

From: Garrity, Seth J <Seth_Garrity@oxy.com>
Sent: 5/8/2025 8:57:32 AM
To: "Borst, Grace (EGLE)" <BorstG1@michigan.gov>
Cc: "Oden, Rikki (EGLE)" <OdenR@michigan.gov>; "Aristizabal, Isabella (EGLE)" <Aristizaball@michigan.gov>; "Jones, Steven W" <Steven_W_Jones@oxy.com>; "Webb, Patrick J" <Patrick_Webb2@oxy.com>; "Parvez, Kairas K" <Kairas_Parvez@oxy.com>
Subject: Re: EGLE PFAS Sample Results - Occidental Chem Corp Sampling, March 19, 2025
Attachments: 25C1675.pdf

**CAUTION: This is an External email. Please send suspicious emails to
abuse@michigan.gov**

Hi Grace,

Thank you for sharing the results from your lab. We compared to our results and they match very well, especially given the sensitivity of the method. Please find attached our lab report. Let us know if you have any questions.

Thanks,

Seth Garrity

HES&S Superintendent

Office: 231.845.4423 | Mobile: 406.599.8744 | Ludington, MI

From: Borst, Grace (EGLE) <BorstG1@michigan.gov>
Sent: Thursday, May 1, 2025 2:31 PM
To: Garrity, Seth J <Seth_Garrity@oxy.com>
Cc: Oden, Rikki (EGLE) <OdenR@michigan.gov>; Aristizabal, Isabella (EGLE) <Aristizaball@michigan.gov>
Subject: [EXTERNAL] EGLE PFAS Sample Results - Occidental Chem Corp Sampling, March 19, 2025

**WARNING - This message is from an EXTERNAL SENDER - be
CAUTIOUS, particularly with links and attachments.**

Hello Seth,

Please see attached for the results from the PFAS sampling conducted on March 19, 2025, at the Occidental Chem Corp Facility. These results have been uploaded to the MiEnviro Portal. Please also see below for coordinates and descriptions of the sampling locations, for your convenience.

The samples beginning with "Mosq-" were collected at a different location within Ludington following the conclusion of the sampling at your facility.

Have you received results back from your split samples? If so, we would request that they be shared for review and comparison to the samples collected by EGLE.

Table 1. Updated sample locations at and around Occidental Chem Corp, March 19, 2025.

Site ID	Sample Type	Latitude	Longitude	PFAS Only	Sample Collection Notes
OcChem-OFSW-1	Regular Sample	43.9403	-86.4422	X	Outfall was submerged – collected a sample of the surface water by the outfall. Also collected lab QA/QC samples here.
OcChem-CS1	Regular Sample	43.9403	-86.4407	X	Sample collected from the facility's composite sampler shed
OcChem-CS1-FR	Field Replicate	43.9403	-86.4407	X	Field replicate from the facility's composite sampler shed
FB-AM	Field Blank	NA	NA	X	
OcChem-SW1	Regular Sample	43.9436	-86.4418	X	Surface water sample collected north of the discharge point
OcChem-SW2	Regular Sample	43.9391	-86.4386	X	Surface water sample near Occidental Chem Corp
OcChem-SW3	Regular Sample	43.9322	-86.4290	X	Surface water sample near the South Pond Lagoon System (<i>had to move sample southeast due to murky water/shoreline</i>)
OcChem-SW4	Regular Sample	43.9367	-86.4473	X	Surface water sample on the west side of the Pere Marquette Lake
OcChem-SW5	Regular Sample	43.9281	-86.4261	X	Outside of the South Pond Lagoon just south of the Polishing Cell
OcChem-SW6	Regular Sample	43.9351	-86.4245	X	Surface water sample east of the bridge over Pere Marquette River to the lagoon
OcChem-SW7	Regular Sample	43.9347	-86.4229	X	Unable to sample due to the tributary being dry
OcChem-Lag1	Regular Sample	43.9297	-86.4266	X	Lagoon wastewater sample collected from the Center Cell of the South Pond System. (<i>Moved location to the south of the Center Cell</i>)
OcChem-Lag2	Regular Sample	43.9283	-86.4254	X	Lagoon wastewater sample collected from the Polishing Cell of the South Pond Lagoon System
Mosq-SW1	Regular Sample	43.942	-86.404	X	Mosquito Creek on the North side of W 6 th St just to the east of the Ludington WWTP entrance
Mosq-SW2	Regular Sample	43.942	-86.399	X	Mosquito Creek at the northwest corner of W 6 th St and S Meyers Rd
Mosq-SW3	Regular Sample	43.935	-86.398	X	Mosquito Creek at the NE corner of S Meyer Rd and W Conrad Rd

Thank you!
Grace

Grace Borst
Emerging Pollutants Section
Water Resources Division
517-331-8647

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ATTACHMENT NAME:

25C1675.pdf

ATTACHMENT TYPE:

Adobe Portable Document Format (PDF) compound image

Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444-2673



231-773-5998 Phone
888-979-4469 Fax
www.trace-labs.com

April 04, 2025

John Juhala
Occidental Chemical
1600 S. Madison St.
Ludington, MI 49431

RE: Trace Project 25C1675
Client Project EGLE PFAS Split Samples

Enclosed are your analytical results. The results of this report relate only to the samples listed in the body of this report.

All reports were examined through Trace's validation process to ensure that requirements for quality and completeness were satisfied. All reported analytical results were obtained in accordance with the methods referenced on the reports. Every practical effort was made to meet the reporting limit specifications for this work, however, some results may have raised reporting limits to correct for percent solids.

The results were obtained from Fibertec Environmental Services.

If you have questions concerning this report, please contact me at 231.773.5998 or by email at tbrewer@trace-labs.com.

Sincerely,

A handwritten signature in black ink that reads "Timothy W. Brewer". The signature is written in a cursive style with a prominent initial "T".

Tim Brewer
Project Manager

Enclosures

Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444-2673



231-773-5998 Phone
888-979-4469 Fax
www.trace-labs.com

SAMPLE SUMMARY

Trace Project ID: 25C1675
Client Project ID: EGLE PFAS Split Samples

Trace ID	Sample ID	Matrix	Collected By	Date Collected	Date Received
25C1675-01	OcChem-SW1	Wastewater	SG	03/19/25	03/25/25 09:30
25C1675-02	OcChem-SW2	Wastewater	SG	03/19/25	03/25/25 09:30
25C1675-03	OcChem-SW3	Wastewater	SG	03/19/25	03/25/25 09:30
25C1675-04	OcChem-SW4	Wastewater	SG	03/19/25	03/25/25 09:30
25C1675-05	OcChem-SW5	Wastewater	SG	03/19/25	03/25/25 09:30
25C1675-06	OcChem-SW6	Wastewater	SG	03/19/25	03/25/25 09:30
25C1675-07	OcChem-Lag1	Wastewater	SG	03/19/25	03/25/25 09:30
25C1675-08	OcChem-Lag2	Wastewater	SG	03/19/25	03/25/25 09:30
25C1675-09	OcChem-CS1	Wastewater	SG	03/19/25	03/25/25 09:30
25C1675-10	OcChem-CFSW-1	Wastewater	SG	03/19/25	03/25/25 09:30



Metiri Group - Holt
1914 Holloway Dr, Holt, MI 48842 - Phone (517) 699-0345 - www.metirigroup.com

April 04, 2025

Tim Brewer
Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444

RE: Trace PFAS Master 25C1675
25C0368

Thank you for selecting Metiri Group - Holt as your analytical laboratory. The samples submitted have been analyzed in accordance with all method and NELAC standards, as applicable. Any exceptions to compliance are noted in the report.

Please note that TO-15 samples will be disposed of 7 calendar days after the reporting date. All other samples will be disposed of 30 days after the reporting date.

If you have any questions regarding these results, or if we may be of further assistance to you, please contact us at (517) 699-0345.

Sincerely,

A handwritten signature in black ink, appearing to read 'Julia Hicks', written over a light blue horizontal line.

Julia Hicks
Project Manager

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Trace Analytical Laboratories, Inc.
 2241 Black Creek Road
 Muskegon, MI 49444

Project: Trace PFAS Master
 Project Number: 25C1675
 Project Manager: Tim Brewer

Reported: 04/04/2025 15:10

Samples in this Report

Lab ID	Sample	Matrix	Date Sampled	Date Received
25C0368-01	OcChem-SW1 25C1675-01	Wastewater	03/19/2025 00:00	03/27/2025
25C0368-02	OcChem-SW2 25C1675-02	Wastewater	03/19/2025 00:00	03/27/2025
25C0368-03	OcChem-SW3 25C1675-03	Wastewater	03/19/2025 00:00	03/27/2025
25C0368-04	OcChem-SW4 25C1675-04	Wastewater	03/19/2025 00:00	03/27/2025
25C0368-05	OcChem-SW5 25C1675-05	Wastewater	03/19/2025 00:00	03/27/2025
25C0368-06	OcChem-SW6 25C1675-06	Wastewater	03/19/2025 00:00	03/27/2025
25C0368-07	OcChem-Lag1 25C1675-07	Wastewater	03/19/2025 00:00	03/27/2025
25C0368-08	OcChem-Lag2 25C1675-08	Wastewater	03/19/2025 00:00	03/27/2025
25C0368-09	OcChem-CS1 25C1675-09	Wastewater	03/19/2025 00:00	03/27/2025
25C0368-10	OcChem-CFSW-1 25C1675-010	Wastewater	03/19/2025 00:00	03/27/2025

Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444

Project: Trace PFAS Master
Project Number: 25C1675
Project Manager: Tim Brewer

Reported: 04/04/2025 15:10

Sample Results

**Sample: OcChem-SW1 25C1675-01
25C0368-01 (Wastewater)**

Analyte	Result/Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch	
Per- and Polyfluoroalkyl Substances (EPA 1633)								
1	PFBA	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
2	PFPeA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606
3	PFHxA	1.2	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
4	PFHpA	1.1	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
5	PFOA	5.9	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
6	PFNA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
7	PFDA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
8	PFUnA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
9	PFDoA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
10	PFTTrDA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
11	PFTeDA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
12	PFBS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
13	PFPeS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
14	PFHxS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
15	PFHpS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
16	PFOS	6.1	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
17	PFNS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
18	PFDS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
19	PFDoS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
20	4:2FTS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
21	6:2FTS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
22	8:2FTS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
23	PFOSA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
24	NMeFOSA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
25	NEtFOSA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
26	NMeFOSAA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
27	NEtFOSAA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
28	NMeFOSE	ND	6.9	ng/L	03/29/25	1	EPA 1633	BEC0606
29	NEtFOSE	ND	6.9	ng/L	03/29/25	1	EPA 1633	BEC0606
30	HFPO-DA	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
31	ADONA	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
32	PFEESA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606

*The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.
No duplication of this report is allowed, except in its entirety.*

Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444

Project: Trace PFAS Master
Project Number: 25C1675
Project Manager: Tim Brewer

Reported: 04/04/2025 15:10

Sample Results (Continued)

Sample: OcChem-SW1 25C1675-01 (Continued) 25C0368-01 (Wastewater)

Analyte	Result/Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch			
Per- and Polyfluoroalkyl Substances (EPA 1633) (Continued)										
33	PFMPA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606		
34	PFMBA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606		
35	NFDHA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606		
36	9CI-PF3ONS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606		
37	11CI-PF3OUDS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606		
38	3:3FTCA	ND	3.4	ng/L	03/29/25	1	EPA 1633	BEC0606		
39	5:3FTCA	ND	17	ng/L	03/29/25	1	EPA 1633	BEC0606		
40	7:3FTCA	ND	17	ng/L	03/29/25	1	EPA 1633	BEC0606		
‡	41	PFOS (Estimated Linear)	2.3	J	0.52	ng/L	03/29/25	1	EPA 1633	BEC0606
‡	42	PFOS (Estimated Branched)	3.7	J	0.17	ng/L	03/29/25	1	EPA 1633	BEC0606
‡	43	PFHxS (Estimated Linear)	ND		0.52	ng/L	03/29/25	1	EPA 1633	BEC0606
‡	44	PFHxS (Estimated Branched)	ND		0.17	ng/L	03/29/25	1	EPA 1633	BEC0606

