

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 14, 2025

Mr. Dale Clark
Clare, City of
202 W. Fifth St.
Clare, Mi 48617

RE: Trace Project 25D0164
Client Project Routine Sampling- 4/2/25

Dear Mr. Clark:

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 Prein and Newhof.

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 long, sweeping underline.

Tim Brewer
Project Manager

Enclosures

Trace Analytical Laboratories, Inc.
2241 Black Creek Road
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SAMPLE SUMMARY

Trace Project ID: 25D0164
Client Project ID: Routine Sampling- 4/2/25

Trace ID	Sample ID	Matrix	Collected By	Date Collected	Date Received
25D0164-01	WTP Plant Tap	Drinking Water	JM	04/02/25 09:17	04/03/25 10:50

April 14, 2025

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

RE: 25D0164

Order No.: 2504466

Dear Mr. Jon Mink:

[Guide to Reading Lab Result](#)

Prein&Newhof Laboratory received 2 sample(s) on 4/7/2025 on your behalf. Your test results are provided in your Prein&Newhof Laboratory analytical report. Please carefully review your analytical report, noting the following.

- You can be assured that the sample results meet the Safe Drinking Water Criteria as no analyte tested exceeds the EPA Maximum Contaminant Level unless indicated by an " * " in the "Qual" column.
- You can be assured that all samples were received and analyzed within required holding times unless noted by a "H" in the "Qual" column.
- You can be assured that all quality control data is within laboratory-defined or method-specified acceptance limits unless defined by the addition of an attached Case Narrative document.
- When testing for PFHxS, PFOA, PFOS, MeFOSAA, and EtFOSAA results include both branched and linear isotopes. We extract a Method Blank and analyze it with the preparation batch. Method Blank analytes are within the Reporting Limit (RL).

We use EPA Approved Methods for all regulated parameters. EPA Lab #: MI000014

We are certified by the State of Michigan for Drinking Water Analysis for: Coliform Bacteria, Metals, Cyanide, Minerals, Anions, Volatile Organics, THM's, Haloacetic Acids, and PFAS.
Michigan Lab ID#: 0020

To learn more about interpreting your Drinking Water Test Results and reading your Lab Report, follow the link above to view our "Guide to Reading Lab Results". If you have any concerns about your test results or need additional help, please call: 616-364-7600 or email me: sbylsma@preinnewhof.com.

Thank you for trusting Prein&Newhof with your testing needs.

Sincerely,



Steve Bylsma
Laboratory Manager

(DW)

WO#: 2504466

Date Reported: 4/14/2025

CLIENT: Trace Analytical Laboratories, Inc.
Project: 25D0164
Lab ID: 2504466-01
Client Sample ID: WTP Plant Tap-25D0164-01
Location:

Collection Date: 4/2/2025 9:17:00 AM
Received Date: 4/7/2025 10:30:00 AM
Matrix: DRINKING WATER
Sampled By: JM

Analyses	Result	RL	Qual	Units	MCL	Date Analyzed
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PFAS, DRINKING WATER

