June 30, 2023

Enthalpy Analytical - El Dorado Hills
Work Order No. 2306101

Mr. Andy Freeman
Hall Environmental Analytical Laboratory
4901 Hawkins NE
Albuquerque, NM 87109

Dear Mr. Freeman,

Enclosed are the results for the sample set received at Enthalpy Analytical - EDH on June 14, 2023 under your Project Name '2306595'.

Enthalpy Analytical - EDH is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mark.rein@enthalpy.com.

Thank you for choosing Enthalpy Analytical - EDH as part of your analytical support team.

Sincerely,

Mark Rein
Project Manager

Enthalpy Analytical - EDH certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Enthalpy Analytical - EDH .

Enthalpy Analytical - EDH Work Order No. 2306101
Case Narrative

Sample Condition on Receipt:

Sixteen aqueous samples were received and stored securely in accordance with Enthalpy Analytical - EDH standard operating procedures and EPA methodology. The samples were received in good condition and within the method temperature requirements. Sample ID discrepancies were noted for the following samples between the container labels and the Chain-of-Custody (CoC). The sample IDs have been reported as listed on the CoC.

Laboratory ID	Sample Name
2306101-01	RG-304-S (Osage)
2306101-03	RG-1115 (Torreon)
2306101-05	RG-20516-S-13 (BW-13)
2306101-06	RG-20516-S-4 (BW-4)
2306101-07	RG-20516-S-3 (BW-3A)
2306101-08	RG-20516-S-8 (BW-8)
2306101-10	RG-20516-S (BW-1)
2306101-11	RG-20516-S-9 (BW-9)
2306101-12	RG-20516-S-6 (BW-6)
2306101-13	RG-304 (St. Mikes)
2306101-15	10MG Tank
2306101-16	RG-68302 (NW Well)

Analytical Notes:

EPA Method 537.1

The samples were extracted and analyzed for a selected list of PFAS using EPA Method 537.1.

Holding Times

The samples were extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

Two Laboratory Fortified Blanks (LFB/LFBD) and a Laboratory Reagent Blank (LRB) were extracted and analyzed with the preparation batch. No analytes were detected in the LRB above the method required limits. The LFB/LFBD recoveries were within the method acceptance criteria.

The surrogate recoveries outside the acceptance criteria are flagged with an "H" qualifier.

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Sample Inventory Report

Sample ID	Client Sample ID	Sampled	Received	Components/Containers
2306101-01	RG-304-S (Osage)	06-Jun-23 11:35	14-Jun-23 09:53	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
2306101-02	RG-1118 (Agua Fria)	06-Jun-23 12:50	14-Jun-23 09:53	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
2306101-03	RG-1115 (Torreon)	06-Jun-23 14:21	14-Jun-23 09:53	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
2306101-04	RG-1116 (Ferguson)	06-Jun-23 15:18	14-Jun-23 09:53	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
2306101-05	RG-20516-S-13 (BW-13)	07-Jun-23 10:05	14-Jun-23 09:53	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
2306101-06	RG-20516-S-4 (BW-4)	07-Jun-23 10:45	14-Jun-23 09:53	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
2306101-07	RG-20516-S-3 (BW-3A)	07-Jun-23 11:05	14-Jun-23 09:53	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
2306101-08	RG-20516-S-8 (BW-8)	07-Jun-23 12:23	14-Jun-23 09:53	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
2306101-09	Field Blank	06-Jun-23 11:35	14-Jun-23 09:53	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
2306101-10	RG-20516-S (BW-1)	07-Jun-23 13:23	14-Jun-23 09:53	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
2306101-11	RG-20516-S-9 (BW-9)	07-Jun-23 15:08	14-Jun-23 09:53	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
2306101-12	RG-20516-S-6 (BW-6)	07-Jun-23 16:05	14-Jun-23 09:53	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
2306101-13	RG-304 (St. Mikes)	08-Jun-23 10:36	14-Jun-23 09:53	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
2306101-14	CRWTP 2MG Tank	08-Jun-23 11:45	14-Jun-23 09:53	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
2306101-15	10MG Tank	08-Jun-23 12:30	14-Jun-23 09:53	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
2306101-16	RG-68302 (NW Well)	08-Jun-23 13:45	14-Jun-23 09:53	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL

ANALYTICAL RESULTS

Sample ID: LRB **EPA Method 537.1**

Client Data
Name: Hall Environmental Analytical Laboratory Matrix: Aqueous
Project: 2306595

Laboratory Data
Lab Sample: B23F135-BLK1 Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	2.00		B23F135	19-Jun-23	0.250 L	21-Jun-23 22:15	1
PFHxA	307-24-4	ND	2.00		B23F135	19-Jun-23	0.250 L	21-Jun-23 22:15	1
PFHpA	375-85-9	ND	2.00		B23F135	19-Jun-23	0.250 L	21-Jun-23 22:15	1
PFHxS	355-46-4	ND	2.00		B23F135	19-Jun-23	0.250 L	21-Jun-23 22:15	1
PFOA	335-67-1	ND	2.00		B23F135	19-Jun-23	0.250 L	21-Jun-23 22:15	1
PFNA	375-95-1	ND	2.00		B23F135	19-Jun-23	0.250 L	21-Jun-23 22:15	1
PFOS	1763-23-1	ND	2.00		B23F135	19-Jun-23	0.250 L	21-Jun-23 22:15	1
PFDA	335-76-2	ND	2.00		B23F135	19-Jun-23	0.250 L	21-Jun-23 22:15	1
MeFOSAA	2355-31-9	ND	2.00		B23F135	19-Jun-23	0.250 L	21-Jun-23 22:15	1
EtFOSAA	2991-50-6	ND	2.00		B23F135	19-Jun-23	0.250 L	21-Jun-23 22:15	1
PFUnA	2058-94-8	ND	2.00		B23F135	19-Jun-23	0.250 L	21-Jun-23 22:15	1
PFDoA	307-55-1	ND	2.00		B23F135	19-Jun-23	0.250 L	21-Jun-23 22:15	1
PFTrDA	72629-94-8	ND	2.00		B23F135	19-Jun-23	0.250 L	21-Jun-23 22:15	1
PFTeDA	376-06-7	ND	2.00		B23F135	19-Jun-23	0.250 L	21-Jun-23 22:15	1
HFPO-DA	13252-13-6	ND	2.00		B23F135	19-Jun-23	0.250 L	21-Jun-23 22:15	1
ADONA	919005-14-4	ND	2.00		B23F135	19-Jun-23	0.250 L	21-Jun-23 22:15	1
9Cl-PF3ONS	756426-58-1	ND	2.00		B23F135	19-Jun-23	0.250 L	21-Jun-23 22:15	1
11Cl-PF3OUdS	763051-92-9	ND	2.00		B23F135	19-Jun-23	0.250 L	21-Jun-23 22:15	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	111	70 - 130		B23F135	19-Jun-23	0.250 L	21-Jun-23 22:15	1
13C2-PFDA	SURR	110	70 - 130		B23F135	19-Jun-23	0.250 L	21-Jun-23 22:15	1
d5-EtFOSAA	SURR	95.3	70 - 130		B23F135	19-Jun-23	0.250 L	21-Jun-23 22:15	1
13C3-HFPO-DA	SURR	109	70 - 130		B23F135	19-Jun-23	0.250 L	21-Jun-23 22:15	1

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: LFBD **EPA Method 537.1**

Name:	Hall Environmental Analytical Laboratory	Lab Sample:	B23F135-BS1/B23F135-BSD1
Project:	2306595	QC Batch:	B23F135
Matrix:	Aqueous	Samp Size:	0.250/0.250 L
		Date Extracted:	19-Jun-23
		Column:	BEH C18

Analyte	CAS Number	LFB (ng/L)	LFB Spike	LFB % Rec	LFB Quals	LFBD (ng/L)	LFBD Spike	LFBD % Rec	RPD	LFBD Quals	%Rec Limits	RPD Limits	LFB Analyzed	LFB Dil	LFBD Analyzed	LFBD Dil
PFBS	375-73-5	80.7	70.8	114		74.0	70.8	104	8.71		70-130	30	21-Jun-23 22:26	1	21-Jun-23 22:37	1
PFHxA	307-24-4	91.4	80.0	114		81.4	80.0	102	11.6		70-130	30	21-Jun-23 22:26	1	21-Jun-23 22:37	1
PFHpA	375-85-9	87.9	80.0	110		80.7	80.0	101	8.50		70-130	30	21-Jun-23 22:26	1	21-Jun-23 22:37	1
PFHxS	355-46-4	77.4	73.0	106		75.5	73.0	104	2.39		70-130	30	21-Jun-23 22:26	1	21-Jun-23 22:37	1
PFOA	335-67-1	86.4	80.0	108		79.8	80.0	99.8	7.88		70-130	30	21-Jun-23 22:26	1	21-Jun-23 22:37	1
PFNA	375-95-1	91.5	80.0	114		82.9	80.0	104	9.85		70-130	30	21-Jun-23 22:26	1	21-Jun-23 22:37	1
PFOS	1763-23-1	79.3	74.1	107		77.1	74.1	104	2.86		70-130	30	21-Jun-23 22:26	1	21-Jun-23 22:37	1
PFDA	335-76-2	93.1	80.0	116		83.1	80.0	104	11.4		70-130	30	21-Jun-23 22:26	1	21-Jun-23 22:37	1
MeFOSAA	2355-31-9	74.5	80.0	93.1		79.1	80.0	98.9	6.06		70-130	30	21-Jun-23 22:26	1	21-Jun-23 22:37	1
EtFOSAA	2991-50-6	73.2	80.0	91.5		77.0	80.0	96.3	5.07		70-130	30	21-Jun-23 22:26	1	21-Jun-23 22:37	1
PFUnA	2058-94-8	91.9	80.0	115		83.4	80.0	104	9.73		70-130	30	21-Jun-23 22:26	1	21-Jun-23 22:37	1
PFDoA	307-55-1	85.5	80.0	107		82.5	80.0	103	3.58		70-130	30	21-Jun-23 22:26	1	21-Jun-23 22:37	1
PFTrDA	72629-94-8	84.9	80.0	106		78.1	80.0	97.6	8.41		70-130	30	21-Jun-23 22:26	1	21-Jun-23 22:37	1
PFTeDA	376-06-7	87.2	80.0	109		77.3	80.0	96.6	12.0		70-130	30	21-Jun-23 22:26	1	21-Jun-23 22:37	1
HFPO-DA	13252-13-6	87.8	80.0	110		80.4	80.0	100	8.76		70-130	30	21-Jun-23 22:26	1	21-Jun-23 22:37	1
ADONA	919005-14-4	85.8	75.6	114		78.7	75.6	104	8.69		70-130	30	21-Jun-23 22:26	1	21-Jun-23 22:37	1
9Cl-PF3ONS	756426-58-1	77.8	74.8	104		76.3	74.8	102	1.85		70-130	30	21-Jun-23 22:26	1	21-Jun-23 22:37	1
11Cl-PF3OUdS	763051-92-9	83.2	75.6	110		76.9	75.6	102	7.90		70-130	30	21-Jun-23 22:26	1	21-Jun-23 22:37	1

Labeled Standards	Type	LFB % Rec	LFB Quals	LFBD % Rec	LFBD Quals	Limits	LFB Analyzed	LFB Dil	LFBD Analyzed	LFBD Dil
13C2-PFHxA	SURR	113		100		70 - 130	21-Jun-23 22:26	1	21-Jun-23 22:37	1
13C2-PFDA	SURR	109		104		70 - 130	21-Jun-23 22:26	1	21-Jun-23 22:37	1
d5-EtFOSAA	SURR	92.5		93.6		70 - 130	21-Jun-23 22:26	1	21-Jun-23 22:37	1
13C3-HFPO-DA	SURR	104		99.1		70 - 130	21-Jun-23 22:26	1	21-Jun-23 22:37	1

Sample ID: RG-304-S (Osage)

EPA Method 537.1

Client Data

Name: Hall Environmental Analytical Laboratory
Project: 2306595
Location: 2306595-001D
Matrix: Aqueous
Date Collected: 06-Jun-23 11:35

Laboratory Data

Lab Sample: 2306101-01
Date Received: 14-Jun-23 09:53
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	1.96		B23F135	19-Jun-23	0.256 L	21-Jun-23 22:48	1
PFHxA	307-24-4	ND	1.96		B23F135	19-Jun-23	0.256 L	21-Jun-23 22:48	1
PFHpA	375-85-9	ND	1.96		B23F135	19-Jun-23	0.256 L	21-Jun-23 22:48	1
PFHxS	355-46-4	ND	1.96		B23F135	19-Jun-23	0.256 L	21-Jun-23 22:48	1
PFOA	335-67-1	ND	1.96		B23F135	19-Jun-23	0.256 L	21-Jun-23 22:48	1
PFNA	375-95-1	ND	1.96		B23F135	19-Jun-23	0.256 L	21-Jun-23 22:48	1
PFOS	1763-23-1	ND	1.96		B23F135	19-Jun-23	0.256 L	21-Jun-23 22:48	1
PFDA	335-76-2	ND	1.96		B23F135	19-Jun-23	0.256 L	21-Jun-23 22:48	1
MeFOSAA	2355-31-9	ND	1.96		B23F135	19-Jun-23	0.256 L	21-Jun-23 22:48	1
EtFOSAA	2991-50-6	ND	1.96		B23F135	19-Jun-23	0.256 L	21-Jun-23 22:48	1
PFUnA	2058-94-8	ND	1.96		B23F135	19-Jun-23	0.256 L	21-Jun-23 22:48	1
PFDoA	307-55-1	ND	1.96		B23F135	19-Jun-23	0.256 L	21-Jun-23 22:48	1
PFTrDA	72629-94-8	ND	1.96		B23F135	19-Jun-23	0.256 L	21-Jun-23 22:48	1
PFTeDA	376-06-7	ND	1.96		B23F135	19-Jun-23	0.256 L	21-Jun-23 22:48	1
HFPO-DA	13252-13-6	ND	1.96		B23F135	19-Jun-23	0.256 L	21-Jun-23 22:48	1
ADONA	919005-14-4	ND	1.96		B23F135	19-Jun-23	0.256 L	21-Jun-23 22:48	1
9Cl-PF3ONS	756426-58-1	ND	1.96		B23F135	19-Jun-23	0.256 L	21-Jun-23 22:48	1
11Cl-PF3OUdS	763051-92-9	ND	1.96		B23F135	19-Jun-23	0.256 L	21-Jun-23 22:48	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	106	70 - 130		B23F135	19-Jun-23	0.256 L	21-Jun-23 22:48	1
13C2-PFDA	SURR	107	70 - 130		B23F135	19-Jun-23	0.256 L	21-Jun-23 22:48	1
d5-EtFOSAA	SURR	97.3	70 - 130		B23F135	19-Jun-23	0.256 L	21-Jun-23 22:48	1
13C3-HFPO-DA	SURR	99.5	70 - 130		B23F135	19-Jun-23	0.256 L	21-Jun-23 22:48	1

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: RG-1118 (Agua Fria)

EPA Method 537.1

Client Data

Name: Hall Environmental Analytical Laboratory
Project: 2306595
Location: 2306595-002D
Matrix: Aqueous
Date Collected: 06-Jun-23 12:50