<i>Extracted Internal Standards (EIS): 13C4-PFBA</i>	99%	5-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C5-PFPEA</i>	99%	40-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C5-PFHXA</i>	94%	40-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C4-PFHFA</i>	98%	40-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C8-PFOA</i>	95%	40-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C9-PFNA</i>	94%	40-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C6-PFDA</i>	95%	40-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C7-PFUnA</i>	90%	30-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C2-PFDOA</i>	92%	10-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C2-PFTEDA</i>	70%	10-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C3-PFBS</i>	93%	40-135	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C3-PFHXS</i>	98%	40-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C8-PFOS</i>	82%	40-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C2-4:2FTS</i>	125%	40-200	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C2-6:2FTS</i>	107%	40-200	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C2-8:2FTS</i>	93%	40-300	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C8-PFOA</i>	93%	40-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): D3-NMEFOA</i>	62%	10-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): D5-NETFOA</i>	56%	10-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): D3-NMEFOSAA</i>	89%	40-170	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): D5-NETFOSAA</i>	86%	25-135	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): D7-NMEFOSE</i>	69%	10-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): D9-NETFOSE</i>	67%	10-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C3-HFPO-DA</i>	93%	40-130	03/29/25	1	EPA 1633

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Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444

Project: Trace PFAS Master
Project Number: 25C1675
Project Manager: Tim Brewer

Reported: 04/04/2025 15:10

Sample Results (Continued)

**Sample: OcChem-SW2 25C1675-02
25C0368-02 (Wastewater)**

Analyte	Result/Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch	
Per- and Polyfluoroalkyl Substances (EPA 1633)								
1	PFBA	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
2	PFPeA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606
3	PFHxA	1.3	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
4	PFHpA	1.1	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
5	PFOA	5.9	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
6	PFNA	0.74	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
7	PFDA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
8	PFUnA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
9	PFDoA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
10	PFTTrDA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
11	PFTeDA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
12	PFBS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
13	PFPeS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
14	PFHxS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
15	PFHpS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
16	PFOS	6.5	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
17	PFNS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
18	PFDS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
19	PFDoS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
20	4:2FTS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
21	6:2FTS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
22	8:2FTS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
23	PFOSA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
24	NMeFOSA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
25	NEtFOSA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
26	NMeFOSAA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
27	NEtFOSAA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
28	NMeFOSE	ND	6.9	ng/L	03/29/25	1	EPA 1633	BEC0606
29	NEtFOSE	ND	6.9	ng/L	03/29/25	1	EPA 1633	BEC0606
30	HFPO-DA	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
31	ADONA	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
32	PFEESA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606

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No duplication of this report is allowed, except in its entirety.*

Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444

Project: Trace PFAS Master
Project Number: 25C1675
Project Manager: Tim Brewer

Reported: 04/04/2025 15:10

Sample Results (Continued)

Sample: OcChem-SW2 25C1675-02 (Continued) 25C0368-02 (Wastewater)

Analyte	Result/Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch			
Per- and Polyfluoroalkyl Substances (EPA 1633) (Continued)										
33	PFMPA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606		
34	PFMBA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606		
35	NFDHA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606		
36	9CI-PF3ONS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606		
37	11CI-PF3OUDS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606		
38	3:3FTCA	ND	3.4	ng/L	03/29/25	1	EPA 1633	BEC0606		
39	5:3FTCA	ND	17	ng/L	03/29/25	1	EPA 1633	BEC0606		
40	7:3FTCA	ND	17	ng/L	03/29/25	1	EPA 1633	BEC0606		
‡	41	PFOS (Estimated Linear)	2.8	J	0.52	ng/L	03/29/25	1	EPA 1633	BEC0606
‡	42	PFOS (Estimated Branched)	3.8	J	0.17	ng/L	03/29/25	1	EPA 1633	BEC0606
‡	43	PFHxS (Estimated Linear)	ND		0.52	ng/L	03/29/25	1	EPA 1633	BEC0606
‡	44	PFHxS (Estimated Branched)	ND		0.17	ng/L	03/29/25	1	EPA 1633	BEC0606

<i>Extracted Internal Standards (EIS): 13C4-PFBA</i>	<i>103%</i>	<i>5-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C5-PFPEA</i>	<i>97%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C5-PFHXA</i>	<i>91%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C4-PFHFA</i>	<i>96%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C8-PFOA</i>	<i>98%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C9-PFNA</i>	<i>102%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C6-PFDA</i>	<i>90%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C7-PFUnA</i>	<i>92%</i>	<i>30-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-PFDOA</i>	<i>88%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-PFTEDA</i>	<i>68%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C3-PFBS</i>	<i>100%</i>	<i>40-135</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C3-PFHXS</i>	<i>101%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C8-PFOS</i>	<i>86%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-4:2FTS</i>	<i>117%</i>	<i>40-200</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-6:2FTS</i>	<i>110%</i>	<i>40-200</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-8:2FTS</i>	<i>102%</i>	<i>40-300</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C8-PFOA</i>	<i>89%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D3-NMEFOA</i>	<i>70%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D5-NETFOA</i>	<i>70%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D3-NMEFOSAA</i>	<i>88%</i>	<i>40-170</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D5-NETFOSAA</i>	<i>92%</i>	<i>25-135</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D7-NMEFOSE</i>	<i>74%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D9-NETFOSE</i>	<i>74%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C3-HFPO-DA</i>	<i>95%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>

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Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444

Project: Trace PFAS Master
Project Number: 25C1675
Project Manager: Tim Brewer

Reported: 04/04/2025 15:10

Sample Results (Continued)

**Sample: OcChem-SW3 25C1675-03
25C0368-03 (Wastewater)**

Analyte	Result/Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch	
Per- and Polyfluoroalkyl Substances (EPA 1633)								
1	PFBA	3.0	2.9	ng/L	03/29/25	1	EPA 1633	BEC0606
2	PFPeA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606
3	PFHxA	0.90	0.71	ng/L	03/29/25	1	EPA 1633	BEC0606
4	PFHpA	0.74	0.71	ng/L	03/29/25	1	EPA 1633	BEC0606
5	PFOA	3.9	0.71	ng/L	03/29/25	1	EPA 1633	BEC0606
6	PFNA	0.99	0.71	ng/L	03/29/25	1	EPA 1633	BEC0606
7	PFDA	ND	0.71	ng/L	03/29/25	1	EPA 1633	BEC0606
8	PFUnA	ND	0.71	ng/L	03/29/25	1	EPA 1633	BEC0606
9	PFDoA	ND	0.71	ng/L	03/29/25	1	EPA 1633	BEC0606
10	PFTTrDA	ND	0.71	ng/L	03/29/25	1	EPA 1633	BEC0606
11	PFTeDA	ND	0.71	ng/L	03/29/25	1	EPA 1633	BEC0606
12	PFBS	ND	0.71	ng/L	03/29/25	1	EPA 1633	BEC0606
13	PFPeS	ND	0.71	ng/L	03/29/25	1	EPA 1633	BEC0606
14	PFHxS	ND	0.71	ng/L	03/29/25	1	EPA 1633	BEC0606
15	PFHpS	ND	0.71	ng/L	03/29/25	1	EPA 1633	BEC0606
16	PFOS	11	0.71	ng/L	03/29/25	1	EPA 1633	BEC0606
17	PFNS	ND	0.71	ng/L	03/29/25	1	EPA 1633	BEC0606
18	PFDS	ND	0.71	ng/L	03/29/25	1	EPA 1633	BEC0606
19	PFDoS	ND	0.71	ng/L	03/29/25	1	EPA 1633	BEC0606
20	4:2FTS	ND	2.9	ng/L	03/29/25	1	EPA 1633	BEC0606
21	6:2FTS	ND	2.9	ng/L	03/29/25	1	EPA 1633	BEC0606
22	8:2FTS	ND	2.9	ng/L	03/29/25	1	EPA 1633	BEC0606
23	PFOSA	ND	0.71	ng/L	03/29/25	1	EPA 1633	BEC0606
24	NMeFOSA	ND	0.71	ng/L	03/29/25	1	EPA 1633	BEC0606
25	NEtFOSA	ND	0.71	ng/L	03/29/25	1	EPA 1633	BEC0606
26	NMeFOSAA	ND	0.71	ng/L	03/29/25	1	EPA 1633	BEC0606
27	NEtFOSAA	ND	0.71	ng/L	03/29/25	1	EPA 1633	BEC0606
28	NMeFOSE	ND	7.1	ng/L	03/29/25	1	EPA 1633	BEC0606
29	NEtFOSE	ND	7.1	ng/L	03/29/25	1	EPA 1633	BEC0606
30	HFPO-DA	ND	2.9	ng/L	03/29/25	1	EPA 1633	BEC0606
31	ADONA	ND	2.9	ng/L	03/29/25	1	EPA 1633	BEC0606
32	PFEESA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606

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Muskegon, MI 49444

Project: Trace PFAS Master
Project Number: 25C1675
Project Manager: Tim Brewer

Reported: 04/04/2025 15:10

Sample Results (Continued)

Sample: OcChem-SW3 25C1675-03 (Continued) 25C0368-03 (Wastewater)

Analyte	Result /Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch			
Per- and Polyfluoroalkyl Substances (EPA 1633) (Continued)										
33	PFMPA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606		
34	PFMBA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606		
35	NFDHA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606		
36	9CI-PF3ONS	ND	2.9	ng/L	03/29/25	1	EPA 1633	BEC0606		
37	11CI-PF3OUDS	ND	2.9	ng/L	03/29/25	1	EPA 1633	BEC0606		
38	3:3FTCA	ND	3.6	ng/L	03/29/25	1	EPA 1633	BEC0606		
39	5:3FTCA	ND	18	ng/L	03/29/25	1	EPA 1633	BEC0606		
40	7:3FTCA	ND	18	ng/L	03/29/25	1	EPA 1633	BEC0606		
‡	41	PFOS (Estimated Linear)	5.5	J	0.54	ng/L	03/29/25	1	EPA 1633	BEC0606
‡	42	PFOS (Estimated Branched)	5.5	J	0.18	ng/L	03/29/25	1	EPA 1633	BEC0606
‡	43	PFHxS (Estimated Linear)	ND		0.54	ng/L	03/29/25	1	EPA 1633	BEC0606
‡	44	PFHxS (Estimated Branched)	ND		0.18	ng/L	03/29/25	1	EPA 1633	BEC0606

<i>Extracted Internal Standards (EIS): 13C4-PFBA</i>	<i>87%</i>	<i>5-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C5-PFPEA</i>	<i>78%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C5-PFHXA</i>	<i>75%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C4-PFHFA</i>	<i>70%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C8-PFOA</i>	<i>73%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C9-PFNA</i>	<i>71%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C6-PFDA</i>	<i>71%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C7-PFUnA</i>	<i>72%</i>	<i>30-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-PFDOA</i>	<i>62%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-PFTEDA</i>	<i>38%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C3-PFBS</i>	<i>66%</i>	<i>40-135</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C3-PFHXS</i>	<i>60%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C8-PFOS</i>	<i>58%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-4:2FTS</i>	<i>83%</i>	<i>40-200</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-6:2FTS</i>	<i>70%</i>	<i>40-200</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-8:2FTS</i>	<i>72%</i>	<i>40-300</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C8-PFOA</i>	<i>70%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D3-NMEFOA</i>	<i>26%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D5-NETFOA</i>	<i>20%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D3-NMEFOSAA</i>	<i>57%</i>	<i>40-170</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D5-NETFOSAA</i>	<i>63%</i>	<i>25-135</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D7-NMEFOSE</i>	<i>49%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D9-NETFOSE</i>	<i>44%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C3-HFPO-DA</i>	<i>76%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>