EPA 537.1

Analyst: JS

PFBS	3.4	2.0		ng/L		4/12/2025 8:51:00 AM
PFHxA	< 2.0	2.0		ng/L		4/12/2025 8:51:00 AM
HFPO-DA	< 2.0	2.0		ng/L	10	4/12/2025 8:51:00 AM
PFHxS	7.2	2.0		ng/L	10	4/12/2025 8:51:00 AM
PFHpA	< 2.0	2.0		ng/L		4/12/2025 8:51:00 AM
ADONA	< 2.0	2.0		ng/L		4/12/2025 8:51:00 AM
PFOA	< 2.0	2.0		ng/L	4.0	4/12/2025 8:51:00 AM
PFOS	4.4	2.0	*	ng/L	4.0	4/12/2025 8:51:00 AM
PFNA	< 2.0	2.0		ng/L	10	4/12/2025 8:51:00 AM
9CI-PF3ONS	< 2.0	2.0		ng/L		4/12/2025 8:51:00 AM
PFDA	< 2.0	2.0		ng/L		4/12/2025 8:51:00 AM
NMeFOSAA	< 2.0	2.0		ng/L		4/12/2025 8:51:00 AM
NEtFOSAA	< 2.0	2.0		ng/L		4/12/2025 8:51:00 AM
PFUnA	< 2.0	2.0		ng/L		4/12/2025 8:51:00 AM
11CI-PF3OUdS	< 2.0	2.0		ng/L		4/12/2025 8:51:00 AM
PFDaA	< 2.0	2.0		ng/L		4/12/2025 8:51:00 AM
PFTTrDA	< 2.0	2.0		ng/L		4/12/2025 8:51:00 AM
PFTA	< 2.0	2.0		ng/L		4/12/2025 8:51:00 AM
PFAS Hazard Index	0.72	0.20		ng/L	1.0	4/12/2025 8:51:00 AM
Surr: d5-N-EtFOSAA	90.6	70 - 130		%Rec		4/12/2025 8:51:00 AM
Surr: M3HFPO-DA	103	70 - 130		%Rec		4/12/2025 8:51:00 AM
Surr: MPFDA	87.4	70 - 130		%Rec		4/12/2025 8:51:00 AM
Surr: MPFHxA	95.7	70 - 130		%Rec		4/12/2025 8:51:00 AM

Qualifiers: * Value exceeds Maximum Contaminant Level. < Not Detected at the Reporting Limit
 H Holding times for preparation or analysis exceeded MCL Maximum Contaminant Level
 PL Permit Limit RL Reporting Limit

CLIENT: Trace Analytical Laboratories, Inc.
Project: 25D0164
Lab ID: 2504466-02
Client Sample ID: Field Blank
Location:

Collection Date: 4/2/2025 9:17:00 AM
Received Date: 4/7/2025 10:30:00 AM
Matrix: BLANK
Sampled By: JM

Analyses	Result	RL	Qual	Units	MCL	Date Analyzed
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PFAS, DRINKING WATER

EPA 537.1

Analyst: JS

PFBS	< 2.0	2.0		ng/L		4/12/2025 2:28:00 AM
PFHxA	< 2.0	2.0		ng/L		4/12/2025 2:28:00 AM
HFPO-DA	< 2.0	2.0		ng/L	10	4/12/2025 2:28:00 AM
PFHxS	< 2.0	2.0		ng/L	10	4/12/2025 2:28:00 AM
PFHpA	< 2.0	2.0		ng/L		4/12/2025 2:28:00 AM
ADONA	< 2.0	2.0		ng/L		4/12/2025 2:28:00 AM
PFOA	< 2.0	2.0		ng/L	4.0	4/12/2025 2:28:00 AM
PFOS	< 2.0	2.0		ng/L	4.0	4/12/2025 2:28:00 AM
PFNA	< 2.0	2.0		ng/L	10	4/12/2025 2:28:00 AM
9CI-PF3ONS	< 2.0	2.0		ng/L		4/12/2025 2:28:00 AM
PFDA	< 2.0	2.0		ng/L		4/12/2025 2:28:00 AM
NMeFOSAA	< 2.0	2.0		ng/L		4/12/2025 2:28:00 AM
NEtFOSAA	< 2.0	2.0		ng/L		4/12/2025 2:28:00 AM
PFUnA	< 2.0	2.0		ng/L		4/12/2025 2:28:00 AM
11CI-PF3OUdS	< 2.0	2.0		ng/L		4/12/2025 2:28:00 AM
PFDaA	< 2.0	2.0		ng/L		4/12/2025 2:28:00 AM
PFTTrDA	< 2.0	2.0		ng/L		4/12/2025 2:28:00 AM
PFTA	< 2.0	2.0		ng/L		4/12/2025 2:28:00 AM
PFAS Hazard Index	< 0.20	0.20		ng/L	1.0	4/12/2025 2:28:00 AM
Surr: d5-N-EtFOSAA	87.3	70 - 130		%Rec		4/12/2025 2:28:00 AM
Surr: M3HFPO-DA	96.9	70 - 130		%Rec		4/12/2025 2:28:00 AM
Surr: MPFDA	89.6	70 - 130		%Rec		4/12/2025 2:28:00 AM
Surr: MPFHxA	90.7	70 - 130		%Rec		4/12/2025 2:28:00 AM

