

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



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

October 21, 2025

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

RE: Trace Project 25J0110  
Client Project PFAS Plant Tap- 10/01/2025

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](mailto: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.  
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Muskegon, MI 49444-2673



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### SAMPLE SUMMARY

Trace Project ID: 25J0110  
Client Project ID: PFAS Plant Tap- 10/01/2025

Trace ID	Sample ID	Matrix	Collected By	Date Collected	Date Received
25J0110-01	WTP Plant Tap	Drinking Water	JM/JB	10/01/25 10:10	10/02/25 10:30

October 20, 2025

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

RE: 25J0110

Order No.: 2510644

Dear Mr. Jon Mink:

[Guide to Reading Lab Result](#)

Prein&Newhof Laboratory received 2 sample(s) on 10/8/2025 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](mailto:sbylsma@preinnewhof.com).

Attention: Prein&Newhof's laboratory has moved. New Address is 3350 Evergreen DR NE, Grand Rapids MI 49525

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

Sincerely,



Steve Bylsma  
Laboratory Manager

<b>CLIENT:</b>	Trace Analytical Laboratories, Inc.	<b>Collection Date</b>	10/1/2025 10:10:00 AM
<b>Project:</b>	25J0110	<b>Received Date:</b>	10/8/2025 9:30:00 AM
<b>Lab ID:</b>	2510644-01	<b>Matrix:</b>	DRINKING WATER
<b>Client Sample ID:</b>	WTP Plant Tap (25J0110-01)	<b>Sampled By:</b>	JM/JB
<b>Location:</b>			

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

**EPA 537.1**

Analyst: JS

PFBS	2.8	2.0		ng/L		10/17/2025 3:43:00 AM
PFHxA	< 2.0	2.0		ng/L		10/17/2025 3:43:00 AM
HFPO-DA	< 2.0	2.0		ng/L	10	10/17/2025 3:43:00 AM
PFHxS	5.2	2.0		ng/L	10	10/17/2025 3:43:00 AM
PFHpA	< 2.0	2.0		ng/L		10/17/2025 3:43:00 AM
ADONA	< 2.0	2.0		ng/L		10/17/2025 3:43:00 AM
PFOA	< 2.0	2.0		ng/L	4.0	10/17/2025 3:43:00 AM
PFOS	4.3	2.0	*	ng/L	4.0	10/17/2025 3:43:00 AM
PFNA	< 2.0	2.0		ng/L	10	10/17/2025 3:43:00 AM
9CI-PF3ONS	< 2.0	2.0		ng/L		10/17/2025 3:43:00 AM
PFDA	< 2.0	2.0		ng/L		10/17/2025 3:43:00 AM
NMeFOSAA	< 2.0	2.0		ng/L		10/17/2025 3:43:00 AM
NEtFOSAA	< 2.0	2.0		ng/L		10/17/2025 3:43:00 AM
PFUnA	< 2.0	2.0		ng/L		10/17/2025 3:43:00 AM
11CI-PF3OUdS	< 2.0	2.0		ng/L		10/17/2025 3:43:00 AM
PFDaA	< 2.0	2.0		ng/L		10/17/2025 3:43:00 AM
PFTTrDA	< 2.0	2.0		ng/L		10/17/2025 3:43:00 AM
PFTA	< 2.0	2.0		ng/L		10/17/2025 3:43:00 AM
PFAS Hazard Index	0.52	0.20		ng/L	1.0	10/17/2025 3:43:00 AM
Surr: d5-N-EtFOSAA	93.6	70 - 130		%Rec		10/17/2025 3:43:00 AM
Surr: M3HFPO-DA	116	70 - 130		%Rec		10/17/2025 3:43:00 AM
Surr: MPFDA	106	70 - 130		%Rec		10/17/2025 3:43:00 AM
Surr: MPFHxA	113	70 - 130		%Rec		10/17/2025 3:43:00 AM

<b>Qualifiers:</b>	* 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

<b>CLIENT:</b>	Trace Analytical Laboratories, Inc.	<b>Collection Date</b>	10/1/2025 10:10:00 AM
<b>Project:</b>	25J0110	<b>Received Date:</b>	10/8/2025 9:30:00 AM
<b>Lab ID:</b>	2510644-02	<b>Matrix:</b>	BLANK
<b>Client Sample ID:</b>	Field Blank	<b>Sampled By:</b>	JM/JB
<b>Location:</b>			