Laboratory Data

Lab Sample: 2306101-02
Date Received: 14-Jun-23 09:53
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	1.97		B23F135	19-Jun-23	0.254 L	21-Jun-23 22:59	1
PFHxA	307-24-4	ND	1.97		B23F135	19-Jun-23	0.254 L	21-Jun-23 22:59	1
PFHpA	375-85-9	ND	1.97		B23F135	19-Jun-23	0.254 L	21-Jun-23 22:59	1
PFHxS	355-46-4	ND	1.97		B23F135	19-Jun-23	0.254 L	21-Jun-23 22:59	1
PFOA	335-67-1	ND	1.97		B23F135	19-Jun-23	0.254 L	21-Jun-23 22:59	1
PFNA	375-95-1	ND	1.97		B23F135	19-Jun-23	0.254 L	21-Jun-23 22:59	1
PFOS	1763-23-1	ND	1.97		B23F135	19-Jun-23	0.254 L	21-Jun-23 22:59	1
PFDA	335-76-2	ND	1.97		B23F135	19-Jun-23	0.254 L	21-Jun-23 22:59	1
MeFOSAA	2355-31-9	ND	1.97		B23F135	19-Jun-23	0.254 L	21-Jun-23 22:59	1
EtFOSAA	2991-50-6	ND	1.97		B23F135	19-Jun-23	0.254 L	21-Jun-23 22:59	1
PFUnA	2058-94-8	ND	1.97		B23F135	19-Jun-23	0.254 L	21-Jun-23 22:59	1
PFDoA	307-55-1	ND	1.97		B23F135	19-Jun-23	0.254 L	21-Jun-23 22:59	1
PFTrDA	72629-94-8	ND	1.97		B23F135	19-Jun-23	0.254 L	21-Jun-23 22:59	1
PFTeDA	376-06-7	ND	1.97		B23F135	19-Jun-23	0.254 L	21-Jun-23 22:59	1
HFPO-DA	13252-13-6	ND	1.97		B23F135	19-Jun-23	0.254 L	21-Jun-23 22:59	1
ADONA	919005-14-4	ND	1.97		B23F135	19-Jun-23	0.254 L	21-Jun-23 22:59	1
9Cl-PF3ONS	756426-58-1	ND	1.97		B23F135	19-Jun-23	0.254 L	21-Jun-23 22:59	1
11Cl-PF3OUdS	763051-92-9	ND	1.97		B23F135	19-Jun-23	0.254 L	21-Jun-23 22:59	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	102	70 - 130		B23F135	19-Jun-23	0.254 L	21-Jun-23 22:59	1
13C2-PFDA	SURR	102	70 - 130		B23F135	19-Jun-23	0.254 L	21-Jun-23 22:59	1
d5-EtFOSAA	SURR	91.0	70 - 130		B23F135	19-Jun-23	0.254 L	21-Jun-23 22:59	1
13C3-HFPO-DA	SURR	93.7	70 - 130		B23F135	19-Jun-23	0.254 L	21-Jun-23 22:59	1

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: RG-1115 (Torreon) **EPA Method 537.1**

Client Data

Name: Hall Environmental Analytical Laboratory
Project: 2306595
Location: 2306595-003D
Matrix: Aqueous
Date Collected: 06-Jun-23 14:21

Laboratory Data

Lab Sample: 2306101-03
Date Received: 14-Jun-23 09:53
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:10	1
PFHxA	307-24-4	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:10	1
PFHpA	375-85-9	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:10	1
PFHxS	355-46-4	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:10	1
PFOA	335-67-1	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:10	1
PFNA	375-95-1	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:10	1
PFOS	1763-23-1	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:10	1
PFDA	335-76-2	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:10	1
MeFOSAA	2355-31-9	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:10	1
EtFOSAA	2991-50-6	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:10	1
PFUnA	2058-94-8	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:10	1
PFDoA	307-55-1	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:10	1
PFTrDA	72629-94-8	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:10	1
PFTeDA	376-06-7	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:10	1
HFPO-DA	13252-13-6	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:10	1
ADONA	919005-14-4	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:10	1
9Cl-PF3ONS	756426-58-1	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:10	1
11Cl-PF3OUdS	763051-92-9	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:10	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	109	70 - 130		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:10	1
13C2-PFDA	SURR	111	70 - 130		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:10	1
d5-EtFOSAA	SURR	98.2	70 - 130		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:10	1
13C3-HFPO-DA	SURR	105	70 - 130		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:10	1

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: RG-1116 (Ferguson) **EPA Method 537.1**

Client Data

Name: Hall Environmental Analytical Laboratory
Project: 2306595
Location: 2306595-004D
Matrix: Aqueous
Date Collected: 06-Jun-23 15:18

Laboratory Data

Lab Sample: 2306101-04
Date Received: 14-Jun-23 09:53
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:21	1
PFHxA	307-24-4	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:21	1
PFHpA	375-85-9	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:21	1
PFHxS	355-46-4	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:21	1
PFOA	335-67-1	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:21	1
PFNA	375-95-1	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:21	1
PFOS	1763-23-1	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:21	1
PFDA	335-76-2	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:21	1
MeFOSAA	2355-31-9	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:21	1
EtFOSAA	2991-50-6	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:21	1
PFUnA	2058-94-8	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:21	1
PFDoA	307-55-1	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:21	1
PFTrDA	72629-94-8	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:21	1
PFTeDA	376-06-7	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:21	1
HFPO-DA	13252-13-6	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:21	1
ADONA	919005-14-4	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:21	1
9Cl-PF3ONS	756426-58-1	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:21	1
11Cl-PF3OUdS	763051-92-9	ND	1.92		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:21	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	90.3	70 - 130		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:21	1
13C2-PFDA	SURR	101	70 - 130		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:21	1
d5-EtFOSAA	SURR	92.5	70 - 130		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:21	1
13C3-HFPO-DA	SURR	88.0	70 - 130		B23F135	19-Jun-23	0.260 L	21-Jun-23 23:21	1

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: RG-20516-S-13 (BW-13)

EPA Method 537.1

Client Data

Name: Hall Environmental Analytical Laboratory
Project: 2306595
Location: 2306595-005A
Matrix: Aqueous
Date Collected: 07-Jun-23 10:05

Laboratory Data

Lab Sample: 2306101-05
Date Received: 14-Jun-23 09:53
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	1.94		B23F135	19-Jun-23	0.258 L	21-Jun-23 23:32	1
PFHxA	307-24-4	ND	1.94		B23F135	19-Jun-23	0.258 L	21-Jun-23 23:32	1
PFHpA	375-85-9	ND	1.94		B23F135	19-Jun-23	0.258 L	21-Jun-23 23:32	1
PFHxS	355-46-4	ND	1.94		B23F135	19-Jun-23	0.258 L	21-Jun-23 23:32	1
PFOA	335-67-1	ND	1.94		B23F135	19-Jun-23	0.258 L	21-Jun-23 23:32	1
PFNA	375-95-1	ND	1.94		B23F135	19-Jun-23	0.258 L	21-Jun-23 23:32	1
PFOS	1763-23-1	ND	1.94		B23F135	19-Jun-23	0.258 L	21-Jun-23 23:32	1
PFDA	335-76-2	ND	1.94		B23F135	19-Jun-23	0.258 L	21-Jun-23 23:32	1
MeFOSAA	2355-31-9	ND	1.94		B23F135	19-Jun-23	0.258 L	21-Jun-23 23:32	1
EtFOSAA	2991-50-6	ND	1.94		B23F135	19-Jun-23	0.258 L	21-Jun-23 23:32	1
PFUnA	2058-94-8	ND	1.94		B23F135	19-Jun-23	0.258 L	21-Jun-23 23:32	1
PFDoA	307-55-1	ND	1.94		B23F135	19-Jun-23	0.258 L	21-Jun-23 23:32	1
PFTrDA	72629-94-8	ND	1.94		B23F135	19-Jun-23	0.258 L	21-Jun-23 23:32	1
PFTeDA	376-06-7	ND	1.94		B23F135	19-Jun-23	0.258 L	21-Jun-23 23:32	1
HFPO-DA	13252-13-6	ND	1.94		B23F135	19-Jun-23	0.258 L	21-Jun-23 23:32	1
ADONA	919005-14-4	ND	1.94		B23F135	19-Jun-23	0.258 L	21-Jun-23 23:32	1
9Cl-PF3ONS	756426-58-1	ND	1.94		B23F135	19-Jun-23	0.258 L	21-Jun-23 23:32	1
11Cl-PF3OUdS	763051-92-9	ND	1.94		B23F135	19-Jun-23	0.258 L	21-Jun-23 23:32	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	109	70 - 130		B23F135	19-Jun-23	0.258 L	21-Jun-23 23:32	1
13C2-PFDA	SURR	106	70 - 130		B23F135	19-Jun-23	0.258 L	21-Jun-23 23:32	1
d5-EtFOSAA	SURR	96.7	70 - 130		B23F135	19-Jun-23	0.258 L	21-Jun-23 23:32	1
13C3-HFPO-DA	SURR	103	70 - 130		B23F135	19-Jun-23	0.258 L	21-Jun-23 23:32	1

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: RG-20516-S-4 (BW-4)

EPA Method 537.1

Client Data

Name: Hall Environmental Analytical Laboratory
Project: 2306595
Location: 2306595-006A
Matrix: Aqueous
Date Collected: 07-Jun-23 10:45

Laboratory Data

Lab Sample: 2306101-06
Date Received: 14-Jun-23 09:53
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	1.85		B23F135	19-Jun-23	0.270 L	21-Jun-23 23:43	1
PFHxA	307-24-4	ND	1.85		B23F135	19-Jun-23	0.270 L	21-Jun-23 23:43	1
PFHpA	375-85-9	ND	1.85		B23F135	19-Jun-23	0.270 L	21-Jun-23 23:43	1
PFHxS	355-46-4	ND	1.85		B23F135	19-Jun-23	0.270 L	21-Jun-23 23:43	1
PFOA	335-67-1	ND	1.85		B23F135	19-Jun-23	0.270 L	21-Jun-23 23:43	1
PFNA	375-95-1	ND	1.85		B23F135	19-Jun-23	0.270 L	21-Jun-23 23:43	1
PFOS	1763-23-1	ND	1.85		B23F135	19-Jun-23	0.270 L	21-Jun-23 23:43	1
PFDA	335-76-2	ND	1.85		B23F135	19-Jun-23	0.270 L	21-Jun-23 23:43	1
MeFOSAA	2355-31-9	ND	1.85		B23F135	19-Jun-23	0.270 L	21-Jun-23 23:43	1
EtFOSAA	2991-50-6	ND	1.85		B23F135	19-Jun-23	0.270 L	21-Jun-23 23:43	1
PFUnA	2058-94-8	ND	1.85		B23F135	19-Jun-23	0.270 L	21-Jun-23 23:43	1
PFDoA	307-55-1	ND	1.85		B23F135	19-Jun-23	0.270 L	21-Jun-23 23:43	1
PFTrDA	72629-94-8	ND	1.85		B23F135	19-Jun-23	0.270 L	21-Jun-23 23:43	1
PFTeDA	376-06-7	ND	1.85		B23F135	19-Jun-23	0.270 L	21-Jun-23 23:43	1
HFPO-DA	13252-13-6	ND	1.85		B23F135	19-Jun-23	0.270 L	21-Jun-23 23:43	1
ADONA	919005-14-4	ND	1.85		B23F135	19-Jun-23	0.270 L	21-Jun-23 23:43	1
9Cl-PF3ONS	756426-58-1	ND	1.85		B23F135	19-Jun-23	0.270 L	21-Jun-23 23:43	1
11Cl-PF3OUdS	763051-92-9	ND	1.85		B23F135	19-Jun-23	0.270 L	21-Jun-23 23:43	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	108	70 - 130		B23F135	19-Jun-23	0.270 L	21-Jun-23 23:43	1
13C2-PFDA	SURR	106	70 - 130		B23F135	19-Jun-23	0.270 L	21-Jun-23 23:43	1
d5-EtFOSAA	SURR	97.9	70 - 130		B23F135	19-Jun-23	0.270 L	21-Jun-23 23:43	1
13C3-HFPO-DA	SURR	105	70 - 130		B23F135	19-Jun-23	0.270 L	21-Jun-23 23:43	1

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: RG-20516-S-3 (BW-3A)

EPA Method 537.1

Client Data

Name: Hall Environmental Analytical Laboratory
Project: 2306595
Location: 2306595-007A
Matrix: Aqueous
Date Collected: 07-Jun-23 11:05

Laboratory Data

Lab Sample: 2306101-07
Date Received: 14-Jun-23 09:53
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	1.97		B23F135	19-Jun-23	0.253 L	26-Jun-23 16:44	1
PFHxA	307-24-4	ND	1.97		B23F135	19-Jun-23	0.253 L	26-Jun-23 16:44	1
PFHpA	375-85-9	ND	1.97		B23F135	19-Jun-23	0.253 L	26-Jun-23 16:44	1
PFHxS	355-46-4	ND	1.97		B23F135	19-Jun-23	0.253 L	26-Jun-23 16:44	1
PFOA	335-67-1	ND	1.97		B23F135	19-Jun-23	0.253 L	26-Jun-23 16:44	1
PFNA	375-95-1	ND	1.97		B23F135	19-Jun-23	0.253 L	26-Jun-23 16:44	1
PFOS	1763-23-1	ND	1.97		B23F135	19-Jun-23	0.253 L	26-Jun-23 16:44	1
PFDA	335-76-2	ND	1.97		B23F135	19-Jun-23	0.253 L	26-Jun-23 16:44	1
MeFOSAA	2355-31-9	ND	1.97		B23F135	19-Jun-23	0.253 L	26-Jun-23 16:44	1
EtFOSAA	2991-50-6	ND	1.97		B23F135	19-Jun-23	0.253 L	26-Jun-23 16:44	1
PFUnA	2058-94-8	ND	1.97		B23F135	19-Jun-23	0.253 L	26-Jun-23 16:44	1
PFDoA	307-55-1	ND	1.97		B23F135	19-Jun-23	0.253 L	26-Jun-23 16:44	1
PFTrDA	72629-94-8	ND	1.97		B23F135	19-Jun-23	0.253 L	26-Jun-23 16:44	1
PFTeDA	376-06-7	ND	1.97		B23F135	19-Jun-23	0.253 L	26-Jun-23 16:44	1
HFPO-DA	13252-13-6	ND	1.97		B23F135	19-Jun-23	0.253 L	26-Jun-23 16:44	1
ADONA	919005-14-4	ND	1.97		B23F135	19-Jun-23	0.253 L	26-Jun-23 16:44	1
9Cl-PF3ONS	756426-58-1	ND	1.97		B23F135	19-Jun-23	0.253 L	26-Jun-23 16:44	1
11Cl-PF3OUdS	763051-92-9	ND	1.97		B23F135	19-Jun-23	0.253 L	26-Jun-23 16:44	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	108	70 - 130		B23F135	19-Jun-23	0.253 L	26-Jun-23 16:44	1
13C2-PFDA	SURR	45.6	70 - 130	H	B23F135	19-Jun-23	0.253 L	26-Jun-23 16:44	1
d5-EtFOSAA	SURR	37.1	70 - 130	H	B23F135	19-Jun-23	0.253 L	26-Jun-23 16:44	1
13C3-HFPO-DA	SURR	93.5	70 - 130		B23F135	19-Jun-23	0.253 L	26-Jun-23 16:44	1