Qualifiers: * Value exceeds Maximum Contaminant Level. < Not Detected at the Reporting Limit
 H Holding times for preparation or analysis exceeded MCL Maximum Contaminant Level
 PL Permit Limit RL Reporting Limit

WO#: 2504466

4/14/2025

Client: Trace Analytical Laboratories, Inc.

Project: 25D0164

TestCode: PFAS-DW

Sample ID: MB-S7-8008	SampType: MBLK	TestCode: PFAS-DW	Units: ng/L	Prep Date: 4/10/2025	RunNo: 44516						
Client ID: PBW	Batch ID: 8008	TestNo: EPA 537.1		Analysis Date: 4/11/2025	SeqNo: 892338						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
PFBS	< 1.8	1.8									
PFHxA	< 1.8	1.8									
HFPO-DA	< 1.8	1.8									
PFHxS	< 1.8	1.8									
PFHpA	< 1.8	1.8									
ADONA	< 1.8	1.8									
PFOA	< 1.8	1.8									
PFOS	< 1.8	1.8									
PFNA	< 1.8	1.8									
9CI-PF3ONS	< 1.8	1.8									
PFDA	< 1.8	1.8									
NMeFOSAA	< 1.8	1.8									
NEtFOSAA	< 1.8	1.8									
PFUnA	< 1.8	1.8									
11CI-PF3OUdS	< 1.8	1.8									
PFDoA	< 1.8	1.8									
PFTTrDA	< 1.8	1.8									
PFTA	< 1.8	1.8									
PFAS Hazard Index	< 0.20	0.20									
Surr: d5-N-EtFOSAA	290		320.0		89.8	70	130				
Surr: M3HFPO-DA	170		200.0		87.0	70	130				
Surr: MPFDA	77		80.00		95.8	70	130				
Surr: MPFHxA	69		80.00		86.0	70	130				

Qualifiers: * Value exceeds Maximum Contaminant Level. < Not Detected at the Reporting Limit H Holding times for preparation or analysis exceeded
MCL Maximum Contaminant Level PL Permit Limit R RPD outside accepted recovery limits
RL Reporting Limit

WO#: 2504466

4/14/2025

Client: Trace Analytical Laboratories, Inc.

Project: 25D0164

TestCode: PFAS-DW

Sample ID: LCS-mid-8008 A	SampType: LCS-MID	TestCode: PFAS-DW	Units: ng/L	Prep Date: 4/10/2025	RunNo: 44516						
Client ID: BatchQC	Batch ID: 8008	TestNo: EPA 537.1		Analysis Date: 4/11/2025	SeqNo: 892339						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
PFBS	61	1.8	80.00	0	76.7	70	130				
PFHxA	75	1.8	80.00	0	94.2	70	130				
HFPO-DA	78	1.8	80.00	0	97.9	70	130				
PFHxS	80	1.8	80.00	0	101	70	130				
PFHpA	86	1.8	80.00	0	108	70	130				
ADONA	81	1.8	80.00	0	101	70	130				
PFOA	83	1.8	80.00	0	104	70	130				
PFOS	80	1.8	80.00	0	100	70	130				
PFNA	84	1.8	80.00	0	105	70	130				
9CI-PF3ONS	80	1.8	80.00	0	100	70	130				
PFDA	81	1.8	80.00	0	102	70	130				
NMeFOSAA	88	1.8	80.00	0	110	70	130				
NEtFOSAA	81	1.8	80.00	0	102	70	130				
PFUnA	70	1.8	80.00	0	87.4	70	130				
11CI-PF3OUdS	79	1.8	80.00	0	98.2	70	130				
PFDoA	67	1.8	80.00	0	83.9	70	130				
PFTTrDA	71	1.8	80.00	0	88.4	70	130				
PFTA	93	1.8	80.00	0	117	70	130				
Surr: d5-N-EtFOSAA	310		320.0		96.5	70	130				
Surr: M3HFPO-DA	190		200.0		94.4	70	130				
Surr: MPFDA	78		80.00		97.9	70	130				
Surr: MPFHxA	73		80.00		91.7	70	130				

