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

May 03, 2023

Aaron Martin
Marathon City Water Department
311 Walnut Street
Marathon, WI 54448

Project: Quartelry PFAS Testing
Project Number: 2023 WDNR Drinking Water Requirements
Work Order: CB03838
Received: 04/19/23
PWS ID: 73701518

Enclosed are the results of analyses for samples received by our laboratory on 4/19/2023. If you have any questions concerning this report, please feel free to contact a client service representative at clientservices@nlslab.com.

Sincerely,

Tom Priebe For Client Services
Northern Lake Service, Inc.

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Marathon City Water Department	Project: Quartelry PFAS Testing		
311 Walnut Street	Project Number: 2023 WDNR Drinking Water Requirements	**Reported:**	**Work Order:**
Marathon, WI 54448	Project Manager: Aaron Martin	5/3/23 9:10	CB03838

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
CB03838-01	EP200 (PFAS)	DW			4/18/23 10:30	4/19/23 9:45
CB03838-02	Field Blank	DW			4/18/23 10:30	4/19/23 9:45

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Sample Results

Sample: EP200 (PFAS)

CB03838-01 (DW) Sampled: 04/18/23 10:30

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		0.30	0.98		ng/L	4/24/23 5:17	4/25/23 0:22	RAW	EPA 537.1, Rev 2.0	2
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND		0.33	1.1		ng/L	4/24/23 5:17	4/25/23 0:22	RAW	EPA 537.1, Rev 2.0	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.36	1.2		ng/L	4/24/23 5:17	4/25/23 0:22	RAW	EPA 537.1, Rev 2.0	2
hexafluoropropylene oxide dimer acid (HFPO DA)	ND		0.40	1.4		ng/L	4/24/23 5:17	4/25/23 0:22	RAW	EPA 537.1, Rev 2.0	2
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		0.46	1.6		ng/L	4/24/23 5:17	4/25/23 0:22	RAW	EPA 537.1, Rev 2.0	2
n-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		0.39	1.3		ng/L	4/24/23 5:17	4/25/23 0:22	RAW	EPA 537.1, Rev 2.0	2
perfluorobutanesulfonic acid (PFBS)	0.46	J	0.29	0.98		ng/L	4/24/23 5:17	4/25/23 0:22	RAW	EPA 537.1, Rev 2.0	2
perfluorodecanoic acid (PFDA)	ND		0.32	1.1		ng/L	4/24/23 5:17	4/25/23 0:22	RAW	EPA 537.1, Rev 2.0	2
perfluorododecanoic acid (PFDoA)	ND		0.23	0.75		ng/L	4/24/23 5:17	4/25/23 0:22	RAW	EPA 537.1, Rev 2.0	2
perfluoroheptanoic acid (PFHpA)	ND		0.43	1.5		ng/L	4/24/23 5:17	4/25/23 0:22	RAW	EPA 537.1, Rev 2.0	2
perfluorohexanoic acid (PFHxA)	ND		0.46	1.6		ng/L	4/24/23 5:17	4/25/23 0:22	RAW	EPA 537.1, Rev 2.0	2
perfluorohexanesulfonic acid (PFHxS)	1.4		0.33	1.1		ng/L	4/24/23 5:17	4/25/23 0:22	RAW	EPA 537.1, Rev 2.0	2
perfluorononanoic acid (PFNA)	ND		0.45	1.5		ng/L	4/24/23 5:17	4/25/23 0:22	RAW	EPA 537.1, Rev 2.0	2
perfluorooctanoic acid (PFOA)	0.83	J	0.48	1.6		ng/L	4/24/23 5:17	4/25/23 0:22	RAW	EPA 537.1, Rev 2.0	2
perfluorooctanesulfonic acid (PFOS)	0.91	J	0.30	0.98		ng/L	4/24/23 5:17	4/25/23 0:22	RAW	EPA 537.1, Rev 2.0	2
perfluorotetradecanoic acid (PFTA)	ND		0.33	1.1		ng/L	4/24/23 5:17	4/25/23 0:22	RAW	EPA 537.1, Rev 2.0	2
perfluorotridecanoic acid (PFTrDA)	ND		0.42	1.4		ng/L	4/24/23 5:17	4/25/23 0:22	RAW	EPA 537.1, Rev 2.0	2
perfluoroundecanoic acid (PFUnA)	ND		0.29	0.98		ng/L	4/24/23 5:17	4/25/23 0:22	RAW	EPA 537.1, Rev 2.0	2
Surrogate: (SURR) C13-PFHxA	*89%*		*Limits:*	*70-130%*			*4/24/23 5:17*	*4/25/23 0:22*	*RAW*	*EPA 537.1, Rev 2.0*	2
Surrogate: (SURR) C13-HFPODA	*88%*		*Limits:*	*70-130%*			*4/24/23 5:17*	*4/25/23 0:22*	*RAW*	*EPA 537.1, Rev 2.0*	2
Surrogate: (SURR) C13-PFDA	*88%*		*Limits:*	*70-130%*			*4/24/23 5:17*	*4/25/23 0:22*	*RAW*	*EPA 537.1, Rev 2.0*	2
Surrogate: (SURR) d5-NEtFOSAA	*83%*		*Limits:*	*70-130%*			*4/24/23 5:17*	*4/25/23 0:22*	*RAW*	*EPA 537.1, Rev 2.0*	2