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: RG-20516-S-8 (BW-8)

EPA Method 537.1

Client Data

Name: Hall Environmental Analytical Laboratory
Project: 2306595
Location: 2306595-008A
Matrix: Aqueous
Date Collected: 07-Jun-23 12:23

Laboratory Data

Lab Sample: 2306101-08
Date Received: 14-Jun-23 09:53
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	1.95		B23F135	19-Jun-23	0.256 L	22-Jun-23 00:39	1
PFHxA	307-24-4	ND	1.95		B23F135	19-Jun-23	0.256 L	22-Jun-23 00:39	1
PFHpA	375-85-9	ND	1.95		B23F135	19-Jun-23	0.256 L	22-Jun-23 00:39	1
PFHxS	355-46-4	ND	1.95		B23F135	19-Jun-23	0.256 L	22-Jun-23 00:39	1
PFOA	335-67-1	ND	1.95		B23F135	19-Jun-23	0.256 L	22-Jun-23 00:39	1
PFNA	375-95-1	ND	1.95		B23F135	19-Jun-23	0.256 L	22-Jun-23 00:39	1
PFOS	1763-23-1	ND	1.95		B23F135	19-Jun-23	0.256 L	22-Jun-23 00:39	1
PFDA	335-76-2	ND	1.95		B23F135	19-Jun-23	0.256 L	22-Jun-23 00:39	1
MeFOSAA	2355-31-9	ND	1.95		B23F135	19-Jun-23	0.256 L	22-Jun-23 00:39	1
EtFOSAA	2991-50-6	ND	1.95		B23F135	19-Jun-23	0.256 L	22-Jun-23 00:39	1
PFUnA	2058-94-8	ND	1.95		B23F135	19-Jun-23	0.256 L	22-Jun-23 00:39	1
PFDoA	307-55-1	ND	1.95		B23F135	19-Jun-23	0.256 L	22-Jun-23 00:39	1
PFTrDA	72629-94-8	ND	1.95		B23F135	19-Jun-23	0.256 L	22-Jun-23 00:39	1
PFTeDA	376-06-7	ND	1.95		B23F135	19-Jun-23	0.256 L	22-Jun-23 00:39	1
HFPO-DA	13252-13-6	ND	1.95		B23F135	19-Jun-23	0.256 L	22-Jun-23 00:39	1
ADONA	919005-14-4	ND	1.95		B23F135	19-Jun-23	0.256 L	22-Jun-23 00:39	1
9Cl-PF3ONS	756426-58-1	ND	1.95		B23F135	19-Jun-23	0.256 L	22-Jun-23 00:39	1
11Cl-PF3OUdS	763051-92-9	ND	1.95		B23F135	19-Jun-23	0.256 L	22-Jun-23 00:39	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	108	70 - 130		B23F135	19-Jun-23	0.256 L	22-Jun-23 00:39	1
13C2-PFDA	SURR	91.0	70 - 130		B23F135	19-Jun-23	0.256 L	22-Jun-23 00:39	1
d5-EtFOSAA	SURR	87.8	70 - 130		B23F135	19-Jun-23	0.256 L	22-Jun-23 00:39	1
13C3-HFPO-DA	SURR	101	70 - 130		B23F135	19-Jun-23	0.256 L	22-Jun-23 00:39	1

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: Field Blank

EPA Method 537.1

Client Data

Name: Hall Environmental Analytical Laboratory
Project: 2306595
Location: 2306595-009A
Matrix: Aqueous
Date Collected: 06-Jun-23 11:35

Laboratory Data

Lab Sample: 2306101-09
Date Received: 14-Jun-23 09:53
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	1.93		B23F135	19-Jun-23	0.259 L	26-Jun-23 16:55	1
PFHxA	307-24-4	ND	1.93		B23F135	19-Jun-23	0.259 L	26-Jun-23 16:55	1
PFHpA	375-85-9	ND	1.93		B23F135	19-Jun-23	0.259 L	26-Jun-23 16:55	1
PFHxS	355-46-4	ND	1.93		B23F135	19-Jun-23	0.259 L	26-Jun-23 16:55	1
PFOA	335-67-1	ND	1.93		B23F135	19-Jun-23	0.259 L	26-Jun-23 16:55	1
PFNA	375-95-1	ND	1.93		B23F135	19-Jun-23	0.259 L	26-Jun-23 16:55	1
PFOS	1763-23-1	ND	1.93		B23F135	19-Jun-23	0.259 L	26-Jun-23 16:55	1
PFDA	335-76-2	ND	1.93		B23F135	19-Jun-23	0.259 L	26-Jun-23 16:55	1
MeFOSAA	2355-31-9	ND	1.93		B23F135	19-Jun-23	0.259 L	26-Jun-23 16:55	1
EtFOSAA	2991-50-6	ND	1.93		B23F135	19-Jun-23	0.259 L	26-Jun-23 16:55	1
PFUnA	2058-94-8	ND	1.93		B23F135	19-Jun-23	0.259 L	26-Jun-23 16:55	1
PFDoA	307-55-1	ND	1.93		B23F135	19-Jun-23	0.259 L	26-Jun-23 16:55	1
PFTrDA	72629-94-8	ND	1.93		B23F135	19-Jun-23	0.259 L	26-Jun-23 16:55	1
PFTeDA	376-06-7	ND	1.93		B23F135	19-Jun-23	0.259 L	26-Jun-23 16:55	1
HFPO-DA	13252-13-6	ND	1.93		B23F135	19-Jun-23	0.259 L	26-Jun-23 16:55	1
ADONA	919005-14-4	ND	1.93		B23F135	19-Jun-23	0.259 L	26-Jun-23 16:55	1
9Cl-PF3ONS	756426-58-1	ND	1.93		B23F135	19-Jun-23	0.259 L	26-Jun-23 16:55	1
11Cl-PF3OUdS	763051-92-9	ND	1.93		B23F135	19-Jun-23	0.259 L	26-Jun-23 16:55	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	107	70 - 130		B23F135	19-Jun-23	0.259 L	26-Jun-23 16:55	1
13C2-PFDA	SURR	104	70 - 130		B23F135	19-Jun-23	0.259 L	26-Jun-23 16:55	1
d5-EtFOSAA	SURR	100	70 - 130		B23F135	19-Jun-23	0.259 L	26-Jun-23 16:55	1
13C3-HFPO-DA	SURR	106	70 - 130		B23F135	19-Jun-23	0.259 L	26-Jun-23 16:55	1

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: RG-20516-S (BW-1)

EPA Method 537.1

Client Data

Name: Hall Environmental Analytical Laboratory
Project: 2306595
Location: 2306595-010A
Matrix: Aqueous
Date Collected: 07-Jun-23 13:23

Laboratory Data

Lab Sample: 2306101-10
Date Received: 14-Jun-23 09:53
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	1.89		B23F135	19-Jun-23	0.264 L	22-Jun-23 01:01	1
PFHxA	307-24-4	ND	1.89		B23F135	19-Jun-23	0.264 L	22-Jun-23 01:01	1
PFHpA	375-85-9	ND	1.89		B23F135	19-Jun-23	0.264 L	22-Jun-23 01:01	1
PFHxS	355-46-4	ND	1.89		B23F135	19-Jun-23	0.264 L	22-Jun-23 01:01	1
PFOA	335-67-1	ND	1.89		B23F135	19-Jun-23	0.264 L	22-Jun-23 01:01	1
PFNA	375-95-1	ND	1.89		B23F135	19-Jun-23	0.264 L	22-Jun-23 01:01	1
PFOS	1763-23-1	ND	1.89		B23F135	19-Jun-23	0.264 L	22-Jun-23 01:01	1
PFDA	335-76-2	ND	1.89		B23F135	19-Jun-23	0.264 L	22-Jun-23 01:01	1
MeFOSAA	2355-31-9	ND	1.89		B23F135	19-Jun-23	0.264 L	22-Jun-23 01:01	1
EtFOSAA	2991-50-6	ND	1.89		B23F135	19-Jun-23	0.264 L	22-Jun-23 01:01	1
PFUnA	2058-94-8	ND	1.89		B23F135	19-Jun-23	0.264 L	22-Jun-23 01:01	1
PFDoA	307-55-1	ND	1.89		B23F135	19-Jun-23	0.264 L	22-Jun-23 01:01	1
PFTrDA	72629-94-8	ND	1.89		B23F135	19-Jun-23	0.264 L	22-Jun-23 01:01	1
PFTeDA	376-06-7	ND	1.89		B23F135	19-Jun-23	0.264 L	22-Jun-23 01:01	1
HFPO-DA	13252-13-6	ND	1.89		B23F135	19-Jun-23	0.264 L	22-Jun-23 01:01	1
ADONA	919005-14-4	ND	1.89		B23F135	19-Jun-23	0.264 L	22-Jun-23 01:01	1
9Cl-PF3ONS	756426-58-1	ND	1.89		B23F135	19-Jun-23	0.264 L	22-Jun-23 01:01	1
11Cl-PF3OUdS	763051-92-9	ND	1.89		B23F135	19-Jun-23	0.264 L	22-Jun-23 01:01	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	101	70 - 130		B23F135	19-Jun-23	0.264 L	22-Jun-23 01:01	1
13C2-PFDA	SURR	97.8	70 - 130		B23F135	19-Jun-23	0.264 L	22-Jun-23 01:01	1
d5-EtFOSAA	SURR	90.4	70 - 130		B23F135	19-Jun-23	0.264 L	22-Jun-23 01:01	1
13C3-HFPO-DA	SURR	100	70 - 130		B23F135	19-Jun-23	0.264 L	22-Jun-23 01:01	1

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: RG-20516-S-9 (BW-9)

EPA Method 537.1

Client Data

Name: Hall Environmental Analytical Laboratory
Project: 2306595
Location: 2306595-011A
Matrix: Aqueous
Date Collected: 07-Jun-23 15:08

Laboratory Data

Lab Sample: 2306101-11
Date Received: 14-Jun-23 09:53
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	1.92		B23F135	19-Jun-23	0.260 L	22-Jun-23 01:12	1
PFHxA	307-24-4	ND	1.92		B23F135	19-Jun-23	0.260 L	22-Jun-23 01:12	1
PFHpA	375-85-9	ND	1.92		B23F135	19-Jun-23	0.260 L	22-Jun-23 01:12	1
PFHxS	355-46-4	ND	1.92		B23F135	19-Jun-23	0.260 L	22-Jun-23 01:12	1
PFOA	335-67-1	ND	1.92		B23F135	19-Jun-23	0.260 L	22-Jun-23 01:12	1
PFNA	375-95-1	ND	1.92		B23F135	19-Jun-23	0.260 L	22-Jun-23 01:12	1
PFOS	1763-23-1	ND	1.92		B23F135	19-Jun-23	0.260 L	22-Jun-23 01:12	1
PFDA	335-76-2	ND	1.92		B23F135	19-Jun-23	0.260 L	22-Jun-23 01:12	1
MeFOSAA	2355-31-9	ND	1.92		B23F135	19-Jun-23	0.260 L	22-Jun-23 01:12	1
EtFOSAA	2991-50-6	ND	1.92		B23F135	19-Jun-23	0.260 L	22-Jun-23 01:12	1
PFUnA	2058-94-8	ND	1.92		B23F135	19-Jun-23	0.260 L	22-Jun-23 01:12	1
PFDoA	307-55-1	ND	1.92		B23F135	19-Jun-23	0.260 L	22-Jun-23 01:12	1
PFTrDA	72629-94-8	ND	1.92		B23F135	19-Jun-23	0.260 L	22-Jun-23 01:12	1
PFTeDA	376-06-7	ND	1.92		B23F135	19-Jun-23	0.260 L	22-Jun-23 01:12	1
HFPO-DA	13252-13-6	ND	1.92		B23F135	19-Jun-23	0.260 L	22-Jun-23 01:12	1
ADONA	919005-14-4	ND	1.92		B23F135	19-Jun-23	0.260 L	22-Jun-23 01:12	1
9Cl-PF3ONS	756426-58-1	ND	1.92		B23F135	19-Jun-23	0.260 L	22-Jun-23 01:12	1
11Cl-PF3OUdS	763051-92-9	ND	1.92		B23F135	19-Jun-23	0.260 L	22-Jun-23 01:12	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	106	70 - 130		B23F135	19-Jun-23	0.260 L	22-Jun-23 01:12	1
13C2-PFDA	SURR	107	70 - 130		B23F135	19-Jun-23	0.260 L	22-Jun-23 01:12	1
d5-EtFOSAA	SURR	100	70 - 130		B23F135	19-Jun-23	0.260 L	22-Jun-23 01:12	1
13C3-HFPO-DA	SURR	104	70 - 130		B23F135	19-Jun-23	0.260 L	22-Jun-23 01:12	1

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: RG-20516-S-6 (BW-6)

EPA Method 537.1

Client Data

Name: Hall Environmental Analytical Laboratory
Project: 2306595
Location: 2306595-012A
Matrix: Aqueous
Date Collected: 07-Jun-23 16:05

Laboratory Data

Lab Sample: 2306101-12
Date Received: 14-Jun-23 09:53
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	1.92		B23F135	19-Jun-23	0.260 L	26-Jun-23 17:06	1
PFHxA	307-24-4	ND	1.92		B23F135	19-Jun-23	0.260 L	26-Jun-23 17:06	1
PFHpA	375-85-9	ND	1.92		B23F135	19-Jun-23	0.260 L	26-Jun-23 17:06	1
PFHxS	355-46-4	ND	1.92		B23F135	19-Jun-23	0.260 L	26-Jun-23 17:06	1
PFOA	335-67-1	ND	1.92		B23F135	19-Jun-23	0.260 L	26-Jun-23 17:06	1
PFNA	375-95-1	ND	1.92		B23F135	19-Jun-23	0.260 L	26-Jun-23 17:06	1
PFOS	1763-23-1	ND	1.92		B23F135	19-Jun-23	0.260 L	26-Jun-23 17:06	1
PFDA	335-76-2	ND	1.92		B23F135	19-Jun-23	0.260 L	26-Jun-23 17:06	1
MeFOSAA	2355-31-9	ND	1.92		B23F135	19-Jun-23	0.260 L	26-Jun-23 17:06	1
EtFOSAA	2991-50-6	ND	1.92		B23F135	19-Jun-23	0.260 L	26-Jun-23 17:06	1
PFUnA	2058-94-8	ND	1.92		B23F135	19-Jun-23	0.260 L	26-Jun-23 17:06	1
PFDoA	307-55-1	ND	1.92		B23F135	19-Jun-23	0.260 L	26-Jun-23 17:06	1
PFTrDA	72629-94-8	ND	1.92		B23F135	19-Jun-23	0.260 L	26-Jun-23 17:06	1
PFTeDA	376-06-7	ND	1.92		B23F135	19-Jun-23	0.260 L	26-Jun-23 17:06	1
HFPO-DA	13252-13-6	ND	1.92		B23F135	19-Jun-23	0.260 L	26-Jun-23 17:06	1
ADONA	919005-14-4	ND	1.92		B23F135	19-Jun-23	0.260 L	26-Jun-23 17:06	1
9Cl-PF3ONS	756426-58-1	ND	1.92		B23F135	19-Jun-23	0.260 L	26-Jun-23 17:06	1
11Cl-PF3OUdS	763051-92-9	ND	1.92		B23F135	19-Jun-23	0.260 L	26-Jun-23 17:06	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	106	70 - 130		B23F135	19-Jun-23	0.260 L	26-Jun-23 17:06	1
13C2-PFDA	SURR	42.4	70 - 130	H	B23F135	19-Jun-23	0.260 L	26-Jun-23 17:06	1
d5-EtFOSAA	SURR	42.3	70 - 130	H	B23F135	19-Jun-23	0.260 L	26-Jun-23 17:06	1
13C3-HFPO-DA	SURR	103	70 - 130		B23F135	19-Jun-23	0.260 L	26-Jun-23 17:06	1