Qualifiers:

* Value exceeds Maximum Contaminant Level.
MCL Maximum Contaminant Level
RL Reporting Limit

< Not Detected at the Reporting Limit
PL Permit Limit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

Original
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WO#: 2504466

4/14/2025

Client: Trace Analytical Laboratories, Inc.

Project: 25D0164

TestCode: PFAS-DW

Sample ID: 2504467-01AMS	SampType: MS-LOW	TestCode: PFAS-DW	Units: ng/L	Prep Date: 4/10/2025	RunNo: 44516						
Client ID: BatchQC	Batch ID: 8008	TestNo: EPA 537.1		Analysis Date: 4/12/2025	SeqNo: 892345						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
PFBS	4.1	1.7	3.774	0	109	50	150				
PFHxA	4.3	1.7	3.774	0	114	50	150				
HFPO-DA	4.3	1.7	3.774	0	115	50	150				
PFHxS	4.2	1.7	3.774	0	110	50	150				
PFHpA	4.1	1.7	3.774	0	110	50	150				
ADONA	3.9	1.7	3.774	0	102	50	150				
PFOA	4.1	1.7	3.774	0	110	50	150				
PFOS	4.2	1.7	3.774	0	111	50	150				
PFNA	3.9	1.7	3.774	0	105	50	150				
9CI-PF3ONS	3.8	1.7	3.774	0	102	50	150				
PFDA	3.6	1.7	3.774	0	96.6	50	150				
NMeFOSAA	3.8	1.7	3.774	0	102	50	150				
NEtFOSAA	4.0	1.7	3.774	0	106	50	150				
PFUnA	3.0	1.7	3.774	0	78.2	50	150				
11CI-PF3OUdS	3.8	1.7	3.774	0	99.7	50	150				
PFDoA	2.9	1.7	3.774	0	76.0	50	150				
PFTTrDA	3.3	1.7	3.774	0	88.5	50	150				
PFTA	4.7	1.7	3.774	0	125	50	150				
Surr: d5-N-EtFOSAA	270		301.9		87.8	70	130				
Surr: M3HFPO-DA	200		188.7		107	70	130				
Surr: MPFDA	68		75.47		89.5	70	130				
Surr: MPFHxA	75		75.47		99.5	70	130				

Qualifiers:

* Value exceeds Maximum Contaminant Level.
MCL Maximum Contaminant Level
RL Reporting Limit

< Not Detected at the Reporting Limit
PL Permit Limit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

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WO#: 2504466

4/14/2025

Client: Trace Analytical Laboratories, Inc.

