



Northern Lake Service, Inc • 400 N Lake Ave • Crandon, WI 54520  
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November 21, 2023

Jesse Barrette  
Oshkosh Water Filtration Dept  
425 Lakeshore Drive  
Oshkosh, WI 54901

Project: UCMR5 Testing SE4  
Project Number: UCMR5 Testing  
Work Order: CB13701  
Received: 11/08/23

Enclosed are the results of analyses for samples received by our laboratory on 11/8/2023. 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 "Ronald T. Krueger".

Ronald T. Krueger For Tracy Huber  
Northern Lake Service, Inc.



Oshkosh Water Filtration Dept  
425 Lakeshore Drive  
Oshkosh, WI 54901

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Project Number: UCMR5 Testing  
Project Manager: Jesse Barrette

**Reported:**  
11/21/23 9:22

**Work Order:**  
CB13701

### 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
CB13701-01	EP81	DW			11/7/23 11:00	11/8/23 7:45

#### Analysis Qualifiers:

LabNumber	Analysis	Qualifier
CB13701-01	UCMR5 EPA Method 533	FBNA
CB13701-01	UCMR5 EPA Method 537.1	FBNA

#### Cancelled Tests:

LabNumber	SampleName	Analysis	Cancelled	Initials
CB13701-02	EP81 Field Blank	Perfluorinated Chemicals by EPA Method 533	11/16/23 12:53	CSC
CB13701-02	EP81 Field Blank	Perfluorinated Chemicals by EPA Method 537.1	11/14/23 14:24	CSC



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### Sample Results

Sample: EP81

CB13701-01 (DW) Sampled: 11/07/23 11:00

Analyte	Result	Qualifier	MRL	MCL	Units	Date Prepared	Date Analyzed	Analyst	Method	Lab Cert Code
<b>Metals</b>										
Lithium, Total	ND		9.0		ug/L	11/15/23 14:11	11/16/23 14:45	RAB	EPA 200.7, Rev 4.4	1
<i>Surrogate: Yttrium 200.7 ISTD</i>										
	95%		Limits: 60-125%			11/15/23 14:11	11/16/23 14:45	RAB	EPA 200.7, Rev 4.4	
<b>Semi-Volatiles</b>										
perfluorobutanoic acid (PFBA)	ND		0.0050		ug/L	11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	1
perfluoro-3-methoxypropanoic acid (PFMPA)	ND		0.0040		ug/L	11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	1
perfluoropentanoic acid (PFPeA)	ND		0.0030		ug/L	11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	1
perfluorobutanesulfonic acid (PFBS)	ND		0.0030		ug/L	11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	1
perfluoro-4-methoxybutanoic acid (PFMBA)	ND		0.0030		ug/L	11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	1
perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND		0.0030		ug/L	11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	1
nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		0.020		ug/L	11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	1
1H,1H, 2H, 2H-perfluorohexane sulfonic acid (4:2FTS)	ND		0.0030		ug/L	11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	1
perfluorohexanoic acid (PFHxA)	ND		0.0030		ug/L	11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	1
perfluoropentanesulfonic acid (PFPeS)	ND		0.0040		ug/L	11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	1
hexafluoropropylene oxide dimer acid (HFPO DA)	ND		0.0050		ug/L	11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	1
perfluoroheptanoic acid (PFHpA)	ND		0.0030		ug/L	11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	1
perfluorohexanesulfonic acid (PFHxS)	ND		0.0030		ug/L	11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.0030		ug/L	11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	1
1H,1H, 2H, 2H-perfluorooctane sulfonic acid (6:2FTS)	ND		0.0050		ug/L	11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	1
perfluoroheptanesulfonic acid (PFHpS)	ND		0.0030		ug/L	11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	1
perfluorooctanoic acid (PFOA)	ND		0.0040		ug/L	11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	1
perfluorononanoic acid (PFNA)	ND		0.0040		ug/L	11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	1
perfluorooctanesulfonic acid (PFOS)	ND		0.0040		ug/L	11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	1
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND		0.0020		ug/L	11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	1
perfluorodecanoic acid (PFDA)	ND		0.0030		ug/L	11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	1
1H,1H, 2H, 2H-perfluorodecane sulfonic acid (8:2FTS)	ND		0.0050		ug/L	11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	1
perfluoroundecanoic acid (PFUnA)	ND		0.0020		ug/L	11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	1



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Sample Results (Continued)

Sample: EP81 (Continued)