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Muskegon, MI 49444

Project: Trace PFAS Master
Project Number: 25C1675
Project Manager: Tim Brewer

Reported: 04/04/2025 15:10

Sample Results (Continued)

**Sample: OcChem-SW4 25C1675-04
25C0368-04 (Wastewater)**

Analyte	Result/Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch	
Per- and Polyfluoroalkyl Substances (EPA 1633)								
1	PFBA	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
2	PFPeA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606
3	PFHxA	1.4	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
4	PFHpA	1.2	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
5	PFOA	6.2	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
6	PFNA	0.76	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
7	PFDA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
8	PFUnA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
9	PFDoA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
10	PFTTrDA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
11	PFTeDA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
12	PFBS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
13	PFPeS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
14	PFHxS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
15	PFHpS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
16	PFOS	8.1	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
17	PFNS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
18	PFDS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
19	PFDoS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
20	4:2FTS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
21	6:2FTS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
22	8:2FTS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
23	PFOSA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
24	NMeFOSA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
25	NEtFOSA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
26	NMeFOSAA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
27	NEtFOSAA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
28	NMeFOSE	ND	6.9	ng/L	03/29/25	1	EPA 1633	BEC0606
29	NEtFOSE	ND	6.9	ng/L	03/29/25	1	EPA 1633	BEC0606
30	HFPO-DA	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
31	ADONA	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
32	PFEESA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606

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Muskegon, MI 49444

Project: Trace PFAS Master
Project Number: 25C1675
Project Manager: Tim Brewer

Reported: 04/04/2025 15:10

Sample Results (Continued)

Sample: OcChem-SW4 25C1675-04 (Continued) 25C0368-04 (Wastewater)

Analyte	Result/Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch			
Per- and Polyfluoroalkyl Substances (EPA 1633) (Continued)										
33	PFMPA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606		
34	PFMBA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606		
35	NFDHA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606		
36	9CI-PF3ONS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606		
37	11CI-PF3OUDS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606		
38	3:3FTCA	ND	3.4	ng/L	03/29/25	1	EPA 1633	BEC0606		
39	5:3FTCA	ND	17	ng/L	03/29/25	1	EPA 1633	BEC0606		
40	7:3FTCA	ND	17	ng/L	03/29/25	1	EPA 1633	BEC0606		
‡	41	PFOS (Estimated Linear)	3.4	J	0.52	ng/L	03/29/25	1	EPA 1633	BEC0606
‡	42	PFOS (Estimated Branched)	4.7	J	0.17	ng/L	03/29/25	1	EPA 1633	BEC0606
‡	43	PFHxS (Estimated Linear)	ND		0.52	ng/L	03/29/25	1	EPA 1633	BEC0606
‡	44	PFHxS (Estimated Branched)	ND		0.17	ng/L	03/29/25	1	EPA 1633	BEC0606

<i>Extracted Internal Standards (EIS): 13C4-PFBA</i>	101%	5-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C5-PFPEA</i>	93%	40-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C5-PFHXA</i>	94%	40-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C4-PFHFA</i>	98%	40-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C8-PFOA</i>	103%	40-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C9-PFNA</i>	98%	40-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C6-PFDA</i>	87%	40-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C7-PFUnA</i>	90%	30-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C2-PFDOA</i>	87%	10-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C2-PFTEDA</i>	67%	10-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C3-PFBS</i>	92%	40-135	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C3-PFHXS</i>	82%	40-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C8-PFOS</i>	93%	40-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C2-4:2FTS</i>	121%	40-200	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C2-6:2FTS</i>	98%	40-200	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C2-8:2FTS</i>	91%	40-300	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C8-PFOA</i>	90%	40-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): D3-NMEFOA</i>	66%	10-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): D5-NETFOA</i>	65%	10-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): D3-NMEFOSAA</i>	91%	40-170	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): D5-NETFOSAA</i>	91%	25-135	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): D7-NMEFOSE</i>	71%	10-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): D9-NETFOSE</i>	70%	10-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C3-HFO-DA</i>	90%	40-130	03/29/25	1	EPA 1633

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Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444

Project: Trace PFAS Master
Project Number: 25C1675
Project Manager: Tim Brewer

Reported: 04/04/2025 15:10

Sample Results (Continued)

**Sample: OcChem-SW5 25C1675-05
25C0368-05 (Wastewater)**

Analyte	Result/Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch	
Per- and Polyfluoroalkyl Substances (EPA 1633)								
1	PFBA	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
2	PFPeA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606
3	PFHxA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
4	PFHpA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
5	PFOA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
6	PFNA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
7	PFDA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
8	PFUnA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
9	PFDoA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
10	PFTTrDA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
11	PFTeDA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
12	PFBS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
13	PFPeS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
14	PFHxS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
15	PFHpS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
16	PFOS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
17	PFNS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
18	PFDS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
19	PFDoS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
20	4:2FTS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
21	6:2FTS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
22	8:2FTS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
23	PFOSA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
24	NMeFOSA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
25	NEtFOSA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
26	NMeFOSAA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
27	NEtFOSAA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
28	NMeFOSE	ND	6.9	ng/L	03/29/25	1	EPA 1633	BEC0606
29	NEtFOSE	ND	6.9	ng/L	03/29/25	1	EPA 1633	BEC0606
30	HFPO-DA	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
31	ADONA	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
32	PFEESA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606

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Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444

Project: Trace PFAS Master
Project Number: 25C1675
Project Manager: Tim Brewer

Reported: 04/04/2025 15:10

Sample Results (Continued)

Sample: OcChem-SW5 25C1675-05 (Continued) 25C0368-05 (Wastewater)

Analyte	Result/Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch		
Per- and Polyfluoroalkyl Substances (EPA 1633) (Continued)									
33	PFMPA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606	
34	PFMBA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606	
35	NFDHA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606	
36	9CI-PF3ONS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606	
37	11CI-PF3OUDS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606	
38	3:3FTCA	ND	3.4	ng/L	03/29/25	1	EPA 1633	BEC0606	
39	5:3FTCA	ND	17	ng/L	03/29/25	1	EPA 1633	BEC0606	
40	7:3FTCA	ND	17	ng/L	03/29/25	1	EPA 1633	BEC0606	
‡	41	PFOS (Estimated Linear)	ND	0.52	ng/L	03/29/25	1	EPA 1633	BEC0606
‡	42	PFOS (Estimated Branched)	ND	0.17	ng/L	03/29/25	1	EPA 1633	BEC0606
‡	43	PFHxS (Estimated Linear)	ND	0.52	ng/L	03/29/25	1	EPA 1633	BEC0606
‡	44	PFHxS (Estimated Branched)	ND	0.17	ng/L	03/29/25	1	EPA 1633	BEC0606

<i>Extracted Internal Standards (EIS): 13C4-PFBA</i>	<i>101%</i>	<i>5-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C5-PFPEA</i>	<i>105%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C5-PFHXA</i>	<i>100%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C4-PFHFA</i>	<i>101%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C8-PFOA</i>	<i>98%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C9-PFNA</i>	<i>89%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C6-PFDA</i>	<i>98%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C7-PFUnA</i>	<i>109%</i>	<i>30-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-PFDOA</i>	<i>92%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-PFTEDA</i>	<i>53%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C3-PFBS</i>	<i>102%</i>	<i>40-135</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C3-PFHXS</i>	<i>97%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C8-PFOS</i>	<i>92%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-4:2FTS</i>	<i>130%</i>	<i>40-200</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-6:2FTS</i>	<i>109%</i>	<i>40-200</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-8:2FTS</i>	<i>100%</i>	<i>40-300</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C8-PFOA</i>	<i>88%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D3-NMEFOA</i>	<i>64%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D5-NETFOA</i>	<i>61%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D3-NMEFOSAA</i>	<i>95%</i>	<i>40-170</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D5-NETFOSAA</i>	<i>94%</i>	<i>25-135</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D7-NMEFOSE</i>	<i>66%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D9-NETFOSE</i>	<i>68%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C3-HFO-DA</i>	<i>99%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>

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Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444

Project: Trace PFAS Master
Project Number: 25C1675
Project Manager: Tim Brewer

Reported: 04/04/2025 15:10

Sample Results (Continued)

**Sample: OcChem-SW6 25C1675-06
25C0368-06 (Wastewater)**

Analyte	Result/Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch	
Per- and Polyfluoroalkyl Substances (EPA 1633)								
1	PFBA	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
2	PFPeA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606
3	PFHxA	1.1	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
4	PFHpA	0.95	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
5	PFOA	5.5	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
6	PFNA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
7	PFDA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
8	PFUnA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
9	PFDoA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
10	PFTTrDA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
11	PFTeDA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
12	PFBS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
13	PFPeS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
14	PFHxS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
15	PFHpS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
16	PFOS	6.5	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
17	PFNS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
18	PFDS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
19	PFDoS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
20	4:2FTS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
21	6:2FTS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
22	8:2FTS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
23	PFOSA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
24	NMeFOSA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
25	NEtFOSA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
26	NMeFOSAA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
27	NEtFOSAA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
28	NMeFOSE	ND	6.9	ng/L	03/29/25	1	EPA 1633	BEC0606
29	NEtFOSE	ND	6.9	ng/L	03/29/25	1	EPA 1633	BEC0606
30	HFPO-DA	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
31	ADONA	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
32	PFEESA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606

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Muskegon, MI 49444

Project: Trace PFAS Master
Project Number: 25C1675
Project Manager: Tim Brewer

Reported: 04/04/2025 15:10

Sample Results (Continued)

Sample: OcChem-SW6 25C1675-06 (Continued) 25C0368-06 (Wastewater)

Analyte	Result/Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch		
Per- and Polyfluoroalkyl Substances (EPA 1633) (Continued)									
33	PFMPA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606	
34	PFMBA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606	
35	NFDHA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606	
36	9CI-PF3ONS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606	
37	11CI-PF3OUDS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606	
38	3:3FTCA	ND	3.4	ng/L	03/29/25	1	EPA 1633	BEC0606	
39	5:3FTCA	ND	17	ng/L	03/29/25	1	EPA 1633	BEC0606	
40	7:3FTCA	ND	17	ng/L	03/29/25	1	EPA 1633	BEC0606	
‡	41	PFOS (Estimated Linear)	2.7 J	0.52	ng/L	03/29/25	1	EPA 1633	BEC0606
‡	42	PFOS (Estimated Branched)	3.8 J	0.17	ng/L	03/29/25	1	EPA 1633	BEC0606
‡	43	PFHxS (Estimated Linear)	ND	0.52	ng/L	03/29/25	1	EPA 1633	BEC0606
‡	44	PFHxS (Estimated Branched)	ND	0.17	ng/L	03/29/25	1	EPA 1633	BEC0606

<i>Extracted Internal Standards (EIS): 13C4-PFBA</i>	<i>95%</i>	<i>5-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C5-PFPEA</i>	<i>93%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C5-PFHXA</i>	<i>89%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C4-PFHFA</i>	<i>87%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C8-PFOA</i>	<i>87%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C9-PFNA</i>	<i>90%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C6-PFDA</i>	<i>91%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C7-PFUnA</i>	<i>95%</i>	<i>30-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-PFDOA</i>	<i>91%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-PFTEDA</i>	<i>72%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C3-PFBS</i>	<i>100%</i>	<i>40-135</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C3-PFHXS</i>	<i>91%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C8-PFOS</i>	<i>90%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-4:2FTS</i>	<i>123%</i>	<i>40-200</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-6:2FTS</i>	<i>107%</i>	<i>40-200</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-8:2FTS</i>	<i>98%</i>	<i>40-300</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C8-PFOA</i>	<i>91%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D3-NMEFOA</i>	<i>60%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D5-NETFOA</i>	<i>57%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D3-NMEFOSAA</i>	<i>92%</i>	<i>40-170</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D5-NETFOSAA</i>	<i>91%</i>	<i>25-135</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D7-NMEFOSE</i>	<i>65%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D9-NETFOSE</i>	<i>64%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C3-HFPO-DA</i>	<i>87%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>

