



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

February 14, 2024

Dennis Wolf  
Sussex Dept Public Works  
N64 W23760 Main Street  
Sussex, WI 53089

Project: UCMR5 Testing SE1  
Project Number: UCMR5 Testing  
Work Order: CC01120  
Received: 02/01/24

Enclosed are the results of analyses for samples received by our laboratory on 2/1/2024. 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 Tracy Huber  
Northern Lake Service, Inc.



Sussex Dept Public Works  
N64 W23760 Main Street  
Sussex, WI 53089

Project: UCMR5 Testing SE1  
Project Number: UCMR5 Testing  
Project Manager: Dennis Wolf

Reported:  
2/14/24 8:06

Work Order:  
CC01120

### 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
CC01120-01	EP100	DW			1/31/24 8:09	2/1/24 8:15
CC01120-03	EP4	DW			1/31/24 7:44	2/1/24 8:15
CC01120-05	EP5	DW			1/31/24 7:35	2/1/24 8:15
CC01120-07	EP8	DW			1/31/24 8:22	2/1/24 8:15

#### Analysis Qualifiers:

LabNumber	Analysis	Qualifier
CC01120-01	UCMR5 EPA Method 533	FBNA
CC01120-01	UCMR5 EPA Method 537.1	FBNA
CC01120-03	UCMR5 EPA Method 533	FBNA
CC01120-03	UCMR5 EPA Method 537.1	FBNA
CC01120-05	UCMR5 EPA Method 533	FBNA
CC01120-05	UCMR5 EPA Method 537.1	FBNA
CC01120-07	UCMR5 EPA Method 533	FBNA
CC01120-07	UCMR5 EPA Method 537.1	FBNA

#### Cancelled Tests:

LabNumber	SampleName	Analysis	Cancelled	Initials
CC01120-02	EP100 Field Blank	Perfluorinated Chemicals by EPA Method 533	2/8/24 15:21	CSC
CC01120-02	EP100 Field Blank	Perfluorinated Chemicals by EPA Method 537.1	2/7/24 9:32	CSC
CC01120-04	EP4 Field Blank	Perfluorinated Chemicals by EPA Method 533	2/8/24 15:21	CSC
CC01120-04	EP4 Field Blank	Perfluorinated Chemicals by EPA Method 537.1	2/7/24 9:32	CSC
CC01120-06	EP5 Field Blank	Perfluorinated Chemicals by EPA Method 533	2/8/24 15:21	CSC
CC01120-06	EP5 Field Blank	Perfluorinated Chemicals by EPA Method 537.1	2/7/24 9:32	CSC
CC01120-08	EP8 Field Blank	Perfluorinated Chemicals by EPA Method 533	2/8/24 15:21	CSC
CC01120-08	EP8 Field Blank	Perfluorinated Chemicals by EPA Method 537.1	2/7/24 9:32	CSC



Sussex Dept Public Works  
N64 W23760 Main Street  
Sussex, WI 53089

Project: UCMR5 Testing SE1  
Project Number: UCMR5 Testing  
Project Manager: Dennis Wolf