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: RG-304 (St. Mikes)

EPA Method 537.1

Client Data

Name: Hall Environmental Analytical Laboratory
Project: 2306595
Location: 2306595-013D
Matrix: Aqueous
Date Collected: 08-Jun-23 10:36

Laboratory Data

Lab Sample: 2306101-13
Date Received: 14-Jun-23 09:53
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	1.97		B23F135	19-Jun-23	0.254 L	26-Jun-23 17:17	1
PFHxA	307-24-4	ND	1.97		B23F135	19-Jun-23	0.254 L	26-Jun-23 17:17	1
PFHpA	375-85-9	ND	1.97		B23F135	19-Jun-23	0.254 L	26-Jun-23 17:17	1
PFHxS	355-46-4	ND	1.97		B23F135	19-Jun-23	0.254 L	26-Jun-23 17:17	1
PFOA	335-67-1	ND	1.97		B23F135	19-Jun-23	0.254 L	26-Jun-23 17:17	1
PFNA	375-95-1	ND	1.97		B23F135	19-Jun-23	0.254 L	26-Jun-23 17:17	1
PFOS	1763-23-1	ND	1.97		B23F135	19-Jun-23	0.254 L	26-Jun-23 17:17	1
PFDA	335-76-2	ND	1.97		B23F135	19-Jun-23	0.254 L	26-Jun-23 17:17	1
MeFOSAA	2355-31-9	ND	1.97		B23F135	19-Jun-23	0.254 L	26-Jun-23 17:17	1
EtFOSAA	2991-50-6	ND	1.97		B23F135	19-Jun-23	0.254 L	26-Jun-23 17:17	1
PFUnA	2058-94-8	ND	1.97		B23F135	19-Jun-23	0.254 L	26-Jun-23 17:17	1
PFDoA	307-55-1	ND	1.97		B23F135	19-Jun-23	0.254 L	26-Jun-23 17:17	1
PFTrDA	72629-94-8	ND	1.97		B23F135	19-Jun-23	0.254 L	26-Jun-23 17:17	1
PFTeDA	376-06-7	ND	1.97		B23F135	19-Jun-23	0.254 L	26-Jun-23 17:17	1
HFPO-DA	13252-13-6	ND	1.97		B23F135	19-Jun-23	0.254 L	26-Jun-23 17:17	1
ADONA	919005-14-4	ND	1.97		B23F135	19-Jun-23	0.254 L	26-Jun-23 17:17	1
9Cl-PF3ONS	756426-58-1	ND	1.97		B23F135	19-Jun-23	0.254 L	26-Jun-23 17:17	1
11Cl-PF3OUdS	763051-92-9	ND	1.97		B23F135	19-Jun-23	0.254 L	26-Jun-23 17:17	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	111	70 - 130		B23F135	19-Jun-23	0.254 L	26-Jun-23 17:17	1
13C2-PFDA	SURR	102	70 - 130		B23F135	19-Jun-23	0.254 L	26-Jun-23 17:17	1
d5-EtFOSAA	SURR	106	70 - 130		B23F135	19-Jun-23	0.254 L	26-Jun-23 17:17	1
13C3-HFPO-DA	SURR	108	70 - 130		B23F135	19-Jun-23	0.254 L	26-Jun-23 17:17	1

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: CRWTP 2MG Tank **EPA Method 537.1**

Client Data

Name: Hall Environmental Analytical Laboratory
Project: 2306595
Location: 2306595-014C
Matrix: Aqueous
Date Collected: 08-Jun-23 11:45

Laboratory Data

Lab Sample: 2306101-14
Date Received: 14-Jun-23 09:53
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	1.99		B23F135	19-Jun-23	0.251 L	26-Jun-23 17:28	1
PFHxA	307-24-4	ND	1.99		B23F135	19-Jun-23	0.251 L	26-Jun-23 17:28	1
PFHpA	375-85-9	ND	1.99		B23F135	19-Jun-23	0.251 L	26-Jun-23 17:28	1
PFHxS	355-46-4	ND	1.99		B23F135	19-Jun-23	0.251 L	26-Jun-23 17:28	1
PFOA	335-67-1	ND	1.99		B23F135	19-Jun-23	0.251 L	26-Jun-23 17:28	1
PFNA	375-95-1	ND	1.99		B23F135	19-Jun-23	0.251 L	26-Jun-23 17:28	1
PFOS	1763-23-1	ND	1.99		B23F135	19-Jun-23	0.251 L	26-Jun-23 17:28	1
PFDA	335-76-2	ND	1.99		B23F135	19-Jun-23	0.251 L	26-Jun-23 17:28	1
MeFOSAA	2355-31-9	ND	1.99		B23F135	19-Jun-23	0.251 L	26-Jun-23 17:28	1
EtFOSAA	2991-50-6	ND	1.99		B23F135	19-Jun-23	0.251 L	26-Jun-23 17:28	1
PFUnA	2058-94-8	ND	1.99		B23F135	19-Jun-23	0.251 L	26-Jun-23 17:28	1
PFDoA	307-55-1	ND	1.99		B23F135	19-Jun-23	0.251 L	26-Jun-23 17:28	1
PFTrDA	72629-94-8	ND	1.99		B23F135	19-Jun-23	0.251 L	26-Jun-23 17:28	1
PFTeDA	376-06-7	ND	1.99		B23F135	19-Jun-23	0.251 L	26-Jun-23 17:28	1
HFPO-DA	13252-13-6	ND	1.99		B23F135	19-Jun-23	0.251 L	26-Jun-23 17:28	1
ADONA	919005-14-4	ND	1.99		B23F135	19-Jun-23	0.251 L	26-Jun-23 17:28	1
9Cl-PF3ONS	756426-58-1	ND	1.99		B23F135	19-Jun-23	0.251 L	26-Jun-23 17:28	1
11Cl-PF3OUdS	763051-92-9	ND	1.99		B23F135	19-Jun-23	0.251 L	26-Jun-23 17:28	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	112	70 - 130		B23F135	19-Jun-23	0.251 L	26-Jun-23 17:28	1
13C2-PFDA	SURR	93.4	70 - 130		B23F135	19-Jun-23	0.251 L	26-Jun-23 17:28	1
d5-EtFOSAA	SURR	78.9	70 - 130		B23F135	19-Jun-23	0.251 L	26-Jun-23 17:28	1
13C3-HFPO-DA	SURR	110	70 - 130		B23F135	19-Jun-23	0.251 L	26-Jun-23 17:28	1

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: 10MG Tank **EPA Method 537.1**

Client Data

Name: Hall Environmental Analytical Laboratory
Project: 2306595
Location: 2306595-015C
Matrix: Aqueous
Date Collected: 08-Jun-23 12:30

Laboratory Data

Lab Sample: 2306101-15
Date Received: 14-Jun-23 09:53
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	2.01		B23F135	19-Jun-23	0.249 L	26-Jun-23 17:39	1
PFHxA	307-24-4	ND	2.01		B23F135	19-Jun-23	0.249 L	26-Jun-23 17:39	1
PFHpA	375-85-9	ND	2.01		B23F135	19-Jun-23	0.249 L	26-Jun-23 17:39	1
PFHxS	355-46-4	ND	2.01		B23F135	19-Jun-23	0.249 L	26-Jun-23 17:39	1
PFOA	335-67-1	ND	2.01		B23F135	19-Jun-23	0.249 L	26-Jun-23 17:39	1
PFNA	375-95-1	ND	2.01		B23F135	19-Jun-23	0.249 L	26-Jun-23 17:39	1
PFOS	1763-23-1	ND	2.01		B23F135	19-Jun-23	0.249 L	26-Jun-23 17:39	1
PFDA	335-76-2	ND	2.01		B23F135	19-Jun-23	0.249 L	26-Jun-23 17:39	1
MeFOSAA	2355-31-9	ND	2.01		B23F135	19-Jun-23	0.249 L	26-Jun-23 17:39	1
EtFOSAA	2991-50-6	ND	2.01		B23F135	19-Jun-23	0.249 L	26-Jun-23 17:39	1
PFUnA	2058-94-8	ND	2.01		B23F135	19-Jun-23	0.249 L	26-Jun-23 17:39	1
PFDoA	307-55-1	ND	2.01		B23F135	19-Jun-23	0.249 L	26-Jun-23 17:39	1
PFTrDA	72629-94-8	ND	2.01		B23F135	19-Jun-23	0.249 L	26-Jun-23 17:39	1
PFTeDA	376-06-7	ND	2.01		B23F135	19-Jun-23	0.249 L	26-Jun-23 17:39	1
HFPO-DA	13252-13-6	ND	2.01		B23F135	19-Jun-23	0.249 L	26-Jun-23 17:39	1
ADONA	919005-14-4	ND	2.01		B23F135	19-Jun-23	0.249 L	26-Jun-23 17:39	1
9Cl-PF3ONS	756426-58-1	ND	2.01		B23F135	19-Jun-23	0.249 L	26-Jun-23 17:39	1
11Cl-PF3OUdS	763051-92-9	ND	2.01		B23F135	19-Jun-23	0.249 L	26-Jun-23 17:39	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	113	70 - 130		B23F135	19-Jun-23	0.249 L	26-Jun-23 17:39	1
13C2-PFDA	SURR	81.8	70 - 130		B23F135	19-Jun-23	0.249 L	26-Jun-23 17:39	1
d5-EtFOSAA	SURR	80.7	70 - 130		B23F135	19-Jun-23	0.249 L	26-Jun-23 17:39	1
13C3-HFPO-DA	SURR	106	70 - 130		B23F135	19-Jun-23	0.249 L	26-Jun-23 17:39	1

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: RG-68302 (NW Well)

EPA Method 537.1

Client Data

Name: Hall Environmental Analytical Laboratory
Project: 2306595
Location: 2306595-016A
Matrix: Aqueous
Date Collected: 08-Jun-23 13:45

Laboratory Data

Lab Sample: 2306101-16
Date Received: 14-Jun-23 09:53
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	1.94		B23F135	19-Jun-23	0.257 L	22-Jun-23 02:07	1
PFHxA	307-24-4	ND	1.94		B23F135	19-Jun-23	0.257 L	22-Jun-23 02:07	1
PFHpA	375-85-9	ND	1.94		B23F135	19-Jun-23	0.257 L	22-Jun-23 02:07	1
PFHxS	355-46-4	ND	1.94		B23F135	19-Jun-23	0.257 L	22-Jun-23 02:07	1
PFOA	335-67-1	ND	1.94		B23F135	19-Jun-23	0.257 L	22-Jun-23 02:07	1
PFNA	375-95-1	ND	1.94		B23F135	19-Jun-23	0.257 L	22-Jun-23 02:07	1
PFOS	1763-23-1	ND	1.94		B23F135	19-Jun-23	0.257 L	22-Jun-23 02:07	1
PFDA	335-76-2	ND	1.94		B23F135	19-Jun-23	0.257 L	22-Jun-23 02:07	1
MeFOSAA	2355-31-9	ND	1.94		B23F135	19-Jun-23	0.257 L	22-Jun-23 02:07	1
EtFOSAA	2991-50-6	ND	1.94		B23F135	19-Jun-23	0.257 L	22-Jun-23 02:07	1
PFUnA	2058-94-8	ND	1.94		B23F135	19-Jun-23	0.257 L	22-Jun-23 02:07	1
PFDoA	307-55-1	ND	1.94		B23F135	19-Jun-23	0.257 L	22-Jun-23 02:07	1
PFTrDA	72629-94-8	ND	1.94		B23F135	19-Jun-23	0.257 L	22-Jun-23 02:07	1
PFTeDA	376-06-7	ND	1.94		B23F135	19-Jun-23	0.257 L	22-Jun-23 02:07	1
HFPO-DA	13252-13-6	ND	1.94		B23F135	19-Jun-23	0.257 L	22-Jun-23 02:07	1
ADONA	919005-14-4	ND	1.94		B23F135	19-Jun-23	0.257 L	22-Jun-23 02:07	1
9Cl-PF3ONS	756426-58-1	ND	1.94		B23F135	19-Jun-23	0.257 L	22-Jun-23 02:07	1
11Cl-PF3OUdS	763051-92-9	ND	1.94		B23F135	19-Jun-23	0.257 L	22-Jun-23 02:07	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	104	70 - 130		B23F135	19-Jun-23	0.257 L	22-Jun-23 02:07	1
13C2-PFDA	SURR	101	70 - 130		B23F135	19-Jun-23	0.257 L	22-Jun-23 02:07	1
d5-EtFOSAA	SURR	95.3	70 - 130		B23F135	19-Jun-23	0.257 L	22-Jun-23 02:07	1
13C3-HFPO-DA	SURR	98.2	70 - 130		B23F135	19-Jun-23	0.257 L	22-Jun-23 02:07	1

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank
Conc.	Concentration
CRS	Cleanup Recovery Standard
D	Dilution
DL	Detection Limit
E	The associated compound concentration exceeded the calibration range of the instrument
H	Recovery and/or RPD was outside laboratory acceptance limits
I	Chemical Interference
IS	Internal Standard
J	The amount detected is below the Reporting Limit/LOQ
LOD	Limit of Detection
LOQ	Limit of Quantitation
M	Estimated Maximum Possible Concentration (CA Region 2 projects only)
MDL	Method Detection Limit
NA	Not applicable
ND	Not Detected
OPR	Ongoing Precision and Recovery sample
P	The reported concentration may include contribution from chlorinated diphenyl ether(s).
Q	The ion transition ratio is outside of the acceptance criteria.
RL	Reporting Limit
RL	For 537.1, the reported RLs are the MRLs.
TEQ	Toxic Equivalency, sum of the toxic equivalency factors (TEF) multiplied by the sample concentrations.
TEQMax	TEQ calculation that uses the detection limit as the concentration for non-detects
TEQMin	TEQ calculation that uses zero as the concentration for non-detects
TEQRisk	TEQ calculation that uses ½ the detection limit as the concentration for non-detects
U	Not Detected (specific projects only)
*	See Cover Letter

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

Enthalpy Analytical - EDH Certifications

Accrediting Authority	Certificate Number
Alaska Department of Environmental Conservation	17-013
Arkansas Department of Environmental Quality	21-023-0
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2020018
Michigan Department of Environmental Quality	9932
Minnesota Department of Health	2211390
Nevada Division of Environmental Protection	CA00413
New Hampshire Environmental Accreditation Program	207721
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Ohio Environmental Protection Agency	87778
Oregon Laboratory Accreditation Program	4042-021
Texas Commission on Environmental Quality	T104704189-22-13
Vermont Department of Health	VT-4042
Virginia Department of General Services	11276
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