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		10/16/2025 8:51:00 PM
PFHxA	< 2.0	2.0		ng/L		10/16/2025 8:51:00 PM
HFPO-DA	< 2.0	2.0		ng/L	10	10/16/2025 8:51:00 PM
PFHxS	< 2.0	2.0		ng/L	10	10/16/2025 8:51:00 PM
PFHpA	< 2.0	2.0		ng/L		10/16/2025 8:51:00 PM
ADONA	< 2.0	2.0		ng/L		10/16/2025 8:51:00 PM
PFOA	< 2.0	2.0		ng/L	4.0	10/16/2025 8:51:00 PM
PFOS	< 2.0	2.0		ng/L	4.0	10/16/2025 8:51:00 PM
PFNA	< 2.0	2.0		ng/L	10	10/16/2025 8:51:00 PM
9CI-PF3ONS	< 2.0	2.0		ng/L		10/16/2025 8:51:00 PM
PFDA	< 2.0	2.0		ng/L		10/16/2025 8:51:00 PM
NMeFOSAA	< 2.0	2.0		ng/L		10/16/2025 8:51:00 PM
NEtFOSAA	< 2.0	2.0		ng/L		10/16/2025 8:51:00 PM
PFUnA	< 2.0	2.0		ng/L		10/16/2025 8:51:00 PM
11CI-PF3OUdS	< 2.0	2.0		ng/L		10/16/2025 8:51:00 PM
PFDaA	< 2.0	2.0		ng/L		10/16/2025 8:51:00 PM
PFTTrDA	< 2.0	2.0		ng/L		10/16/2025 8:51:00 PM
PFTA	< 2.0	2.0		ng/L		10/16/2025 8:51:00 PM
PFAS Hazard Index	< 0.20	0.20		ng/L	1.0	10/16/2025 8:51:00 PM
Surr: d5-N-EtFOSAA	78.1	70 - 130		%Rec		10/16/2025 8:51:00 PM
Surr: M3HFPO-DA	90.4	70 - 130		%Rec		10/16/2025 8:51:00 PM
Surr: MPFDA	90.1	70 - 130		%Rec		10/16/2025 8:51:00 PM
Surr: MPFHxA	93.5	70 - 130		%Rec		10/16/2025 8:51:00 PM

<b>Qualifiers:</b>	* 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#: 2510644

10/20/2025

**Client:** Trace Analytical Laboratories, Inc.

**Project:** 25J0110

**TestCode:** PFAS-DW

Sample ID: <b>LCS-high-8690 A</b>	SampType: <b>LCS-HIGH</b>	TestCode: <b>PFAS-DW</b>	Units: <b>ng/L</b>	Prep Date: <b>10/14/2025</b>	RunNo: <b>47932</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>8690</b>	TestNo: <b>EPA 537.1</b>		Analysis Date: <b>10/17/2025</b>	SeqNo: <b>974386</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
PFBS	210	1.8	200.0	0	106	70	130				
PFHxA	200	1.8	200.0	0	102	70	130				
HFPO-DA	220	1.8	200.0	0	109	70	130				
PFHxS	200	1.8	200.0	0	102	70	130				
PFHpA	200	1.8	200.0	0	102	70	130				
ADONA	200	1.8	200.0	0	99.2	70	130				
PFOA	200	1.8	200.0	0	97.6	70	130				
PFOS	200	1.8	200.0	0	99.7	70	130				
PFNA	200	1.8	200.0	0	101	70	130				
9CI-PF3ONS	200	1.8	200.0	0	98.7	70	130				
PFDA	200	1.8	200.0	0	100	70	130				
NMeFOSAA	200	1.8	200.0	0	100	70	130				
NEtFOSAA	190	1.8	200.0	0	93.1	70	130				
PFUnA	200	1.8	200.0	0	102	70	130				
11CI-PF3OUdS	200	1.8	200.0	0	101	70	130				
PFDoA	200	1.8	200.0	0	101	70	130				
PFTTrDA	200	1.8	200.0	0	98.8	70	130				
PFTA	200	1.8	200.0	0	102	70	130				
Surr: d5-N-EtFOSAA	320		320.0		99.3	70	130				
Surr: M3HFPO-DA	220		200.0		111	70	130				
Surr: MPFDA	85		80.00		106	70	130				
Surr: MPFHxA	86		80.00		108	70	130				

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level.  
MCL Maximum Contaminant Level

< Not Detected at the Reporting Limit  
PL Permit Limit

H Holding times for preparation or analysis exceeded  
RL Reporting Limit

WO#: 2510644

10/20/2025

**Client:** Trace Analytical Laboratories, Inc.

**Project:** 25J0110

**TestCode:** PFAS-DW

Sample ID: 2510572-01ADUP	SampType: DUP	TestCode: PFAS-DW	Units: ng/L	Prep Date: 10/14/2025	RunNo: 47932						
Client ID: BatchQC	Batch ID: 8690	TestNo: EPA 537.1		Analysis Date: 10/17/2025	SeqNo: 974388						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
PFBS	4.8	1.8						5.104	5.39	30	
PFHxA	2.0	1.8						1.980	2.59	30	
HFPO-DA	< 1.8	1.8						0	0	30	
PFHxS	2.0	1.8						2.020	3.42	30	
PFHpA	< 1.8	1.8						0	0	30	
ADONA	< 1.8	1.8						0	0	30	
PFOA	< 1.8	1.8						0	0	30	
PFOS	4.9	1.8						5.328	7.72	30	*
PFNA	< 1.8	1.8						0	0	30	
9CI-PF3ONS	< 1.8	1.8						0	0	30	
PFDA	< 1.8	1.8						0	0	30	
NMeFOSAA	< 1.8	1.8						0	0	30	
NEtFOSAA	< 1.8	1.8						0	0	30	
PFUnA	< 1.8	1.8						0	0	30	
11CI-PF3OUdS	< 1.8	1.8						0	0	30	
PFDoA	< 1.8	1.8						0	0	30	
PFTTrDA	< 1.8	1.8						0	0	30	
PFTA	< 1.8	1.8						0	0	30	
PFAS Hazard Index	0.26	0.20						0.2670	4.49	0	
Surr: d5-N-EtFOSAA	240		320.0		73.6	70	130		0	0	
Surr: M3HFPO-DA	220		200.0		111	70	130		0	0	
Surr: MPFDA	77		80.00		96.8	70	130		0	0	
Surr: MPFHxA	86		80.00		108	70	130		0	0	