Reported:  
2/14/24 8:06

Work Order:  
CC01120

Sample Results

Sample: EP100

CC01120-01 (DW) Sampled: 01/31/24 08:09

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	2/8/24 15:16	2/9/24 10:15	RAB	EPA 200.7, Rev 4.4	1
<hr/>										
Surrogate: Yttrium 200.7 ISTD	94%		Limits: 60-125%			2/8/24 15:16	2/9/24 10:15	RAB	EPA 200.7, Rev 4.4	
<b>Semi-Volatiles</b>										
perfluorobutanoic acid (PFBA)	ND		0.0050		ug/L	2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	1
perfluoro-3-methoxypropanoic acid (PFMPA)	ND		0.0040		ug/L	2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	1
perfluoropentanoic acid (PFPeA)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	1
perfluorobutanesulfonic acid (PFBS)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	1
perfluoro-4-methoxybutanoic acid (PFMBA)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	1
perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	1
nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		0.020		ug/L	2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	1
1H,1H, 2H, 2H-perfluorohexane sulfonic acid (4:2FTS)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	1
perfluorohexanoic acid (PFHxA)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	1
perfluoropentanesulfonic acid (PFPeS)	ND		0.0040		ug/L	2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	1
hexafluoropropylene oxide dimer acid (HFPO DA)	ND		0.0050		ug/L	2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	1
perfluoroheptanoic acid (PFHpA)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	1
perfluorohexanesulfonic acid (PFHxS)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	1
1H,1H, 2H, 2H-perfluorooctane sulfonic acid (6:2FTS)	ND		0.0050		ug/L	2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	1
perfluoroheptanesulfonic acid (PFHpS)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	1
perfluorooctanoic acid (PFOA)	ND		0.0040		ug/L	2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	1
perfluorononanoic acid (PFNA)	ND		0.0040		ug/L	2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	1
perfluorooctanesulfonic acid (PFOS)	ND		0.0040		ug/L	2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	1
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND		0.0020		ug/L	2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	1
perfluorodecanoic acid (PFDA)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	1
1H,1H, 2H, 2H-perfluorodecane sulfonic acid (8:2FTS)	ND		0.0050		ug/L	2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	1
perfluoroundecanoic acid (PFUnA)	ND		0.0020		ug/L	2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	1



Sussex Dept Public Works  
N64 W23760 Main Street  
Sussex, WI 53089

Project: UCMR5 Testing SE1  
Project Number: UCMR5 Testing  
Project Manager: Dennis Wolf

Reported:  
2/14/24 8:06

Work Order:  
CC01120

Sample Results (Continued)

Sample: EP100 (Continued)

CC01120-01 (DW) Sampled: 01/31/24 08:09

Analyte	Result	Qualifier	MRL	MCL	Units	Date Prepared	Date Analyzed	Analyst	Method	Lab Cert Code
<b>Semi-Volatiles (Continued)</b>										
11-chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		0.0050		ug/L	2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	1
perfluorododecanoic acid (PFDaA)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	1
Surrogate: (EIS) MPFBA	95%		Limits: 50-200%			2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	
Surrogate: (EIS) M5PFPeA	95%		Limits: 50-200%			2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	
Surrogate: (EIS) M3PFBS	102%		Limits: 50-200%			2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	
Surrogate: (EIS) M2-4:2FTS	99%		Limits: 50-200%			2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	
Surrogate: (EIS) M5PFHxA	100%		Limits: 50-200%			2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	
Surrogate: (EIS) M4PFHpA	98%		Limits: 50-200%			2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	
Surrogate: (EIS) M3PFHxS	96%		Limits: 50-200%			2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	
Surrogate: (EIS) M2-6:2FTS	88%		Limits: 50-200%			2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	
Surrogate: (EIS) M8PFOA	98%		Limits: 50-200%			2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	
Surrogate: (EIS) M9PFNA	98%		Limits: 50-200%			2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	
Surrogate: (EIS) M8PFOS	99%		Limits: 50-200%			2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	
Surrogate: (EIS) M2-8:2FTS	98%		Limits: 50-200%			2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	
Surrogate: (EIS) M6PFDA	101%		Limits: 50-200%			2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	
Surrogate: (EIS) M7PFUdA	99%		Limits: 50-200%			2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	
Surrogate: (EIS) MPFDaA	95%		Limits: 50-200%			2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	
Surrogate: (EIS) M3HFPODA	87%		Limits: 50-200%			2/7/24 6:36	2/7/24 20:20	RAW	EPA 533	
n-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		0.0060		ug/L	2/2/24 6:33	2/2/24 18:17	RAW	EPA 537.1, Rev 2.0	1
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		0.0050		ug/L	2/2/24 6:33	2/2/24 18:17	RAW	EPA 537.1, Rev 2.0	1
perfluorotridecanoic acid (PFTTrDA)	ND		0.0070		ug/L	2/2/24 6:33	2/2/24 18:17	RAW	EPA 537.1, Rev 2.0	1
perfluorotetradecanoic acid (PFTTA)	ND		0.0080		ug/L	2/2/24 6:33	2/2/24 18:17	RAW	EPA 537.1, Rev 2.0	1
Surrogate: (SURRE) C13-PFHxA	90%		Limits: 70-130%			2/2/24 6:33	2/2/24 18:17	RAW	EPA 537.1, Rev 2.0	
Surrogate: (SURRE) C13-HFPODA	91%		Limits: 70-130%			2/2/24 6:33	2/2/24 18:17	RAW	EPA 537.1, Rev 2.0	
Surrogate: (SURRE) C13-PFDA	89%		Limits: 70-130%			2/2/24 6:33	2/2/24 18:17	RAW	EPA 537.1, Rev 2.0	
Surrogate: (SURRE) d5-NEtFOSAA	86%		Limits: 70-130%			2/2/24 6:33	2/2/24 18:17	RAW	EPA 537.1, Rev 2.0	