Current certificates and lists of licensed parameters can be found at Enthalpy.com/Resources/Accreditations.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: www.hallenvironmental.com

CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 2

2306101 0.7°C

SUB CONTRATOR: **Vista Analytical Labor**	COMPANY: **Vista Analytical Laboratory**	PHONE: **(916) 673-1520**	FAX:
ADDRESS: **1104 Windfield Way**		ACCOUNT #:	EMAIL:
CITY, STATE, ZIP: **El Dorado Hills, CA 95762**			

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	2306595-001D	RG-304-S (Osage)	250HDPE	Aqueous	6/6/2023 11:35:00 AM	2	537 18 Compound PFAS testing
2	2306595-002D	RG-1118 (Agua Fria)	250HDPE	Aqueous	6/6/2023 12:50:00 PM	2	537 18 Compound PFAS testing
3	2306595-003D	RG-1115 (Torreon)	250HDPE	Aqueous	6/6/2023 2:21:00 PM	2	537 18 Compound PFAS testing
4	2306595-004D	RG-1116 (Ferguson)	250HDPE	Aqueous	6/6/2023 3:18:00 PM	2	537 18 Compound PFAS testing
5	2306595-005A	RG-20516-S-13 (BW-13)	250HDPE	Aqueous	6/7/2023 10:05:00 AM	2	537 18 Compound PFAS testing
6	2306595-006A	RG-20516-S-4 (BW-4)	250HDPE	Aqueous	6/7/2023 10:45:00 AM	2	537 18 Compound PFAS testing
7	2306595-007A	RG-20516-S-3 (BW-3A)	250HDPE	Aqueous	6/7/2023 11:05:00 AM	2	537 18 Compound PFAS testing
8	2306595-008A	RG-20516-S-8 (BW-8)	250HDPE	Aqueous	6/7/2023 12:23:00 PM	2	537 18 Compound PFAS testing
9	2306595-009A	Field Blank	250HDPE	Aqueous	6/6/2023 11:35:00 AM	2	537 18 Compound PFAS testing
10	2306595-010A	RG-20516-S (BW-1)	250HDPE	Aqueous	6/7/2023 1:23:00 PM	2	537 18 Compound PFAS testing
11	2306595-011A	RG-20516-S-9 (BW-9)	250HDPE	Aqueous	6/7/2023 3:08:00 PM	2	537 18 Compound PFAS testing
12	2306595-012A	RG-20516-S-6 (BW-6)	250HDPE	Aqueous	6/7/2023 4:05:00 PM	2	537 18 Compound PFAS testing
13	2306595-013D	RG-304 (St. Mikes)	250HDPE	Aqueous	6/8/2023 10:36:00 AM	2	537 18 Compound PFAS testing

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

Relinquished By	Date	Time	Received By	Date	Time
CM	6/13/2023	7:15 AM	Kelia Wadsworth	06/14/23	0953
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date	Time:

TAT: Standard ☑ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐

REPORT TRANSMITTAL DESIRED:

☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY

Temp of samples _____ °C Attempt to Cool ? _____

Comments: _____

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: www.hallenvironmental.com

CHAIN OF CUSTODY RECORD

PAGE: 2 OF: 2

2306101 0.7°C

SUB CONTRATOR: Vista Analytical Labor	COMPANY: Vista Analytical Laboratory	PHONE: (916) 673-1520	FAX:
ADDRESS: 1104 Windfield Way		ACCOUNT #:	EMAIL:
CITY, STATE, ZIP: El Dorado Hills, CA 95762			

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
14	2306595-014C	CRWTP 2MG Tank	250HDPE	Aqueous	6/8/2023 11:45 00 AM	2	537 18 Compound PFAS testing
15	2306595-015C	10MG Tank	250HDPE	Aqueous	6/8/2023 12:30:00 PM	2	537 18 Compound PFAS testing
16	2306595-016A	RG-68302 (NW Well)	250HDPE	Aqueous	6/8/2023 1:45:00 PM	2	537 18 Compound PFAS testing

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

Relinquished By:	Date: 6/13/2023	Time: 7:15 AM	Received By: Kelsi Wadsworth	Date: 06/14/23	Time: 0753
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

TAT: Standard ☑ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐

REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY
Temp of samples _____ °C Attempt to Cool ? _____
Comments: _____

Sample Log-In Checklist

ENTHALPY ANALYTICAL

Page # 1 of 1

Work Order #: 2306101 TAT Std

Samples Arrival:	Date/Time: 06/14/23 0953		Initials: KW		Location: WR-2 Shelf/Rack: N/A		
Delivered By:	(FedEx)	UPS	On Trac	GLS	DHL	Hand Delivered	Other
Preservation:	Ice		Blue Ice		Techni Ice	Dry Ice	None
Temp °C: 2.1 (uncorrected) / Temp °C: 0.7 (corrected)	Probe used: Y / (N)		Thermometer ID: IR-4				

	YES	NO	NA
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Airbill — Trk # 772437676005	✓		
Shipping Documentation Present?	✓		
Shipping Container: Enthalpy / (Client) / Retain / (Return)		Dispose	
Chain of Custody / Sample Documentation Present?	✓		
Chain of Custody / Sample Documentation Complete?	✓		
Holding Time Acceptable?	✓		

	Date/Time	Initials:	Location:	
Logged In:	06/14/23 1201	VB	R-13, WR-2 Shelf/Rack: A-3 B-5	
COC Anomaly/Sample Acceptance Form completed?	✓			

Comments:

CoC/Label Reconciliation Report WO# 2306101

LabNumber	CoC Sample ID	SampleAlias	Sample Date/Time	Container	BaseMatrix	Sample Comments
2306101-01	A RG-304-S (Osage)	2306595-001D	06-Jun-23 11:35	HDPE Bottle, 250 mL	Aqueous	
2306101-01	B RG-304-S (Osage)	2306595-001D	06-Jun-23 11:35	HDPE Bottle, 250 mL	Aqueous	
2306101-02	A RG-1118 (Agua Fria)	2306595-002D	06-Jun-23 12:50	HDPE Bottle, 250 mL	Aqueous	
2306101-02	B RG-1118 (Agua Fria)	2306595-002D	06-Jun-23 12:50	HDPE Bottle, 250 mL	Aqueous	
2306101-03	A RG-1115 (Torrcon)	2306595-003D	06-Jun-23 14:21	HDPE Bottle, 250 mL	Aqueous	
2306101-03	B RG-1115 (Torrcon)	2306595-003D	06-Jun-23 14:21	HDPE Bottle, 250 mL	Aqueous	
2306101-04	A RG-1116 (Ferguson)	2306595-004D	06-Jun-23 15:18	HDPE Bottle, 250 mL	Aqueous	
2306101-04	B RG-1116 (Ferguson)	2306595-004D	06-Jun-23 15:18	HDPE Bottle, 250 mL	Aqueous	
2306101-05	A RG-20516-S-13 (BW-13)	2306595-005A	07-Jun-23 10:05	HDPE Bottle, 250 mL	Aqueous	
2306101-05	B RG-20516-S-13 (BW-13)	2306595-005A	07-Jun-23 10:05	HDPE Bottle, 250 mL	Aqueous	
2306101-06	A RG-20516-S-4 (BW-4)	2306595-006A	07-Jun-23 10:45	HDPE Bottle, 250 mL	Aqueous	
2306101-06	B RG-20516-S-4 (BW-4)	2306595-006A	07-Jun-23 10:45	HDPE Bottle, 250 mL	Aqueous	
2306101-07	A RG-20516-S-3 (BW-3A)	2306595-007A	07-Jun-23 11:05	HDPE Bottle, 250 mL	Aqueous	
2306101-07	B RG-20516-S-3 (BW-3A)	2306595-007A	07-Jun-23 11:05	HDPE Bottle, 250 mL	Aqueous	
2306101-08	A RG-20516-S-8 (BW-8)	2306595-008A	07-Jun-23 12:23	HDPE Bottle, 250 mL	Aqueous	
2306101-08	B RG-20516-S-8 (BW-8)	2306595-008A	07-Jun-23 12:23	HDPE Bottle, 250 mL	Aqueous	
2306101-09	A Field Blank	2306595-009A	06-Jun-23 11:35	HDPE Bottle, 250 mL	Aqueous	
2306101-09	B Field Blank	2306595-009A	06-Jun-23 11:35	HDPE Bottle, 250 mL	Aqueous	
2306101-10	A RG-20516-S (BW-1)	2306595-010A	07-Jun-23 13:23	HDPE Bottle, 250 mL	Aqueous	
2306101-10	B RG-20516-S (BW-1)	2306595-010A	07-Jun-23 13:23	HDPE Bottle, 250 mL	Aqueous	
2306101-11	A RG-20516-S-9 (BW-9)	2306595-011A	07-Jun-23 15:08	HDPE Bottle, 250 mL	Aqueous	
2306101-11	B RG-20516-S-9 (BW-9)	2306595-011A	07-Jun-23 15:08	HDPE Bottle, 250 mL	Aqueous	
2306101-12	A RG-20516-S-6 (BW-6)	2306595-012A	07-Jun-23 16:05	HDPE Bottle, 250 mL	Aqueous	
2306101-12	B RG-20516-S-6 (BW-6)	2306595-012A	07-Jun-23 16:05	HDPE Bottle, 250 mL	Aqueous	
2306101-13	A RG-304 (St. Mikes)	2306595-013D	08-Jun-23 10:36	HDPE Bottle, 250 mL	Aqueous	
2306101-13	B RG-304 (St. Mikes)	2306595-013D	08-Jun-23 10:36	HDPE Bottle, 250 mL	Aqueous	
2306101-14	A CRWTP 2MG Tank	2306595-014C	08-Jun-23 11:45	HDPE Bottle, 250 mL	Aqueous	
2306101-14	B CRWTP 2MG Tank	2306595-014C	08-Jun-23 11:45	HDPE Bottle, 250 mL	Aqueous	

2306101-15	A 10MG Tank	☑ (E)	2306595-015C	08-Jun-23 12:30	☑	HDPE Bottle, 250 mL	Aqueous
2306101-15	B 10MG Tank	☑ ↓	2306595-015C	08-Jun-23 12:30	☑	HDPE Bottle, 250 mL	Aqueous
2306101-16	A RG-68302 (NW Well)	☑ (F)	2306595-016A	08-Jun-23 13:45	☑	HDPE Bottle, 250 mL	Aqueous
2306101-16	B RG-68302 (NW Well)	☑ ↓	2306595-016A	08-Jun-23 13:45	☑	HDPE Bottle, 250 mL	Aqueous

Checkmarks indicate that information on the COC reconciled with the sample label.
Any discrepancies are noted in the following columns.

	Yes	No	NA
Sample Container Intact?	✓		
Sample Custody Seals Intact?		✓	✓
Adequate Sample Volume?	✓		
Container Type Appropriate for Analysis(es)	✓		

Preservation Documented: Na2S2O3 Trizma (G) NH4CH3CO2 None Other

Verifed by/Date: SNH 06/14/23
KA 06/14/23

Comments:
(A) underlined portion is lower case on sample label
(B) sample label: RG-1115 (Terra con)
(C) underlined portion has "5" on sample label
(D) Sample label ID: RG-304- (St. Mikes)
(E) Sample label ID: 10Mg Tank
(F) Sample label ID: RG68302 (NW Well)
(G) Client Trizma label

ANOMALY FORM

Work Order # 2306101

Initial/Date — The following checked issues were noted during sample receipt and login:

_____ ☐ **1. The samples were received out of temperature at (WI-PHT):** _____
Was Ice present: Yes No Melted Blue Ice

_____ ☐ 2. The Chain-of-Custody (CoC) was not relinquished properly.

_____ ☐ 3. The CoC did not include collection time(s). 00:00 will be used unless notified otherwise.

_____ ☐ 4. The sample(s) did not include a sample collection time. All or Sample Name: _____

YA 06/16/23 ☑ 5. A sample ID discrepancy was found. See the Reconciliation report.
The CoC Sample ID will be used unless notified otherwise.

_____ ☐ 6. A sample date and/or time discrepancy was found. See the Reconciliation report.
The CoC Sample date/time will be used unless notified otherwise.

_____ ☐ **7. The CoC did not include a sample matrix. The following sample matrix will be used:** _____

_____ ☐ **8. Insufficent volume received for analysis. All or Sample Name:** _____

_____ ☐ 9. The backup bottle was received broken. Sample Name: _____

_____ ☐ **10. CoC not received, illegible or destroyed.**

_____ ☐ **11. The sample(s) were received out of holding time. All or Sample Name:** _____

_____ ☐ **12. The CoC did not include an analysis. All or Sample Name:** _____

_____ ☐ **13. Sample(s) received without collection date. All or Sample Name:** _____

_____ ☐ **14. Sample(s) not received. All or Sample Name:** _____

_____ ☐ **15. Sample(s) received broken. All or Sample Name:** _____

_____ ☐ **16. An Incorrect container-type was used. All or Sample Name:** _____

_____ ☐ 17. The Field Reagent Blank (FRB) preservative was from a different lot than the field samples.
Will proceed with analysis and narrate unless notified otherwise.

_____ ☐ 18. Other:

Bolded items require sign-off

Client Contacted: _____

Date of Contact: _____

Lab Project Manager: _____

Resolution:

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306595**

03-Jul-23

Client: John Shomaker & Assoc.

Project: COSF PFAS Sampling

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **A97552**	RunNo: **97552**
Prep Date:	Analysis Date: **6/19/2023**	SeqNo: **3545667** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Calcium	ND	1.0								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Silicon	ND	0.080								
Sodium	ND	1.0								

Sample ID: **LCSLL-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **A97552**	RunNo: **97552**
Prep Date:	Analysis Date: **6/19/2023**	SeqNo: **3545668** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020	0.01000	0	111	50	150			
Calcium	ND	1.0	0.5000	0	116	50	150			
Magnesium	ND	1.0	0.5000	0	118	50	150			
Potassium	ND	1.0	0.5000	0	102	50	150			
Silicon	ND	0.080	0.08000	0	98.1	50	150			
Sodium	ND	1.0	0.5000	0	108	50	150			

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **A97552**	RunNo: **97552**
Prep Date:	Analysis Date: **6/19/2023**	SeqNo: **3545669** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	54	1.0	50.00	0	108	85	115			
Magnesium	54	1.0	50.00	0	108	85	115			
Potassium	53	1.0	50.00	0	107	85	115			
Silicon	2.7	0.080	2.500	0	110	85	115			
Sodium	53	1.0	50.00	0	107	85	115			

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **A97552**	RunNo: **97552**
Prep Date:	Analysis Date: **6/19/2023**	SeqNo: **3545690** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.50	0.020	0.5000	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306595**

03-Jul-23

Client: John Shomaker & Assoc.