**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#: 2510644

10/20/2025

**Client:** Trace Analytical Laboratories, Inc.

**Project:** 25J0110

**TestCode:** PFAS-DW

Sample ID: <b>MB-S5-8690</b>	SampType: <b>MBLK</b>	TestCode: <b>PFAS-DW</b>	Units: <b>ng/L</b>	Prep Date: <b>10/14/2025</b>	RunNo: <b>47932</b>						
Client ID: <b>PBW</b>	Batch ID: <b>8690</b>	TestNo: <b>EPA 537.1</b>		Analysis Date: <b>10/17/2025</b>	SeqNo: <b>974497</b>						
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	280		320.0		88.5	70	130				
Surr: M3HFPO-DA	240		200.0		121	70	130				
Surr: MPFDA	81		80.00		101	70	130				
Surr: MPFHxA	88		80.00		110	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 RL Reporting Limit

WO#: 2510644

10/20/2025

**Client:** Trace Analytical Laboratories, Inc.

**Project:** 25J0110

**TestCode:** PFAS-DW

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
PFBS	210	1.8	200.0	0	105	70	130				
PFHxA	210	1.8	200.0	0	106	70	130				
HFPO-DA	210	1.8	200.0	0	106	70	130				
PFHxS	210	1.8	200.0	0	107	70	130				
PFHpA	200	1.8	200.0	0	99.3	70	130				
ADONA	220	1.8	200.0	0	108	70	130				
PFOA	210	1.8	200.0	0	104	70	130				
PFOS	210	1.8	200.0	0	105	70	130				
PFNA	210	1.8	200.0	0.8600	106	70	130				
9CI-PF3ONS	220	1.8	200.0	0	109	70	130				
PFDA	210	1.8	200.0	0	104	70	130				
NMeFOSAA	200	1.8	200.0	0.5080	98.6	70	130				
NEtFOSAA	190	1.8	200.0	0.8480	96.2	70	130				
PFUnA	210	1.8	200.0	0	104	70	130				
11CI-PF3OUdS	200	1.8	200.0	0	102	70	130				
PFDoA	200	1.8	200.0	0	98.1	70	130				
PFTTrDA	180	1.8	200.0	0	92.4	70	130				
PFTA	190	1.8	200.0	0	93.8	70	130				
Surr: d5-N-EtFOSAA	300		320.0		93.0	70	130				
Surr: M3HFPO-DA	230		200.0		117	70	130				
Surr: MPFDA	88		80.00		110	70	130				
Surr: MPFHxA	92		80.00		115	70	130				

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level.  
MCL Maximum Contaminant Level

< Not Detected at the Reporting Limit  
PL Permit Limit

H Holding times for preparation or analysis exceeded  
RL Reporting Limit

Original  
Page 7 of 8

**SUBCONTRACT ORDER**

**25J0110**

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

Project Manager: Tim Brewer

Note Our New Email address: [TraceSubOut@trace-labs.com](mailto:TraceSubOut@trace-labs.com)

**PO # 25J0110**

Matrix: Drinking Water    Sampled: 10/01/25 10:10    TAT: Standard    10644-1





Sample ID: WTP Plant Tap 25J0110-01

Sampled By: JM/JB

*Analysis Needed:*

PFAS Drinking Water- EGLE List with Field Blank

12

	10/6/25		10/8/25
Released By	Date	Received By	Date
	10/8/25		10/8/25 0930
Released By	Date	Received By	Date

70L



**25J0110**

Clare, City of  
 Project Manager: Tim Brewer

**Sample Log In Checklist**

Date: 10/2/25	Original Observation	Corrected Temperature	IR-9 (CF: 0.0°C)	IR-12 (CF: 0.0°C)	IR-13 (CF: -0.5°C)	IR-14 (CF: -1.1°C)	SR1 (CF: -0.2°C)	SR2 (CF: -0.3°C)	Temp Blank	Client Sample
Time: 1530										
Initials: MJ										
Package Description: Cooler										
Package Temp °C	0.0	0.0	/							
Representative Sample Temp °C	2.3	2.0							/	/

**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: HC461264)     pH 11.0-13.0 (Lot: HC022540)     Other
- Air bubbles absent from VOAs (no bubble greater than 6mm)

**Chain of Custody (COC)**

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

**Notes:**

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