Sample: EP4

CC01120-03 (DW) Sampled: 01/31/24 07:44

Analyte	Result	Qualifier	MRL	MCL	Units	Date Prepared	Date Analyzed	Analyst	Method	Lab Cert Code
---------	--------	-----------	-----	-----	-------	---------------	---------------	---------	--------	---------------



Sussex Dept Public Works  
N64 W23760 Main Street  
Sussex, WI 53089

Project: UCMR5 Testing SE1  
Project Number: UCMR5 Testing  
Project Manager: Dennis Wolf

Reported:  
2/14/24 8:06

Work Order:  
CC01120

**Sample Results (Continued)**

**Sample: EP4 (Continued)**

**CC01120-03 (DW) Sampled: 01/31/24 07:44**

Analyte	Result	Qualifier	MRL	MCL	Units	Date Prepared	Date Analyzed	Analyst	Method	Lab Cert Code
<b>Metals</b>										
Lithium, Total	12		9.0		ug/L	2/8/24 15:16	2/9/24 10:18	RAB	EPA 200.7, Rev 4.4	1
<hr/>										
Surrogate: Yttrium 200.7 ISTD	94%		Limits: 60-125%			2/8/24 15:16	2/9/24 10:18	RAB	EPA 200.7, Rev 4.4	
<hr/>										
<b>Semi-Volatiles</b>										
perfluorobutanoic acid (PFBA)	ND		0.0050		ug/L	2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	1
perfluoro-3-methoxypropanoic acid (PFMPA)	ND		0.0040		ug/L	2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	1
perfluoropentanoic acid (PFPeA)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	1
perfluorobutanesulfonic acid (PFBS)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	1
perfluoro-4-methoxybutanoic acid (PFMBA)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	1
perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	1
nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		0.020		ug/L	2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	1
1H,1H, 2H, 2H-perfluorohexane sulfonic acid (4:2FTS)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	1
perfluorohexanoic acid (PFHxA)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	1
perfluoropentanesulfonic acid (PFPeS)	ND		0.0040		ug/L	2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	1
hexafluoropropylene oxide dimer acid (HFPO DA)	ND		0.0050		ug/L	2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	1
perfluoroheptanoic acid (PFHpA)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	1
perfluorohexanesulfonic acid (PFHxS)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	1
1H,1H, 2H, 2H-perfluorooctane sulfonic acid (6:2FTS)	ND		0.0050		ug/L	2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	1
perfluoroheptanesulfonic acid (PFHpS)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	1
perfluorooctanoic acid (PFOA)	ND		0.0040		ug/L	2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	1
perfluorononanoic acid (PFNA)	ND		0.0040		ug/L	2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	1
perfluorooctanesulfonic acid (PFOS)	ND		0.0040		ug/L	2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	1
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND		0.0020		ug/L	2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	1
perfluorodecanoic acid (PFDA)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	1
1H,1H, 2H, 2H-perfluorodecane sulfonic acid (8:2FTS)	ND		0.0050		ug/L	2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	1
perfluoroundecanoic acid (PFUnA)	ND		0.0020		ug/L	2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	1