Project: COSF PFAS Sampling

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R97429**	RunNo: **97429**
Prep Date:	Analysis Date: **6/13/2023**	SeqNo: **3539788** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P)	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R97429**	RunNo: **97429**
Prep Date:	Analysis Date: **6/13/2023**	SeqNo: **3539789** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.47	0.10	0.5000	0	94.6	90	110			
Chloride	4.7	0.50	5.000	0	93.0	90	110			
Bromide	2.4	0.10	2.500	0	94.4	90	110			
Phosphorus, Orthophosphate (As P)	4.7	0.50	5.000	0	94.1	90	110			
Sulfate	9.5	0.50	10.00	0	94.8	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	98.3	90	110			

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R97429**	RunNo: **97429**
Prep Date:	Analysis Date: **6/13/2023**	SeqNo: **3539815** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P)	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R97429**	RunNo: **97429**
Prep Date:	Analysis Date: **6/13/2023**	SeqNo: **3539816** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.48	0.10	0.5000	0	95.6	90	110			
Chloride	4.6	0.50	5.000	0	92.2	90	110			
Bromide	2.3	0.10	2.500	0	93.6	90	110			
Phosphorus, Orthophosphate (As P)	4.7	0.50	5.000	0	93.1	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306595**

03-Jul-23

Client: John Shomaker & Assoc.

Project: COSF PFAS Sampling

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R97429**	RunNo: **97429**
Prep Date:	Analysis Date: **6/13/2023**	SeqNo: **3539816** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	9.4	0.50	10.00	0	93.7	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	97.4	90	110			

Sample ID: **2306595-001BMS**	SampType: **ms**	TestCode: **EPA Method 300.0: Anions**
Client ID: **RG-304-S (Osage)**	Batch ID: **R97429**	RunNo: **97429**
Prep Date:	Analysis Date: **6/13/2023**	SeqNo: **3539818** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.61	0.10	0.5000	0.1488	92.6	66.6	118			
Bromide	2.5	0.10	2.500	0.07640	96.0	88.8	110			
Sulfate	18	0.50	10.00	7.809	101	84.9	110			

Sample ID: **2306595-001BMSD**	SampType: **msd**	TestCode: **EPA Method 300.0: Anions**
Client ID: **RG-304-S (Osage)**	Batch ID: **R97429**	RunNo: **97429**
Prep Date:	Analysis Date: **6/13/2023**	SeqNo: **3539819** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.62	0.10	0.5000	0.1488	93.5	66.6	118	0.765	20	
Bromide	2.5	0.10	2.500	0.07640	96.6	87.2	110	0.535	20	
Sulfate	18	0.50	10.00	7.809	103	84.9	111	0.638	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306595**

03-Jul-23

Client: John Shomaker & Assoc.

Project: COSF PFAS Sampling

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R97458**	RunNo: **97458**
Prep Date:	Analysis Date: **6/14/2023**	SeqNo: **3541036** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	114	70	130			
Toluene	20	1.0	20.00	0	99.3	70	130			
Chlorobenzene	20	1.0	20.00	0	99.8	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	106	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	106	70	130			
Surr: 1,2-Dichloroethane-d4	12		10.00		120	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.0	70	130			
Surr: Dibromofluoromethane	11		10.00		114	70	130			
Surr: Toluene-d8	9.9		10.00		99.1	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R97458**	RunNo: **97458**
Prep Date:	Analysis Date: **6/14/2023**	SeqNo: **3541056** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306595**

03-Jul-23

Client: John Shomaker & Assoc.

Project: COSF PFAS Sampling

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R97458**	RunNo: **97458**
Prep Date:	Analysis Date: **6/14/2023**	SeqNo: **3541056** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306595**

03-Jul-23

Client: John Shomaker & Assoc.

Project: COSF PFAS Sampling

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R97458**	RunNo: **97458**
Prep Date:	Analysis Date: **6/14/2023**	SeqNo: **3541056** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		110	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		92.1	70	130			
Surr: Dibromofluoromethane	12		10.00		117	70	130			
Surr: Toluene-d8	9.7		10.00		97.2	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2306595**
03-Jul-23

Client: John Shomaker & Assoc.
Project: COSF PFAS Sampling

Sample ID: **lcs-1 99.3uS eC**	SampType: **LCS**	TestCode: **SM2510B: Specific Conductance**
Client ID: **LCSW**	Batch ID: **R97490**	RunNo: **97490**
Prep Date:	Analysis Date: **6/15/2023**	SeqNo: **3542266** Units: **µmhos/cm**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	100	10	99.30	0	104	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306595**

03-Jul-23

Client: John Shomaker & Assoc.

Project: COSF PFAS Sampling

Sample ID: **mb-1 alk**	SampType: **MBLK**	TestCode: **SM2320B: Alkalinity**
Client ID: **PBW**	Batch ID: **R97450**	RunNo: **97450**
Prep Date:	Analysis Date: **6/14/2023**	SeqNo: **3540395** Units: **mg/L CaCO3**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: **lcs-1 alk**	SampType: **LCS**	TestCode: **SM2320B: Alkalinity**
Client ID: **LCSW**	Batch ID: **R97450**	RunNo: **97450**
Prep Date:	Analysis Date: **6/14/2023**	SeqNo: **3540396** Units: **mg/L CaCO3**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	77.64	20.00	80.00	0	97.0	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306595**

03-Jul-23

Client: John Shomaker & Assoc.

Project: COSF PFAS Sampling

Sample ID: **MB-75546**	SampType: **MBLK**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **PBW**	Batch ID: **75546**	RunNo: **97442**
Prep Date: **6/13/2023**	Analysis Date: **6/14/2023**	SeqNo: **3540296** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	50.0								

Sample ID: **LCS-75546**	SampType: **LCS**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **LCSW**	Batch ID: **75546**	RunNo: **97442**
Prep Date: **6/13/2023**	Analysis Date: **6/14/2023**	SeqNo: **3540297** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1000	50.0	1000	0	100	80	120			

Sample ID: **2306595-001BDUP**	SampType: **DUP**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **RG-304-S (Osage)**	Batch ID: **75546**	RunNo: **97442**
Prep Date: **6/13/2023**	Analysis Date: **6/14/2023**	SeqNo: **3540299** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	182	50.0						4.49	10	

Sample ID: **MB-75607**	SampType: **MBLK**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **PBW**	Batch ID: **75607**	RunNo: **97517**
Prep Date: **6/15/2023**	Analysis Date: **6/16/2023**	SeqNo: **3543347** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	50.0								

Sample ID: **LCS-75607**	SampType: **LCS**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **LCSW**	Batch ID: **75607**	RunNo: **97517**
Prep Date: **6/15/2023**	Analysis Date: **6/16/2023**	SeqNo: **3543348** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1010	50.0	1000	0	101	80	120			

Sample ID: **2306595-015ADUP**	SampType: **DUP**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **10MG Tank**	Batch ID: **75607**	RunNo: **97517**
Prep Date: **6/15/2023**	Analysis Date: **6/16/2023**	SeqNo: **3543364** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	260	50.0						3.03	10	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: John Shomaker & Assoc. Work Order Number: 2306595 RcptNo: 1

Received By: Nancy Proctor 6/12/2023 11:30:00 AM

Completed By: Cheyenne Cason 6/12/2023 2:40:23 PM

Reviewed By: 6/12/23

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☑	No ☐	NA ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 4 (<2 or >12 unless noted)

Adjusted? NO

Checked by: SCM 06/12/23

pH Lot #538534

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.1	Good	Not Present	Morty		
2	1.8	Good	Not Present	Morty		

Chain-of-Custody Record

Client: John Shomaker + Associates

Mailing Address: 2611 Broadbent Parkway NE
Albuquerque, NM 87107

Phone #: (505) 345-3407

email or Fax#: sfinch@shomaker.com
zweathers@shomaker.com

QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☑ EDD (Type) Excel + PDF

Turn-Around Time:
☑ Standard ☐ Rush

Project Name: CDSF - PFAS sampling

Project #:

Project Manager: Steve Finch

Sampler: ZW

On Ice: ☑ Yes ☐ No

# of Coolers: 2

Cooler Temp (including CF): 3.3-0.2=3.1 marty
2.0-0.2=1.8 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2306595	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	EPA 537	cation/anion balance				
6/6	11:35	aq	RG-304-S (Osage)	8x various	various	001								X			X	X				
6/6	12:50	aq	RG-1118 (Agua Fria)	8x various	various	002								X			X	X				
6/6	14:21	aq	RG-1115 (Torreon)	8x various	various	003								X			X	X				
6/6	15:18	aq	RG-1116 (Ferguson)	8x various	various	004								X			X	X				
6/7	10:05	aq	RG-20516-S-13 (BW-13)	2x 250	Trizma	005											X					
6/7	10:45	aq	RG-20516-S-4 (BW-4)	2x 250	Trizma	006											X					
6/7	11:05	aq	RG-20516-S-3 (BW-3A)	2x 250	Trizma	007											X					
6/7	12:23	aq	RG-20516-S-8 (BW-8)	2x 250	Trizma	008											X					
6/6	11:35	aq	Field Blank	2x 250	Trizma	009											X					
6/7	13:23	aq	RG-20516-S (BW-1)	2x 250	Trizma	010											X					
6/7	15:08	aq	RG-20516-S-9 (BW-9)	2x 250	Trizma	011											X					
6/7	16:05	aq	RG-20516-S-6 (BW-6)	2x 250	Trizma	012											X					

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
6/12	11:27			COC	6/12/23	11:30
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks: Please include Al and Si for the cation/anion analyses.

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: John Shoemaker & Associates

Mailing Address: 2611 Broadbent Parkway NE
Albuquerque, NM 87107

Phone #: (505) 345-3407

email or Fax#: sfinch@shoemaker.com
zweathers@shoemaker.com

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☒ EDD (Type) Excel & PDF

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: LOSF - PFAS sampling

Project #: #2W

Project Manager: Steve Finch

Sampler: ZW

On Ice: ☑ Yes ☐ No

# of Coolers: 2 manly

Cooler Temp(including CF): 3.3 - 0.2 = 3.1 (°C)
2.0 - 0.2 = 1.8

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2306595	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Cation / Anion Balance	EPA 537
6/8	10:35	aq	RLz-304 (Lt. Mikes)	8x various		013								X			X	X
6/8	11:45	aq	CRWTP 2MG Tank	5x various		~~015~~ 014											X	X
6/8	12:30	aq	10MG Tank	5x various		015											X	X
6/8	13:45	aq	RLz-68302 (NW well)	2x Trisma		016											X	X
		aq	Trip Blank	HCl		017								X				

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
6/12	11:22	Zach Weathers	[illegible]	COO	6/12/23	11:30
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks: Please include Al and Si with the cation/anion analyses.

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 11, 2023

Steve Finch

John Shomaker & Assoc.
2611 Broadbent Parkway NE
Albuquerque, NM 87107
TEL: (505) 345-3407
FAX: (505) 345-9920

RE: COSF PFAS Sampling OrderNo.: 2306C46

Dear Steve Finch:

Hall Environmental Analysis Laboratory received 5 sample(s) on 6/23/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

July 10, 2023

Enthalpy Analytical - El Dorado Hills
Work Order No. 2306186

Mr. Andy Freeman
Hall Environmental Analytical Laboratory
4901 Hawkins NE
Albuquerque, NM 87109

Dear Mr. Freeman,

Enclosed are the results for the sample set received at Enthalpy Analytical - EDH on June 27, 2023 under your Project Name '2306C46'.

Enthalpy Analytical - EDH is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mark.rein@enthalpy.com.

Thank you for choosing Enthalpy Analytical - EDH as part of your analytical support team.

Sincerely,

Mark Rein
Project Manager

Enthalpy Analytical -EDH certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Enthalpy Analytical -EDH .

Enthalpy Analytical - EDH Work Order No. 2306186
Case Narrative

Sample Condition on Receipt:

Five aqueous samples were received and stored securely in accordance with Enthalpy Analytical - EDH standard operating procedures and EPA methodology. The samples were received in good condition and within the recommended temperature requirements.

Analytical Notes:

PFAS Isotope Dilution Method

Sample "BDD Intake" contained particulate and was centrifuged prior to extraction.

The samples were extracted and analyzed for a selected list of PFAS using Enthalpy Analytical - EDH's PFAS Isotope Dilution Method. The results for PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Results for all other analytes include the linear isomers only.

Holding Times

The samples were extracted and analyzed within the hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank above 1/2 the Reporting Limits (RL). The OPR recoveries were within the method acceptance criteria.

The labeled standard recoveries for all QC and field samples were within the acceptance criteria.

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Sample Inventory Report

Sample ID	Client Sample ID	Sampled	Received	Components/Containers
2306186-01	RG-20516-5-12(BW-12)	13-Jun-23 12:00	27-Jun-23 09:07	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
2306186-02	RG-20516-5-11(BW-11)	13-Jun-23 13:35	27-Jun-23 09:07	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
2306186-03	RG-20516-5-10(BW-10)	13-Jun-23 14:40	27-Jun-23 09:07	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
2306186-04	BDD Intake	13-Jun-23 15:15	27-Jun-23 09:07	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
2306186-05	BDD Finished Water	13-Jun-23 13:30	27-Jun-23 09:07	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL

ANALYTICAL RESULTS

Sample ID: Method Blank — **PFAS Isotope Dilution Method**

Client Data

Name: Hall Environmental Analytical Laboratory
Project: 2306C46
Matrix: Aqueous

Laboratory Data

Lab Sample: B23F271-BLK1
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	2.00		B23F271	30-Jun-23	0.250 L	05-Jul-23 19:58	1
PFHxA	307-24-4	ND	2.00		B23F271	30-Jun-23	0.250 L	05-Jul-23 19:58	1
HFPO-DA	13252-13-6	ND	2.00		B23F271	30-Jun-23	0.250 L	05-Jul-23 19:58	1
PFHpA	375-85-9	ND	2.00		B23F271	30-Jun-23	0.250 L	05-Jul-23 19:58	1
ADONA	919005-14-4	ND	2.00		B23F271	30-Jun-23	0.250 L	05-Jul-23 19:58	1
PFHxS	355-46-4	ND	2.00		B23F271	30-Jun-23	0.250 L	05-Jul-23 19:58	1
PFOA	335-67-1	ND	2.00		B23F271	30-Jun-23	0.250 L	05-Jul-23 19:58	1
PFNA	375-95-1	ND	2.00		B23F271	30-Jun-23	0.250 L	05-Jul-23 19:58	1
PFOS	1763-23-1	ND	2.00		B23F271	30-Jun-23	0.250 L	05-Jul-23 19:58	1
9Cl-PF3ONS	756426-58-1	ND	2.00		B23F271	30-Jun-23	0.250 L	05-Jul-23 19:58	1
PFDA	335-76-2	ND	2.00		B23F271	30-Jun-23	0.250 L	05-Jul-23 19:58	1
MeFOSAA	2355-31-9	ND	2.00		B23F271	30-Jun-23	0.250 L	05-Jul-23 19:58	1
EtFOSAA	2991-50-6	ND	2.00		B23F271	30-Jun-23	0.250 L	05-Jul-23 19:58	1
PFUnA	2058-94-8	ND	2.00		B23F271	30-Jun-23	0.250 L	05-Jul-23 19:58	1
11Cl-PF3OUdS	763051-92-9	ND	2.00		B23F271	30-Jun-23	0.250 L	05-Jul-23 19:58	1
PFDoA	307-55-1	ND	2.00		B23F271	30-Jun-23	0.250 L	05-Jul-23 19:58	1
PFTrDA	72629-94-8	ND	2.00		B23F271	30-Jun-23	0.250 L	05-Jul-23 19:58	1
PFTeDA	376-06-7	ND	2.00		B23F271	30-Jun-23	0.250 L	05-Jul-23 19:58	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	99.2	25 - 150		B23F271	30-Jun-23	0.250 L	05-Jul-23 19:58	1
13C2-PFHxA	IS	97.9	25 - 150		B23F271	30-Jun-23	0.250 L	05-Jul-23 19:58	1
13C3-HFPO-DA	IS	100	25 - 150		B23F271	30-Jun-23	0.250 L	05-Jul-23 19:58	1
13C4-PFHpA	IS	98.9	25 - 150		B23F271	30-Jun-23	0.250 L	05-Jul-23 19:58	1
13C3-PFHxS	IS	98.9	25 - 150		B23F271	30-Jun-23	0.250 L	05-Jul-23 19:58	1
13C2-PFOA	IS	104	25 - 150		B23F271	30-Jun-23	0.250 L	05-Jul-23 19:58	1
13C5-PFNA	IS	99.4	25 - 150		B23F271	30-Jun-23	0.250 L	05-Jul-23 19:58	1
13C8-PFOS	IS	98.2	25 - 150		B23F271	30-Jun-23	0.250 L	05-Jul-23 19:58	1
13C2-PFDA	IS	94.7	25 - 150		B23F271	30-Jun-23	0.250 L	05-Jul-23 19:58	1
d3-MeFOSAA	IS	94.4	25 - 150		B23F271	30-Jun-23	0.250 L	05-Jul-23 19:58	1
d5-EtFOSAA	IS	89.4	25 - 150		B23F271	30-Jun-23	0.250 L	05-Jul-23 19:58	1
13C2-PFUnA	IS	91.6	25 - 150		B23F271	30-Jun-23	0.250 L	05-Jul-23 19:58	1
13C2-PFDoA	IS	87.5	25 - 150		B23F271	30-Jun-23	0.250 L	05-Jul-23 19:58	1
13C2-PFTeDA	IS	90.1	20 - 150		B23F271	30-Jun-23	0.250 L	05-Jul-23 19:58	1

