



Northern Lake Service, Inc • 400 N Lake Ave • Crandon, WI 54520  
800-278-1254 • [www.nlslab.com](http://www.nlslab.com)

August 24, 2023

Scott Boers  
Wausau Waterworks  
1801 Burek Ave  
Wausau, WI 54401

Project: Investigative PFAS Testing  
Project Number: 2023 WDNR Drinking Water Requirements  
Work Order: CB09517  
Received: 08/11/23  
PWS ID: 73701023

Enclosed are the results of analyses for samples received by our laboratory on 8/11/2023. If you have any questions concerning this report, please feel free to contact a client service representative at [clientservices@nlslab.com](mailto:clientservices@nlslab.com).

Sincerely,

A handwritten signature in black ink, appearing to read "Tom Priebe".

Tom Priebe For Client Services  
Northern Lake Service, Inc.



Wausau Waterworks  
1801 Burek Ave  
Wausau, WI 54401

Project: Investigative PFAS Testing  
Project Number: 2023 WDNR Drinking Water Requirements  
Project Manager: Scott Boers

**Reported:**  
8/24/23 8:41

**Work Order:**  
CB09517

### Sample Summary

Descriptions of all qualifiers listed throughout this report can be found on the Qualifiers and Definitions Page.

Lab ID	Sample	Matrix	Sample Type	Qualifiers	Date Sampled	Date Received
CB09517-01	Lab	DW			8/10/23 11:42	8/11/23 8:00



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**Sample Results**

**Sample: Lab**  
**CB09517-01 (DW) Sampled: 08/10/23 11:42**

Analyte	Result	Qualifier	LOD	LOQ	MCL	Units	Date Prepared	Date Analyzed	Analyst	Method	Lab Cert Code
<b>Semi-Volatiles</b>											
11-chloroicosafafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		0.31	1.0		ng/L	8/16/23 5:27	8/17/23 16:22	RAW	EPA 537.1, Rev 2.0	2
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND		0.34	1.1		ng/L	8/16/23 5:27	8/17/23 16:22	RAW	EPA 537.1, Rev 2.0	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.37	1.2		ng/L	8/16/23 5:27	8/17/23 16:22	RAW	EPA 537.1, Rev 2.0	2
hexafluoropropylene oxide dimer acid (HFPO DA)	ND		0.41	1.4		ng/L	8/16/23 5:27	8/17/23 16:22	RAW	EPA 537.1, Rev 2.0	2
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.7		0.47	1.6		ng/L	8/16/23 5:27	8/17/23 16:22	RAW	EPA 537.1, Rev 2.0	2
n-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		0.40	1.3		ng/L	8/16/23 5:27	8/17/23 16:22	RAW	EPA 537.1, Rev 2.0	2
perfluorobutanesulfonic acid (PFBS)	0.36	J	0.30	1.0		ng/L	8/16/23 5:27	8/17/23 16:22	RAW	EPA 537.1, Rev 2.0	2
perfluorodecanoic acid (PFDA)	ND		0.33	1.1		ng/L	8/16/23 5:27	8/17/23 16:22	RAW	EPA 537.1, Rev 2.0	2
perfluorododecanoic acid (PFDoA)	ND		0.23	0.77		ng/L	8/16/23 5:27	8/17/23 16:22	RAW	EPA 537.1, Rev 2.0	2
perfluoroheptanoic acid (PFHpA)	2.3		0.44	1.5		ng/L	8/16/23 5:27	8/17/23 16:22	RAW	EPA 537.1, Rev 2.0	2
perfluorohexanoic acid (PFHxA)	2.5		0.47	1.6		ng/L	8/16/23 5:27	8/17/23 16:22	RAW	EPA 537.1, Rev 2.0	2
perfluorohexanesulfonic acid (PFHxS)	ND		0.34	1.1		ng/L	8/16/23 5:27	8/17/23 16:22	RAW	EPA 537.1, Rev 2.0	2
perfluorononanoic acid (PFNA)	ND		0.46	1.5		ng/L	8/16/23 5:27	8/17/23 16:22	RAW	EPA 537.1, Rev 2.0	2
perfluorooctanoic acid (PFOA)	6.1		0.49	1.6		ng/L	8/16/23 5:27	8/17/23 16:22	RAW	EPA 537.1, Rev 2.0	2
perfluorooctanesulfonic acid (PFOS)	1.1		0.31	1.0		ng/L	8/16/23 5:27	8/17/23 16:22	RAW	EPA 537.1, Rev 2.0	2
perfluorotetradecanoic acid (PFTA)	ND		0.34	1.1		ng/L	8/16/23 5:27	8/17/23 16:22	RAW	EPA 537.1, Rev 2.0	2
perfluorotridecanoic acid (PFTTrDA)	ND		0.43	1.4		ng/L	8/16/23 5:27	8/17/23 16:22	RAW	EPA 537.1, Rev 2.0	2
perfluoroundecanoic acid (PFUnA)	ND		0.30	1.0		ng/L	8/16/23 5:27	8/17/23 16:22	RAW	EPA 537.1, Rev 2.0	2
Surrogate: (SURR) C13-PFHxA	95%		Limits: 70-130%				8/16/23 5:27	8/17/23 16:22	RAW	EPA 537.1, Rev 2.0	2
Surrogate: (SURR) C13-HFPODA	90%		Limits: 70-130%				8/16/23 5:27	8/17/23 16:22	RAW	EPA 537.1, Rev 2.0	2
Surrogate: (SURR) C13-PFDA	98%		Limits: 70-130%				8/16/23 5:27	8/17/23 16:22	RAW	EPA 537.1, Rev 2.0	2
Surrogate: (SURR) d5-NEtFOSAA	93%		Limits: 70-130%				8/16/23 5:27	8/17/23 16:22	RAW	EPA 537.1, Rev 2.0	2