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Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444

Project: Trace PFAS Master
Project Number: 25C1675
Project Manager: Tim Brewer

Reported: 04/04/2025 15:10

Sample Results (Continued)

**Sample: OcChem-Lag1 25C1675-07
25C0368-07 (Wastewater)**

Analyte	Result/Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch	
Per- and Polyfluoroalkyl Substances (EPA 1633)								
1	PFBA	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
2	PFPeA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606
3	PFHxA	0.75	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
4	PFHpA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
5	PFOA	2.9	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
6	PFNA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
7	PFDA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
8	PFUnA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
9	PFDoA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
10	PFTTrDA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
11	PFTeDA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
12	PFBS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
13	PFPeS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
14	PFHxS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
15	PFHpS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
16	PFOS	2.5	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
17	PFNS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
18	PFDS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
19	PFDoS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
20	4:2FTS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
21	6:2FTS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
22	8:2FTS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
23	PFOSA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
24	NMeFOSA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
25	NEtFOSA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
26	NMeFOSAA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
27	NEtFOSAA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
28	NMeFOSE	ND	6.9	ng/L	03/29/25	1	EPA 1633	BEC0606
29	NEtFOSE	ND	6.9	ng/L	03/29/25	1	EPA 1633	BEC0606
30	HFPO-DA	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
31	ADONA	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
32	PFEESA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606

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Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444

Project: Trace PFAS Master
Project Number: 25C1675
Project Manager: Tim Brewer

Reported: 04/04/2025 15:10

Sample Results (Continued)

Sample: OcChem-Lag1 25C1675-07 (Continued) 25C0368-07 (Wastewater)

Analyte	Result /Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch			
Per- and Polyfluoroalkyl Substances (EPA 1633) (Continued)										
33	PFMPA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606		
34	PFMBA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606		
35	NFDHA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606		
36	9CI-PF3ONS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606		
37	11CI-PF3OUDS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606		
38	3:3FTCA	ND	3.4	ng/L	03/29/25	1	EPA 1633	BEC0606		
39	5:3FTCA	ND	17	ng/L	03/29/25	1	EPA 1633	BEC0606		
40	7:3FTCA	ND	17	ng/L	03/29/25	1	EPA 1633	BEC0606		
‡	41	PFOS (Estimated Linear)	1.2	J	0.52	ng/L	03/29/25	1	EPA 1633	BEC0606
‡	42	PFOS (Estimated Branched)	1.3	J	0.17	ng/L	03/29/25	1	EPA 1633	BEC0606
‡	43	PFHxS (Estimated Linear)	ND		0.52	ng/L	03/29/25	1	EPA 1633	BEC0606
‡	44	PFHxS (Estimated Branched)	ND		0.17	ng/L	03/29/25	1	EPA 1633	BEC0606

<i>Extracted Internal Standards (EIS): 13C4-PFBA</i>	<i>100%</i>	<i>5-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C5-PFPEA</i>	<i>105%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C5-PFHXA</i>	<i>101%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C4-PFHFA</i>	<i>97%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C8-PFOA</i>	<i>96%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C9-PFNA</i>	<i>97%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C6-PFDA</i>	<i>93%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C7-PFUnA</i>	<i>101%</i>	<i>30-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-PFDOA</i>	<i>93%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-PFTEDA</i>	<i>78%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C3-PFBS</i>	<i>95%</i>	<i>40-135</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C3-PFHXS</i>	<i>93%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C8-PFOS</i>	<i>94%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-4:2FTS</i>	<i>102%</i>	<i>40-200</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-6:2FTS</i>	<i>99%</i>	<i>40-200</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-8:2FTS</i>	<i>93%</i>	<i>40-300</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C8-PFOA</i>	<i>93%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D3-NMEFOA</i>	<i>65%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D5-NETFOA</i>	<i>59%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D3-NMEFOSAA</i>	<i>92%</i>	<i>40-170</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D5-NETFOSAA</i>	<i>97%</i>	<i>25-135</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D7-NMEFOSE</i>	<i>64%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D9-NETFOSE</i>	<i>65%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C3-HFO-DA</i>	<i>102%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>

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Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444

Project: Trace PFAS Master
Project Number: 25C1675
Project Manager: Tim Brewer

Reported: 04/04/2025 15:10

Sample Results (Continued)

**Sample: OcChem-Lag2 25C1675-08
25C0368-08 (Wastewater)**

Analyte	Result/Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch	
Per- and Polyfluoroalkyl Substances (EPA 1633)								
1	PFBA	3.8	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
2	PFPeA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606
3	PFHxA	0.86	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
4	PFHpA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
5	PFOA	1.3	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
6	PFNA	0.76	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
7	PFDA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
8	PFUnA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
9	PFDoA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
10	PFTTrDA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
11	PFTeDA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
12	PFBS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
13	PFPeS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
14	PFHxS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
15	PFHpS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
16	PFOS	1.5	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
17	PFNS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
18	PFDS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
19	PFDoS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
20	4:2FTS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
21	6:2FTS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
22	8:2FTS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
23	PFOSA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
24	NMeFOSA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
25	NEtFOSA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
26	NMeFOSAA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
27	NEtFOSAA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
28	NMeFOSE	ND	6.9	ng/L	03/29/25	1	EPA 1633	BEC0606
29	NEtFOSE	ND	6.9	ng/L	03/29/25	1	EPA 1633	BEC0606
30	HFPO-DA	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
31	ADONA	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
32	PFEESA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606

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2241 Black Creek Road
Muskegon, MI 49444

Project: Trace PFAS Master
Project Number: 25C1675
Project Manager: Tim Brewer

Reported: 04/04/2025 15:10

Sample Results (Continued)

Sample: OcChem-Lag2 25C1675-08 (Continued) 25C0368-08 (Wastewater)

Analyte	Result /Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch			
Per- and Polyfluoroalkyl Substances (EPA 1633) (Continued)										
33	PFMPA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606		
34	PFMBA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606		
35	NFDHA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606		
36	9CI-PF3ONS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606		
37	11CI-PF3OUDS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606		
38	3:3FTCA	ND	3.4	ng/L	03/29/25	1	EPA 1633	BEC0606		
39	5:3FTCA	ND	17	ng/L	03/29/25	1	EPA 1633	BEC0606		
40	7:3FTCA	ND	17	ng/L	03/29/25	1	EPA 1633	BEC0606		
‡	41	PFOS (Estimated Linear)	0.54	J	0.52	ng/L	03/29/25	1	EPA 1633	BEC0606
‡	42	PFOS (Estimated Branched)	0.99	J	0.17	ng/L	03/29/25	1	EPA 1633	BEC0606
‡	43	PFHxS (Estimated Linear)	ND		0.52	ng/L	03/29/25	1	EPA 1633	BEC0606
‡	44	PFHxS (Estimated Branched)	ND		0.17	ng/L	03/29/25	1	EPA 1633	BEC0606

<i>Extracted Internal Standards (EIS): 13C4-PFBA</i>	<i>104%</i>	<i>5-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C5-PFPEA</i>	<i>98%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C5-PFHXA</i>	<i>93%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C4-PFHFA</i>	<i>99%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C8-PFOA</i>	<i>103%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C9-PFNA</i>	<i>93%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C6-PFDA</i>	<i>92%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C7-PFUnA</i>	<i>92%</i>	<i>30-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-PFDOA</i>	<i>84%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-PFTEDA</i>	<i>64%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C3-PFBS</i>	<i>104%</i>	<i>40-135</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C3-PFHXS</i>	<i>98%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C8-PFOS</i>	<i>92%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-4:2FTS</i>	<i>115%</i>	<i>40-200</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-6:2FTS</i>	<i>105%</i>	<i>40-200</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-8:2FTS</i>	<i>92%</i>	<i>40-300</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C8-PFOA</i>	<i>91%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D3-NMEFOA</i>	<i>61%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D5-NETFOA</i>	<i>62%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D3-NMEFOSAA</i>	<i>95%</i>	<i>40-170</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D5-NETFOSAA</i>	<i>99%</i>	<i>25-135</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D7-NMEFOSE</i>	<i>70%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D9-NETFOSE</i>	<i>71%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C3-HFPO-DA</i>	<i>93%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>

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Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444

Project: Trace PFAS Master
Project Number: 25C1675
Project Manager: Tim Brewer

Reported: 04/04/2025 15:10

Sample Results (Continued)

**Sample: OcChem-CS1 25C1675-09
25C0368-09 (Wastewater)**

Analyte	Result/Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch	
Per- and Polyfluoroalkyl Substances (EPA 1633)								
1	PFBA	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
2	PFPeA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606
3	PFHxA	1.2	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
4	PFHpA	1.1	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
5	PFOA	5.9	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
6	PFNA	0.73	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
7	PFDA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
8	PFUnA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
9	PFDoA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
10	PFTTrDA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
11	PFTeDA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
12	PFBS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
13	PFPeS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
14	PFHxS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
15	PFHpS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
16	PFOS	8.6	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
17	PFNS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
18	PFDS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
19	PFDoS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
20	4:2FTS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
21	6:2FTS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
22	8:2FTS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
23	PFOSA	1.3	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
24	NMeFOSA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
25	NEtFOSA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
26	NMeFOSAA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
27	NEtFOSAA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
28	NMeFOSE	ND	6.9	ng/L	03/29/25	1	EPA 1633	BEC0606
29	NEtFOSE	ND	6.9	ng/L	03/29/25	1	EPA 1633	BEC0606
30	HFPO-DA	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
31	ADONA	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
32	PFEESA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606

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Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444

Project: Trace PFAS Master
Project Number: 25C1675
Project Manager: Tim Brewer

Reported: 04/04/2025 15:10

Sample Results (Continued)

Sample: OcChem-CS1 25C1675-09 (Continued) 25C0368-09 (Wastewater)

Analyte	Result/Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch		
Per- and Polyfluoroalkyl Substances (EPA 1633) (Continued)									
33	PFMPA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606	
34	PFMBA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606	
35	NFDHA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606	
36	9CI-PF3ONS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606	
37	11CI-PF3OUDS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606	
38	3:3FTCA	ND	3.4	ng/L	03/29/25	1	EPA 1633	BEC0606	
39	5:3FTCA	ND	17	ng/L	03/29/25	1	EPA 1633	BEC0606	
40	7:3FTCA	ND	17	ng/L	03/29/25	1	EPA 1633	BEC0606	
‡	41	PFOS (Estimated Linear)	4.8 J	0.52	ng/L	03/29/25	1	EPA 1633	BEC0606
‡	42	PFOS (Estimated Branched)	3.8 J	0.17	ng/L	03/29/25	1	EPA 1633	BEC0606
‡	43	PFHxS (Estimated Linear)	ND	0.52	ng/L	03/29/25	1	EPA 1633	BEC0606
‡	44	PFHxS (Estimated Branched)	ND	0.17	ng/L	03/29/25	1	EPA 1633	BEC0606

<i>Extracted Internal Standards (EIS): 13C4-PFBA</i>	98%	5-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C5-PFPEA</i>	99%	40-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C5-PFHXA</i>	99%	40-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C4-PFHFA</i>	96%	40-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C8-PFOA</i>	98%	40-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C9-PFNA</i>	94%	40-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C6-PFDA</i>	90%	40-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C7-PFUnA</i>	87%	30-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C2-PFDOA</i>	79%	10-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C2-PFTEDA</i>	65%	10-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C3-PFBS</i>	98%	40-135	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C3-PFHXS</i>	95%	40-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C8-PFOS</i>	87%	40-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C2-4:2FTS</i>	107%	40-200	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C2-6:2FTS</i>	98%	40-200	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C2-8:2FTS</i>	99%	40-300	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C8-PFOA</i>	87%	40-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): D3-NMEFOA</i>	58%	10-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): D5-NETFOA</i>	58%	10-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): D3-NMEFOSAA</i>	90%	40-170	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): D5-NETFOSAA</i>	86%	25-135	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): D7-NMEFOSE</i>	60%	10-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): D9-NETFOSE</i>	68%	10-130	03/29/25	1	EPA 1633
<i>Extracted Internal Standards (EIS): 13C3-HFO-DA</i>	99%	40-130	03/29/25	1	EPA 1633