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OPR **PFAS Isotope Dilution Method**

Client Data

Name: Hall Environmental Analytical Laboratory
Project: 2306C46
Matrix: Aqueous

Laboratory Data

Lab Sample: B23F271-BS1
Column: BEH C18

Analyte	CAS Number	Amt Found (ng/L)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	38.2	40.0	95.5	65 - 135		B23F271	30-Jun-23	0.250 L	05-Jul-23 20:09	1
PFHxA	307-24-4	37.2	40.0	93.0	65 - 135		B23F271	30-Jun-23	0.250 L	05-Jul-23 20:09	1
HFPO-DA	13252-13-6	42.7	40.0	107	65 - 135		B23F271	30-Jun-23	0.250 L	05-Jul-23 20:09	1
PFHpA	375-85-9	38.1	40.0	95.2	65 - 135		B23F271	30-Jun-23	0.250 L	05-Jul-23 20:09	1
ADONA	919005-14-4	37.2	40.0	93.1	65 - 135		B23F271	30-Jun-23	0.250 L	05-Jul-23 20:09	1
PFHxS	355-46-4	37.9	40.0	94.8	65 - 135		B23F271	30-Jun-23	0.250 L	05-Jul-23 20:09	1
PFOA	335-67-1	37.4	40.0	93.4	65 - 135		B23F271	30-Jun-23	0.250 L	05-Jul-23 20:09	1
PFNA	375-95-1	36.5	40.0	91.3	65 - 135		B23F271	30-Jun-23	0.250 L	05-Jul-23 20:09	1
PFOS	1763-23-1	35.8	40.0	89.6	65 - 140		B23F271	30-Jun-23	0.250 L	05-Jul-23 20:09	1
9Cl-PF3ONS	756426-58-1	37.8	40.0	94.6	65 - 135		B23F271	30-Jun-23	0.250 L	05-Jul-23 20:09	1
PFDA	335-76-2	39.7	40.0	99.3	65 - 135		B23F271	30-Jun-23	0.250 L	05-Jul-23 20:09	1
MeFOSAA	2355-31-9	37.4	40.0	93.6	65 - 135		B23F271	30-Jun-23	0.250 L	05-Jul-23 20:09	1
EtFOSAA	2991-50-6	38.3	40.0	95.6	65 - 135		B23F271	30-Jun-23	0.250 L	05-Jul-23 20:09	1
PFUnA	2058-94-8	38.7	40.0	96.7	65 - 140		B23F271	30-Jun-23	0.250 L	05-Jul-23 20:09	1
11Cl-PF3OUdS	763051-92-9	39.0	40.0	97.5	65 - 135		B23F271	30-Jun-23	0.250 L	05-Jul-23 20:09	1
PFDoA	307-55-1	38.9	40.0	97.3	65 - 135		B23F271	30-Jun-23	0.250 L	05-Jul-23 20:09	1
PFTrDA	72629-94-8	39.0	40.0	97.5	60 - 140		B23F271	30-Jun-23	0.250 L	05-Jul-23 20:09	1
PFTeDA	376-06-7	40.5	40.0	101	65 - 135		B23F271	30-Jun-23	0.250 L	05-Jul-23 20:09	1

Labeled Standards	Type	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	107	25 - 150		B23F271	30-Jun-23	0.250 L	05-Jul-23 20:09	1
13C2-PFHxA	IS	105	25 - 150		B23F271	30-Jun-23	0.250 L	05-Jul-23 20:09	1
13C3-HFPO-DA	IS	106	25 - 150		B23F271	30-Jun-23	0.250 L	05-Jul-23 20:09	1
13C4-PFHpA	IS	108	25 - 150		B23F271	30-Jun-23	0.250 L	05-Jul-23 20:09	1
13C3-PFHxS	IS	105	25 - 150		B23F271	30-Jun-23	0.250 L	05-Jul-23 20:09	1
13C2-PFOA	IS	115	25 - 150		B23F271	30-Jun-23	0.250 L	05-Jul-23 20:09	1
13C5-PFNA	IS	108	25 - 150		B23F271	30-Jun-23	0.250 L	05-Jul-23 20:09	1
13C8-PFOS	IS	106	25 - 150		B23F271	30-Jun-23	0.250 L	05-Jul-23 20:09	1
13C2-PFDA	IS	102	25 - 150		B23F271	30-Jun-23	0.250 L	05-Jul-23 20:09	1
d3-MeFOSAA	IS	102	25 - 150		B23F271	30-Jun-23	0.250 L	05-Jul-23 20:09	1
d5-EtFOSAA	IS	95.6	25 - 150		B23F271	30-Jun-23	0.250 L	05-Jul-23 20:09	1
13C2-PFUnA	IS	104	25 - 150		B23F271	30-Jun-23	0.250 L	05-Jul-23 20:09	1
13C2-PFDoA	IS	95.6	25 - 150		B23F271	30-Jun-23	0.250 L	05-Jul-23 20:09	1
13C2-PFTeDA	IS	97.0	20 - 150		B23F271	30-Jun-23	0.250 L	05-Jul-23 20:09	1

Sample ID: RG-20516-5-12(BW-12) **PFAS Isotope Dilution Method**

Client Data

Name: Hall Environmental Analytical Laboratory
Project: 2306C46
Location: 2306C46-001A
Matrix: Aqueous
Date Collected: 13-Jun-23 12:00

Laboratory Data

Lab Sample: 2306186-01
Date Received: 27-Jun-23 09:07
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 20:19	1
PFHxA	307-24-4	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 20:19	1
HFPO-DA	13252-13-6	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 20:19	1
PFHpA	375-85-9	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 20:19	1
ADONA	919005-14-4	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 20:19	1
PFHxS	355-46-4	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 20:19	1
PFOA	335-67-1	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 20:19	1
PFNA	375-95-1	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 20:19	1
PFOS	1763-23-1	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 20:19	1
9Cl-PF3ONS	756426-58-1	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 20:19	1
PFDA	335-76-2	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 20:19	1
MeFOSAA	2355-31-9	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 20:19	1
EtFOSAA	2991-50-6	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 20:19	1
PFUnA	2058-94-8	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 20:19	1
11Cl-PF3OUdS	763051-92-9	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 20:19	1
PFDoA	307-55-1	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 20:19	1
PFTrDA	72629-94-8	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 20:19	1
PFTeDA	376-06-7	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 20:19	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	111	25 - 150		B23F271	30-Jun-23	0.251 L	05-Jul-23 20:19	1
13C2-PFHxA	IS	109	25 - 150		B23F271	30-Jun-23	0.251 L	05-Jul-23 20:19	1
13C3-HFPO-DA	IS	106	25 - 150		B23F271	30-Jun-23	0.251 L	05-Jul-23 20:19	1
13C4-PFHpA	IS	108	25 - 150		B23F271	30-Jun-23	0.251 L	05-Jul-23 20:19	1
13C3-PFHxS	IS	105	25 - 150		B23F271	30-Jun-23	0.251 L	05-Jul-23 20:19	1
13C2-PFOA	IS	113	25 - 150		B23F271	30-Jun-23	0.251 L	05-Jul-23 20:19	1
13C5-PFNA	IS	107	25 - 150		B23F271	30-Jun-23	0.251 L	05-Jul-23 20:19	1
13C8-PFOS	IS	107	25 - 150		B23F271	30-Jun-23	0.251 L	05-Jul-23 20:19	1
13C2-PFDA	IS	103	25 - 150		B23F271	30-Jun-23	0.251 L	05-Jul-23 20:19	1
d3-MeFOSAA	IS	105	25 - 150		B23F271	30-Jun-23	0.251 L	05-Jul-23 20:19	1
d5-EtFOSAA	IS	104	25 - 150		B23F271	30-Jun-23	0.251 L	05-Jul-23 20:19	1
13C2-PFUnA	IS	106	25 - 150		B23F271	30-Jun-23	0.251 L	05-Jul-23 20:19	1
13C2-PFDoA	IS	100	25 - 150		B23F271	30-Jun-23	0.251 L	05-Jul-23 20:19	1
13C2-PFTeDA	IS	95.2	20 - 150		B23F271	30-Jun-23	0.251 L	05-Jul-23 20:19	1

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: RG-20516-5-11(BW-11)

PFAS Isotope Dilution Method

Client Data

Name: Hall Environmental Analytical Laboratory
Project: 2306C46
Location: 2306C46-002A
Matrix: Aqueous
Date Collected: 13-Jun-23 13:35

Laboratory Data

Lab Sample: 2306186-02
Date Received: 27-Jun-23 09:07
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:29	1
PFHxA	307-24-4	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:29	1
HFPO-DA	13252-13-6	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:29	1
PFHpA	375-85-9	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:29	1
ADONA	919005-14-4	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:29	1
PFHxS	355-46-4	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:29	1
PFOA	335-67-1	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:29	1
PFNA	375-95-1	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:29	1
PFOS	1763-23-1	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:29	1
9Cl-PF3ONS	756426-58-1	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:29	1
PFDA	335-76-2	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:29	1
MeFOSAA	2355-31-9	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:29	1
EtFOSAA	2991-50-6	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:29	1
PFUnA	2058-94-8	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:29	1
11Cl-PF3OUdS	763051-92-9	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:29	1
PFDoA	307-55-1	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:29	1
PFTrDA	72629-94-8	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:29	1
PFTeDA	376-06-7	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:29	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	113	25 - 150		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:29	1
13C2-PFHxA	IS	111	25 - 150		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:29	1
13C3-HFPO-DA	IS	113	25 - 150		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:29	1
13C4-PFHpA	IS	114	25 - 150		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:29	1
13C3-PFHxS	IS	109	25 - 150		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:29	1
13C2-PFOA	IS	116	25 - 150		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:29	1
13C5-PFNA	IS	110	25 - 150		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:29	1
13C8-PFOS	IS	109	25 - 150		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:29	1
13C2-PFDA	IS	111	25 - 150		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:29	1
d3-MeFOSAA	IS	107	25 - 150		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:29	1
d5-EtFOSAA	IS	108	25 - 150		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:29	1
13C2-PFUnA	IS	114	25 - 150		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:29	1
13C2-PFDoA	IS	101	25 - 150		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:29	1
13C2-PFTeDA	IS	102	20 - 150		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:29	1

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: RG-20516-5-10(BW-10)

PFAS Isotope Dilution Method

Client Data

Name: Hall Environmental Analytical Laboratory
Project: 2306C46
Location: 2306C46-003A
Matrix: Aqueous
Date Collected: 13-Jun-23 14:40

Laboratory Data

Lab Sample: 2306186-03
Date Received: 27-Jun-23 09:07
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:40	1
PFHxA	307-24-4	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:40	1
HFPO-DA	13252-13-6	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:40	1
PFHpA	375-85-9	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:40	1
ADONA	919005-14-4	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:40	1
PFHxS	355-46-4	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:40	1
PFOA	335-67-1	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:40	1
PFNA	375-95-1	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:40	1
PFOS	1763-23-1	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:40	1
9Cl-PF3ONS	756426-58-1	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:40	1
PFDA	335-76-2	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:40	1
MeFOSAA	2355-31-9	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:40	1
EtFOSAA	2991-50-6	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:40	1
PFUnA	2058-94-8	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:40	1
11Cl-PF3OUdS	763051-92-9	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:40	1
PFDoA	307-55-1	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:40	1
PFTrDA	72629-94-8	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:40	1
PFTeDA	376-06-7	ND	1.97		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:40	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	105	25 - 150		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:40	1
13C2-PFHxA	IS	107	25 - 150		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:40	1
13C3-HFPO-DA	IS	105	25 - 150		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:40	1
13C4-PFHpA	IS	107	25 - 150		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:40	1
13C3-PFHxS	IS	111	25 - 150		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:40	1
13C2-PFOA	IS	110	25 - 150		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:40	1
13C5-PFNA	IS	103	25 - 150		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:40	1
13C8-PFOS	IS	107	25 - 150		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:40	1
13C2-PFDA	IS	103	25 - 150		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:40	1
d3-MeFOSAA	IS	101	25 - 150		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:40	1
d5-EtFOSAA	IS	95.1	25 - 150		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:40	1
13C2-PFUnA	IS	108	25 - 150		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:40	1
13C2-PFDoA	IS	93.6	25 - 150		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:40	1
13C2-PFTeDA	IS	94.8	20 - 150		B23F271	30-Jun-23	0.254 L	05-Jul-23 20:40	1

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: BDD Intake — **PFAS Isotope Dilution Method**

Client Data

Name: Hall Environmental Analytical Laboratory
Project: 2306C46
Location: 2306C46-004A
Matrix: Aqueous
Date Collected: 13-Jun-23 15:15