Sussex Dept Public Works  
N64 W23760 Main Street  
Sussex, WI 53089

Project: UCMR5 Testing SE1  
Project Number: UCMR5 Testing  
Project Manager: Dennis Wolf

Reported:  
2/14/24 8:06

Work Order:  
CC01120

Sample Results (Continued)

Sample: EP4 (Continued)

CC01120-03 (DW) Sampled: 01/31/24 07:44

Analyte	Result	Qualifier	MRL	MCL	Units	Date Prepared	Date Analyzed	Analyst	Method	Lab Cert Code
<b>Semi-Volatiles (Continued)</b>										
11-chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		0.0050		ug/L	2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	1
perfluorododecanoic acid (PFDa)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	1
Surrogate: (EIS) MPFBA	91%		Limits: 50-200%			2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	
Surrogate: (EIS) M5PFPeA	90%		Limits: 50-200%			2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	
Surrogate: (EIS) M3PFBS	101%		Limits: 50-200%			2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	
Surrogate: (EIS) M2-4:2FTS	99%		Limits: 50-200%			2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	
Surrogate: (EIS) M5PFHxA	91%		Limits: 50-200%			2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	
Surrogate: (EIS) M4PFHpA	93%		Limits: 50-200%			2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	
Surrogate: (EIS) M3PFHxS	93%		Limits: 50-200%			2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	
Surrogate: (EIS) M2-6:2FTS	90%		Limits: 50-200%			2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	
Surrogate: (EIS) M8PFOA	90%		Limits: 50-200%			2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	
Surrogate: (EIS) M9PFNA	93%		Limits: 50-200%			2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	
Surrogate: (EIS) M8PFOS	95%		Limits: 50-200%			2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	
Surrogate: (EIS) M2-8:2FTS	96%		Limits: 50-200%			2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	
Surrogate: (EIS) M6PFDA	96%		Limits: 50-200%			2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	
Surrogate: (EIS) M7PFUDa	93%		Limits: 50-200%			2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	
Surrogate: (EIS) MPFDoA	91%		Limits: 50-200%			2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	
Surrogate: (EIS) M3HFPODA	84%		Limits: 50-200%			2/7/24 6:36	2/7/24 20:44	RAW	EPA 533	
n-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		0.0060		ug/L	2/2/24 6:33	2/2/24 18:43	RAW	EPA 537.1, Rev 2.0	1
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		0.0050		ug/L	2/2/24 6:33	2/2/24 18:43	RAW	EPA 537.1, Rev 2.0	1
perfluorotridecanoic acid (PFTTrDA)	ND		0.0070		ug/L	2/2/24 6:33	2/2/24 18:43	RAW	EPA 537.1, Rev 2.0	1
perfluorotetradecanoic acid (PFTTA)	ND		0.0080		ug/L	2/2/24 6:33	2/2/24 18:43	RAW	EPA 537.1, Rev 2.0	1
Surrogate: (SURRE) C13-PFHxA	90%		Limits: 70-130%			2/2/24 6:33	2/2/24 18:43	RAW	EPA 537.1, Rev 2.0	
Surrogate: (SURRE) C13-HFPODA	89%		Limits: 70-130%			2/2/24 6:33	2/2/24 18:43	RAW	EPA 537.1, Rev 2.0	
Surrogate: (SURRE) C13-PFDA	83%		Limits: 70-130%			2/2/24 6:33	2/2/24 18:43	RAW	EPA 537.1, Rev 2.0	
Surrogate: (SURRE) d5-NEtFOSAA	77%		Limits: 70-130%			2/2/24 6:33	2/2/24 18:43	RAW	EPA 537.1, Rev 2.0	

Sample: EP5

CC01120-05 (DW) Sampled: 01/31/24 07:35

Analyte	Result	Qualifier	MRL	MCL	Units	Date Prepared	Date Analyzed	Analyst	Method	Lab Cert Code
---------	--------	-----------	-----	-----	-------	---------------	---------------	---------	--------	---------------