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Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444

Project: Trace PFAS Master
Project Number: 25C1675
Project Manager: Tim Brewer

Reported: 04/04/2025 15:10

Sample Results (Continued)

**Sample: OcChem-CFSW-1 25C1675-010
25C0368-10 (Wastewater)**

Analyte	Result/Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch	
Per- and Polyfluoroalkyl Substances (EPA 1633)								
1	PFBA	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
2	PFPeA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606
3	PFHxA	1.2	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
4	PFHpA	1.1	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
5	PFOA	5.4	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
6	PFNA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
7	PFDA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
8	PFUnA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
9	PFDoA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
10	PFTTrDA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
11	PFTeDA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
12	PFBS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
13	PFPeS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
14	PFHxS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
15	PFHpS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
16	PFOS	6.4	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
17	PFNS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
18	PFDS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
19	PFDoS	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
20	4:2FTS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
21	6:2FTS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
22	8:2FTS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
23	PFOSA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
24	NMeFOSA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
25	NEtFOSA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
26	NMeFOSAA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
27	NEtFOSAA	ND	0.69	ng/L	03/29/25	1	EPA 1633	BEC0606
28	NMeFOSE	ND	6.9	ng/L	03/29/25	1	EPA 1633	BEC0606
29	NEtFOSE	ND	6.9	ng/L	03/29/25	1	EPA 1633	BEC0606
30	HFPO-DA	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
31	ADONA	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606
32	PFEESA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606

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Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444

Project: Trace PFAS Master
Project Number: 25C1675
Project Manager: Tim Brewer

Reported: 04/04/2025 15:10

Sample Results (Continued)

Sample: OcChem-CFSW-1 25C1675-010 (Continued) 25C0368-10 (Wastewater)

Analyte	Result /Qual	PQL	Units	Date Analyzed	DF	Method	Prep Batch		
Per- and Polyfluoroalkyl Substances (EPA 1633) (Continued)									
33	PFMPA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606	
34	PFMBA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606	
35	NFDHA	ND	1.4	ng/L	03/29/25	1	EPA 1633	BEC0606	
36	9CI-PF3ONS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606	
37	11CI-PF3OUDS	ND	2.8	ng/L	03/29/25	1	EPA 1633	BEC0606	
38	3:3FTCA	ND	3.4	ng/L	03/29/25	1	EPA 1633	BEC0606	
39	5:3FTCA	ND	17	ng/L	03/29/25	1	EPA 1633	BEC0606	
40	7:3FTCA	ND	17	ng/L	03/29/25	1	EPA 1633	BEC0606	
‡	41	PFOS (Estimated Linear)	2.6 J	0.52	ng/L	03/29/25	1	EPA 1633	BEC0606
‡	42	PFOS (Estimated Branched)	3.7 J	0.17	ng/L	03/29/25	1	EPA 1633	BEC0606
‡	43	PFHxS (Estimated Linear)	ND	0.52	ng/L	03/29/25	1	EPA 1633	BEC0606
‡	44	PFHxS (Estimated Branched)	ND	0.17	ng/L	03/29/25	1	EPA 1633	BEC0606

<i>Extracted Internal Standards (EIS): 13C4-PFBA</i>	<i>100%</i>	<i>5-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C5-PFPEA</i>	<i>95%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C5-PFHXA</i>	<i>89%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C4-PFHFA</i>	<i>90%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C8-PFOA</i>	<i>102%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C9-PFNA</i>	<i>99%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C6-PFDA</i>	<i>90%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C7-PFUnA</i>	<i>108%</i>	<i>30-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-PFDOA</i>	<i>94%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-PFTEDA</i>	<i>65%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C3-PFBS</i>	<i>106%</i>	<i>40-135</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C3-PFHXS</i>	<i>96%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C8-PFOS</i>	<i>94%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-4:2FTS</i>	<i>123%</i>	<i>40-200</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-6:2FTS</i>	<i>95%</i>	<i>40-200</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C2-8:2FTS</i>	<i>93%</i>	<i>40-300</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C8-PFOA</i>	<i>89%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D3-NMEFOA</i>	<i>65%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D5-NETFOA</i>	<i>60%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D3-NMEFOSAA</i>	<i>90%</i>	<i>40-170</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D5-NETFOSAA</i>	<i>93%</i>	<i>25-135</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D7-NMEFOSE</i>	<i>64%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): D9-NETFOSE</i>	<i>65%</i>	<i>10-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>
<i>Extracted Internal Standards (EIS): 13C3-HFO-DA</i>	<i>89%</i>	<i>40-130</i>	<i>03/29/25</i>	<i>1</i>	<i>EPA 1633</i>

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Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444

Project: Trace PFAS Master
Project Number: 25C1675
Project Manager: Tim Brewer

Reported: 04/04/2025 15:10

PREPARATION BATCH SUMMARY

EPA 1633

Laboratory: Metiri Group - Holt

Client: Trace Analytical Laboratories, Inc.

Batch: BEC0606 Batch Matrix: Water Preparation: 537M

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT mL	FINAL VOL. mL
OcChem-SW1 25C1675-01	25C0368-01	03/28/25 12:01	290.0000	2
OcChem-SW2 25C1675-02	25C0368-02	03/28/25 12:01	290.0000	2
OcChem-SW3 25C1675-03	25C0368-03	03/28/25 12:01	280.0000	2
OcChem-SW4 25C1675-04	25C0368-04	03/28/25 12:01	290.0000	2
OcChem-SW5 25C1675-05	25C0368-05	03/28/25 12:01	290.0000	2
OcChem-SW6 25C1675-06	25C0368-06	03/28/25 12:01	290.0000	2
OcChem-Lag1 25C1675-07	25C0368-07	03/28/25 12:01	290.0000	2
OcChem-Lag2 25C1675-08	25C0368-08	03/28/25 12:01	290.0000	2
OcChem-CS1 25C1675-09	25C0368-09	03/28/25 12:01	290.0000	2
OcChem-CFSW-1 25C1675-010	25C0368-10	03/28/25 12:01	290.0000	2
Blank	BEC0606-BLK1	03/28/25 12:01	500.0000	2
LCS	BEC0606-BS1	03/28/25 12:01	500.0000	2
LCS Dup	BEC0606-BSD1	03/28/25 12:01	500.0000	2
MRL Check	BEC0606-MRL1	03/28/25 12:01	500.0000	2

Trace Analytical Laboratories, Inc.
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Project: Trace PFAS Master
Project Number: 25C1675
Project Manager: Tim Brewer

Reported: 04/04/2025 15:10

Quality Control

Per- and Polyfluoroalkyl Substances (EPA 1633)

Analyte	Result/ Qual	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Method: EPA 1633

Batch: BEC0606 - 537M

Blank (BEC0606-BLK1)

Prepared: 03/28/25 12:01 Analyzed: 03/29/25 08:16

1 PFBA	ND	1.6	ng/L						
2 PFPeA	ND	0.80	ng/L						
3 PFHxA	ND	0.40	ng/L						
4 PFHpA	ND	0.40	ng/L						
5 PFOA	ND	0.40	ng/L						
6 PFNA	ND	0.40	ng/L						
7 PFDA	ND	0.40	ng/L						
8 PFUnA	ND	0.40	ng/L						
9 PFDoA	ND	0.40	ng/L						
10 PFTTrDA	ND	0.40	ng/L						
11 PFTeDA	ND	0.40	ng/L						
12 PFBS	ND	0.40	ng/L						
13 PFPeS	ND	0.40	ng/L						
14 PFHxS	ND	0.40	ng/L						
15 PFHpS	ND	0.40	ng/L						
16 PFOS	ND	0.40	ng/L						
17 PFNS	ND	0.40	ng/L						
18 PFDS	ND	0.40	ng/L						
19 PFDoS	ND	0.40	ng/L						
20 4:2FTS	ND	1.6	ng/L						
21 6:2FTS	ND	1.6	ng/L						
22 8:2FTS	ND	1.6	ng/L						
23 PFBSA	ND	0.40	ng/L						
24 PFHxSA	ND	0.40	ng/L						
25 PFOSA	ND	0.40	ng/L						
26 NMeFOSA	ND	0.40	ng/L						
27 NEtFOSA	ND	0.40	ng/L						
28 NMeFOSAA	ND	0.40	ng/L						
29 NEtFOSAA	ND	0.40	ng/L						
30 NMeFOSE	ND	4.0	ng/L						
31 NEtFOSE	ND	4.0	ng/L						
32 HFPO-DA	ND	1.6	ng/L						
33 ADONA	ND	1.6	ng/L						
34 PFEESA	ND	0.80	ng/L						
35 PFMPA	ND	0.80	ng/L						
36 PFMBA	ND	0.80	ng/L						
37 NFDHA	ND	0.80	ng/L						
38 9Cl-PF3ONS	ND	1.6	ng/L						
39 11Cl-PF3OUDS	ND	1.6	ng/L						
40 PFECHS	ND	0.40	ng/L						
41 3:3FTCA	ND	2.0	ng/L						

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2241 Black Creek Road
Muskegon, MI 49444

Project: Trace PFAS Master
Project Number: 25C1675
Project Manager: Tim Brewer

Reported: 04/04/2025 15:10

Quality Control (Continued)

Per- and Polyfluoroalkyl Substances (EPA 1633) (Continued)

Analyte	Result/ Qual	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Blank (BEC0606-BLK1)				Prepared: 03/28/25 12:01 Analyzed: 03/29/25 08:16					
42 5:3FTCA	ND	10	ng/L						
43 7:3FTCA	ND	10	ng/L						
<hr/>									
<i>Extracted Internal Standards (EIS): 13C4-PFBA</i>	32		ng/L	32.0		99	5-130		
<i>Extracted Internal Standards (EIS): 13C5-PFPEA</i>	16		ng/L	16.0		101	40-130		
<i>Extracted Internal Standards (EIS): 13C5-PFHXA</i>	7.9		ng/L	8.00		99	40-130		
<i>Extracted Internal Standards (EIS): 13C4-PFHFA</i>	8.3		ng/L	8.00		103	40-130		
<i>Extracted Internal Standards (EIS): 13C8-PFOA</i>	7.4		ng/L	8.00		92	40-130		
<i>Extracted Internal Standards (EIS): 13C9-PFNA</i>	4.1		ng/L	4.00		103	40-130		
<i>Extracted Internal Standards (EIS): 13C6-PFDA</i>	3.9		ng/L	4.00		97	40-130		
<i>Extracted Internal Standards (EIS): 13C7-PFUnA</i>	3.4		ng/L	4.00		85	30-130		
<i>Extracted Internal Standards (EIS): 13C2-PFDOA</i>	3.5		ng/L	4.00		88	10-130		
<i>Extracted Internal Standards (EIS): 13C2-PFTEDA</i>	3.2		ng/L	4.00		80	10-130		
<i>Extracted Internal Standards (EIS): 13C3-PFBS</i>	6.4		ng/L	7.46		86	40-135		
<i>Extracted Internal Standards (EIS): 13C3-PFHXS</i>	7.1		ng/L	7.58		94	40-130		
<i>Extracted Internal Standards (EIS): 13C8-PFOS</i>	6.4		ng/L	7.66		84	40-130		
<i>Extracted Internal Standards (EIS): 13C2-4:2FTS</i>	15		ng/L	15.0		98	40-200		
<i>Extracted Internal Standards (EIS): 13C2-6:2FTS</i>	14		ng/L	15.2		91	40-200		
<i>Extracted Internal Standards (EIS): 13C2-8:2FTS</i>	16		ng/L	15.4		102	40-300		
<i>Extracted Internal Standards (EIS): 13C8-PFOA</i>	6.7		ng/L	8.00		84	40-130		
<i>Extracted Internal Standards (EIS): D3-NMEFOSA</i>	4.4		ng/L	8.00		55	10-130		
<i>Extracted Internal Standards (EIS): D5-NETFOA</i>	4.2		ng/L	8.00		53	10-130		
<i>Extracted Internal Standards (EIS): D3-NMEFOSAA</i>	14		ng/L	16.0		88	40-170		
<i>Extracted Internal Standards (EIS): D5-NETFOSAA</i>	13		ng/L	16.0		81	25-135		
<i>Extracted Internal Standards (EIS): D7-NMEFOSE</i>	47		ng/L	80.0		58	10-130		
<i>Extracted Internal Standards (EIS): D9-NETFOSE</i>	48		ng/L	80.0		59	10-130		
<i>Extracted Internal Standards (EIS): 13C3-HFPO-DA</i>	32		ng/L	32.0		100	40-130		

