



Northern Lake Service, Inc • 400 N Lake Ave • Crandon, WI 54520
800-278-1254 • www.nlslab.com

September 02, 2024

Mark Pauli
Wisconsin Dept of Natural Res - Madison
107 Sutliff Ave
Rhinelander, WI 54501

Project: 2024 0.5 Expanded Zone (Starks/Stella)
Project Number: Kimberly Medina (4090 Camp Bryn Afon Road)
Work Order: CC09641
Received: 08/20/24

Enclosed are the results of analyses for samples received by our laboratory on 8/20/2024. If you have any questions concerning this report, please feel free to contact a client service representative at clientservices@nlslab.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Ronald T. Krueger".

Ronald T. Krueger For Client Services
Northern Lake Service, Inc.



Wisconsin Dept of Natural Res - Madison
107 Sutliff Ave
Rhineland, WI 54501

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Project Number: Kimberly Medina (4090 Camp Bryn Afon Road)
Project Manager: Mark Pauli

Reported:
9/2/24 18:16

Work Order:
CC09641

Sample Summary

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

Lab ID	Sample	Matrix	Qualifiers	Date Sampled	Date Received
CC09641-01	Kitchen Sink	DW		8/18/24 13:30	8/20/24 8:30
CC09641-02	Kitchen Sink Field Blank	DW		8/18/24 13:30	8/20/24 8:30



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Sample Results

Sample: Kitchen Sink

CC09641-01 (DW) Sampled: 08/18/24 13:30

Analyte	Result	Qualifier	LOD	LOQ	MCL	Units	Date Prepared	Date Analyzed	Analyst	Method	Lab Cert Code
Semi-Volatiles											
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		1.5	5.0		ng/L	8/22/24 5:38	8/22/24 15:47	JPW	EPA 537.1, Rev 2.0	2
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND		2.3	7.5		ng/L	8/22/24 5:38	8/22/24 15:47	JPW	EPA 537.1, Rev 2.0	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0	6.5		ng/L	8/22/24 5:38	8/22/24 15:47	JPW	EPA 537.1, Rev 2.0	2
hexafluoropropylene oxide dimer acid (HFPO DA)	ND		4.6	15		ng/L	8/22/24 5:38	8/22/24 15:47	JPW	EPA 537.1, Rev 2.0	2
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		8.5	28		ng/L	8/22/24 5:38	8/22/24 15:47	JPW	EPA 537.1, Rev 2.0	2
n-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		9.5	32		ng/L	8/22/24 5:38	8/22/24 15:47	JPW	EPA 537.1, Rev 2.0	2
perfluorobutanesulfonic acid (PFBS)	3.9	J	3.6	12		ng/L	8/22/24 5:38	8/22/24 15:47	JPW	EPA 537.1, Rev 2.0	2
perfluorodecanoic acid (PFDA)	ND		2.6	9.0		ng/L	8/22/24 5:38	8/22/24 15:47	JPW	EPA 537.1, Rev 2.0	2
perfluorododecanoic acid (PFDoA)	ND		3.0	10		ng/L	8/22/24 5:38	8/22/24 15:47	JPW	EPA 537.1, Rev 2.0	2
perfluoroheptanoic acid (PFHpA)	190		2.6	9.0		ng/L	8/22/24 5:38	8/22/24 15:47	JPW	EPA 537.1, Rev 2.0	2
perfluorohexanoic acid (PFHxA)	350		2.8	9.0		ng/L	8/22/24 5:38	8/22/24 15:47	JPW	EPA 537.1, Rev 2.0	2
perfluorohexanesulfonic acid (PFHxS)	ND		3.1	10		ng/L	8/22/24 5:38	8/22/24 15:47	JPW	EPA 537.1, Rev 2.0	2
perfluorononanoic acid (PFNA)	4.4	J	2.6	8.5		ng/L	8/22/24 5:38	8/22/24 15:47	JPW	EPA 537.1, Rev 2.0	2
perfluorooctanoic acid (PFOA)	150		2.3	7.5		ng/L	8/22/24 5:38	8/22/24 15:47	JPW	EPA 537.1, Rev 2.0	2
perfluorooctanesulfonic acid (PFOS)	8.4		2.4	8.0		ng/L	8/22/24 5:38	8/22/24 15:47	JPW	EPA 537.1, Rev 2.0	2
perfluorotetradecanoic acid (PFTA)	ND		2.6	9.0		ng/L	8/22/24 5:38	8/22/24 15:47	JPW	EPA 537.1, Rev 2.0	2
perfluorotridecanoic acid (PFTTrDA)	ND		2.6	9.0		ng/L	8/22/24 5:38	8/22/24 15:47	JPW	EPA 537.1, Rev 2.0	2
perfluoroundecanoic acid (PFUnA)	ND		2.6	8.5		ng/L	8/22/24 5:38	8/22/24 15:47	JPW	EPA 537.1, Rev 2.0	2
Surrogate: (SURR) C13-PFHxA	97%		Limits: 70-130%				8/22/24 5:38	8/22/24 15:47	JPW	EPA 537.1, Rev 2.0	2
Surrogate: (SURR) C13-HFPODA	95%		Limits: 70-130%				8/22/24 5:38	8/22/24 15:47	JPW	EPA 537.1, Rev 2.0	2
Surrogate: (SURR) C13-PFDA	96%		Limits: 70-130%				8/22/24 5:38	8/22/24 15:47	JPW	EPA 537.1, Rev 2.0	2
Surrogate: (SURR) d5-NEtFOSAA	88%		Limits: 70-130%				8/22/24 5:38	8/22/24 15:47	JPW	EPA 537.1, Rev 2.0	2