Sussex Dept Public Works  
N64 W23760 Main Street  
Sussex, WI 53089

Project: UCMR5 Testing SE1  
Project Number: UCMR5 Testing  
Project Manager: Dennis Wolf

Reported:  
2/14/24 8:06

Work Order:  
CC01120

**Sample Results (Continued)**

**Sample: EP5 (Continued)**

**CC01120-05 (DW) Sampled: 01/31/24 07:35**

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	2/8/24 15:16	2/9/24 10:21	RAB	EPA 200.7, Rev 4.4	1
<hr/>										
Surrogate: Yttrium 200.7 ISTD	94%		Limits: 60-125%			2/8/24 15:16	2/9/24 10:21	RAB	EPA 200.7, Rev 4.4	
<hr/>										
<b>Semi-Volatiles</b>										
perfluorobutanoic acid (PFBA)	ND		0.0050		ug/L	2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	1
perfluoro-3-methoxypropanoic acid (PFMPA)	ND		0.0040		ug/L	2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	1
perfluoropentanoic acid (PFPeA)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	1
perfluorobutanesulfonic acid (PFBS)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	1
perfluoro-4-methoxybutanoic acid (PFMBA)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	1
perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	1
nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		0.020		ug/L	2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	1
1H,1H, 2H, 2H-perfluorohexane sulfonic acid (4:2FTS)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	1
perfluorohexanoic acid (PFHxA)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	1
perfluoropentanesulfonic acid (PFPeS)	ND		0.0040		ug/L	2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	1
hexafluoropropylene oxide dimer acid (HFPO DA)	ND		0.0050		ug/L	2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	1
perfluoroheptanoic acid (PFHpA)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	1
perfluorohexanesulfonic acid (PFHxS)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	1
1H,1H, 2H, 2H-perfluorooctane sulfonic acid (6:2FTS)	ND		0.0050		ug/L	2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	1
perfluoroheptanesulfonic acid (PFHpS)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	1
perfluorooctanoic acid (PFOA)	ND		0.0040		ug/L	2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	1
perfluorononanoic acid (PFNA)	ND		0.0040		ug/L	2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	1
perfluorooctanesulfonic acid (PFOS)	ND		0.0040		ug/L	2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	1
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND		0.0020		ug/L	2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	1
perfluorodecanoic acid (PFDA)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	1
1H,1H, 2H, 2H-perfluorodecane sulfonic acid (8:2FTS)	ND		0.0050		ug/L	2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	1
perfluoroundecanoic acid (PFUnA)	ND		0.0020		ug/L	2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	1



Sussex Dept Public Works  
N64 W23760 Main Street  
Sussex, WI 53089

Project: UCMR5 Testing SE1  
Project Number: UCMR5 Testing  
Project Manager: Dennis Wolf

Reported:  
2/14/24 8:06

Work Order:  
CC01120

Sample Results (Continued)

Sample: EP5 (Continued)