Marathon City Water Department	Project: Quartelry PFAS Testing		
311 Walnut Street	Project Number: 2023 WDNR Drinking Water Requirements	**Reported:**	**Work Order:**
Marathon, WI 54448	Project Manager: Aaron Martin	5/3/23 9:10	CB03838

Sample: Field Blank

CB03838-02 (DW) Sampled: 04/18/23 10:30

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		0.30	0.96		ng/L	4/27/23 5:17	4/27/23 17:41	RAW	EPA 537.1, Rev 2.0	2
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND		0.33	1.1		ng/L	4/27/23 5:17	4/27/23 17:41	RAW	EPA 537.1, Rev 2.0	2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.36	1.2		ng/L	4/27/23 5:17	4/27/23 17:41	RAW	EPA 537.1, Rev 2.0	2
hexafluoropropylene oxide dimer acid (HFPO DA)	ND		0.39	1.3		ng/L	4/27/23 5:17	4/27/23 17:41	RAW	EPA 537.1, Rev 2.0	2
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		0.45	1.5		ng/L	4/27/23 5:17	4/27/23 17:41	RAW	EPA 537.1, Rev 2.0	2
n-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		0.38	1.2		ng/L	4/27/23 5:17	4/27/23 17:41	RAW	EPA 537.1, Rev 2.0	2
perfluorobutanesulfonic acid (PFBS)	ND		0.29	0.96		ng/L	4/27/23 5:17	4/27/23 17:41	RAW	EPA 537.1, Rev 2.0	2
perfluorodecanoic acid (PFDA)	ND		0.32	1.1		ng/L	4/27/23 5:17	4/27/23 17:41	RAW	EPA 537.1, Rev 2.0	2
perfluorododecanoic acid (PFDoA)	ND		0.22	0.74		ng/L	4/27/23 5:17	4/27/23 17:41	RAW	EPA 537.1, Rev 2.0	2
perfluoroheptanoic acid (PFHpA)	ND		0.42	1.4		ng/L	4/27/23 5:17	4/27/23 17:41	RAW	EPA 537.1, Rev 2.0	2
perfluorohexanoic acid (PFHxA)	ND		0.45	1.5		ng/L	4/27/23 5:17	4/27/23 17:41	RAW	EPA 537.1, Rev 2.0	2
perfluorohexanesulfonic acid (PFHxS)	ND		0.33	1.1		ng/L	4/27/23 5:17	4/27/23 17:41	RAW	EPA 537.1, Rev 2.0	2
perfluorononanoic acid (PFNA)	ND		0.44	1.4		ng/L	4/27/23 5:17	4/27/23 17:41	RAW	EPA 537.1, Rev 2.0	2
perfluorooctanoic acid (PFOA)	ND		0.47	1.5		ng/L	4/27/23 5:17	4/27/23 17:41	RAW	EPA 537.1, Rev 2.0	2
perfluorooctanesulfonic acid (PFOS)	ND		0.30	0.96		ng/L	4/27/23 5:17	4/27/23 17:41	RAW	EPA 537.1, Rev 2.0	2
perfluorotetradecanoic acid (PFTA)	ND		0.33	1.1		ng/L	4/27/23 5:17	4/27/23 17:41	RAW	EPA 537.1, Rev 2.0	2
