
VOA Sample Preservation - Date/Time VOAs Frozen:	