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Sample: Kitchen Sink Field Blank

CC09641-02 (DW) Sampled: 08/18/24 13:30

Analyte	Result	Qualifier	LOD	LOQ	MCL	Units	Date Prepared	Date Analyzed	Analyst	Method	Lab Cert Code
Semi-Volatiles											
11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		0.30	1.0		ng/L	8/28/24 5:37	8/28/24 19:10	JPW	EPA 537.1, Rev 2.0	2
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND		0.46	1.5		ng/L	8/28/24 5:37	8/28/24 19:10	JPW	EPA 537.1, Rev 2.0	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.40	1.3		ng/L	8/28/24 5:37	8/28/24 19:10	JPW	EPA 537.1, Rev 2.0	2
hexafluoropropylene oxide dimer acid (HFPO DA)	ND		0.91	3.0		ng/L	8/28/24 5:37	8/28/24 19:10	JPW	EPA 537.1, Rev 2.0	2
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.7	5.7		ng/L	8/28/24 5:37	8/28/24 19:10	JPW	EPA 537.1, Rev 2.0	2
n-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.9	6.3		ng/L	8/28/24 5:37	8/28/24 19:10	JPW	EPA 537.1, Rev 2.0	2
perfluorobutanesulfonic acid (PFBS)	ND		0.71	2.4		ng/L	8/28/24 5:37	8/28/24 19:10	JPW	EPA 537.1, Rev 2.0	2
perfluorodecanoic acid (PFDA)	ND		0.53	1.8		ng/L	8/28/24 5:37	8/28/24 19:10	JPW	EPA 537.1, Rev 2.0	2
perfluorododecanoic acid (PFDoA)	ND		0.61	2.0		ng/L	8/28/24 5:37	8/28/24 19:10	JPW	EPA 537.1, Rev 2.0	2
perfluoroheptanoic acid (PFHpA)	ND		0.53	1.8		ng/L	8/28/24 5:37	8/28/24 19:10	JPW	EPA 537.1, Rev 2.0	2
perfluorohexanoic acid (PFHxA)	ND		0.55	1.8		ng/L	8/28/24 5:37	8/28/24 19:10	JPW	EPA 537.1, Rev 2.0	2
perfluorohexanesulfonic acid (PFHxS)	ND		0.62	2.1		ng/L	8/28/24 5:37	8/28/24 19:10	JPW	EPA 537.1, Rev 2.0	2
perfluorononanoic acid (PFNA)	ND		0.51	1.7		ng/L	8/28/24 5:37	8/28/24 19:10	JPW	EPA 537.1, Rev 2.0	2
perfluorooctanoic acid (PFOA)	ND		0.46	1.5		ng/L	8/28/24 5:37	8/28/24 19:10	JPW	EPA 537.1, Rev 2.0	2
perfluorooctanesulfonic acid (PFOS)	ND		0.47	1.6		ng/L	8/28/24 5:37	8/28/24 19:10	JPW	EPA 537.1, Rev 2.0	2
perfluorotetradecanoic acid (PFTA)	ND		0.53	1.8		ng/L	8/28/24 5:37	8/28/24 19:10	JPW	EPA 537.1, Rev 2.0	2
perfluorotridecanoic acid (PFTTrDA)	ND		0.53	1.8		ng/L	8/28/24 5:37	8/28/24 19:10	JPW	EPA 537.1, Rev 2.0	2