perfluorotridecanoic acid (PFTrDA)	ND		0.41	1.3		ng/L	4/27/23 5:17	4/27/23 17:41	RAW	EPA 537.1, Rev 2.0	2
perfluoroundecanoic acid (PFUnA)	ND		0.29	0.96		ng/L	4/27/23 5:17	4/27/23 17:41	RAW	EPA 537.1, Rev 2.0	2
Surrogate: (SURR) C13-PFHxA	*92%*		*Limits:*	*70-130%*			*4/27/23 5:17*	*4/27/23 17:41*	*RAW*	*EPA 537.1, Rev 2.0*	2
Surrogate: (SURR) C13-HFPODA	*95%*		*Limits:*	*70-130%*			*4/27/23 5:17*	*4/27/23 17:41*	*RAW*	*EPA 537.1, Rev 2.0*	2
Surrogate: (SURR) C13-PFDA	*81%*		*Limits:*	*70-130%*			*4/27/23 5:17*	*4/27/23 17:41*	*RAW*	*EPA 537.1, Rev 2.0*	2
Surrogate: (SURR) d5-NEtFOSAA	*93%*		*Limits:*	*70-130%*			*4/27/23 5:17*	*4/27/23 17:41*	*RAW*	*EPA 537.1, Rev 2.0*	2

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311 Walnut Street	Project Number: 2023 WDNR Drinking Water Requirements	**Reported:**	**Work Order:**
Marathon, WI 54448	Project Manager: Aaron Martin	5/3/23 9:10	CB03838

List of Certifications

Code	Description	Number	Expires
2	NLS (Crandon) WDNR Laboratory ID No.	721026460	8/31/23

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Marathon, WI 54448	Project Manager: Aaron Martin	5/3/23 9:10	CB03838

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 AND CHAIN OF CUSTODY RECORD

CB03838

Wisconsin Lab Cert. No. 721026460
WI DATCP 105-000330

CLIENT	Marathon City Water Dept
ADDRESS	311 Walnut St
CITY	Marathon
STATE	WI
ZIP	54448
PROJECT DESCRIPTION / NO.	
QUOTATION NO.	
DNR FID #	73701518
DNR LICENSE #	38093
CONTACT	
PHONE	
PURCHASE ORDER NO.	
FAX	

MATRIX:
SW = surface water
WW = waste water
GW = groundwater
DW = drinking water
TIS = tissue
AIR = air
SOIL = soil
SED = sediment
PROD = product
SL = sludge
OTHER

USE BOX

Indicate G or C if WW Sample is Grab or Composite.

ITEM NO.	NLS LAB NO.	SAMPLE ID	COLLECTION DATE	COLLECTION TIME	MATRIX (See above)	ANALYZE PER ORDER OF ANALYSIS: 3-10 C-14	50C-12	VOC-3	EPA 537	COLLECTION REMARKS (i.e. DNR Well ID #)
1.						G	G	G		
2.		EP200	4/12/23	10:30 AM	DW	X	X	X	X	
3.										
4.										
5.										
6.										
7.										
8.										
9.										
10.										

ONE SAMPLE PER LINE

NO.

COLLECTED BY (signature)

CUSTODY SEAL NO. (IF ANY)

DATE/TIME 4/12/23

RELINQUISHED BY (signature)

RECEIVED BY (signature)

DATE/TIME 4/13/23

DISPATCHED BY (signature)

METHOD OF TRANSPORT Fedex

DATE/TIME

RECEIVED AT NLS BY (signature)

DATE/TIME 4/13/23 0945

CONDITION on ice

TEMP 0.6°C

COOLER #

REMARKS & OTHER INFORMATION

WDNR FACILITY NUMBER

E-MAIL ADDRESS

REPORT TO

INVOICE TO

PRESERVATIVE:
NP = no preservative
S = sulfuric acid
N = nitric acid
Z = zinc acetate
M = methanol
OH = sodium hydroxide
HA = hydrochloric & ascorbic acid
H = hydrochloric acid

IMPORTANT:

1. TO MEET REGULATORY REQUIREMENTS, THIS FORM MUST BE COMPLETED IN DETAIL AND INCLUDED IN THE COOLER CONTAINING THE SAMPLES DESCRIBED.
2. PLEASE USE ONE LINE PER SAMPLE, NOT PER BOTTLE.
3. RETURN THIS FORM WITH SAMPLES - CLIENT MAY KEEP PINK COPY.
4. PARTIES COLLECTING SAMPLE, LISTED AS REPORT TO AND LISTED AS INVOICED TO AGREE TO STANDARD TERMS & CONDITIONS ON REVERSE.

DNR Drinking Water Program
West Central Region
1300 W Clairemont
Eau Claire WI 54701

PFAS ANALYSIS
(ENCLOSE FORM WHEN SENDING SAMPLE TO LAB)

Public Water Supply
Form Number: 4464
Revision: 20230105
Generated: 1/12/2023

Section I: System Information (to be completed by Department of Natural Resources/SAMPLER)

System Name: **MARATHON CITY WATERWORKS** PWS ID: **73701518**

DNR Contact: **KYLE PRIEST (715)315-8094** Region: **6** Type: **MC**

System Address: **P O BOX 487** City: **MARATHON CITY** County: **MARATHON**

Entry Point ID: **200** WI Unique Well No: Note: **System Chlorinates.**

Sampler Contact Info: (Notify DNR Contact of Corrections)	**Sampler:** (Leave Blank If You Don't Use These Services) Provide information to have results faxed or emailed or to change a billing address, if your lab offers these services
(715)370-5278 AARON MARTIN PO BOX 487 311 WALNUT ST MARATHON CITY WI 54448	Fax Number: Email: Billing Address:

Sample Source: (Location)	**Sample Type:** (Check Only One)
W - Well Source	X D - Compliance Sample
X E - Entry Point	C - Confirmation Sample
D - Distribution System	I - Investigation Sample
	W - Raw Water Sample

Special Instructions:

Collect Sample between: **4/1/2023** and **6/30/2023**

Section II: Sample Information (to be completed by SAMPLER -- ALL ITEMS REQUIRED)

Sample Collection Date: 04 / 12 / 2023 (mm/dd/yyyy) Time: 10 : 30 ☒a.m. ☐p.m.

Address where sample was collected: 311 walnut

Monitoring Site ID: EP200 Sample Tap Location (e.g. kitchen sink): Kitchen Tap

First Initial and Last Name of Sampler: A - Martin Sampler Phone: 7153705274

Section III: To be completed by LAB. Report results on back for PWS and electronically to DNR within 10 days per NR 809.80

☐ **Check here if some or all of the parameters were analyzed by a subcontracted lab.**
NOTE: A separate form must be completed by each lab with data for only the parameters which that lab analyzed.