Laboratory Data

Lab Sample: 2306186-04
Date Received: 27-Jun-23 09:07
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	2.02		B23F271	30-Jun-23	0.248 L	05-Jul-23 20:50	1
PFHxA	307-24-4	ND	2.02		B23F271	30-Jun-23	0.248 L	05-Jul-23 20:50	1
HFPO-DA	13252-13-6	ND	2.02		B23F271	30-Jun-23	0.248 L	05-Jul-23 20:50	1
PFHpA	375-85-9	ND	2.02		B23F271	30-Jun-23	0.248 L	05-Jul-23 20:50	1
ADONA	919005-14-4	ND	2.02		B23F271	30-Jun-23	0.248 L	05-Jul-23 20:50	1
PFHxS	355-46-4	ND	2.02		B23F271	30-Jun-23	0.248 L	05-Jul-23 20:50	1
PFOA	335-67-1	ND	2.02		B23F271	30-Jun-23	0.248 L	05-Jul-23 20:50	1
PFNA	375-95-1	ND	2.02		B23F271	30-Jun-23	0.248 L	05-Jul-23 20:50	1
PFOS	1763-23-1	ND	2.02		B23F271	30-Jun-23	0.248 L	05-Jul-23 20:50	1
9Cl-PF3ONS	756426-58-1	ND	2.02		B23F271	30-Jun-23	0.248 L	05-Jul-23 20:50	1
PFDA	335-76-2	ND	2.02		B23F271	30-Jun-23	0.248 L	05-Jul-23 20:50	1
MeFOSAA	2355-31-9	ND	2.02		B23F271	30-Jun-23	0.248 L	05-Jul-23 20:50	1
EtFOSAA	2991-50-6	ND	2.02		B23F271	30-Jun-23	0.248 L	05-Jul-23 20:50	1
PFUnA	2058-94-8	ND	2.02		B23F271	30-Jun-23	0.248 L	05-Jul-23 20:50	1
11Cl-PF3OUdS	763051-92-9	ND	2.02		B23F271	30-Jun-23	0.248 L	05-Jul-23 20:50	1
PFDoA	307-55-1	ND	2.02		B23F271	30-Jun-23	0.248 L	05-Jul-23 20:50	1
PFTrDA	72629-94-8	ND	2.02		B23F271	30-Jun-23	0.248 L	05-Jul-23 20:50	1
PFTeDA	376-06-7	ND	2.02		B23F271	30-Jun-23	0.248 L	05-Jul-23 20:50	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	117	25 - 150		B23F271	30-Jun-23	0.248 L	05-Jul-23 20:50	1
13C2-PFHxA	IS	111	25 - 150		B23F271	30-Jun-23	0.248 L	05-Jul-23 20:50	1
13C3-HFPO-DA	IS	111	25 - 150		B23F271	30-Jun-23	0.248 L	05-Jul-23 20:50	1
13C4-PFHpA	IS	112	25 - 150		B23F271	30-Jun-23	0.248 L	05-Jul-23 20:50	1
13C3-PFHxS	IS	114	25 - 150		B23F271	30-Jun-23	0.248 L	05-Jul-23 20:50	1
13C2-PFOA	IS	119	25 - 150		B23F271	30-Jun-23	0.248 L	05-Jul-23 20:50	1
13C5-PFNA	IS	108	25 - 150		B23F271	30-Jun-23	0.248 L	05-Jul-23 20:50	1
13C8-PFOS	IS	106	25 - 150		B23F271	30-Jun-23	0.248 L	05-Jul-23 20:50	1
13C2-PFDA	IS	107	25 - 150		B23F271	30-Jun-23	0.248 L	05-Jul-23 20:50	1
d3-MeFOSAA	IS	106	25 - 150		B23F271	30-Jun-23	0.248 L	05-Jul-23 20:50	1
d5-EtFOSAA	IS	101	25 - 150		B23F271	30-Jun-23	0.248 L	05-Jul-23 20:50	1
13C2-PFUnA	IS	107	25 - 150		B23F271	30-Jun-23	0.248 L	05-Jul-23 20:50	1
13C2-PFDoA	IS	91.8	25 - 150		B23F271	30-Jun-23	0.248 L	05-Jul-23 20:50	1
13C2-PFTeDA	IS	83.8	20 - 150		B23F271	30-Jun-23	0.248 L	05-Jul-23 20:50	1

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: BDD Finished Water — **PFAS Isotope Dilution Method**

Client Data

Name: Hall Environmental Analytical Laboratory
Project: 2306C46
Location: 2306C46-005A
Matrix: Aqueous
Date Collected: 13-Jun-23 13:30

Laboratory Data

Lab Sample: 2306186-05
Date Received: 27-Jun-23 09:07
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 21:01	1
PFHxA	307-24-4	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 21:01	1
HFPO-DA	13252-13-6	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 21:01	1
PFHpA	375-85-9	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 21:01	1
ADONA	919005-14-4	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 21:01	1
PFHxS	355-46-4	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 21:01	1
PFOA	335-67-1	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 21:01	1
PFNA	375-95-1	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 21:01	1
PFOS	1763-23-1	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 21:01	1
9Cl-PF3ONS	756426-58-1	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 21:01	1
PFDA	335-76-2	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 21:01	1
MeFOSAA	2355-31-9	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 21:01	1
EtFOSAA	2991-50-6	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 21:01	1
PFUnA	2058-94-8	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 21:01	1
11Cl-PF3OUdS	763051-92-9	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 21:01	1
PFDoA	307-55-1	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 21:01	1
PFTrDA	72629-94-8	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 21:01	1
PFTeDA	376-06-7	ND	1.99		B23F271	30-Jun-23	0.251 L	05-Jul-23 21:01	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	107	25 - 150		B23F271	30-Jun-23	0.251 L	05-Jul-23 21:01	1
13C2-PFHxA	IS	107	25 - 150		B23F271	30-Jun-23	0.251 L	05-Jul-23 21:01	1
13C3-HFPO-DA	IS	106	25 - 150		B23F271	30-Jun-23	0.251 L	05-Jul-23 21:01	1
13C4-PFHpA	IS	111	25 - 150		B23F271	30-Jun-23	0.251 L	05-Jul-23 21:01	1
13C3-PFHxS	IS	115	25 - 150		B23F271	30-Jun-23	0.251 L	05-Jul-23 21:01	1
13C2-PFOA	IS	114	25 - 150		B23F271	30-Jun-23	0.251 L	05-Jul-23 21:01	1
13C5-PFNA	IS	110	25 - 150		B23F271	30-Jun-23	0.251 L	05-Jul-23 21:01	1
13C8-PFOS	IS	109	25 - 150		B23F271	30-Jun-23	0.251 L	05-Jul-23 21:01	1
13C2-PFDA	IS	108	25 - 150		B23F271	30-Jun-23	0.251 L	05-Jul-23 21:01	1
d3-MeFOSAA	IS	104	25 - 150		B23F271	30-Jun-23	0.251 L	05-Jul-23 21:01	1
d5-EtFOSAA	IS	106	25 - 150		B23F271	30-Jun-23	0.251 L	05-Jul-23 21:01	1
13C2-PFUnA	IS	113	25 - 150		B23F271	30-Jun-23	0.251 L	05-Jul-23 21:01	1
13C2-PFDoA	IS	101	25 - 150		B23F271	30-Jun-23	0.251 L	05-Jul-23 21:01	1
13C2-PFTeDA	IS	95.8	20 - 150		B23F271	30-Jun-23	0.251 L	05-Jul-23 21:01	1

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank
Conc.	Concentration
CRS	Cleanup Recovery Standard
D	Dilution
DL	Detection Limit
E	The associated compound concentration exceeded the calibration range of the instrument
H	Recovery and/or RPD was outside laboratory acceptance limits
I	Chemical Interference
IS	Internal Standard
J	The amount detected is below the Reporting Limit/LOQ
LOD	Limit of Detection
LOQ	Limit of Quantitation
M	Estimated Maximum Possible Concentration (CA Region 2 projects only)
MDL	Method Detection Limit
NA	Not applicable
ND	Not Detected
OPR	Ongoing Precision and Recovery sample
P	The reported concentration may include contribution from chlorinated diphenyl ether(s).
Q	The ion transition ratio is outside of the acceptance criteria.
RL	Reporting Limit
RL	For 537.1, the reported RLs are the MRLs.
TEQ	Toxic Equivalency, sum of the toxic equivalency factors (TEF) multiplied by the sample concentrations.
TEQMax	TEQ calculation that uses the detection limit as the concentration for non-detects
TEQMin	TEQ calculation that uses zero as the concentration for non-detects
TEQRisk	TEQ calculation that uses ½ the detection limit as the concentration for non-detects
U	Not Detected (specific projects only)
*	See Cover Letter

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

Enthalpy Analytical - EDH Certifications

Accrediting Authority	Certificate Number
Alaska Department of Environmental Conservation	17-013
Arkansas Department of Environmental Quality	21-023-0
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2020018
Michigan Department of Environmental Quality	9932
Minnesota Department of Health	2211390
Nevada Division of Environmental Protection	CA00413
New Hampshire Environmental Accreditation Program	207721
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Ohio Environmental Protection Agency	87778
Oregon Laboratory Accreditation Program	4042-021
Texas Commission on Environmental Quality	T104704189-22-13
Vermont Department of Health	VT-4042
Virginia Department of General Services	11276
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

Current certificates and lists of licensed parameters can be found at Enthalpy.com/Resources/Accreditations.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: www.hallenvironmental.com

CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

2306186 3.2°C

SUB CONTRATOR	Vista Analytical Labor	COMPANY	Vista Analytical Laboratory	PHONE	(916) 673-1520	FAX	
ADDRESS	1104 Windfield Way			ACCOUNT #		EMAIL	
CITY, STATE, ZIP	El Dorado Hills, CA 95762						

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	2306C46-001A	RG-20516-5-12(BW-12)	250HDPE	Aqueous	6/13/2023 12:00:00 PM	2	537 18 Compound PFAS testing
2	2306C46-002A	RG-20516-5-11(BW-11)	250HDPE	Aqueous	6/13/2023 1:35:00 PM	2	537 18 Compound PFAS testing
3	2306C46-003A	RG-20516-5-10(BW-10)	250HDPE	Aqueous	6/13/2023 2:40:00 PM	2	537 18 Compound PFAS testing
4	2306C46-004A	BDD Intake	250HDPE	Aqueous	6/13/2023 3:15:00 PM	2	537 18 Compound PFAS testing
5	2306C46-005A	BDD Finished Water	250HDPE	Aqueous	6/13/2023 1:30:00 PM	2	537 18 Compound PFAS testing

537.1 method.

6/23

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

	Date	Time	Received By	Date	Time
Relinquished By	6/23/2023	10:42 AM	Kelia Wadsworth	06/27/23	0907
Relinquished By	Date	Time	Received By	Date	Time
Relinquished By	Date	Time	Received By	Date	Time

TAT: Standard RUSH Next BD 2nd BD 3rd BD

REPORT TRANSMITTAL DESIRED

HARDCOPY (extra cost) FAX EMAIL ONLINE

FOR LAB USE ONLY

Temp of samples °C Attempt to Cool ?

Comments

Sample Log-In Checklist

ENTHALPY ANALYTICAL

Page # 1 of 1

Work Order #: 2306186 TAT Std

Samples Arrival:	**Date/Time** 06/27/23 0907		**Initials:** KW		**Location:** WR-2 **Shelf/Rack:** N/A		
Delivered By:	(FedEx)	UPS	On Trac	GLS	DHL	Hand Delivered	Other
Preservation:	Ice		(Blue Ice)		Techni Ice	Dry Ice	None
Temp °C: 4.6 (uncorrected)			**Probe used: Y / (N)**		**Thermometer ID:** IR-4		
Temp °C: 3.2 (corrected)							

	YES	NO	NA
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Airbill — Trk # 7725 6415 8733	✓		
Shipping Documentation Present?	✓		
Shipping Container: Enthalpy / (Client) / Retain / (Return) / Dispose			
Chain of Custody / Sample Documentation Present?	✓		
Chain of Custody / Sample Documentation Complete?	✓		
Holding Time Acceptable?	✓		

Logged In:	**Date/Time** 06/27/23 10:35	**Initials:** JA	**Location:** R-13, WR-2 **Shelf/Rack:** A-3, E-4
COC Anomaly/Sample Acceptance Form completed?		✓	✓

Comments:

CoC/Label Reconciliation Report WO# 2306186

LabNumber	CoC Sample ID	SampleAlias	Sample Date/Time	Container	BaseMatrix	Sample Comments
2306186-01	A RG-20516-5-12(BW-12) ☑	2306C46-001A	13-Jun-23 12:00 ☑	HDPE Bottle, 250 mL	Aqueous	
2306186-01	B RG-20516-5-12(BW-12) ☑	2306C46-001A	13-Jun-23 12:00 ☑	HDPE Bottle, 250 mL	Aqueous	
2306186-02	A RG-20516-5-11(BW-11) ☑	2306C46-002A	13-Jun-23 13:35 ☑	HDPE Bottle, 250 mL	Aqueous	
2306186-02	B RG-20516-5-11(BW-11) ☑	2306C46-002A	13-Jun-23 13:35 ☑	HDPE Bottle, 250 mL	Aqueous	
2306186-03	A RG-20516-5-10(BW-10) ☑	2306C46-003A	13-Jun-23 14:40 ☑	HDPE Bottle, 250 mL	Aqueous	
2306186-03	B RG-20516-5-10(BW-10) ☑	2306C46-003A	13-Jun-23 14:40 ☑	HDPE Bottle, 250 mL	Aqueous	
2306186-04	A BDD Intake ☑	2306C46-004A	13-Jun-23 15:15 ☑	HDPE Bottle, 250 mL	Aqueous	
2306186-04	B BDD Intake ☑	2306C46-004A	13-Jun-23 15:15 ☑	HDPE Bottle, 250 mL	Aqueous	
2306186-05	A BDD Finished Water ☑	2306C46-005A	13-Jun-23 13:30 ☑	HDPE Bottle, 250 mL	Aqueous	
2306186-05	B BDD Finished Water ☑	2306C46-005A	13-Jun-23 13:30 ☑	HDPE Bottle, 250 mL	Aqueous	

Checkmarks indicate that information on the COC reconciled with the sample label.
Any discrepancies are noted in the following columns.

	Yes	No	NA
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Adequate Sample Volume?	✓		
Container Type Appropriate for Analysis(es)	✓		

Comments: A) ESS trizma label

Preservation Documented: Na2S2O3 (Trizma A) NH4CH3CO2 None Other

Verifed by/Date: JCA 06/27/23
MLS 06/27/23

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: John Shomaker & Assoc. Work Order Number: 2306C46 RcptNo: 1

Received By: STEVEN McQUISTON 6/23/2023 10:03:00 AM
Completed By: Tracy Casarrubias 6/23/2023 10:43:43 AM
Reviewed By: JR 6-23-23

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: JR 6/23/23

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.9	Good	Not Present	Morty		

Chain-of-Custody Record

Client: John Shomaker + Associates, Inc.

Mailing Address: 2611 Broadbent Parkway NE
Albuquerque, NM 87107

Phone #: (505) 345-3407

email or Fax#: sfinch@shomaker.com

QA/QC Package: zweathers@shomaker.com

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☒ EDD (Type) Excel + PDF

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: COSF - PFAS Sampling

Project #:

Project Manager: Steve Finch

Sampler: ZW

On Ice: ☒ Yes ☐ No

# of Coolers: 1 MORIV

Cooler Temp(Including CF): 6.0 -0.1=5.9 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2306C46	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	524.2 537
6/13	12:00	aq	RG-20516-S-12 (BW-12)	2x250	Trizma	001											X
6/13	13:35	aq	RG-20516-S-11 (BW-11)	2x250	Trizma	002											X
6/13	14:40	aq	RG-20516-S-10 (BW-10)	2x250	Trizma	003											X
6/13	15:15	aq	BDD intake	2x250	Trizma	004											X
6/16	13:30	aq	BDD Finished Water	2x250	Trizma	005											X

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
6/23	10:03				6/23	10:03
6/23	10:23		SCM	CDO	06/23/23	1003

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.