CC01120-05 (DW) Sampled: 01/31/24 07:35

Analyte	Result	Qualifier	MRL	MCL	Units	Date Prepared	Date Analyzed	Analyst	Method	Lab Cert Code
<b>Semi-Volatiles (Continued)</b>										
11-chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		0.0050		ug/L	2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	1
perfluorododecanoic acid (PFDa)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	1
Surrogate: (EIS) MPFBA	90%		Limits: 50-200%			2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	
Surrogate: (EIS) M5PFPeA	92%		Limits: 50-200%			2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	
Surrogate: (EIS) M3PFBS	95%		Limits: 50-200%			2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	
Surrogate: (EIS) M2-4:2FTS	98%		Limits: 50-200%			2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	
Surrogate: (EIS) M5PFHxA	92%		Limits: 50-200%			2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	
Surrogate: (EIS) M4PFHpA	92%		Limits: 50-200%			2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	
Surrogate: (EIS) M3PFHxS	91%		Limits: 50-200%			2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	
Surrogate: (EIS) M2-6:2FTS	90%		Limits: 50-200%			2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	
Surrogate: (EIS) M8PFOA	92%		Limits: 50-200%			2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	
Surrogate: (EIS) M9PFNA	93%		Limits: 50-200%			2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	
Surrogate: (EIS) M8PFOS	93%		Limits: 50-200%			2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	
Surrogate: (EIS) M2-8:2FTS	100%		Limits: 50-200%			2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	
Surrogate: (EIS) M6PFDA	95%		Limits: 50-200%			2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	
Surrogate: (EIS) M7PFUDa	95%		Limits: 50-200%			2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	
Surrogate: (EIS) MPFDoA	88%		Limits: 50-200%			2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	
Surrogate: (EIS) M3HFPODA	86%		Limits: 50-200%			2/7/24 6:36	2/7/24 21:08	RAW	EPA 533	
n-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		0.0060		ug/L	2/2/24 6:33	2/5/24 10:35	RAW	EPA 537.1, Rev 2.0	1
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		0.0050		ug/L	2/2/24 6:33	2/5/24 10:35	RAW	EPA 537.1, Rev 2.0	1
perfluorotridecanoic acid (PFTTrDA)	ND		0.0070		ug/L	2/2/24 6:33	2/5/24 10:35	RAW	EPA 537.1, Rev 2.0	1
perfluorotetradecanoic acid (PFTa)	ND		0.0080		ug/L	2/2/24 6:33	2/5/24 10:35	RAW	EPA 537.1, Rev 2.0	1
Surrogate: (SURRE) C13-PFHxA	95%		Limits: 70-130%			2/2/24 6:33	2/5/24 10:35	RAW	EPA 537.1, Rev 2.0	
Surrogate: (SURRE) C13-HFPODA	90%		Limits: 70-130%			2/2/24 6:33	2/5/24 10:35	RAW	EPA 537.1, Rev 2.0	
Surrogate: (SURRE) C13-PFDA	97%		Limits: 70-130%			2/2/24 6:33	2/5/24 10:35	RAW	EPA 537.1, Rev 2.0	
Surrogate: (SURRE) d5-NEtFOSAA	92%		Limits: 70-130%			2/2/24 6:33	2/5/24 10:35	RAW	EPA 537.1, Rev 2.0	

Sample: EP8

CC01120-07 (DW) Sampled: 01/31/24 08:22

Analyte	Result	Qualifier	MRL	MCL	Units	Date Prepared	Date Analyzed	Analyst	Method	Lab Cert Code
---------	--------	-----------	-----	-----	-------	---------------	---------------	---------	--------	---------------





Sussex Dept Public Works  
N64 W23760 Main Street  
Sussex, WI 53089

Project: UCMR5 Testing SE1  
Project Number: UCMR5 Testing  
Project Manager: Dennis Wolf

