



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

June 26, 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: Frank & Amy Rosendahl - 3274 County Highway C
Work Order: CC06422
Received: 06/12/24

Enclosed are the results of analyses for samples received by our laboratory on 6/12/2024. 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: Frank & Amy Rosendahl - 3274 County Highway C
Project Manager: Mark Pauli

Reported:
6/26/24 6:59

Work Order:
CC06422

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
CC06422-01	Kitchen Sink	DW		6/11/24 5:45	6/12/24 13:15
CC06422-02	Kitchen Sink Field Blank	DW		6/11/24 5:45	6/12/24 13:15

Qualifiers that apply to the entire work order:

Rec-Cust



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Sample Results

Sample: Kitchen Sink

CC06422-01 (DW) Sampled: 06/11/24 05:45

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		75	250		ng/L	6/14/24 5:44	6/16/24 9:36	RAW	EPA 537.1, Rev 2.0	2
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND		120	380		ng/L	6/14/24 5:44	6/16/24 9:36	RAW	EPA 537.1, Rev 2.0	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND		100	320		ng/L	6/14/24 5:44	6/16/24 9:36	RAW	EPA 537.1, Rev 2.0	2
hexafluoropropylene oxide dimer acid (HFPO DA)	ND		230	750		ng/L	6/14/24 5:44	6/16/24 9:36	RAW	EPA 537.1, Rev 2.0	2
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		160	520		ng/L	6/14/24 5:44	6/16/24 9:36	RAW	EPA 537.1, Rev 2.0	2
n-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		160	520		ng/L	6/14/24 5:44	6/16/24 9:36	RAW	EPA 537.1, Rev 2.0	2
perfluorobutanesulfonic acid (PFBS)	ND		180	600		ng/L	6/14/24 5:44	6/16/24 9:36	RAW	EPA 537.1, Rev 2.0	2
perfluorodecanoic acid (PFDA)	ND		130	450		ng/L	6/14/24 5:44	6/16/24 9:36	RAW	EPA 537.1, Rev 2.0	2
perfluorododecanoic acid (PFDoA)	ND		150	500		ng/L	6/14/24 5:44	6/16/24 9:36	RAW	EPA 537.1, Rev 2.0	2
perfluoroheptanoic acid (PFHpA)	11000		130	450		ng/L	6/14/24 5:44	6/16/24 9:36	RAW	EPA 537.1, Rev 2.0	2
perfluorohexanoic acid (PFHxA)	10000		120	400		ng/L	6/14/24 5:44	6/16/24 9:36	RAW	EPA 537.1, Rev 2.0	2
perfluorohexanesulfonic acid (PFHxS)	290	J	160	520		ng/L	6/14/24 5:44	6/16/24 9:36	RAW	EPA 537.1, Rev 2.0	2
perfluorononanoic acid (PFNA)	200	J	130	420		ng/L	6/14/24 5:44	6/16/24 9:36	RAW	EPA 537.1, Rev 2.0	2
perfluorooctanoic acid (PFOA)	41000		580	1900		ng/L	6/14/24 5:44	6/16/24 13:29	RAW	EPA 537.1, Rev 2.0	2
perfluorooctanesulfonic acid (PFOS)	2200		120	400		ng/L	6/14/24 5:44	6/16/24 9:36	RAW	EPA 537.1, Rev 2.0	2
perfluorotetradecanoic acid (PFTA)	ND		130	450		ng/L	6/14/24 5:44	6/16/24 9:36	RAW	EPA 537.1, Rev 2.0	2
perfluorotridecanoic acid (PFTTrDA)	ND		130	450		ng/L	6/14/24 5:44	6/16/24 9:36	RAW	EPA 537.1, Rev 2.0	2
perfluoroundecanoic acid (PFUnA)	ND		130	420		ng/L	6/14/24 5:44	6/16/24 9:36	RAW	EPA 537.1, Rev 2.0	2
Surrogate: (SURR) C13-PFHxA	106%		Limits: 70-130%				6/14/24 5:44	6/16/24 9:36	RAW	EPA 537.1, Rev 2.0	2
Surrogate: (SURR) C13-HFPODA	98%		Limits: 70-130%				6/14/24 5:44	6/16/24 9:36	RAW	EPA 537.1, Rev 2.0	2
Surrogate: (SURR) C13-PFDA	100%		Limits: 70-130%				6/14/24 5:44	6/16/24 9:36	RAW	EPA 537.1, Rev 2.0	2
Surrogate: (SURR) d5-NEtFOSAA	97%		Limits: 70-130%				6/14/24 5:44	6/16/24 9:36	RAW	EPA 537.1, Rev 2.0	2



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Sample: Kitchen Sink Field Blank

CC06422-02 (DW) Sampled: 06/11/24 05:45

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		0.31	1.0		ng/L	6/18/24 5:37	6/18/24 16:30	RAW	EPA 537.1, Rev 2.0	2
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND		0.47	1.5		ng/L	6/18/24 5:37	6/18/24 16:30	RAW	EPA 537.1, Rev 2.0	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.41	1.3		ng/L	6/18/24 5:37	6/18/24 16:30	RAW	EPA 537.1, Rev 2.0	2
hexafluoropropylene oxide dimer acid (HFPO DA)	ND		0.93	3.1		ng/L	6/18/24 5:37	6/18/24 16:30	RAW	EPA 537.1, Rev 2.0	2
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		0.64	2.1		ng/L	6/18/24 5:37	6/18/24 16:30	RAW	EPA 537.1, Rev 2.0	2
n-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		0.64	2.1		ng/L	6/18/24 5:37	6/18/24 16:30	RAW	EPA 537.1, Rev 2.0	2
perfluorobutanesulfonic acid (PFBS)	ND		0.72	2.4		ng/L	6/18/24 5:37	6/18/24 16:30	RAW	EPA 537.1, Rev 2.0	2
perfluorodecanoic acid (PFDA)	ND		0.54	1.8		ng/L	6/18/24 5:37	6/18/24 16:30	RAW	EPA 537.1, Rev 2.0	2
perfluorododecanoic acid (PFDoA)	ND		0.62	2.0		ng/L	6/18/24 5:37	6/18/24 16:30	RAW	EPA 537.1, Rev 2.0	2
perfluoroheptanoic acid (PFHpA)	ND		0.54	1.8		ng/L	6/18/24 5:37	6/18/24 16:30	RAW	EPA 537.1, Rev 2.0	2
perfluorohexanoic acid (PFHxA)	ND		0.50	1.6		ng/L	6/18/24 5:37	6/18/24 16:30	RAW	EPA 537.1, Rev 2.0	2
perfluorohexanesulfonic acid (PFHxS)	ND		0.63	2.1		ng/L	6/18/24 5:37	6/18/24 16:30	RAW	EPA 537.1, Rev 2.0	2
perfluorononanoic acid (PFNA)	ND		0.52	1.7		ng/L	6/18/24 5:37	6/18/24 16:30	RAW	EPA 537.1, Rev 2.0	2
perfluorooctanoic acid (PFOA)	ND		0.47	1.5		ng/L	6/18/24 5:37	6/18/24 16:30	RAW	EPA 537.1, Rev 2.0	2
perfluorooctanesulfonic acid (PFOS)	ND		0.48	1.6		ng/L	6/18/24 5:37	6/18/24 16:30	RAW	EPA 537.1, Rev 2.0	2
perfluorotetradecanoic acid (PFTA)	ND		0.54	1.8		ng/L	6/18/24 5:37	6/18/24 16:30	RAW	EPA 537.1, Rev 2.0	2
perfluorotridecanoic acid (PFTTrDA)	ND		0.54	1.8		ng/L	6/18/24 5:37	6/18/24 16:30	RAW	EPA 537.1, Rev 2.0	2
perfluoroundecanoic acid (PFUnA)	ND		0.52	1.7		ng/L	6/18/24 5:37	6/18/24 16:30	RAW	EPA 537.1, Rev 2.0	2
<i>Surrogate: (SURR) C13-PFHxA</i>	<i>97%</i>						<i>6/18/24 5:37</i>	<i>6/18/24 16:30</i>	<i>RAW</i>	<i>EPA 537.1, Rev 2.0</i>	<i>2</i>
<i>Surrogate: (SURR) C13-HFPODA</i>	<i>95%</i>						<i>6/18/24 5:37</i>	<i>6/18/24 16:30</i>	<i>RAW</i>	<i>EPA 537.1, Rev 2.0</i>	<i>2</i>
<i>Surrogate: (SURR) C13-PFDA</i>	<i>96%</i>						<i>6/18/24 5:37</i>	<i>6/18/24 16:30</i>	<i>RAW</i>	<i>EPA 537.1, Rev 2.0</i>	<i>2</i>
<i>Surrogate: (SURR) d5-NEtFOSAA</i>	<i>87%</i>						<i>6/18/24 5:37</i>	<i>6/18/24 16:30</i>	<i>RAW</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	8/31/24



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Qualifiers and Definitions

Item	Definition
Rec-Cust	Temp >6.0 C (Actual 8.5 C)
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

CC06422



Please provide the following information:

Name: Frank + Amy Rosendahl
Address: 3274 County Highway C
City/State/Zip: Rhineland, WI 54501
Phone: 715-490-0869
Sample Collection Date: 6-11-24 Sample Collection Time: 545 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.**

* > 6.0 °C (actual 8.5 °C) [Signature]

Laboratory use only:

Received at NLS by (Signature): [Signature] Date/Time: 6/12/24 1315
Method of Delivery: Speedee Condition (on ice / no ice) Ice Packs (cold)
Receiving Temperature (°C) 8.5 Thermometer # 12