CB13701-01 (DW) Sampled: 11/07/23 11:00

Analyte	Result	Qualifier	MRL	MCL	Units	Date Prepared	Date Analyzed	Analyst	Method	Lab Cert Code
<b>Semi-Volatiles (Continued)</b>										
11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		0.0050		ug/L	11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	1
perfluorododecanoic acid (PFDa)	ND		0.0030		ug/L	11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	1
Surrogate: (EIS) MPFBA	90%		Limits: 50-200%			11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	
Surrogate: (EIS) M5PFPeA	96%		Limits: 50-200%			11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	
Surrogate: (EIS) M3PFBS	93%		Limits: 50-200%			11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	
Surrogate: (EIS) M2-4:2FTS	111%		Limits: 50-200%			11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	
Surrogate: (EIS) M5PFHxA	92%		Limits: 50-200%			11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	
Surrogate: (EIS) M4PFHpA	93%		Limits: 50-200%			11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	
Surrogate: (EIS) M3PFHxS	95%		Limits: 50-200%			11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	
Surrogate: (EIS) M2-6:2FTS	97%		Limits: 50-200%			11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	
Surrogate: (EIS) M8PFOA	93%		Limits: 50-200%			11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	
Surrogate: (EIS) M9PFNA	92%		Limits: 50-200%			11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	
Surrogate: (EIS) M8PFOS	94%		Limits: 50-200%			11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	
Surrogate: (EIS) M2-8:2FTS	110%		Limits: 50-200%			11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	
Surrogate: (EIS) M6PFDA	92%		Limits: 50-200%			11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	
Surrogate: (EIS) M7PFUDa	90%		Limits: 50-200%			11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	
Surrogate: (EIS) MPFDoA	91%		Limits: 50-200%			11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	
Surrogate: (EIS) M3HFPODA	88%		Limits: 50-200%			11/15/23 6:45	11/15/23 18:01	RAW	EPA 533	
n-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		0.0060		ug/L	11/13/23 5:56	11/14/23 0:38	RAW	EPA 537.1, Rev 2.0	1
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		0.0050		ug/L	11/13/23 5:56	11/14/23 0:38	RAW	EPA 537.1, Rev 2.0	1
perfluorotridecanoic acid (PFTTrDA)	ND		0.0070		ug/L	11/13/23 5:56	11/14/23 0:38	RAW	EPA 537.1, Rev 2.0	1
perfluorotetradecanoic acid (PFTTA)	ND		0.0080		ug/L	11/13/23 5:56	11/14/23 0:38	RAW	EPA 537.1, Rev 2.0	1
Surrogate: (SURR) C13-PFHxA	86%		Limits: 70-130%			11/13/23 5:56	11/14/23 0:38	RAW	EPA 537.1, Rev 2.0	
Surrogate: (SURR) C13-HFPODA	85%		Limits: 70-130%			11/13/23 5:56	11/14/23 0:38	RAW	EPA 537.1, Rev 2.0	
Surrogate: (SURR) C13-PFDA	86%		Limits: 70-130%			11/13/23 5:56	11/14/23 0:38	RAW	EPA 537.1, Rev 2.0	
Surrogate: (SURR) d5-NEtFOSAA	74%		Limits: 70-130%			11/13/23 5:56	11/14/23 0:38	RAW	EPA 537.1, Rev 2.0	



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**List of Certifications**

<b>Code</b>	<b>Description</b>	<b>Number</b>	<b>Expires</b>
1	EPA Laboratory ID No.	WI00034	1/1/26



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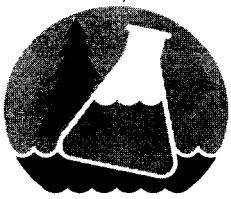
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### Qualifiers and Definitions

Item	Definition
FBNA	The field sample had no detects, therefore the corresponding trip blank/field reagent blank was not analyzed.
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.



# Northern Lake Service Inc.

ENVIRONMENTAL ANALYTICAL LABORATORY

400 N Lake Ave | Crandon, WI 54520 | 800-278-1254 | www.nslslab.com

## UCMR5 Sample Collection and Chain of Custody Record

### Oshkosh Water Filtration Dept -- UCMR5 Testing SE4

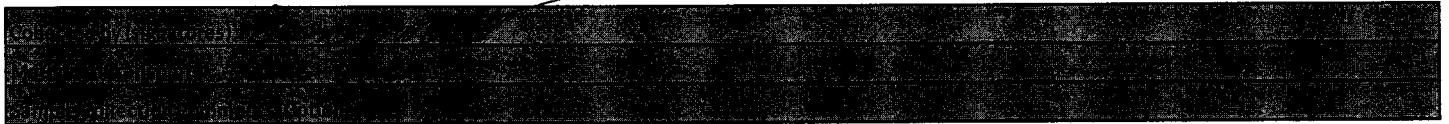
**Bottle Order Number: C000083**

*(Client please fill in date/time)*

Sample Point ID Code	Collection Date/Time	200.7	533	537.1
EP81	11/7/23 1100	X	X	X
EP81 Field Blank	11/7/23 1100		X	X

The EPA Unregulated Contaminant Monitoring Program has specific sample receipt temperature requirements. Samples received within 48 hours from collection must be received at < or = 10 C. Samples received greater than 48 hours from collection must be received at < or = 6 C

*(Client please sign)*



		<i>(To be filled out by lab upon arrival)</i>		
		200.7	533	537.1
Received at NLS by (Signature)	<i>[Signature]</i>	Date/Time 11/8/23 5:45	Rec Temp 5.6	9.0
Remarks and other Information <i>Speedee</i>				

**IMPORTANT:** To meet regulatory requirements, this form must be completed in detail and included in the cooler containing the samples described

For Lab Use Only										
Method 533	S1B1	S1B2	S2B1	S2B2	S3B1	S3B2	S4B1	S4B2	S5B1	S5B2
pH (6-8)	7.11	7.08								
Res Chlorine (<0.1)	4.1	4.1								
Method 537.1	S1B1	S1B2	S2B1	S2B2	S3B1	S3B2	S4B1	S4B2	S5B1	S5B2
pH (6-8)	7.75	7.78								
Res Chlorine (<0.1)	4.1	4.1								
Method 200.7	S1	S2	S3	S4	S5					
Acidified	✓									

CB13701