Reported:  
2/14/24 8:06

Work Order:  
CC01120

**Sample Results (Continued)**

**Sample: EP8 (Continued)**

**CC01120-07 (DW) Sampled: 01/31/24 08:22**

Analyte	Result	Qualifier	MRL	MCL	Units	Date Prepared	Date Analyzed	Analyst	Method	Lab Cert Code
<b>Metals</b>										
Lithium, Total	9.1		9.0		ug/L	2/8/24 15:16	2/9/24 10:24	RAB	EPA 200.7, Rev 4.4	1
<hr/>										
Surrogate: Yttrium 200.7 ISTD	95%		Limits: 60-125%			2/8/24 15:16	2/9/24 10:24	RAB	EPA 200.7, Rev 4.4	
<hr/>										
<b>Semi-Volatiles</b>										
perfluorobutanoic acid (PFBA)	ND		0.0050		ug/L	2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	1
perfluoro-3-methoxypropanoic acid (PFMPA)	ND		0.0040		ug/L	2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	1
perfluoropentanoic acid (PFPeA)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	1
perfluorobutanesulfonic acid (PFBS)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	1
perfluoro-4-methoxybutanoic acid (PFMBA)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	1
perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	1
nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		0.020		ug/L	2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	1
1H,1H, 2H, 2H-perfluorohexane sulfonic acid (4:2FTS)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	1
perfluorohexanoic acid (PFHxA)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	1
perfluoropentanesulfonic acid (PFPeS)	ND		0.0040		ug/L	2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	1
hexafluoropropylene oxide dimer acid (HFPO DA)	ND		0.0050		ug/L	2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	1
perfluoroheptanoic acid (PFHpA)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	1
perfluorohexanesulfonic acid (PFHxS)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	1
1H,1H, 2H, 2H-perfluorooctane sulfonic acid (6:2FTS)	ND		0.0050		ug/L	2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	1
perfluoroheptanesulfonic acid (PFHpS)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	1
perfluorooctanoic acid (PFOA)	ND		0.0040		ug/L	2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	1
perfluorononanoic acid (PFNA)	ND		0.0040		ug/L	2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	1
perfluorooctanesulfonic acid (PFOS)	ND		0.0040		ug/L	2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	1
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND		0.0020		ug/L	2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	1
perfluorodecanoic acid (PFDA)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	1
1H,1H, 2H, 2H-perfluorodecane sulfonic acid (8:2FTS)	ND		0.0050		ug/L	2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	1
perfluoroundecanoic acid (PFUnA)	ND		0.0020		ug/L	2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	1



Sussex Dept Public Works  
N64 W23760 Main Street  
Sussex, WI 53089

Project: UCMR5 Testing SE1  
Project Number: UCMR5 Testing  
Project Manager: Dennis Wolf

Reported:  
2/14/24 8:06

Work Order:  
CC01120

Sample Results (Continued)

Sample: EP8 (Continued)

CC01120-07 (DW) Sampled: 01/31/24 08:22

Analyte	Result	Qualifier	MRL	MCL	Units	Date Prepared	Date Analyzed	Analyst	Method	Lab Cert Code
<b>Semi-Volatiles (Continued)</b>										
11-chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		0.0050		ug/L	2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	1
perfluorododecanoic acid (PFDa)	ND		0.0030		ug/L	2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	1
Surrogate: (EIS) MPFBA	78%		Limits: 50-200%			2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	
Surrogate: (EIS) M5PFPeA	75%		Limits: 50-200%			2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	
Surrogate: (EIS) M3PFBS	85%		Limits: 50-200%			2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	
Surrogate: (EIS) M2-4:2FTS	87%		Limits: 50-200%			2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	
Surrogate: (EIS) M5PFHxA	81%		Limits: 50-200%			2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	
Surrogate: (EIS) M4PFHpA	79%		Limits: 50-200%			2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	
Surrogate: (EIS) M3PFHxS	83%		Limits: 50-200%			2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	
Surrogate: (EIS) M2-6:2FTS	79%		Limits: 50-200%			2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	
Surrogate: (EIS) M8PFOA	75%		Limits: 50-200%			2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	
Surrogate: (EIS) M9PFNA	78%		Limits: 50-200%			2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	
Surrogate: (EIS) M8PFOS	85%		Limits: 50-200%			2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	
Surrogate: (EIS) M2-8:2FTS	83%		Limits: 50-200%			2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	
Surrogate: (EIS) M6PFDA	78%		Limits: 50-200%			2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	
Surrogate: (EIS) M7PFUDa	77%		Limits: 50-200%			2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	
Surrogate: (EIS) MPFDoA	77%		Limits: 50-200%			2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	
Surrogate: (EIS) M3HFPODA	73%		Limits: 50-200%			2/7/24 6:36	2/7/24 21:31	RAW	EPA 533	
n-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		0.0060		ug/L	2/2/24 6:33	2/5/24 18:33	RAW	EPA 537.1, Rev 2.0	1
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		0.0050		ug/L	2/2/24 6:33	2/5/24 18:33	RAW	EPA 537.1, Rev 2.0	1
perfluorotridecanoic acid (PFTTrDA)	ND		0.0070		ug/L	2/2/24 6:33	2/5/24 18:33	RAW	EPA 537.1, Rev 2.0	1
perfluorotetradecanoic acid (PFTTA)	ND		0.0080		ug/L	2/2/24 6:33	2/5/24 18:33	RAW	EPA 537.1, Rev 2.0	1
Surrogate: (SURR) C13-PFHxA	88%		Limits: 70-130%			2/2/24 6:33	2/5/24 18:33	RAW	EPA 537.1, Rev 2.0	
Surrogate: (SURR) C13-HFPODA	85%		Limits: 70-130%			2/2/24 6:33	2/5/24 18:33	RAW	EPA 537.1, Rev 2.0	
Surrogate: (SURR) C13-PFDA	85%		Limits: 70-130%			2/2/24 6:33	2/5/24 18:33	RAW	EPA 537.1, Rev 2.0	
Surrogate: (SURR) d5-NEtFOSAA	80%		Limits: 70-130%			2/2/24 6:33	2/5/24 18:33	RAW	EPA 537.1, Rev 2.0	



