

ANALYTICAL REPORT

PREPARED FOR

Attn: Marty Durkin
City of Morton Grove
7840 Nagle Avenue
Morton Grove, Illinois 60053

Generated 11/20/2023 8:49:30 AM

JOB DESCRIPTION

UCMR5-IL0311950-MortonGrove-SE4

JOB NUMBER

810-82549-1

Eurofins Eaton Analytical South Bend

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Eaton Analytical, LLC Project Manager.

Authorization



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Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Client Sample Results	6
Lab Chronicle	8
Certification Summary	9
Method Summary	10
Sample Summary	11
Chain of Custody	12
Receipt Checklists	13



Definitions/Glossary

Client: City of Morton Grove
Project/Site: UCMR5-IL0311950-MortonGrove-SE4

Job ID: 810-82549-1

Qualifiers

LCMS

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: City of Morton Grove
Project/Site: UCMR5-IL0311950-MortonGrove-SE4

Job ID: 810-82549-1

Job ID: 810-82549-1

Laboratory: Eurofins Eaton Analytical South Bend

Narrative

Job Narrative 810-82549-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method. Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The sample was received on 10/24/2023 8:45 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice.

PFAS

Method 537.1_UCMR5: The low level laboratory control sample (LLCS) associated with batch 78643 had analyte recoveries outside of method 537.1 acceptance limits. Perfluorotetradecanoic acid (PFTA) was recovered at 36% and Perfluorotridecanoic acid (PFTrDA) was recovered at 42%. Limits 50-150%. Sample 00001/Entry Point/South Pumpink Station (810-82549-1) could not be re-extracted due to expired hold time.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: City of Morton Grove
Project/Site: UCMR5-IL0311950-MortonGrove-SE4

Job ID: 810-82549-1

Client Sample ID: 00001/Entry Point/South Pumpink Station

Lab Sample ID: 810-82549-1

Date Collected: 10/23/23 08:34

Matrix: Drinking Water

Date Received: 10/24/23 08:45

PWSID Number: IL0311950

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.0049		0.0049	ug/L		11/10/23 15:40	11/14/23 21:09	1
Perfluoropentanoic acid (PFPeA)	<0.0029		0.0029	ug/L		11/10/23 15:40	11/14/23 21:09	1
Perfluorohexanoic acid (PFHxA)	<0.0029		0.0029	ug/L		11/10/23 15:40	11/14/23 21:09	1
Perfluoroheptanoic acid (PFHpA)	<0.0029		0.0029	ug/L		11/10/23 15:40	11/14/23 21:09	1
Perfluorooctanoic acid (PFOA)	<0.0039		0.0039	ug/L		11/10/23 15:40	11/14/23 21:09	1
Perfluorononanoic acid (PFNA)	<0.0039		0.0039	ug/L		11/10/23 15:40	11/14/23 21:09	1
Perfluorodecanoic acid (PFDA)	<0.0029		0.0029	ug/L		11/10/23 15:40	11/14/23 21:09	1
Perfluoroundecanoic acid (PFUnA)	<0.0019		0.0019	ug/L		11/10/23 15:40	11/14/23 21:09	1
Perfluorododecanoic acid (PFDoA)	<0.0029		0.0029	ug/L		11/10/23 15:40	11/14/23 21:09	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0029		0.0029	ug/L		11/10/23 15:40	11/14/23 21:09	1
Perfluorobutanesulfonic acid (PFBS)	<0.0029		0.0029	ug/L		11/10/23 15:40	11/14/23 21:09	1
Perfluorohexanesulfonic acid (PFHxS)	<0.0029		0.0029	ug/L		11/10/23 15:40	11/14/23 21:09	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.0029		0.0029	ug/L		11/10/23 15:40	11/14/23 21:09	1
Perfluorooctanesulfonic acid (PFOS)	<0.0039		0.0039	ug/L		11/10/23 15:40	11/14/23 21:09	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0039		0.0039	ug/L		11/10/23 15:40	11/14/23 21:09	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0049		0.0049	ug/L		11/10/23 15:40	11/14/23 21:09	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid	<0.0019		0.0019	ug/L		11/10/23 15:40	11/14/23 21:09	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid	<0.0049		0.0049	ug/L		11/10/23 15:40	11/14/23 21:09	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0029		0.0029	ug/L		11/10/23 15:40	11/14/23 21:09	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0049		0.0049	ug/L		11/10/23 15:40	11/14/23 21:09	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0049		0.0049	ug/L		11/10/23 15:40	11/14/23 21:09	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0195		0.0195	ug/L		11/10/23 15:40	11/14/23 21:09	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0039		0.0039	ug/L		11/10/23 15:40	11/14/23 21:09	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0029		0.0029	ug/L		11/10/23 15:40	11/14/23 21:09	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.0029		0.0029	ug/L		11/10/23 15:40	11/14/23 21:09	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	81		50 - 200	11/10/23 15:40	11/14/23 21:09	1
13C4 PFBA	92		50 - 200	11/10/23 15:40	11/14/23 21:09	1
13C3 PFBS	90		50 - 200	11/10/23 15:40	11/14/23 21:09	1
13C5 PFPeA	91		50 - 200	11/10/23 15:40	11/14/23 21:09	1
13C5 PFHxA	83		50 - 200	11/10/23 15:40	11/14/23 21:09	1
13C4 PFHpA	86		50 - 200	11/10/23 15:40	11/14/23 21:09	1
13C8 PFOA	89		50 - 200	11/10/23 15:40	11/14/23 21:09	1
13C9 PFNA	96		50 - 200	11/10/23 15:40	11/14/23 21:09	1
13C6 PFDA	90		50 - 200	11/10/23 15:40	11/14/23 21:09	1
13C7 PFUnA	88		50 - 200	11/10/23 15:40	11/14/23 21:09	1
13C2 PFDoA	83		50 - 200	11/10/23 15:40	11/14/23 21:09	1
13C8 PFOS	89		50 - 200	11/10/23 15:40	11/14/23 21:09	1
13C3 PFHxS	89		50 - 200	11/10/23 15:40	11/14/23 21:09	1

Eurofins Eaton Analytical South Bend

Client Sample Results

Client: City of Morton Grove
Project/Site: UCMR5-IL0311950-MortonGrove-SE4

Job ID: 810-82549-1

Client Sample ID: 00001/Entry Point/South Pumpink Station

Lab Sample ID: 810-82549-1

Date Collected: 10/23/23 08:34

Matrix: Drinking Water

Date Received: 10/24/23 08:45

PWSID Number: IL0311950

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2-4:2-FTS	80		50 - 200	11/10/23 15:40	11/14/23 21:09	1
13C2-6:2-FTS	89		50 - 200	11/10/23 15:40	11/14/23 21:09	1
13C2-8:2-FTS	98		50 - 200	11/10/23 15:40	11/14/23 21:09	1

Method: EPA 537.1 UCMR5 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.0050		0.0050	ug/L		11/01/23 08:31	11/03/23 21:06	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.0060		0.0060	ug/L		11/01/23 08:31	11/03/23 21:06	1
Perfluorotetradecanoic acid (PFTA)	<0.0080	*-	0.0080	ug/L		11/01/23 08:31	11/03/23 21:06	1
Perfluorotridecanoic acid (PFTrDA)	<0.0070	*-	0.0070	ug/L		11/01/23 08:31	11/03/23 21:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	96		70 - 130	11/01/23 08:31	11/03/23 21:06	1
13C2 PFHxA	96		70 - 130	11/01/23 08:31	11/03/23 21:06	1
13C2 PFDA	93		70 - 130	11/01/23 08:31	11/03/23 21:06	1
13C3 HFPO-DA	88		70 - 130	11/01/23 08:31	11/03/23 21:06	1

Method: EPA 200.7 UCMR5 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<9.00		9.00	ug/L		11/02/23 13:05	11/03/23 16:01	1

Lab Chronicle

Client: City of Morton Grove
Project/Site: UCMR5-IL0311950-MortonGrove-SE4

Job ID: 810-82549-1

Client Sample ID: 00001/Entry Point/South Pumpink Station

Lab Sample ID: 810-82549-1

Date Collected: 10/23/23 08:34

Matrix: Drinking Water

Date Received: 10/24/23 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			79683	ER	EA SB	11/10/23 15:40
Total/NA	Analysis	533		1	79796	KB	EA SB	11/14/23 21:09
Total/NA	Prep	537.1 DW			78562	SS	EA SB	11/01/23 08:31
Total/NA	Analysis	537.1 UCMR5		1	78643	PP	EA SB	11/03/23 21:06
Total/NA	Prep	200.7 UCMR5			78783	NB	EA SB	11/02/23 13:05
Total/NA	Analysis	200.7 UCMR5		1	78934	AC	EA SB	11/03/23 16:01

Laboratory References:

EA SB = Eurofins Eaton Analytical South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

Accreditation/Certification Summary

Client: City of Morton Grove
Project/Site: UCMR5-IL0311950-MortonGrove-SE4

Job ID: 810-82549-1

Laboratory: Eurofins Eaton Analytical South Bend

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
USEPA UCMR 5	US Federal Programs	IN00035	12-31-25

Method Summary

Client: City of Morton Grove
Project/Site: UCMR5-IL0311950-MortonGrove-SE4

Job ID: 810-82549-1

Method	Method Description	Protocol	Laboratory
533	Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water	EPA	EA SB
537.1 UCMR5	Perfluorinated Alkyl Acids (LC/MS)	EPA	EA SB
200.7 UCMR5	Metals (ICP)	EPA	EA SB
200.7 UCMR5	Preparation, Total Recoverable Metals	EPA	EA SB
533	Extraction of Perfluorinated and Polyfluorinated Alkyl Acids	EPA	EA SB
537.1 DW	Extraction of Perfluorinated Alkyl Acids	EPA	EA SB

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EA SB = Eurofins Eaton Analytical South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

Sample Summary

Client: City of Morton Grove
Project/Site: UCMR5-IL0311950-MortonGrove-SE4

Job ID: 810-82549-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
810-82549-1	00001/Entry Point/South Pumpink Station	Drinking Water	10/23/23 08:34	10/24/23 08:45	IL0311950

1

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South Bend, IN

110 S Hill Street

South Bend, IN 46617

Phone (574) 233-4777; Phone (574) 233-8207

"UCMR 5 Sampling Form for Single Collection Site"

(Separate form is needed for each collection site)



Environment Testing
America

Company Contact: MARTY DURKIN
Company Name: VILLAGE OF MORTON GROVE
Company Address: 7840 NAGLE
MORTON GROVE IL
60053
Phone: 847-470-5235
Email: mdurkin@mortongroveil.org
Purchase Order: _____

Lab PM(name): _____
PM Email: _____
EEA Project: _____
PWSID: 0311950
FacID: 00001
SPID: SOUTH PUMPING STATION
FacName: _____
SPName: ENTRY POINT
Sampling Event: UCMR5 SE4

Water System Name: VILLAGE OF MORTON GROVE
Collection Location: 6702 OAKTON
Scheduled Collection Date: OCT 2023

Sampler Name (Print): MARTY DURKIN

Date/Time Sampled: 10-23-2023

Client Storage temp, if > 2 days from collection: _____

AREA BELOW FOR LAB USE ONLY

For UCMR 5 specific criteria see: REC-WI55108 Guidance Document for UCMR 5 Sample Receiving F



810-82549 Chain of Custody

Method	Type	# Bot	IR Gun#: <u>23</u>	Temp °C (10°C within 2 days of collection, 6°C for > 2 days) Initial / Corrected	pH* value	Ice: Wet / Blue		Cl (P/A) **	Sample Comments	if sample is invalid
						✓ if receipt pH acceptable	✓ if pH needs adjustment			
200.7	FS	1								
200.7	FS	2								
533	FS	1		<u>4.4 / 3.4</u>		✓		<u>A</u>		
533	FS	2		<u>4.4 / 3.6</u>		✓		<u>A</u>		
533	FS	3		<u>4.4 / 3.4</u>		✓		<u>A</u>		
533	FRB	1		<u>4.6 / 3.8</u>		✓		<u>A</u>		
537.1	FS	1		<u>4.8 / 4.0</u>		✓		<u>A</u>		
537.1	FS	2		<u>4.8 / 4.0</u>		✓		<u>A</u>		
537.1	FS	3		<u>4.8 / 4.0</u>		✓		<u>A</u>		
537.1	FRB	1		<u>5.0 / 4.2</u>		✓		<u>A</u>		

* pH <2 for 200.7. pH 6-8 for 533 & 537.1. Note: 200.7 & 533 pH may be adjusted upon receipt.

** A = Absent if Free Cl <0.1 mg/L; P = Chlorine is present

Received By: Robin A. [Signature]

Date/Time: 10-24-23

845 A

Login Sample Receipt Checklist

Client: City of Morton Grove

Job Number: 810-82549-1

Login Number: 82549

List Number: 1

Creator: Alfred, Robbin

List Source: Eurofins Eaton Analytical South Bend

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	False	Client provided containers