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Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444

Project: Trace PFAS Master
Project Number: 25C1675
Project Manager: Tim Brewer

Reported: 04/04/2025 15:10

Quality Control (Continued)

Per- and Polyfluoroalkyl Substances (EPA 1633) (Continued)

Analyte	Result/ Qual	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
LCS (BEC0606-BS1)				Prepared: 03/28/25 12:01		Analyzed: 03/29/25 08:43			
1 PFBA	36	1.6	ng/L	32.0		111	70-140		
2 PFPeA	18	0.80	ng/L	16.0		111	65-135		
3 PFHxA	8.1	0.40	ng/L	8.00		101	70-145		
4 PFHpA	8.6	0.40	ng/L	8.00		107	70-150		
5 PFOA	8.2	0.40	ng/L	8.00		103	70-150		
6 PFNA	8.1	0.40	ng/L	8.00		101	70-150		
7 PFDA	8.8	0.40	ng/L	8.00		109	70-140		
8 PFUnA	9.1	0.40	ng/L	8.00		113	70-145		
9 PFDaA	8.5	0.40	ng/L	8.00		106	70-140		
10 PFTrDA	8.2	0.40	ng/L	8.00		103	65-140		
11 PFTeDA	9.1	0.40	ng/L	8.00		113	60-140		
12 PFBS	8.7	0.40	ng/L	7.12		123	60-145		
13 PFPeS	7.3	0.40	ng/L	7.52		97	65-140		
14 PFHxS	6.9	0.40	ng/L	7.28		95	65-145		
15 PFHpS	7.6	0.40	ng/L	7.60		100	70-150		
16 PFOS	7.8	0.40	ng/L	7.44		105	55-150		
17 PFNS	7.7	0.40	ng/L	7.68		100	65-145		
18 PFDS	8.6	0.40	ng/L	7.72		111	60-145		
19 PFDoS	7.5	0.40	ng/L	7.76		97	50-145		
20 4:2FTS	36	1.6	ng/L	30.0		119	70-145		
21 6:2FTS	33	1.6	ng/L	30.4		110	65-155		
22 8:2FTS	35	1.6	ng/L	30.7		115	60-150		
23 PFBSA	8.8	0.40	ng/L	8.00		110	60-140		
24 PFHxSA	8.6	0.40	ng/L	8.00		108	60-140		
25 PFOSA	8.5	0.40	ng/L	8.00		106	70-145		
26 NMeFOSA	9.6	0.40	ng/L	8.00		120	60-150		
27 NEtFOSA	8.8	0.40	ng/L	8.00		110	65-145		
28 NMeFOSAA	9.1	0.40	ng/L	8.00		114	50-140		
29 NEtFOSAA	8.3	0.40	ng/L	8.00		104	70-145		
30 NMeFOSE	90	4.0	ng/L	80.0		112	70-145		
31 NEtFOSE	90	4.0	ng/L	80.0		112	70-135		
32 HFPO-DA	34	1.6	ng/L	32.0		106	70-140		
33 ADONA	32	1.6	ng/L	30.2		107	65-145		
34 PFEESA	14	0.80	ng/L	14.3		100	70-140		
35 PFMPA	17	0.80	ng/L	16.0		108	55-140		
36 PFMBA	18	0.80	ng/L	16.0		110	60-150		
37 NFDHA	18	0.80	ng/L	16.0		113	50-150		
38 9Cl-PF3ONS	34	1.6	ng/L	29.8		114	70-155		
39 11Cl-PF3OUDS	32	1.6	ng/L	30.2		107	55-160		
40 PFECHS	7.3	0.40	ng/L	7.40		99	60-140		
41 3:3FTCA	41	2.0	ng/L	40.0		103	65-130		
42 5:3FTCA	210	10	ng/L	200		106	70-135		
43 7:3FTCA	220	10	ng/L	200		110	50-145		

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Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444

Project: Trace PFAS Master
Project Number: 25C1675
Project Manager: Tim Brewer

Reported: 04/04/2025 15:10

Quality Control (Continued)

Per- and Polyfluoroalkyl Substances (EPA 1633) (Continued)

Analyte	Result/ Qual	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
LCS (BEC0606-BS1)				Prepared: 03/28/25 12:01		Analyzed: 03/29/25 08:43			
<i>Extracted Internal Standards (EIS): 13C4-PFBA</i>	29		ng/L	32.0		91	5-130		
<i>Extracted Internal Standards (EIS): 13C5-PFPEA</i>	16		ng/L	16.0		97	40-130		
<i>Extracted Internal Standards (EIS): 13C5-PFHXA</i>	7.7		ng/L	8.00		97	40-130		
<i>Extracted Internal Standards (EIS): 13C4-PFHFA</i>	7.6		ng/L	8.00		95	40-130		
<i>Extracted Internal Standards (EIS): 13C8-PFOA</i>	7.9		ng/L	8.00		98	40-130		
<i>Extracted Internal Standards (EIS): 13C9-PFNA</i>	3.8		ng/L	4.00		96	40-130		
<i>Extracted Internal Standards (EIS): 13C6-PFDA</i>	3.5		ng/L	4.00		86	40-130		
<i>Extracted Internal Standards (EIS): 13C7-PFUnA</i>	3.5		ng/L	4.00		88	30-130		
<i>Extracted Internal Standards (EIS): 13C2-PFDOA</i>	3.4		ng/L	4.00		86	10-130		
<i>Extracted Internal Standards (EIS): 13C2-PFTEDA</i>	3.0		ng/L	4.00		74	10-130		
<i>Extracted Internal Standards (EIS): 13C3-PFBS</i>	5.4		ng/L	7.46		73	40-135		
<i>Extracted Internal Standards (EIS): 13C3-PFHXS</i>	6.4		ng/L	7.58		85	40-130		
<i>Extracted Internal Standards (EIS): 13C8-PFOS</i>	7.4		ng/L	7.66		97	40-130		
<i>Extracted Internal Standards (EIS): 13C2-4:2FTS</i>	13		ng/L	15.0		87	40-200		
<i>Extracted Internal Standards (EIS): 13C2-6:2FTS</i>	13		ng/L	15.2		88	40-200		
<i>Extracted Internal Standards (EIS): 13C2-8:2FTS</i>	14		ng/L	15.4		92	40-300		
<i>Extracted Internal Standards (EIS): 13C8-PFOA</i>	8.0		ng/L	8.00		100	40-130		
<i>Extracted Internal Standards (EIS): D3-NMEFOA</i>	4.7		ng/L	8.00		59	10-130		
<i>Extracted Internal Standards (EIS): D5-NETFOA</i>	4.7		ng/L	8.00		58	10-130		
<i>Extracted Internal Standards (EIS): D3-NMEFOSAA</i>	14		ng/L	16.0		89	40-170		
<i>Extracted Internal Standards (EIS): D5-NETFOSAA</i>	15		ng/L	16.0		96	25-135		
<i>Extracted Internal Standards (EIS): D7-NMEFOSE</i>	56		ng/L	80.0		70	10-130		
<i>Extracted Internal Standards (EIS): D9-NETFOSE</i>	55		ng/L	80.0		69	10-130		
<i>Extracted Internal Standards (EIS): 13C3-HFPO-DA</i>	31		ng/L	32.0		97	40-130		
LCS Dup (BEC0606-BS1)				Prepared: 03/28/25 12:01		Analyzed: 03/29/25 08:56			
1 PFBA	34	1.6	ng/L	32.0		105	70-140	5	30
2 PFPeA	17	0.80	ng/L	16.0		104	65-135	6	30
3 PFHxA	8.4	0.40	ng/L	8.00		105	70-145	3	30

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Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444

Project: Trace PFAS Master
Project Number: 25C1675
Project Manager: Tim Brewer

Reported: 04/04/2025 15:10

Quality Control (Continued)

Per- and Polyfluoroalkyl Substances (EPA 1633) (Continued)

Analyte	Result/ Qual	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
LCS Dup (BEC0606-BSD1)				Prepared: 03/28/25 12:01		Analyzed: 03/29/25 08:56			
4 PFHpA	8.3	0.40	ng/L	8.00	104	70-150	4	30	
5 PFOA	8.0	0.40	ng/L	8.00	100	70-150	3	30	
6 PFNA	7.5	0.40	ng/L	8.00	94	70-150	8	30	
7 PFDA	8.9	0.40	ng/L	8.00	112	70-140	2	30	
8 PFUnA	9.2	0.40	ng/L	8.00	115	70-145	2	30	
9 PFDoA	7.8	0.40	ng/L	8.00	98	70-140	8	30	
10 PFTrDA	8.1	0.40	ng/L	8.00	102	65-140	1	30	
11 PFTeDA	8.9	0.40	ng/L	8.00	112	60-140	2	30	
12 PFBS	7.9	0.40	ng/L	7.12	111	60-145	10	30	
13 PFPeS	7.2	0.40	ng/L	7.52	96	65-140	0.8	30	
14 PFHxS	6.9	0.40	ng/L	7.28	95	65-145	0.4	30	
15 PFHpS	6.6	0.40	ng/L	7.60	87	70-150	14	30	
16 PFOS	7.3	0.40	ng/L	7.44	99	55-150	6	30	
17 PFNS	7.7	0.40	ng/L	7.68	100	65-145	0.09	30	
18 PFDS	8.2	0.40	ng/L	7.72	106	60-145	5	30	
19 PFDoS	8.3	0.40	ng/L	7.76	107	50-145	10	30	
20 4:2FTS	33	1.6	ng/L	30.0	110	70-145	8	30	
21 6:2FTS	30	1.6	ng/L	30.4	100	65-155	9	30	
22 8:2FTS	33	1.6	ng/L	30.7	108	60-150	6	30	
23 PFBSA	8.9	0.40	ng/L	8.00	111	60-140	0.5	30	
24 PFHxSA	8.4	0.40	ng/L	8.00	105	60-140	3	30	
25 PFOSA	8.5	0.40	ng/L	8.00	107	70-145	0.7	30	
26 NMeFOSA	9.0	0.40	ng/L	8.00	113	60-150	6	30	
27 NETFOSA	8.8	0.40	ng/L	8.00	110	65-145	0.06	30	
28 NMeFOSAA	8.2	0.40	ng/L	8.00	102	50-140	11	30	
29 NETFOSAA	7.9	0.40	ng/L	8.00	99	70-145	5	30	
30 NMeFOSE	87	4.0	ng/L	80.0	109	70-145	3	30	
31 NETFOSE	84	4.0	ng/L	80.0	106	70-135	6	30	
32 HFPO-DA	33	1.6	ng/L	32.0	104	70-140	2	30	
33 ADONA	33	1.6	ng/L	30.2	109	65-145	2	30	
34 PFEESA	14	0.80	ng/L	14.3	95	70-140	6	30	
35 PFMPA	16	0.80	ng/L	16.0	103	55-140	5	30	
36 PFMBA	18	0.80	ng/L	16.0	110	60-150	0.2	30	
37 NFDHA	17	0.80	ng/L	16.0	108	50-150	4	30	
38 9Cl-PF3ONS	30	1.6	ng/L	29.8	100	70-155	13	30	
39 11Cl-PF3OUDS	31	1.6	ng/L	30.2	102	55-160	4	30	
40 PFECHS	6.6	0.40	ng/L	7.40	89	60-140	11	30	
41 3:3FTCA	46	2.0	ng/L	40.0	114	65-130	10	30	
42 5:3FTCA	260	10	ng/L	200	130	70-135	20	30	
43 7:3FTCA	280	10	ng/L	200	140	50-145	24	30	