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**List of Certifications**

<b>Code</b>	<b>Description</b>	<b>Number</b>	<b>Expires</b>
2	NLS (Crandon) WDNR Laboratory ID No.	721026460	8/31/23



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### Qualifiers and Definitions

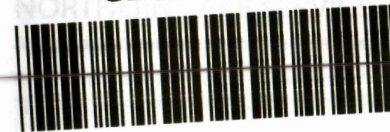
Item	Definition
J	Result is between LOD and LOQ and considered to be within a region of less-certain quantitation.
ND	Analyte NOT DETECTED at or above the LOD or MRL.
LOD	Limit of Detection.
LOQ	Limit of Quantitation.
NA	Not Applicable.
Dry	Dry Weight Basis.
Wet	Wet Weight Basis.
% Dry	Equal to: (mg/kg dry) / 10000.
1000 ug/L	Equal to: 1 mg/L.
MCL	Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.
RPD	Relative Percent Difference.
%REC	Percent Recovery.
Source	Sample that was matrix spiked or duplicated.

All LOD/LOQs adjusted to reflect preparation volumes, dilutions, and/or solids content.

# SAMPLE COLLECTION AND CHAIN OF CUSTODY RECORD

CB09517

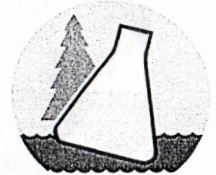
Wisconsin Lab Cert. No. 721026460  
WI DATCP 105-000330



CLIENT <i>Wausau Water Works</i>	
ADDRESS <i>1801 Burek Ave</i>	
CITY <i>Wausau</i>	STATE <i>WI</i>
ZIP <i>54401</i>	
PROJECT DESCRIPTION / NO.	QUOTATION NO.
DNR FID #	DNR LICENSE #
CONTACT	PHONE
PURCHASE ORDER NO.	FAX

MATRIX:  
SW = surface water  
WW = waste water  
GW = groundwater  
DW = drinking water  
TIS = tissue  
AIR = air  
SOIL = soil  
SED = sediment  
PROD = product  
SL = sludge  
OTHER

Indicate Y or N if GW Sample is field filtered.  
Indicate G or C if WW Sample is Grab or Composite.



NO.

ITEM NO.	NLS LAB. NO.	SAMPLE ID	COLLECTION		MATRIX (See above)	ANALYZE PER ORDER OF ANALYSIS	PARAMETER										COLLECTION REMARKS (i.e. DNR Well ID #)		
			DATE	TIME			1	2	3	4	5	6	7	8	9	10			
1.	PFAS	Lab	8-10-23	1:42 Am	DW	7													
2.																			
3.																			
4.																			
5.																			
6.																			
7.																			
8.																			
9.																			
10.																			

COLLECTED BY (signature) <i>Tim Muser</i>	CUSTODY SEAL NO. (IF ANY)	DATE/TIME <i>8-10-23 - 1:42 Am</i>
RELINQUISHED BY (signature)	RECEIVED BY (signature)	DATE/TIME
DISPATCHED BY (signature)	METHOD OF TRANSPORT <i>800</i>	DATE/TIME
RECEIVED AT NLS BY (signature)	DATE/TIME <i>8/11/23 800</i>	CONDITION <i>ON ICE</i>
COOLER #	TEMP. <i>1</i>	
REMARKS & OTHER INFORMATION		
WPNR FACILITY NUMBER	E-MAIL ADDRESS	

REPORT TO
INVOICE TO

**IMPORTANT:**

1. TO MEET REGULATORY REQUIREMENTS, THIS FORM MUST BE COMPLETED IN DETAIL AND INCLUDED IN THE COOLER CONTAINING THE SAMPLES DESCRIBED.
2. PLEASE USE ONE LINE PER SAMPLE, NOT PER BOTTLE.
3. RETURN THIS FORM WITH SAMPLES - CLIENT MAY KEEP PINK COPY.
4. PARTIES COLLECTING SAMPLE, LISTED AS REPORT TO AND LISTED AS INVOICED TO AGREE TO STANDARD TERMS & CONDITIONS ON REVERSE.