Project: 25D0164

TestCode: PFAS-DW

Sample ID: LCS-mid-8008 B	SampType: LCS-MID	TestCode: PFAS-DW	Units: ng/L	Prep Date: 4/10/2025	RunNo: 44516						
Client ID: BatchQC	Batch ID: 8008	TestNo: EPA 537.1	Analysis Date: 4/12/2025	SeqNo: 892354							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
PFBS	63	1.8	80.00	0	78.9	70	130				
PFHxA	79	1.8	80.00	0	98.6	70	130				
HFPO-DA	81	1.8	80.00	0	101	70	130				
PFHxS	83	1.8	80.00	0	104	70	130				
PFHpA	83	1.8	80.00	0	104	70	130				
ADONA	82	1.8	80.00	0	103	70	130				
PFOA	84	1.8	80.00	0	105	70	130				
PFOS	80	1.8	80.00	0	100	70	130				
PFNA	84	1.8	80.00	0	105	70	130				
9CI-PF3ONS	82	1.8	80.00	0	102	70	130				
PFDA	76	1.8	80.00	0	95.5	70	130				
NMeFOSAA	86	1.8	80.00	0	108	70	130				
NEtFOSAA	80	1.8	80.00	0	101	70	130				
PFUnA	63	1.8	80.00	0	78.7	70	130				
11CI-PF3OUdS	81	1.8	80.00	0	102	70	130				
PFDoA	63	1.8	80.00	0	79.1	70	130				
PFTTrDA	71	1.8	80.00	0	88.6	70	130				
PFTA	100	1.8	80.00	0	130	70	130				
Surr: d5-N-EtFOSAA	310		320.0		97.3	70	130				
Surr: M3HFPO-DA	190		200.0		93.4	70	130				
Surr: MPFDA	73		80.00		91.6	70	130				
Surr: MPFHxA	77		80.00		96.4	70	130				

Qualifiers:

* Value exceeds Maximum Contaminant Level.
MCL Maximum Contaminant Level
RL Reporting Limit

< Not Detected at the Reporting Limit
PL Permit Limit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

Original
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QC SUMMARY REPORT

WO#: 2504466

4/14/2025

Client: Trace Analytical Laboratories, Inc.

Project: 25D0164

TestCode: PFAS-DW

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sample ID: 2504466-01ADUP	SampType: DUP	TestCode: PFAS-DW	Units: ng/L	Prep Date: 4/10/2025	RunNo: 44516						
Client ID: WTP Plant Tap-25D	Batch ID: 8008	TestNo: EPA 537.1	Analysis Date: 4/12/2025	SeqNo: 892369							
PFBS	3.3	1.7						3.370	1.22	30	
PFHxA	1.9	1.7						1.919	2.53	30	
HFPO-DA	< 1.7	1.7						0	0	30	
PFHxS	7.1	1.7						7.159	1.30	30	
PFHpA	< 1.7	1.7						0	0	30	
ADONA	< 1.7	1.7						0	0	30	
PFOA	< 1.7	1.7						0	0	30	
PFOS	4.4	1.7						4.411	0.370	30	*
PFNA	< 1.7	1.7						0	0	30	
9CI-PF3ONS	< 1.7	1.7						0	0	30	
PFDA	< 1.7	1.7						0	0	30	
NMeFOSAA	< 1.7	1.7						0	0	30	
NEtFOSAA	< 1.7	1.7						0	0	30	R
PFUnA	< 1.7	1.7						0	0	30	
11CI-PF3OUdS	< 1.7	1.7						0	0	30	
PFDoA	< 1.7	1.7						0	0	30	
PFTTrDA	< 1.7	1.7						0	0	30	
PFTA	< 1.7	1.7						0	0	30	
PFAS Hazard Index	0.71	0.20						0.7176	1.30	0	
Surr: d5-N-EtFOSAA	280		313.7		88.7	70	130		0	0	
Surr: M3HFPO-DA	210		196.1		106	70	130		0	0	
Surr: MPFDA	74		78.43		94.1	70	130		0	0	
Surr: MPFHxA	78		78.43		99.1	70	130		0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
MCL Maximum Contaminant Level
RL Reporting Limit

< Not Detected at the Reporting Limit
PL Permit Limit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

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SUBCONTRACT ORDER
25D0164

SENDING LABORATORY:

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

RECEIVING LABORATORY:

Prein and Newhof
3260 Evergreen Drive NE
Grand Rapids, MI 49525
Phone :(616) 364-7600

4466-1

Project Manager: Tim Brewer

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

PO # 25D0164

Matrix: Drinking Water

Sampled: 04/02/25 09:17

TAT: Standard

-1

Sample ID: WTP Plant Tap 25D0164-01

Sampled By: JM

Analysis Needed:

PFAS Drinking Water- EGLE List with Field Blank


Released By

4/3/25 12:00 PM
Date


Received By

4/7/25 1030
Date

Released By

Date

Received By

Date

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