Sussex Dept Public Works  
N64 W23760 Main Street  
Sussex, WI 53089

Project: UCMR5 Testing SE1  
Project Number: UCMR5 Testing  
Project Manager: Dennis Wolf

**Reported:**  
2/14/24 8:06

**Work Order:**  
CC01120

**List of Certifications**

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



Sussex Dept Public Works  
N64 W23760 Main Street  
Sussex, WI 53089

Project: UCMR5 Testing SE1  
Project Number: UCMR5 Testing  
Project Manager: Dennis Wolf

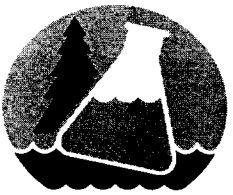
**Reported:**  
2/14/24 8:06

**Work Order:**  
CC01120

### 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**  
 ENVIRONMENTAL ANALYTICAL LABO  
 400 N Lake Ave | Crandon, WI 54520 | 800-278-1254 | ww

CC01120



**UCMR5 Sample Collection and Chain of Custody Record**  
 Sussex Dept Public Works -- UCMR5 Testing SE1

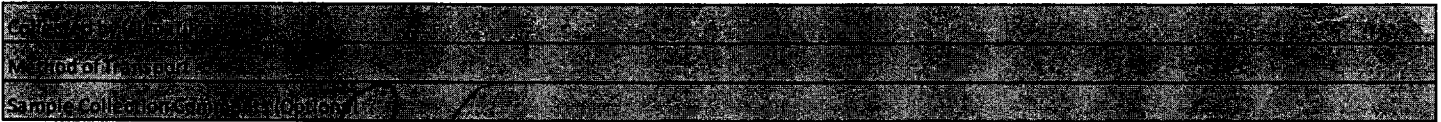
**Bottle Order Number: C000672**

(Client please fill in date/time)

Sample Point ID Code	Collection Date/Time	200.7	533	537.1
EP100	1-31 0909	X	X	X
EP100 Field Blank	1-31 0744		X	X
EP4	1-31 074	X	X	X
EP4 Field Blank	1-31 0752		X	X
EP5	1-31 0735	X	X	X
EP5 Field Blank	1-31 0735		X	X
EP8	1-31 0822	X	X	X
EP8 Field Blank	1-31 0822		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)



		(To be filled out by lab upon arrival)		
		200.7	533	537.1
Received at NLS by (Signature)	<i>[Signature]</i>	Date/Time	2/1/21 OAS	Rec Temp
Remarks and other Information		5.2	7.7	5.2

**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)	6.97	7.03	7.06	7.02	7.12	7.10	7.13	7.07	7.07	7.09
Res Chlorine (<0.1)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
		100		4		5		80		
Method 537.1	S1B1	S1B2	S2B1	S2B2	S3B1	S3B2	S4B1	S4B2	S5B1	S5B2
pH (6-8)	7.08	7.07	7.05	7.09	7.07	7.18	7.21	7.18	7.26	7.20
Res Chlorine (<0.1)	<1	<1	<1	<1	<1	<1				
Method 200.7	S1	S2	S3	S4	S5					
Acidified	/	/	/	/	/					