perfluoroundecanoic acid (PFUnA)	ND		0.51	1.7		ng/L	8/28/24 5:37	8/28/24 19:10	JPW	EPA 537.1, Rev 2.0	2
<i>Surrogate: (SURR) C13-PFHxA</i>	<i>93%</i>				<i>Limits: 70-130%</i>		<i>8/28/24 5:37</i>	<i>8/28/24 19:10</i>	<i>JPW</i>	<i>EPA 537.1, Rev 2.0</i>	<i>2</i>
<i>Surrogate: (SURR) C13-HFPODA</i>	<i>90%</i>				<i>Limits: 70-130%</i>		<i>8/28/24 5:37</i>	<i>8/28/24 19:10</i>	<i>JPW</i>	<i>EPA 537.1, Rev 2.0</i>	<i>2</i>
<i>Surrogate: (SURR) C13-PFDA</i>	<i>91%</i>				<i>Limits: 70-130%</i>		<i>8/28/24 5:37</i>	<i>8/28/24 19:10</i>	<i>JPW</i>	<i>EPA 537.1, Rev 2.0</i>	<i>2</i>
<i>Surrogate: (SURR) d5-NEtFOSAA</i>	<i>83%</i>				<i>Limits: 70-130%</i>		<i>8/28/24 5:37</i>	<i>8/28/24 19:10</i>	<i>JPW</i>	<i>EPA 537.1, Rev 2.0</i>	<i>2</i>



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List of Certifications

Code	Description	Number	Expires
2	NLS (Crandon) WDNR Laboratory ID No.	721026460	8/31/25



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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 Record

Town of Stella-Starks Expanded PFAS (537.1) Sampling Project

Return your sample no later than 2 days after collection to:

Northern Lake Service
400 N Lake Ave
Crandon, WI 54520

Please provide the following information:

Name: Kimberly Medina
Address: 4090 Camp Bryn Afon Rd.
City/State/Zip: Rhinelander, WI, 54501
Phone: 970-443-8814
Sample Collection Date: 8-18-24 Sample Collection Time: 1:30 pm AM/PM
Sample Collection Location (ex. Kitchen Sink): Kitchen Sink
Sample Collected By (Signature): [Signature]

Per EPA 537.1, each sample set **must be accompanied by a field blank. The purpose of the field blank is to allow for the identification of potential contamination during sample collection and handling.

Final results will be reported directly to the Wisconsin DNR. WDNR will review, interpret, and inform residents of further action. **DO NOT CONTACT NORTHERN LAKE SERVICE DIRECTLY FOR SAMPLE RESULTS.**

CC09641



Laboratory use only:

Received at NLS by (Signature): [Signature] Date/Time: 8/20/24 0830
Method of Delivery: Spec Fee Condition (on ice / no ice) Blue Ice
Receiving Temperature (°C) 5.4 Thermometer # 11