Extracted Internal Standards (EIS):
13C4-PFBA

22

ng/L

32.0

68

5-130

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Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444

Project: Trace PFAS Master
Project Number: 25C1675
Project Manager: Tim Brewer

Reported: 04/04/2025 15:10

Quality Control (Continued)

Per- and Polyfluoroalkyl Substances (EPA 1633) (Continued)

Analyte	Result/ Qual	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
LCS Dup (BEC0606-BSD1)				Prepared: 03/28/25 12:01		Analyzed: 03/29/25 08:56			
<i>Extracted Internal Standards (EIS): 13C5-PFPEA</i>	11		ng/L	16.0		70	40-130		
<i>Extracted Internal Standards (EIS): 13C5-PFHXA</i>	5.4		ng/L	8.00		67	40-130		
<i>Extracted Internal Standards (EIS): 13C4-PFHFA</i>	5.5		ng/L	8.00		69	40-130		
<i>Extracted Internal Standards (EIS): 13C8-PFOA</i>	6.5		ng/L	8.00		81	40-130		
<i>Extracted Internal Standards (EIS): 13C9-PFNA</i>	3.4		ng/L	4.00		85	40-130		
<i>Extracted Internal Standards (EIS): 13C6-PFDA</i>	2.9		ng/L	4.00		73	40-130		
<i>Extracted Internal Standards (EIS): 13C7-PFUnA</i>	3.1		ng/L	4.00		76	30-130		
<i>Extracted Internal Standards (EIS): 13C2-PFDOA</i>	3.3		ng/L	4.00		82	10-130		
<i>Extracted Internal Standards (EIS): 13C2-PFTEDA</i>	2.9		ng/L	4.00		72	10-130		
<i>Extracted Internal Standards (EIS): 13C3-PFBS</i>	3.9		ng/L	7.46		52	40-135		
<i>Extracted Internal Standards (EIS): 13C3-PFHXS</i>	4.8		ng/L	7.58		63	40-130		
<i>Extracted Internal Standards (EIS): 13C8-PFOS</i>	4.9		ng/L	7.66		64	40-130		
<i>Extracted Internal Standards (EIS): 13C2-4:2FTS</i>	10		ng/L	15.0		67	40-200		
<i>Extracted Internal Standards (EIS): 13C2-6:2FTS</i>	12		ng/L	15.2		76	40-200		
<i>Extracted Internal Standards (EIS): 13C2-8:2FTS</i>	11		ng/L	15.4		72	40-300		
<i>Extracted Internal Standards (EIS): 13C8-PFOSA</i>	6.9		ng/L	8.00		86	40-130		
<i>Extracted Internal Standards (EIS): D3-NMEFOSA</i>	4.1		ng/L	8.00		51	10-130		
<i>Extracted Internal Standards (EIS): D5-NETFOSA</i>	3.9		ng/L	8.00		49	10-130		
<i>Extracted Internal Standards (EIS): D3-NMEFOSAA</i>	10		ng/L	16.0		62	40-170		
<i>Extracted Internal Standards (EIS): D5-NETFOSAA</i>	9.8		ng/L	16.0		61	25-135		
<i>Extracted Internal Standards (EIS): D7-NMEFOSE</i>	46		ng/L	80.0		57	10-130		
<i>Extracted Internal Standards (EIS): D9-NETFOSE</i>	46		ng/L	80.0		58	10-130		
<i>Extracted Internal Standards (EIS): 13C3-HFPO-DA</i>	23		ng/L	32.0		73	40-130		
LLCS (BEC0606-MRL1)				Prepared: 03/28/25 12:01		Analyzed: 03/29/25 08:30			
1 PFBA	3.3	1.6	ng/L	3.20		103	70-140		
2 PFPeA	1.6	0.80	ng/L	1.60		102	65-135		
3 PFHxA	0.90	0.40	ng/L	0.800		113	70-145		
4 PFHpA	0.80	0.40	ng/L	0.800		99	70-150		

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Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444

Project: Trace PFAS Master
Project Number: 25C1675
Project Manager: Tim Brewer

Reported: 04/04/2025 15:10

Quality Control (Continued)

Per- and Polyfluoroalkyl Substances (EPA 1633) (Continued)

Analyte	Result/ Qual	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
LLCS (BEC0606-MRL1)				Prepared: 03/28/25 12:01		Analyzed: 03/29/25 08:30			
5 PFOA	0.94	0.40	ng/L	0.800		117	70-150		
6 PFNA	0.88	0.40	ng/L	0.800		110	70-150		
7 PFDA	0.82	0.40	ng/L	0.800		103	70-140		
8 PFUnA	0.92	0.40	ng/L	0.800		115	70-145		
9 PFDoA	0.84	0.40	ng/L	0.800		105	70-140		
10 PFTTrDA	0.84	0.40	ng/L	0.800		105	65-140		
11 PFTeDA	0.93	0.40	ng/L	0.800		117	60-140		
12 PFBS	0.76	0.40	ng/L	0.712		107	60-145		
13 PFPeS	0.78	0.40	ng/L	0.752		103	65-140		
14 PFHxS	0.76	0.40	ng/L	0.728		104	65-145		
15 PFHpS	0.85	0.40	ng/L	0.760		112	70-150		
16 PFOS	0.84	0.40	ng/L	0.744		112	55-150		
17 PFNS	0.78	0.40	ng/L	0.768		101	65-145		
18 PFDS	0.85	0.40	ng/L	0.772		110	60-145		
19 PFDoS	0.75	0.40	ng/L	0.776		96	50-145		
20 4:2FTS	3.3	1.6	ng/L	3.00		108	70-145		
21 6:2FTS	2.8	1.6	ng/L	3.04		91	65-155		
22 8:2FTS	3.6	1.6	ng/L	3.07		116	60-150		
23 PFBSA	0.94	0.40	ng/L	0.800		117	60-140		
24 PFHxSA	0.89	0.40	ng/L	0.800		111	60-140		
25 PFOSA	0.88	0.40	ng/L	0.800		109	70-145		
26 NMeFOSA	0.88	0.40	ng/L	0.800		110	60-150		
27 NETFOSA	0.85	0.40	ng/L	0.800		107	65-145		
28 NMeFOSAA	0.81	0.40	ng/L	0.800		101	50-140		
29 NETFOSAA	0.76	0.40	ng/L	0.800		95	70-145		
30 NMeFOSE	8.7	4.0	ng/L	8.00		109	70-145		
31 NETFOSE	8.4	4.0	ng/L	8.00		105	70-135		
32 HFPO-DA	3.7	1.6	ng/L	3.20		117	70-140		
33 ADONA	3.3	1.6	ng/L	3.02		109	65-145		
34 PFEESA	1.6	0.80	ng/L	1.43		115	70-140		
35 PFMPA	1.6	0.80	ng/L	1.60		100	55-140		
36 PFMBA	1.7	0.80	ng/L	1.60		104	60-150		
37 NFDHA	1.8	0.80	ng/L	1.60		115	50-150		
38 9Cl-PF3ONS	3.5	1.6	ng/L	2.98		117	70-155		
39 11Cl-PF3OUDS	3.3	1.6	ng/L	3.02		109	55-160		
40 PFECHS	0.80	0.40	ng/L	0.740		109	60-140		
41 3:3FTCA	3.7	2.0	ng/L	4.00		94	65-130		
42 5:3FTCA	22	10	ng/L	20.0		108	70-135		
43 7:3FTCA	22	10	ng/L	20.0		109	50-145		

Extracted Internal Standards (EIS): 32 ng/L 32.0 100 5-130
13C4-PFBA

Extracted Internal Standards (EIS): 17 ng/L 16.0 106 40-130
13C5-PFPEA

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Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444

Project: Trace PFAS Master
Project Number: 25C1675
Project Manager: Tim Brewer

Reported: 04/04/2025 15:10

Quality Control (Continued)

Per- and Polyfluoroalkyl Substances (EPA 1633) (Continued)

Analyte	Result/ Qual	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
LLCS (BEC0606-MRL1)				Prepared: 03/28/25 12:01		Analyzed: 03/29/25 08:30			
<i>Extracted Internal Standards (EIS): 13C5-PFHXA</i>	7.9		ng/L	8.00		98	40-130		
<i>Extracted Internal Standards (EIS): 13C4-PFHXA</i>	8.5		ng/L	8.00		106	40-130		
<i>Extracted Internal Standards (EIS): 13C8-PFOA</i>	8.0		ng/L	8.00		99	40-130		
<i>Extracted Internal Standards (EIS): 13C9-PFNA</i>	4.1		ng/L	4.00		102	40-130		
<i>Extracted Internal Standards (EIS): 13C6-PFDA</i>	4.0		ng/L	4.00		101	40-130		
<i>Extracted Internal Standards (EIS): 13C7-PFUnA</i>	3.8		ng/L	4.00		95	30-130		
<i>Extracted Internal Standards (EIS): 13C2-PFDOA</i>	3.8		ng/L	4.00		95	10-130		
<i>Extracted Internal Standards (EIS): 13C2-PFTEDA</i>	3.2		ng/L	4.00		81	10-130		
<i>Extracted Internal Standards (EIS): 13C3-PFBS</i>	6.9		ng/L	7.46		93	40-135		
<i>Extracted Internal Standards (EIS): 13C3-PFHXS</i>	7.2		ng/L	7.58		95	40-130		
<i>Extracted Internal Standards (EIS): 13C8-PFOS</i>	6.9		ng/L	7.66		90	40-130		
<i>Extracted Internal Standards (EIS): 13C2-4:2FTS</i>	15		ng/L	15.0		100	40-200		
<i>Extracted Internal Standards (EIS): 13C2-6:2FTS</i>	16		ng/L	15.2		107	40-200		
<i>Extracted Internal Standards (EIS): 13C2-8:2FTS</i>	16		ng/L	15.4		101	40-300		
<i>Extracted Internal Standards (EIS): 13C8-PFOSA</i>	6.9		ng/L	8.00		87	40-130		
<i>Extracted Internal Standards (EIS): D3-NMEFOSA</i>	4.3		ng/L	8.00		54	10-130		
<i>Extracted Internal Standards (EIS): D5-NETFOA</i>	4.2		ng/L	8.00		52	10-130		
<i>Extracted Internal Standards (EIS): D3-NMEFOSAA</i>	16		ng/L	16.0		98	40-170		
<i>Extracted Internal Standards (EIS): D5-NETFOSAA</i>	16		ng/L	16.0		98	25-135		
<i>Extracted Internal Standards (EIS): D7-NMEFOSE</i>	48		ng/L	80.0		60	10-130		
<i>Extracted Internal Standards (EIS): D9-NETFOSE</i>	48		ng/L	80.0		60	10-130		
<i>Extracted Internal Standards (EIS): 13C3-HFPO-DA</i>	32		ng/L	32.0		99	40-130		

The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.
No duplication of this report is allowed, except in its entirety.

Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444

Project: Trace PFAS Master
Project Number: 25C1675
Project Manager: Tim Brewer

Reported: 04/04/2025 15:10

Notes and Definitions

Item	Definition
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
Dry	Sample results reported on a dry weight basis.
MDL	Method Detection Limit (only displays if reported to the MDL)
ND	Analyte NOT DETECTED at or above the reporting limit.
DF	Dilution Factor
DL	Detection Limit
‡	Parameter not included in NELAC Scope of Analysis.
RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was matrix spiked or duplicated.
PQL, Practical Quantitation Limit = Method Reporting Limit (MRL).	



Accreditation Number(s):
MI001292024-1

Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444

Project: Trace PFAS Master
Project Number: 25C1675
Project Manager: Tim Brewer

Reported: 04/04/2025 15:10



WORK ORDER

25C0368

Printed: 04/04/2025 3:10 pm

Project: Trace PFAS Master
Project Number: 25C1675
Project Manager: Julia Hicks
PO Number: 25C1675

Report To:

Trace Analytical Laboratories, Inc.
Tim Brewer
2241 Black Creek Road
Muskegon, MI 49444
Phone: (231) 773-5998

Invoice To:

Trace Analytical Laboratories, Inc.
Accounting
2241 Black Creek Road
Muskegon, MI 49444
Phone: (231) 773-5998

Date Received: 03/27/2025 12:52 PM
Date Due: 04/10/2025 (10.00 day TAT)

Logged In By: Kelly Williams
Received By: Alexander Woods

Analysis	Comments
25C0368-01 OcChem-SW1 25C1675-01 [Water] Sampled 3/19/2025 12:00:00AM 1633-MI	Full List (40 Compounds_BL)
25C0368-02 OcChem-SW2 25C1675-02 [Water] Sampled 3/19/2025 12:00:00AM 1633-MI	Full List (40 Compounds_BL)
25C0368-03 OcChem-SW3 25C1675-03 [Water] Sampled 3/19/2025 12:00:00AM 1633-MI	Full List (40 Compounds_BL)
25C0368-04 OcChem-SW4 25C1675-04 [Water] Sampled 3/19/2025 12:00:00AM 1633-MI	Full List (40 Compounds_BL)
25C0368-05 OcChem-SW5 25C1675-05 [Water] Sampled 3/19/2025 12:00:00AM 1633-MI	Full List (40 Compounds_BL)
25C0368-06 OcChem-SW6 25C1675-06 [Water] Sampled 3/19/2025 12:00:00AM 1633-MI	Full List (40 Compounds_BL)
25C0368-07 OcChem-Lag1 25C1675-07 [Water] Sampled 3/19/2025 12:00:00AM 1633-MI	Full List (40 Compounds_BL)
25C0368-08 OcChem-Lag2 25C1675-08 [Water] Sampled 3/19/2025 12:00:00AM 1633-MI	Full List (40 Compounds_BL)
25C0368-09 OcChem-CS1 25C1675-09 [Water] Sampled 3/19/2025 12:00:00AM 1633-MI	Full List (40 Compounds_BL)
25C0368-10 OcChem-CFSW-1 25C1675-010 [Water] Sampled 3/19/2025 12:00:00AM 1633-MI	Full List (40 Compounds_BL)

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Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444

Project: Trace PFAS Master
Project Number: 25C1675
Project Manager: Tim Brewer

Reported: 04/04/2025 15:10

25C0368

Sample Receipt Log

Default Cooler

Samples Received at: **1.5°C**

Were Custody Seals present and signed?	No	Container/preservative correct for test requested?	Yes
Received on Ice	Yes	Sufficient amount sent for tests requested?	Yes
Within proper temp	Yes	Required containers sealed in separate bags?	Yes
Were all TO-15 samples received at ambient?	No	Were all samples inspected and sampled correctly?	Yes
Was a chain of custody received?	Yes	Were bubbles absent in volatile samples?	No
COCs complete/signed in the appropriate places?	Yes	Sufficient remaining holding time for analyses?	Yes
Were all samples listed on COC received?	Yes	If Applicable pH documented for necessary samples?	No
Did all samples/container labels agree with COCs?	Yes	If applicable, was the chlorine test negative?	No
Did all containers arrive in good condition?	Yes	If applicable, samples free of oxidizers?	No
Containers Intact	Yes	Thermometer # : 10003954 used?	Yes

Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444-2673



231-773-5998 Phone
888-979-4469 Fax
www.trace-labs.com

SUBCONTRACT ORDER

25C1675

SENDING LABORATORY:

Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444
Phone: 231.773.5998

RECEIVING LABORATORY:

Fibertec Environmental Services
1798 Holloway Drive, Suite B
Holt, MI 48842
Phone :(517) 699-0345

Project Manager: Tim Brewer

Note Our New Email address: TraceSubOut@trace-labs.com

PO # 25C1675

Matrix: Wastewater Sampled: 03/19/25 00:00 TAT: Standard
Sample ID: OcChem-SW1 25C1675-01

Sampled By: SG

Analysis Needed:

PFAS Wastewater EPA Method 1633

Matrix: Wastewater Sampled: 03/19/25 00:00 TAT: Standard
Sample ID: OcChem-SW2 25C1675-02

Sampled By: SG

Analysis Needed:

PFAS Wastewater EPA Method 1633

25C0368

Received
On Ice

Received On Ice

MAR 27 2025

Initials: YW

1.5°C

Released By: *C.M.* Date: 3/25/25 10:40

Received By: *[Signature]* Date: 3-27-25 17:52

Released By: *[Signature]* Date: 3-27-25 10:13

Received By: *[Signature]* Date: 3/27/25 16:13

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SUBCONTRACT ORDER

25C1675

Matrix: Wastewater

Sampled: 03/19/25 00:00

TAT: Standard

Sample ID: OcChem-SW3 25C1675-03

Sampled By: SG

Analysis Needed:

PFAS Wastewater EPA Method 1633

Matrix: Wastewater

Sampled: 03/19/25 00:00

TAT: Standard

Sample ID: OcChem-SW4 25C1675-04

Sampled By: SG

Analysis Needed:

PFAS Wastewater EPA Method 1633

Matrix: Wastewater

Sampled: 03/19/25 00:00

TAT: Standard

Sample ID: OcChem-SW5 25C1675-05

Sampled By: SG

Analysis Needed:

PFAS Wastewater EPA Method 1633

Received
Office

Received By Lab

MAR 27 2025

25C0368

Initials KW

1.5°C

C. Min 3/25/25 10:40

3-27-25 12:53

3-27-25 16:13

3/27/25 16:13

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Muskegon, MI 49444-2673



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SUBCONTRACT ORDER

25C1675

Matrix: Wastewater

Sampled: 03/19/25 00:00

TAT: Standard

Sample ID: OcChem-SW6 25C1675-06

Sampled By: SG

Analysis Needed:

PFAS Wastewater EPA Method 1633

Matrix: Wastewater

Sampled: 03/19/25 00:00

TAT: Standard

Sample ID: OcChem-Lag1 25C1675-07

Sampled By: SG

Analysis Needed:

PFAS Wastewater EPA Method 1633

Matrix: Wastewater

Sampled: 03/19/25 00:00

TAT: Standard

Sample ID: OcChem-Lag2 25C1675-08

Sampled By: SG

Analysis Needed:

PFAS Wastewater EPA Method 1633

25C0368

Received
On Ice

Received By Lab

MAR 27 2025

Initials: KW

1.5°C

Released By: CM Date: 3/25/25 10:40

Received By: [Signature]

Date: 3-27-25 12:53

Released By: [Signature] Date: 3-27-25 16:13

Received By: Vicky Nuts

Date: 3/27/25 16:13

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SUBCONTRACT ORDER
25C1675

Matrix: Wastewater

Sampled: 03/19/25 00:00

TAT: Standard

Sample ID: OcChem-CS1 25C1675-09

Sampled By: SG

Analysis Needed:

PFAS Wastewater EPA Method 1633

Matrix: Wastewater

Sampled: 03/19/25 00:00

TAT: Standard

Sample ID: OcChem-CFSW-1 25C1675-10

Sampled By: SG

Analysis Needed:

PFAS Wastewater EPA Method 1633

Received
On Ice

Received By Lab

MAR 27 2025

Initials: KW

25C0368

1.5°C

Released By: C. Min Date: 3/25/25 10:40

Received By: [Signature] Date: 3-27-25 12:53

Released By: [Signature] Date: 3-27-25 16:13

Received By: [Signature] Date: 3/27/25 16:13

Trace Analytical Laboratories, Inc.
 2241 Black Creek Road
 Muskegon, MI 49444-2673



231-773-5998 Phone
 888-979-4469 Fax
 www.trace-labs.com



OXYCHEM®
CHAIN OF CUSTODY
RECORD
 EPA-01

PROJECT/PROGRAM
EGLE PFAS Split Samples

SAMPLER (SIGN & PRINT NAME)
Seth Gornish
 Seth Gornish

FACILITY LOCATION
Oxy - Ludington

SAMPLE SITE
Oxy Ludington

SHIP TO
 Trace Analytical Lab
 2241 Black Creek Road
 Muskegon MI, 49444

25C11675 CM
 VJNE

REQUESTED ANALYSIS

SAMPLE IDENTIFICATION	DATE (M/D/Y)	TIME	GRAB	OTHER	CONTAINER TYPE	# OF CONTAINERS	REMARKS	SAMPLE PRESERVATION
DeChem-SW1	3/19/25	12:30	✓		HDPPE	2	PFAS 1633	
DeChem-SW2	3/19/25	10:00	✓		HDPPE	2		
DeChem-SW3	3/19/25	9:30	✓		HDPPE	2		
DeChem-SW4	3/19/25	12:05	✓		HDPPE	2		
DeChem-SW5	3/19/25		✓		HDPPE	2		
DeChem-SW6	3/19/25		✓		HDPPE	2		
DeChem-Lag1	3/19/25		✓		HDPPE	2		
DeChem-Lag2	3/19/25		✓		HDPPE	2		
DeChem-CS1	3/19/25		✓		HDPPE	2		
DeChem-CFSW-1	3/19/25		✓		HDPPE	2		

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	EMPLOYER	CUSTODY REMARKS
<i>Seth Gornish</i>	3-19-25	12:30	<i>[Signature]</i>	Oxy	
<i>[Signature]</i>	3/20/25	10:00	<i>[Signature]</i>	Oxy	
<i>[Signature]</i>	3/24/25	9:30	<i>[Signature]</i>	Trace	
<i>[Signature]</i>	3/25/25	12:05	<i>[Signature]</i>	Trace	
<i>[Signature]</i>			<i>[Signature]</i>	Trace	

25C1675
 Occidental Chemical
 Project Manager: Tim Brewer

Sample Log In Checklist

Date: 3/25/25	Original Observation	Corrected Temperature	IR-9 (CF: +0.1°C)	IR-12 (CF: 0.0°C)	IR-13 (CF: 0.0°C)	SR1 (CF: -0.4°C)	SR2 (CF: -0.1°C)	Temp Blank	Client Sample
Time: 1210									
Initials: CM									
Package Description: Cooler									
Package Temp °C	-1.0	-1.0							
Representative Sample Temp °C	2.4	2.4							

Sample Receipt

- Yes No
- Received on ice or other coolant
- Ice still present upon receipt
- Custody seals present
- Trace Courier Client Drop-off
- Yes No Custody seals intact (if applicable)
- UPS Fed Ex US Mail Other

Sample Condition

- Yes No N/A
- All sample containers arrived unbroken and labeled
- Sufficient sample to run requested analyses
- Correct chemical preservative added to samples
- Samples preserved at Trace
- Chemical preservation verified, check EMD pH test strip used (if applicable)
- pH 0-2.5 (Lot: HC311850) pH 11.0-13.0 (Lot: HC022540) Other
- Air bubbles absent from VOAs

Chain of Custody (COC)

- Yes No
- All bottle labels agree with COC
- COC filled out properly
- COC signed by client

Notes:
