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May 29, 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: James Breneman - 3337 White Pine Road  
Work Order: CC05320  
Received: 05/16/24

Enclosed are the results of analyses for samples received by our laboratory on 5/16/2024. 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 "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

Project: 2024 0.5 Expanded Zone (Starks/Stella)  
Project Number: James Breneman - 3337 White Pine Road  
Project Manager: Mark Pauli

**Reported:**  
5/29/24 9:14

**Work Order:**  
CC05320

### 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
CC05320-01	Kitchen Sink	DW		5/16/24 7:30	5/16/24 8:15
CC05320-02	Kitchen Sink Field Blank	DW		5/16/24 7:30	5/16/24 8:15



Wisconsin Dept of Natural Res - Madison 107 Sutliff Ave Rhineland, WI 54501	Project: 2024 0.5 Expanded Zone (Starks/Stella) Project Number: James Breneman - 3337 White Pine Road Project Manager: Mark Pauli	<b>Reported:</b> 5/29/24 9:14	<b>Work Order:</b> CC05320
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**Sample Results**

**Sample: Kitchen Sink**  
**CC05320-01 (DW) Sampled: 05/16/24 07:30**

Analyte	Result	Qualifier	LOD	LOQ	MCL	Units	Date Prepared	Date Analyzed	Analyst	Method	Lab Cert Code
<b>Semi-Volatiles</b>											
11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		0.31	1.0		ng/L	5/21/24 12:05	5/23/24 1:28	RAW	EPA 537.1, Rev 2.0	2
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND		0.48	1.6		ng/L	5/21/24 12:05	5/23/24 1:28	RAW	EPA 537.1, Rev 2.0	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.42	1.4		ng/L	5/21/24 12:05	5/23/24 1:28	RAW	EPA 537.1, Rev 2.0	2
hexafluoropropylene oxide dimer acid (HFPO DA)	ND		0.95	3.1		ng/L	5/21/24 12:05	5/23/24 1:28	RAW	EPA 537.1, Rev 2.0	2
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		0.66	2.2		ng/L	5/21/24 12:05	5/23/24 1:28	RAW	EPA 537.1, Rev 2.0	2
n-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		0.66	2.2		ng/L	5/21/24 12:05	5/23/24 1:28	RAW	EPA 537.1, Rev 2.0	2
perfluorobutanesulfonic acid (PFBS)	12		0.74	2.5		ng/L	5/21/24 12:05	5/23/24 1:28	RAW	EPA 537.1, Rev 2.0	2
perfluorodecanoic acid (PFDA)	ND		0.55	1.9		ng/L	5/21/24 12:05	5/23/24 1:28	RAW	EPA 537.1, Rev 2.0	2
perfluorododecanoic acid (PFDoA)	ND		0.64	2.1		ng/L	5/21/24 12:05	5/23/24 1:28	RAW	EPA 537.1, Rev 2.0	2
perfluoroheptanoic acid (PFHpA)	230		2.8	9.4		ng/L	5/21/24 12:05	5/23/24 8:34	RAW	EPA 537.1, Rev 2.0	2
perfluorohexanoic acid (PFHxA)	290		2.6	8.3		ng/L	5/21/24 12:05	5/23/24 8:34	RAW	EPA 537.1, Rev 2.0	2
perfluorohexanesulfonic acid (PFHxS)	6.1		0.65	2.2		ng/L	5/21/24 12:05	5/23/24 1:28	RAW	EPA 537.1, Rev 2.0	2
perfluorononanoic acid (PFNA)	ND		0.53	1.8		ng/L	5/21/24 12:05	5/23/24 1:28	RAW	EPA 537.1, Rev 2.0	2
perfluorooctanoic acid (PFOA)	110		2.4	7.8		ng/L	5/21/24 12:05	5/23/24 8:34	RAW	EPA 537.1, Rev 2.0	2
perfluorooctanesulfonic acid (PFOS)	ND		0.49	1.7		ng/L	5/21/24 12:05	5/23/24 1:28	RAW	EPA 537.1, Rev 2.0	2
perfluorotetradecanoic acid (PFTA)	ND		0.55	1.9		ng/L	5/21/24 12:05	5/23/24 1:28	RAW	EPA 537.1, Rev 2.0	2
perfluorotridecanoic acid (PFTTrDA)	ND		0.55	1.9		ng/L	5/21/24 12:05	5/23/24 1:28	RAW	EPA 537.1, Rev 2.0	2
perfluoroundecanoic acid (PFUnA)	ND		0.53	1.8		ng/L	5/21/24 12:05	5/23/24 1:28	RAW	EPA 537.1, Rev 2.0	2
Surrogate: (SURR) C13-PFHxA	82%		Limits: 70-130%				5/21/24 12:05	5/23/24 1:28	RAW	EPA 537.1, Rev 2.0	2
Surrogate: (SURR) C13-HFPODA	85%		Limits: 70-130%				5/21/24 12:05	5/23/24 1:28	RAW	EPA 537.1, Rev 2.0	2
Surrogate: (SURR) C13-PFDA	88%		Limits: 70-130%				5/21/24 12:05	5/23/24 1:28	RAW	EPA 537.1, Rev 2.0	2
Surrogate: (SURR) d5-NEtFOSAA	77%		Limits: 70-130%				5/21/24 12:05	5/23/24 1:28	RAW	EPA 537.1, Rev 2.0	2



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**Sample: Kitchen Sink Field Blank**

**CC05320-02 (DW) Sampled: 05/16/24 07:30**

Analyte	Result	Qualifier	LOD	LOQ	MCL	Units	Date Prepared	Date Analyzed	Analyst	Method	Lab Cert Code
<b>Semi-Volatiles</b>											
11-chloroicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		0.31	1.0		ng/L	5/23/24 12:04	5/25/24 10:35	RAW	EPA 537.1, Rev 2.0	2
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND		0.48	1.6		ng/L	5/23/24 12:04	5/25/24 10:35	RAW	EPA 537.1, Rev 2.0	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.42	1.4		ng/L	5/23/24 12:04	5/25/24 10:35	RAW	EPA 537.1, Rev 2.0	2
hexafluoropropylene oxide dimer acid (HFPO DA)	ND		0.95	3.1		ng/L	5/23/24 12:04	5/25/24 10:35	RAW	EPA 537.1, Rev 2.0	2
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		0.66	2.2		ng/L	5/23/24 12:04	5/25/24 10:35	RAW	EPA 537.1, Rev 2.0	2
n-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		0.66	2.2		ng/L	5/23/24 12:04	5/25/24 10:35	RAW	EPA 537.1, Rev 2.0	2
perfluorobutanesulfonic acid (PFBS)	ND		0.74	2.5		ng/L	5/23/24 12:04	5/25/24 10:35	RAW	EPA 537.1, Rev 2.0	2
perfluorodecanoic acid (PFDA)	ND		0.55	1.9		ng/L	5/23/24 12:04	5/25/24 10:35	RAW	EPA 537.1, Rev 2.0	2
perfluorododecanoic acid (PFDoA)	ND		0.64	2.1		ng/L	5/23/24 12:04	5/25/24 10:35	RAW	EPA 537.1, Rev 2.0	2
perfluoroheptanoic acid (PFHpA)	ND		0.55	1.9		ng/L	5/23/24 12:04	5/25/24 10:35	RAW	EPA 537.1, Rev 2.0	2
perfluorohexanoic acid (PFHxA)	ND		0.51	1.7		ng/L	5/23/24 12:04	5/25/24 10:35	RAW	EPA 537.1, Rev 2.0	2
perfluorohexanesulfonic acid (PFHxS)	ND		0.65	2.2		ng/L	5/23/24 12:04	5/25/24 10:35	RAW	EPA 537.1, Rev 2.0	2
perfluorononanoic acid (PFNA)	ND		0.53	1.8		ng/L	5/23/24 12:04	5/25/24 10:35	RAW	EPA 537.1, Rev 2.0	2
perfluorooctanoic acid (PFOA)	ND		0.48	1.6		ng/L	5/23/24 12:04	5/25/24 10:35	RAW	EPA 537.1, Rev 2.0	2
perfluorooctanesulfonic acid (PFOS)	ND		0.49	1.7		ng/L	5/23/24 12:04	5/25/24 10:35	RAW	EPA 537.1, Rev 2.0	2
perfluorotetradecanoic acid (PFTA)	ND		0.55	1.9		ng/L	5/23/24 12:04	5/25/24 10:35	RAW	EPA 537.1, Rev 2.0	2
perfluorotridecanoic acid (PFTTrDA)	ND		0.55	1.9		ng/L	5/23/24 12:04	5/25/24 10:35	RAW	EPA 537.1, Rev 2.0	2
perfluoroundecanoic acid (PFUnA)	ND		0.53	1.8		ng/L	5/23/24 12:04	5/25/24 10:35	RAW	EPA 537.1, Rev 2.0	2
Surrogate: (SURR) C13-PFHxA	94%		Limits: 70-130%				5/23/24 12:04	5/25/24 10:35	RAW	EPA 537.1, Rev 2.0	2
Surrogate: (SURR) C13-HFPODA	92%		Limits: 70-130%				5/23/24 12:04	5/25/24 10:35	RAW	EPA 537.1, Rev 2.0	2
Surrogate: (SURR) C13-PFDA	89%		Limits: 70-130%				5/23/24 12:04	5/25/24 10:35	RAW	EPA 537.1, Rev 2.0	2
Surrogate: (SURR) d5-NEtFOSAA	88%		Limits: 70-130%				5/23/24 12:04	5/25/24 10:35	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	8/31/24



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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: James Breneman  
Address: 3337 White Pine Road  
City/State/Zip: Raineland, WI 54501  
Phone: 715 550 3613  
Sample Collection Date: 5/16/24 Sample Collection Time: 0730 AM/PM  
Sample Collection Location (ex. Kitchen Sink): Kitchen Sink  
Sample Collected By (Signature): James Breneman

\*\*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.**

CC05320



Laboratory use only:

Received at NLS by (Signature): [Signature] Date/Time: 5/16/24 0815  
Method of Delivery: hand del Condition (on ice / no ice) Ice  
Receiving Temperature (°C) 3.4 Thermometer # 3