Laboratory ID: Laboratory Name:

Date Sample Received: / / Time: : Lab Sample ID:

Signature of Receiving Lab Official: Date Reported to PWS: / /

Condition of Sample Upon Receipt:

Notice: This form must be submitted with laboratory samples analyzed to determine compliance with ch. NR 809, Wis. Adm. Code, Safe Drinking Water. Completion of this form or a similar form approved by the Department is mandatory. Failure to submit a completed form to the Department is a violation punishable by a forfeiture of no less than $10 nor more than $5000, or by a fine of not less than $10 nor more than $100 or imprisonment of not less than 30 days, or both. Each day of continued violation is a separate offense (ss. 144.99, Wis. Stats.). Authorization for these requirement is under s. 280.13(d), Wis. Stats. and ch. NR 809.80. Personally identifiable information on this form will be used for no other purpose. Reference Requirement #96779893.

PFAS ANALYSIS System Name: **MARATHON CITY WATERWORKS**

To be completed by the laboratory performing analysis. PWS ID: **73701518** Lab Sample ID:

Storet Code		Parameter	SDWA Method	MDL	Results	MCL	Units
* 99597	X	PERFLUORO-N-OCTANOIC ACID				70	NG/L
* 99598	X	PERFLUORO-N-OCTANESULFONIC ACID				70	NG/L
97433		11-CHLOROEICOSAFLUORO-3-OXAUNDECANE-1-SULFONIC ACID					NG/L
97434		4,8-DIOXA-3H-PERFLUORONONANOIC ACID					NG/L
97415		4:2 FLUOROTELOMER SULFONIC ACID					NG/L
97414		6:2 FLUOROTELOMER SULFONIC ACID					NG/L
97413		8:2 FLUOROTELOMER SULFONIC ACID					NG/L
97432		9-CHLOROHEXADECAFLUORO-3-OXANONANE-1-SULFONIC ACID					NG/L
97435		HEXAFLUOROPROPYLENE OXIDE DIMER ACID					NG/L
97436		N-ETHYL PERFLUOROOCTANESULFONAMIDO-ACETIC ACID					NG/L
97437		N-METHYL PERFLUOROOCTANESULFONAMIDO-ACETIC ACID					NG/L
99987		PERFLUORO-N-BUTANESULFONIC ACID					NG/L
99991		PERFLUORO-N-BUTANOIC ACID					NG/L
99996		PERFLUORO-N-DECANOIC ACID					NG/L
99998		PERFLUORO-N-DODECANOIC ACID					NG/L
99989		PERFLUORO-N-HEPTANESULFONIC ACID					NG/L
99994		PERFLUORO-N-HEPTANOIC ACID					NG/L
99988		PERFLUORO-N-HEXANESULFONIC ACID					NG/L
99993		PERFLUORO-N-HEXANOIC ACID					NG/L
99995		PERFLUORO-N-NONANOIC ACID					NG/L
99992		PERFLUORO-N-PENTANOIC ACID					NG/L
99924		PERFLUORO-N-TETRADECANOIC ACID					NG/L
99923		PERFLUORO-N-TRIDECANOIC ACID					NG/L
99997		PERFLUORO-N-UNDECANOIC ACID					NG/L
97425		PERFLUOROPENTANESULFONIC ACID					NG/L
95507		NONAFLUORO-3,6-DIOXAPHEPTANOIC ACID					NG/L
95504		PERFLUORO(2-ETHOXYETHANE)SULFONIC ACID					NG/L
95501		PERFLUORO-4-METHOXYBUTANOIC ACID					NG/L
95498		PERFLUORO-3-METHOXYPROPANOIC ACID					NG/L

***The full suite of PFAS contaminants listed under EPA Method 537.1 or EPA Method 533 must be analyzed as part of the perfluoro-n-octanoic acid (PFOA) and perfluoro-n-octanesulfonic acid (PFOS) analysis. Any detection of any other PFAS contaminant identified as part of the analysis must also be reported to the DNR as specified under NR 809.207(2), Safe Drinking Water, Wis. Adm. Code.**

Approved By: QA Officer: Date:

Laboratory Manager: Date:

Comments: