

Notice: Hazardous substance discharges must be reported immediately according to Wis. Stat. § 292.11. Non-emergency hazardous substance discharges may be reported by submitting this online form, calling the Department or visiting an office in person. Under Wis. Stat. § 292.99, the penalty for violating the reporting requirement of Wis. Stat. ch. 292 shall be no less than \$10 nor more than \$5,000 for each violation. Each day of continued violation is a separate offense. It is not the Department's intention to use any personally identifiable information from this form for any purpose other than program administration. However, information submitted on this form may also be made available to requesters under Wisconsin's Open Records Law (Wis. Stat. § 19.31 - 19.39). Submitting the notification as part of a Phase 1 or Phase 2 environment assessment report is not considered immediate notification under Wis. Stat. ch. 292.

Reporter Information:

Name: Brad Luedtke Company: 3M
Address: 1425 Stokke Pkwy, Menomonie, WI, 54751 Phone: 7155782318
Email: bdluedtke@mmm.com

Site Information:

Site Name: 3M
Address: 1425 Stokke Pkwy, Menomonie, WI, 54751
Address Description: Not Applicable

Coordinates, County and municipality where contamination was found on the property

Coordinates: WTM 371176 493826 Lat/Long 44.90230 -91.88507

What does the coordinate location represent? Contamination source (preferred)

County: Dunn Municipality: Menomonie



Responsible Party (RP):

Company Name	Full Name	Address	Email	Phone Number
3M	Janice Neitzel	1425 Stokke Pkwy, Menomonie, WI, 54751	jmneitzel@mmm.com	7155782210

Contact Person:

Representing the Responsible Party, Business or Property Owner
Current Property Owner

Contact Person Information: Same as Contact Reporting Discharge

Company Name	Full Name	Address	Email	Phone Number
3M	Brad Luedtke	1425 Stokke Pkwy, Menomonie, WI, 54751	bdluedtke@mmm.com	7155782318

Hazardous Substance Information**Type of Discharge:**

Other - Describe

See attached Narrative Responses document

Contamination was discovered as a result of:

Other Assessment - 9/26/2022
Other Assessment Comments - See attached Narrative Responses document

Hazardous Substance Discharged:

PFAS

Impacts to the Environment**Impacts to the Environment Information:**

Soil Contamination

Lab Results and other Info

Lab results or Report: Labs included in other documents attached below

Additional documentation: Submit other documentation, not listed above (No Fee)

Document Type: Other Document/Assessment - Describe - [See attached Narrative Responses document]

Payment type: Not Applicable

Payment Amount:

0

Additional Comments: See attached Narrative Responses document

If you have questions please contact:

HAYLEY SCHNAE

hayley.schnae@wisconsin.gov

(715) 456-1720

Narrative Responses to Notification Form for Hazardous Substance Discharged

3M is providing the following additional information to the sections of the Notification Form referenced below.

Under the Hazardous Substance Information Section, subpart “Select the type of discharge” our response is:

Detection in soil stockpile. 3M does not believe submittal of this form is required because we do not have available information that the detected levels in the soil stockpile occurred from a spill or discharge. With that as the backdrop, 3M is voluntarily entering into and submitting this form to work with the Wisconsin DNR.

Under the Hazardous Substance Information Section, subpart “Identify hazardous substance discharged” our response is:

3M continues to affirmatively assert that per- and polyfluoroalkyl substances (PFAS) or Aqueous Film Forming Foam (AFFF) and any releases or threatened releases of PFAS or AFFF substances do not constitute releases of hazardous substances, pollutants or contaminants as those are defined and regulated under any federal or state statutes or rules.

Under the Lab Results and Documents Section, subpart “Additional Comments” our response is:

3M requests approval from the Wisconsin DNR to utilize the soil stockpile as fill material onsite because the detected levels are all below the WI DNR’s industrial direct contact Residual Contamination Levels (RCLs) for PFAS. The area where we would like to utilize the soil is depicted on the attached Figure 2. The sampling results for this area are attached, which are also all below the WI DNR’s industrial direct contact RCLs for PFAS.

Tables

Table 1
Summary of Shallow Soil Samples Analyzed for PFAS' Associated with Chiller Building Addition
3M Menomonie Facility
Menomonie, Wisconsin

Soil Sample ID	Concentration of PFAS (in ug/Kg)	
	Perfluorohexanesulfonic acid (PFHxS)	Perfluorooctanesulfonic acid (PFOS)
HA1 1.5-2	ND	ND
HA2 1.5-2	ND	0.36
HA3 1.5-2	0.26	3.8
HA4 1.5-2	ND	4.5
HA5 1.5-2	ND	7.6
HA6 1.5-2	ND	2.8
HA7 1.5-2	ND	2.1
HA8 1.5-2	ND	1.2
HA9 1.5-2	ND	1.3
HA10 1.5-2	ND	75
HA11 1.5-2	3.8	210
HA12 1.5-2	0.83	54
HA13 1.5-2	ND	19
HA14 1.5-2	0.30	42
HA15 1.5-2	1.5	69
HA16 1.5-2	8.1	120
Wisconsin Department of Natural Resources (WDNR) Industrial Direct Contact RCL	NE	16,400

Notes:

* PFAS = Per- and polyfluoroalkyl substances

Only PFAS constituents detected above the laboratory reporting limit for Method 537 are listed; all other constituents are not-detected at the reporting limit.

ug/Kg = micrograms per kilogram.

Soil samples were collected from a depth of 1.5-2 feet of land surface.

ND = Not-detected at the reporting limit.

RCL = Residual Contaminant Level (defined by Wisconsin Department of Natural Resources NR 720.12).

NE = No standard has been established.

Table 2
Laboratory Results from Soil Samples Collected from Soil Stockpile
3M Menomonie Facility
Menomonie, Wisconsin

Parameter	CAS Number	Units	Sample Location and Date									
			1-MEN-S-220826	2-MEN-S-220826	3-MEN-S-220826	4-MEN-S-220826	5-MEN-S-220826	6-MEN-S-220826	7-MEN-S-220826	MEN-EB-S-220826*	MEN-FB-S-220826*	
			8/26/22	8/26/22	8/26/22	8/26/22	8/26/22	8/26/22	8/26/22	8/26/22	8/26/22	8/26/22
Perfluoroalkyl Carboxylates/Carboxylic Acids (PFCA)												
Perfluorobutanoic acid (PFBA)	375-22-4	ug/Kg	<0.028	<0.028	<0.029	<0.035	<0.028	0.16	0.11	<0.55	<0.51	
Perfluoropentanoic acid (PFPeA)	2706-90-3	ug/Kg	<0.028	<0.028	<0.029	<0.035	<0.028	<0.030	<0.029	<0.90	<0.84	
Perfluorohexanoic acid (PFHxA)	307-24-4	ug/Kg	<0.027	<0.027	<0.028	<0.034	<0.027	<0.029	<0.028	<1.00	<0.93	
Perfluoroheptanoic acid (PFHpA)	375-85-9	ug/Kg	<0.034	<0.034	<0.035	<0.043	<0.034	<0.036	<0.036	<0.75	<0.70	
Perfluorooctanoic acid (PFOA)	335-67-1	ug/Kg	<0.031	<0.031	<0.032	<0.038	0.13	<0.032	<0.032	<0.94	<0.88	
Perfluorononanoic acid (PFNA)	375-95-1	ug/Kg	<0.031	<0.031	<0.032	<0.038	<0.030	<0.032	<0.032	<0.87	<0.81	
Perfluorodecanoic acid (PFDA)	335-76-2	ug/Kg	<0.023	<0.022	<0.023	<0.028	<0.022	<0.024	<0.023	<0.67	<0.62	
Perfluoroundecanoic acid (PFUnDA/PFUdA)	2058-94-8	ug/Kg	<0.030	<0.030	<0.031	<0.037	<0.029	<0.032	<0.031	<0.53	<0.49	
Perfluorododecanoic acid (PFDoA)	307-55-1	ug/Kg	<0.033	<0.032	<0.033	<0.040	<0.032	<0.034	<0.034	<0.53	<0.49	
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	ug/Kg	<0.032	<0.031	<0.032	<0.039	<0.031	<0.033	<0.033	<0.68	<0.63	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	ug/Kg	<0.034	<0.034	<0.035	<0.042	<0.033	<0.036	<0.035	<0.66	<0.61	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	ug/Kg	<0.026	<0.026	<0.027	<0.032	<0.026	<0.027	<0.027	<0.53	<0.49	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	ug/Kg	<0.024	<0.024	<0.024	<0.029	<0.023	<0.025	<0.025	<0.66	<0.61	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	ug/Kg	0.13	<0.022	0.12	0.41	0.73	<0.023	0.23	<0.58	<0.54	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	ug/Kg	<0.028	<0.027	<0.028	<0.034	0.13	<0.029	<0.028	<0.73	<0.68	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	ug/Kg	4.9	2.2	1.2	1.3	34 D	4.9	2.3	<0.73	<0.68	
Perfluoronone sulfonic acid (PFNS)	68259-12-1	ug/Kg	<0.034	<0.034	<0.035	<0.043	<0.034	<0.036	<0.036	<0.64	<0.60	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	ug/Kg	<0.028	<0.028	<0.028	<0.035	<0.028	<0.029	<0.029	<0.70	<0.65	
Perfluorooctane sulfonamide (PFOSA)	754-91-6	ug/Kg	<0.029	<0.029	<0.030	<0.036	<0.029	<0.031	<0.030	<0.79	<0.73	
N-ethyl perfluorooctane sulfonamide (NEtFOSA)	4151-50-2	ug/Kg	<0.025	<0.025	<0.026	<0.031	<0.025	<0.027	<0.026	<0.63	<0.58	
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	2355-31-9	ug/Kg	<0.028	<0.028	<0.029	<0.035	<0.027	<0.029	<0.029	<0.76	<0.71	
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	2991-50-6	ug/Kg	<0.040	<0.040	<0.041	<0.049	<0.039	<0.042	<0.041	<0.89	<0.83	
4:2 Fluorotelomer sulfonic acid (4:2FTS)	757124-72-4	ug/Kg	<0.023	<0.023	<0.023	<0.028	<0.023	<0.024	<0.024	<0.51	<0.47	
6:2 Fluorotelomer sulfonic acid (6:2FTS)	27619-97-2	ug/Kg	<0.041	<0.041	<0.042	<0.051	<0.040	<0.043	<0.042	3.5	<0.69	
8:2 Fluorotelomer sulfonic acid (8:2FTS)	39108-34-4	ug/Kg	<0.044	<0.043	<0.045	<0.054	<0.043	<0.046	<0.045	<0.55	<0.51	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	13252-13-6	ug/Kg	<0.028	<0.027	<0.028	<0.034	<0.027	<0.029	<0.028	<0.54	<0.50	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	ug/Kg	<0.036	<0.036	<0.037	<0.045	<0.035	<0.038	<0.037	<1.0	<0.93	
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9CI-PF3ONS)	756426-58-1	ug/Kg	<0.025	<0.025	<0.025	<0.031	<0.025	<0.026	<0.026	<0.51	<0.48	
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3OUDS)	763051-92-9	ug/Kg	<0.025	<0.025	<0.026	<0.031	<0.025	<0.026	<0.026	<0.61	<0.57	

Notes:

Laboratory analysis was completed by Pace Laboratories using DOD QSM 5.3 for PFAS.

Bold = value exceeds the Method Detection Limit.

"<" not detection and the number presented is the Method Detection Limit.

Units for soil samples are presented in micrograms per Kilogram (ug/Kg).

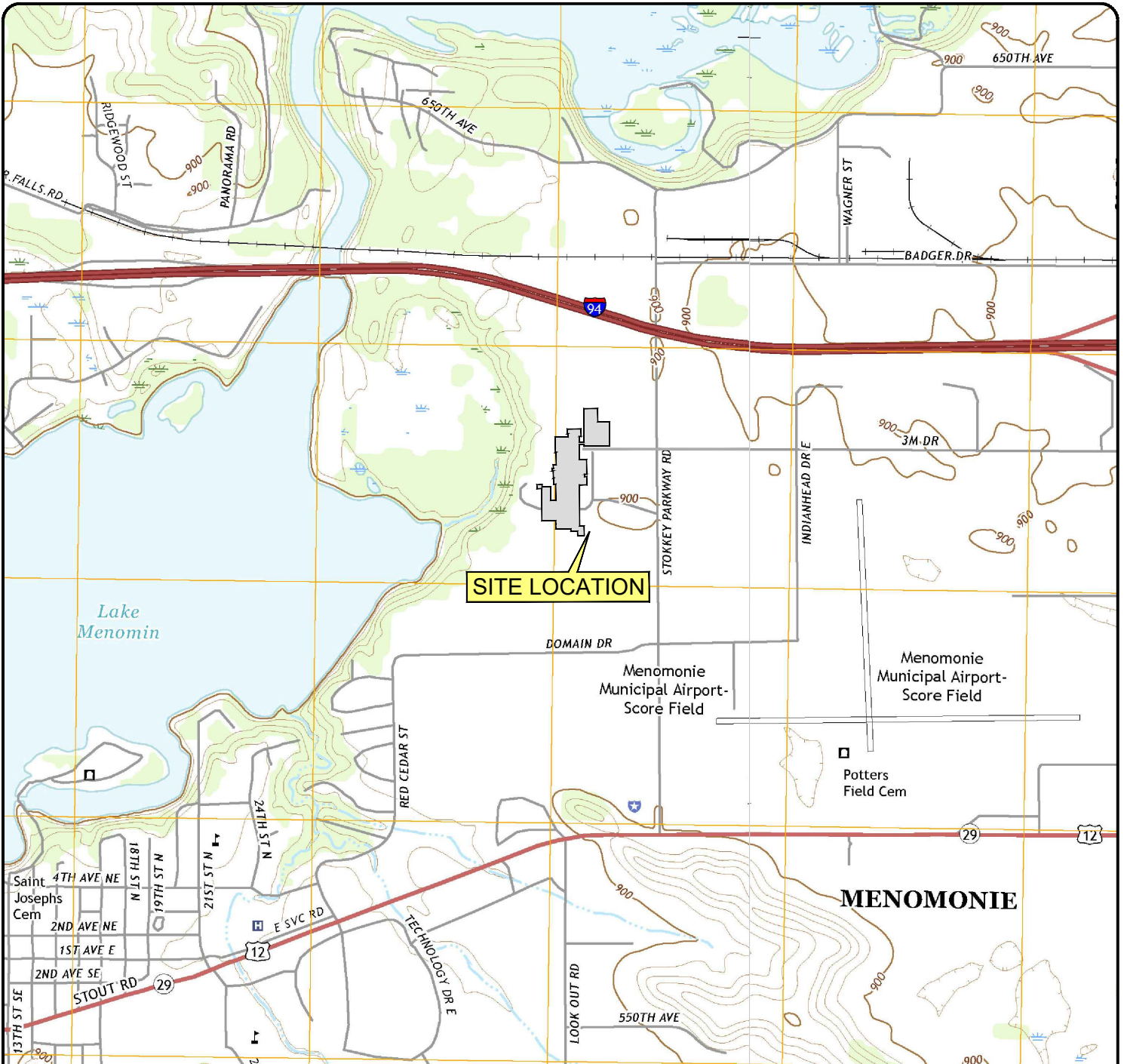
*Units for these quality assurance and quality control samples (equipment blank and field blank) are presented in nanograms per liter (ng/L).

D = The results were taken from secondary dilutions of the sample extracts to bring results within calibration range.

The Industrial Direct Contact Residual Contaminant Level (RCL) for PFBS is 16,400 milligrams per kilogram (mg/Kg) and 16.4 mg/Kg for PFOS and PFOA.

Figures

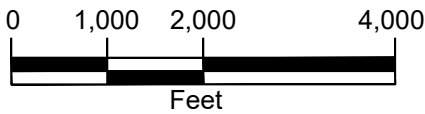
DRAFT



SITE LOCATION

MENOMONIE

SOURCE: U.S.G.S. TOPOGRAPHIC QUADRANGLES MENOMONIE NORTH AND RUSK, WI (2015)



**DUNN COUNTY
WISCONSIN**

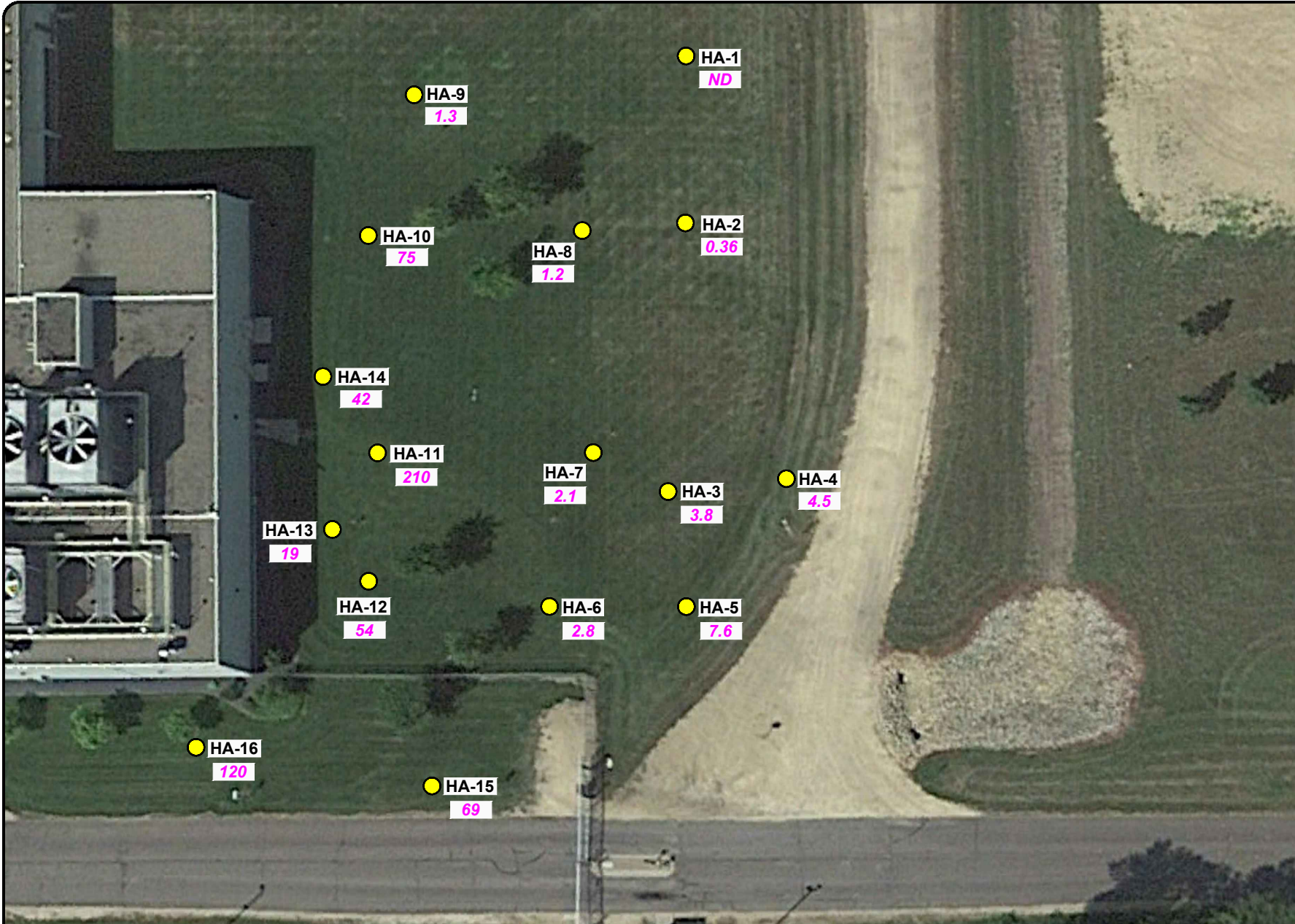
P:\ACAD\7383-006-MENOMI\7383006003A.DWG

Tt TETRA TECH
 www.tetrattech.com
 2001 KILLEWBREW DRIVE, SUITE 141
 BLOOMINGTON, MN 55425
 PHONE: 612.643.2200

3M MENOMONIE TECHNICAL MEMORANDUM
 1425 STOKKE PARKWAY
 MENOMONIE, WISCONSIN 54751
SITE LOCATION MAP

Project No:	117-7383006
Designed by:	CP
Checked by:	EC
FIGURE	
1	

Bar Measures 1 inch




TETRA TECH

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 2001 KILLEWBREW DRIVE, SUITE 141
 BLOOMINGTON, MN 55425
 PHONE: 612.643.2200

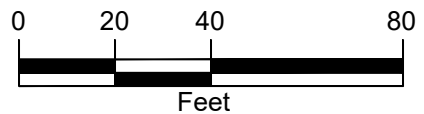
3M MENOMONIE TECHNICAL MEMORANDUM
 1425 STOKKE PARKWAY
 MENOMONIE, WISCONSIN 54751
**HAND AUGER SOIL SAMPLE LOCATION MAP
 WITH PFOS RESULTS**

P:\ACAD\7383-006-MENOM\7383006002A.DWG

LEGEND:

-  Hand Auger Soil Boring Location (1.5-2.0 feet below land surface)
- 2.1** PFOS Concentration (µg/kg)

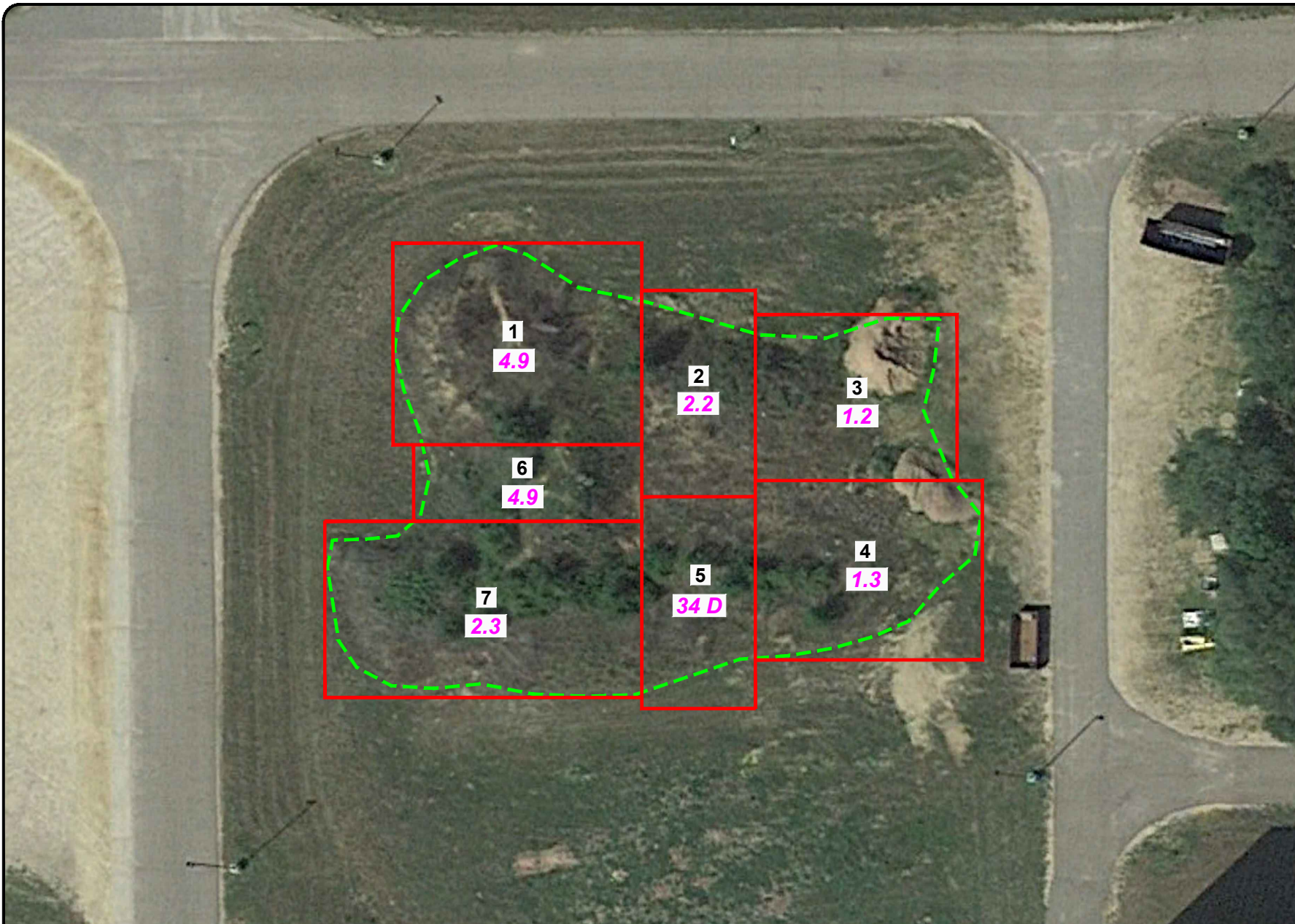
ND = Not Detected.
 Concentration of Perfluorooctanesulfonic acid (PFOS) in micrograms per kilogram (µg/kg).
 All samples were collected from a depth of 1.5 to 2 feet below land surface.



Project No: 117-7383006
Designed by: EC
Checked by: CP
FIGURE 2

Bar Measures 1 inch

P:\ACAD\7383-006-MENOMI\7383006006A.DWG



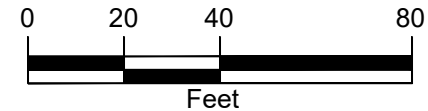
LEGEND:

- 7 GENERAL SOIL STOCKPILE AREAS
- 4.9 PFOS CONCENTRATION (µg/kg)
- EDGE OF PILE

NOTES:

Concentration of Perfluorooctanesulfonic acid (PFOS) in micrograms per kilogram (µg/kg).

Samples were analyzed for 29 constituents using DOD QSM 5.3. The laboratory results are included in Table 2.



3M MENOMONIE TECHNICAL MEMORANDUM

1425 STOKKE PARKWAY
 MENOMONIE, WISCONSIN 54751

GENERAL SOIL STOCKPILE AREAS WITH PFOS RESULTS

Project No:	117-7383006
Designed by:	EC
Checked by:	CP
FIGURE	3

Bar Measures 1 inch



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 BLOOMINGTON, MN 55425
 PHONE: 612.643.2200

Appendix A

Laboratory Report

ANALYTICAL REPORT

Eurofins Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-86450-1
Client Project/Site: E22-0203 Menomonie Soils

For:
3M Company
3M Laboratory
3M Center, Building 260-5N-17
St Paul, Minnesota 55144-1000

Attn: Amanda Albrecht



Authorized for release by:
4/8/2022 1:37:09 PM

David Alltucker, Project Manager I
(916)374-4383
David.Alltucker@et.eurofinsus.com

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	7
Isotope Dilution Summary	34
QC Sample Results	38
QC Association Summary	49
Lab Chronicle	51
Certification Summary	57
Method Summary	58
Sample Summary	59
Chain of Custody	60
Receipt Checklists	63

Definitions/Glossary

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Qualifiers

LCMS

Qualifier	Qualifier Description
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	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: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Job ID: 320-86450-1

Laboratory: Eurofins Sacramento

Narrative

Job Narrative 320-86450-1

Receipt

The samples were received on 4/5/2022 9:50 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.5° C.

Receipt Exceptions

The container label for the following sample(s) did not match the information listed on the Chain-of-Custody (COC):
Field Blank (320-86450-17) COC lists sample matrix as Soil, however sample received was a water sample.
Rinsate Blank (320-86450-18) COC lists sample matrix as soil, however sample received was a water sample.
The lab logged in sample matrix as Water. Field Blank (320-86450-17) and Rinsate Blank (320-86450-18).

LCMS

Method 537 (modified): The matrix spike (MS) recovery for preparation batch 320-578613 and analytical batch 320-578411 was outside control limits for Perfluoroundecanoic acid (PFUnA). Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 537 (modified): The concentration of one or more analytes associated with the following samples exceeded the instrument calibration range: HA11 1.5-2 (320-86450-11), HA12 1.5-2 (320-86450-12), HA14 1.5-2 (320-86450-14) and HA15 1.5-2 (320-86450-15). This analyte has been qualified; however, the peaks did not saturate the instrument detector. Historical data indicate that for the isotope dilution method, dilution and re-analysis will not produce significantly different results from those reported above the calibration range.

Method 537 (modified): Results for samples HA10 1.5-2 (320-86450-10), HA11 1.5-2 (320-86450-11) and HA16 1.5-2 (320-86450-16) were reported from the analysis of a diluted extract due to high concentration of the target analyte. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits.

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

General Chemistry

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

Organic Prep

Method 3535: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-578250.

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

Detection Summary

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: HA1-1.5-2.0

Lab Sample ID: 320-86450-1

No Detections.

Client Sample ID: HA2 1.5-2

Lab Sample ID: 320-86450-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	0.36		0.24	ug/Kg	1	✳	537 (modified)	Total/NA

Client Sample ID: HA3 1.5-2

Lab Sample ID: 320-86450-3

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	0.26		0.21	ug/Kg	1	✳	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.8		0.21	ug/Kg	1	✳	537 (modified)	Total/NA

Client Sample ID: HA4 1.5-2

Lab Sample ID: 320-86450-4

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	4.5		0.20	ug/Kg	1	✳	537 (modified)	Total/NA

Client Sample ID: HA5 1.5-2

Lab Sample ID: 320-86450-5

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	7.6		0.21	ug/Kg	1	✳	537 (modified)	Total/NA

Client Sample ID: HA6 1.5-2

Lab Sample ID: 320-86450-6

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	2.8		0.22	ug/Kg	1	✳	537 (modified)	Total/NA

Client Sample ID: HA7 1.5-2

Lab Sample ID: 320-86450-7

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	2.1		0.20	ug/Kg	1	✳	537 (modified)	Total/NA

Client Sample ID: HA8 1.5-2

Lab Sample ID: 320-86450-8

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	1.2		0.21	ug/Kg	1	✳	537 (modified)	Total/NA

Client Sample ID: HA9 1.5-2

Lab Sample ID: 320-86450-9

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	1.3		0.22	ug/Kg	1	✳	537 (modified)	Total/NA

Client Sample ID: HA10 1.5-2

Lab Sample ID: 320-86450-10

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	75		2.3	ug/Kg	10	✳	537 (modified)	Total/NA

Client Sample ID: HA11 1.5-2

Lab Sample ID: 320-86450-11

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	3.8		2.1	ug/Kg	10	✳	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	210	E	2.1	ug/Kg	10	✳	537 (modified)	Total/NA

Client Sample ID: HA12 1.5-2

Lab Sample ID: 320-86450-12

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	0.83		0.21	ug/Kg	1	✳	537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Detection Summary

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: HA12 1.5-2 (Continued)

Lab Sample ID: 320-86450-12

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	54	E	0.21	ug/Kg	1	*	537 (modified)	Total/NA

Client Sample ID: HA13 1.5-2

Lab Sample ID: 320-86450-13

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	19		0.20	ug/Kg	1	*	537 (modified)	Total/NA

Client Sample ID: HA14 1.5-2

Lab Sample ID: 320-86450-14

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	0.30		0.20	ug/Kg	1	*	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	42	E	0.20	ug/Kg	1	*	537 (modified)	Total/NA

Client Sample ID: HA15 1.5-2

Lab Sample ID: 320-86450-15

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	1.5		0.21	ug/Kg	1	*	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	69	E	0.21	ug/Kg	1	*	537 (modified)	Total/NA

Client Sample ID: HA16 1.5-2

Lab Sample ID: 320-86450-16

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	8.1		2.1	ug/Kg	10	*	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	120		2.1	ug/Kg	10	*	537 (modified)	Total/NA

Client Sample ID: Field Blank

Lab Sample ID: 320-86450-17

No Detections.

Client Sample ID: Rinsate Blank

Lab Sample ID: 320-86450-18

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Client Sample Results

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: HA1-1.5-2.0

Lab Sample ID: 320-86450-1

Date Collected: 04/01/22 09:45

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 94.1

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 12:30	1
Perfluoropentanoic acid (PFPeA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 12:30	1
Perfluorohexanoic acid (PFHxA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 12:30	1
Perfluoroheptanoic acid (PFHpA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 12:30	1
Perfluorooctanoic acid (PFOA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 12:30	1
Perfluorononanoic acid (PFNA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 12:30	1
Perfluorodecanoic acid (PFDA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 12:30	1
Perfluoroundecanoic acid (PFUnA)	<0.21	F1	0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 12:30	1
Perfluorododecanoic acid (PFDoA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 12:30	1
Perfluorotridecanoic acid (PFTrDA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 12:30	1
Perfluorotetradecanoic acid (PFTeA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 12:30	1
Perfluorobutanesulfonic acid (PFBS)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 12:30	1
Perfluoropentanesulfonic acid (PFPeS)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 12:30	1
Perfluorohexanesulfonic acid (PFHxS)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 12:30	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 12:30	1
Perfluorooctanesulfonic acid (PFOS)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 12:30	1
Perfluorononanesulfonic acid (PFNS)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 12:30	1
Perfluorodecanesulfonic acid (PFDS)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 12:30	1
Perfluorododecanesulfonic acid (PFDoS)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 12:30	1
Perfluorooctanesulfonamide (FOSA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 12:30	1
NMeFOSAA	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 12:30	1
NEtFOSAA	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 12:30	1
4:2 FTS	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 12:30	1
6:2 FTS	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 12:30	1
8:2 FTS	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 12:30	1
NEtFOSA	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 12:30	1
NMeFOSA	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 12:30	1
NMeFOSE	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 12:30	1
NEtFOSE	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 12:30	1
9Cl-PF3ONS	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 12:30	1
11Cl-PF3OUdS	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 12:30	1
HFPO-DA (GenX)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 12:30	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 12:30	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	85		25 - 150	04/06/22 12:56	04/07/22 12:30	1
13C5 PFPeA	84		25 - 150	04/06/22 12:56	04/07/22 12:30	1
13C2 PFHxA	87		25 - 150	04/06/22 12:56	04/07/22 12:30	1
13C4 PFHpA	83		25 - 150	04/06/22 12:56	04/07/22 12:30	1
13C4 PFOA	90		25 - 150	04/06/22 12:56	04/07/22 12:30	1
13C5 PFNA	77		25 - 150	04/06/22 12:56	04/07/22 12:30	1
13C2 PFDA	82		25 - 150	04/06/22 12:56	04/07/22 12:30	1
13C2 PFUnA	83		25 - 150	04/06/22 12:56	04/07/22 12:30	1
13C2 PFDoA	82		25 - 150	04/06/22 12:56	04/07/22 12:30	1
13C2 PFTeDA	79		25 - 150	04/06/22 12:56	04/07/22 12:30	1
13C2 PFHxDA	81		25 - 150	04/06/22 12:56	04/07/22 12:30	1
13C3 PFBS	82		25 - 150	04/06/22 12:56	04/07/22 12:30	1

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Client Sample Results

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: HA1-1.5-2.0

Lab Sample ID: 320-86450-1

Date Collected: 04/01/22 09:45

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 94.1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	85		25 - 150	04/06/22 12:56	04/07/22 12:30	1
13C4 PFOS	79		25 - 150	04/06/22 12:56	04/07/22 12:30	1
13C8 FOSA	102		25 - 150	04/06/22 12:56	04/07/22 12:30	1
M2-4:2 FTS	73		25 - 150	04/06/22 12:56	04/07/22 12:30	1
M2-6:2 FTS	62		25 - 150	04/06/22 12:56	04/07/22 12:30	1
M2-8:2 FTS	58		25 - 150	04/06/22 12:56	04/07/22 12:30	1
d5-NEtFOSAA	88		25 - 150	04/06/22 12:56	04/07/22 12:30	1
d3-NMeFOSAA	81		25 - 150	04/06/22 12:56	04/07/22 12:30	1
d-N-MeFOSA-M	66		25 - 150	04/06/22 12:56	04/07/22 12:30	1
d-N-EtFOSA-M	61		25 - 150	04/06/22 12:56	04/07/22 12:30	1
d7-N-MeFOSE-M	75		10 - 120	04/06/22 12:56	04/07/22 12:30	1
d9-N-EtFOSE-M	71		10 - 120	04/06/22 12:56	04/07/22 12:30	1
13C3 HFPO-DA	82		25 - 150	04/06/22 12:56	04/07/22 12:30	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	5.9		0.1	%			04/05/22 13:55	1
Percent Solids	94.1		0.1	%			04/05/22 13:55	1

Client Sample ID: HA2 1.5-2

Lab Sample ID: 320-86450-2

Date Collected: 04/01/22 09:55

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 82.4

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.24		0.24	ug/Kg	✱	04/06/22 12:56	04/07/22 12:00	1
Perfluoropentanoic acid (PFPeA)	<0.24		0.24	ug/Kg	✱	04/06/22 12:56	04/07/22 12:00	1
Perfluorohexanoic acid (PFHxA)	<0.24		0.24	ug/Kg	✱	04/06/22 12:56	04/07/22 12:00	1
Perfluoroheptanoic acid (PFHpA)	<0.24		0.24	ug/Kg	✱	04/06/22 12:56	04/07/22 12:00	1
Perfluorooctanoic acid (PFOA)	<0.24		0.24	ug/Kg	✱	04/06/22 12:56	04/07/22 12:00	1
Perfluorononanoic acid (PFNA)	<0.24		0.24	ug/Kg	✱	04/06/22 12:56	04/07/22 12:00	1
Perfluorodecanoic acid (PFDA)	<0.24		0.24	ug/Kg	✱	04/06/22 12:56	04/07/22 12:00	1
Perfluoroundecanoic acid (PFUnA)	<0.24		0.24	ug/Kg	✱	04/06/22 12:56	04/07/22 12:00	1
Perfluorododecanoic acid (PFDoA)	<0.24		0.24	ug/Kg	✱	04/06/22 12:56	04/07/22 12:00	1
Perfluorotridecanoic acid (PFTTrDA)	<0.24		0.24	ug/Kg	✱	04/06/22 12:56	04/07/22 12:00	1
Perfluorotetradecanoic acid (PFTeA)	<0.24		0.24	ug/Kg	✱	04/06/22 12:56	04/07/22 12:00	1
Perfluorobutanesulfonic acid (PFBS)	<0.24		0.24	ug/Kg	✱	04/06/22 12:56	04/07/22 12:00	1
Perfluoropentanesulfonic acid (PFPeS)	<0.24		0.24	ug/Kg	✱	04/06/22 12:56	04/07/22 12:00	1
Perfluorohexanesulfonic acid (PFHxS)	<0.24		0.24	ug/Kg	✱	04/06/22 12:56	04/07/22 12:00	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.24		0.24	ug/Kg	✱	04/06/22 12:56	04/07/22 12:00	1
Perfluorooctanesulfonic acid (PFOS)	0.36		0.24	ug/Kg	✱	04/06/22 12:56	04/07/22 12:00	1
Perfluorononanesulfonic acid (PFNS)	<0.24		0.24	ug/Kg	✱	04/06/22 12:56	04/07/22 12:00	1
Perfluorodecanesulfonic acid (PFDS)	<0.24		0.24	ug/Kg	✱	04/06/22 12:56	04/07/22 12:00	1
Perfluorododecanesulfonic acid (PFDoS)	<0.24		0.24	ug/Kg	✱	04/06/22 12:56	04/07/22 12:00	1
Perfluorooctanesulfonamide (FOSA)	<0.24		0.24	ug/Kg	✱	04/06/22 12:56	04/07/22 12:00	1
NMeFOSAA	<0.24		0.24	ug/Kg	✱	04/06/22 12:56	04/07/22 12:00	1
NEtFOSAA	<0.24		0.24	ug/Kg	✱	04/06/22 12:56	04/07/22 12:00	1

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Client Sample Results

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: HA2 1.5-2

Lab Sample ID: 320-86450-2

Date Collected: 04/01/22 09:55

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 82.4

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4:2 FTS	<0.24		0.24	ug/Kg	✳	04/06/22 12:56	04/07/22 12:00	1
6:2 FTS	<0.24		0.24	ug/Kg	✳	04/06/22 12:56	04/07/22 12:00	1
8:2 FTS	<0.24		0.24	ug/Kg	✳	04/06/22 12:56	04/07/22 12:00	1
NEtFOSA	<0.24		0.24	ug/Kg	✳	04/06/22 12:56	04/07/22 12:00	1
NMeFOSA	<0.24		0.24	ug/Kg	✳	04/06/22 12:56	04/07/22 12:00	1
NMeFOSE	<0.24		0.24	ug/Kg	✳	04/06/22 12:56	04/07/22 12:00	1
NEtFOSE	<0.24		0.24	ug/Kg	✳	04/06/22 12:56	04/07/22 12:00	1
9Cl-PF3ONS	<0.24		0.24	ug/Kg	✳	04/06/22 12:56	04/07/22 12:00	1
11Cl-PF3OUdS	<0.24		0.24	ug/Kg	✳	04/06/22 12:56	04/07/22 12:00	1
HFPO-DA (GenX)	<0.24		0.24	ug/Kg	✳	04/06/22 12:56	04/07/22 12:00	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.24		0.24	ug/Kg	✳	04/06/22 12:56	04/07/22 12:00	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	82		25 - 150	04/06/22 12:56	04/07/22 12:00	1
13C5 PFPeA	88		25 - 150	04/06/22 12:56	04/07/22 12:00	1
13C2 PFHxA	92		25 - 150	04/06/22 12:56	04/07/22 12:00	1
13C4 PFHpA	84		25 - 150	04/06/22 12:56	04/07/22 12:00	1
13C4 PFOA	86		25 - 150	04/06/22 12:56	04/07/22 12:00	1
13C5 PFNA	77		25 - 150	04/06/22 12:56	04/07/22 12:00	1
13C2 PFDA	79		25 - 150	04/06/22 12:56	04/07/22 12:00	1
13C2 PFUnA	84		25 - 150	04/06/22 12:56	04/07/22 12:00	1
13C2 PFDoA	84		25 - 150	04/06/22 12:56	04/07/22 12:00	1
13C2 PFTeDA	79		25 - 150	04/06/22 12:56	04/07/22 12:00	1
13C2 PFHxDA	85		25 - 150	04/06/22 12:56	04/07/22 12:00	1
13C3 PFBS	84		25 - 150	04/06/22 12:56	04/07/22 12:00	1
18O2 PFHxS	89		25 - 150	04/06/22 12:56	04/07/22 12:00	1
13C4 PFOS	82		25 - 150	04/06/22 12:56	04/07/22 12:00	1
13C8 FOSA	102		25 - 150	04/06/22 12:56	04/07/22 12:00	1
M2-4:2 FTS	75		25 - 150	04/06/22 12:56	04/07/22 12:00	1
M2-6:2 FTS	65		25 - 150	04/06/22 12:56	04/07/22 12:00	1
M2-8:2 FTS	56		25 - 150	04/06/22 12:56	04/07/22 12:00	1
d5-NEtFOSAA	78		25 - 150	04/06/22 12:56	04/07/22 12:00	1
d3-NMeFOSAA	74		25 - 150	04/06/22 12:56	04/07/22 12:00	1
d-N-MeFOSA-M	65		25 - 150	04/06/22 12:56	04/07/22 12:00	1
d-N-EtFOSA-M	62		25 - 150	04/06/22 12:56	04/07/22 12:00	1
d7-N-MeFOSE-M	76		10 - 120	04/06/22 12:56	04/07/22 12:00	1
d9-N-EtFOSE-M	72		10 - 120	04/06/22 12:56	04/07/22 12:00	1
13C3 HFPO-DA	81		25 - 150	04/06/22 12:56	04/07/22 12:00	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	17.6		0.1	%			04/05/22 13:55	1
Percent Solids	82.4		0.1	%			04/05/22 13:55	1

Client Sample Results

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: HA3 1.5-2

Lab Sample ID: 320-86450-3

Date Collected: 04/01/22 10:00

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 93.4

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.21		0.21	ug/Kg	✳	04/06/22 12:56	04/07/22 13:00	1
Perfluoropentanoic acid (PFPeA)	<0.21		0.21	ug/Kg	✳	04/06/22 12:56	04/07/22 13:00	1
Perfluorohexanoic acid (PFHxA)	<0.21		0.21	ug/Kg	✳	04/06/22 12:56	04/07/22 13:00	1
Perfluoroheptanoic acid (PFHpA)	<0.21		0.21	ug/Kg	✳	04/06/22 12:56	04/07/22 13:00	1
Perfluorooctanoic acid (PFOA)	<0.21		0.21	ug/Kg	✳	04/06/22 12:56	04/07/22 13:00	1
Perfluorononanoic acid (PFNA)	<0.21		0.21	ug/Kg	✳	04/06/22 12:56	04/07/22 13:00	1
Perfluorodecanoic acid (PFDA)	<0.21		0.21	ug/Kg	✳	04/06/22 12:56	04/07/22 13:00	1
Perfluoroundecanoic acid (PFUnA)	<0.21		0.21	ug/Kg	✳	04/06/22 12:56	04/07/22 13:00	1
Perfluorododecanoic acid (PFDoA)	<0.21		0.21	ug/Kg	✳	04/06/22 12:56	04/07/22 13:00	1
Perfluorotridecanoic acid (PFTrDA)	<0.21		0.21	ug/Kg	✳	04/06/22 12:56	04/07/22 13:00	1
Perfluorotetradecanoic acid (PFTeA)	<0.21		0.21	ug/Kg	✳	04/06/22 12:56	04/07/22 13:00	1
Perfluorobutanesulfonic acid (PFBS)	<0.21		0.21	ug/Kg	✳	04/06/22 12:56	04/07/22 13:00	1
Perfluoropentanesulfonic acid (PFPeS)	<0.21		0.21	ug/Kg	✳	04/06/22 12:56	04/07/22 13:00	1
Perfluorohexanesulfonic acid (PFHxS)	0.26		0.21	ug/Kg	✳	04/06/22 12:56	04/07/22 13:00	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.21		0.21	ug/Kg	✳	04/06/22 12:56	04/07/22 13:00	1
Perfluorooctanesulfonic acid (PFOS)	3.8		0.21	ug/Kg	✳	04/06/22 12:56	04/07/22 13:00	1
Perfluorononanesulfonic acid (PFNS)	<0.21		0.21	ug/Kg	✳	04/06/22 12:56	04/07/22 13:00	1
Perfluorodecanesulfonic acid (PFDS)	<0.21		0.21	ug/Kg	✳	04/06/22 12:56	04/07/22 13:00	1
Perfluorododecanesulfonic acid (PFDoS)	<0.21		0.21	ug/Kg	✳	04/06/22 12:56	04/07/22 13:00	1
Perfluorooctanesulfonamide (FOSA)	<0.21		0.21	ug/Kg	✳	04/06/22 12:56	04/07/22 13:00	1
NMeFOSAA	<0.21		0.21	ug/Kg	✳	04/06/22 12:56	04/07/22 13:00	1
NEtFOSAA	<0.21		0.21	ug/Kg	✳	04/06/22 12:56	04/07/22 13:00	1
4:2 FTS	<0.21		0.21	ug/Kg	✳	04/06/22 12:56	04/07/22 13:00	1
6:2 FTS	<0.21		0.21	ug/Kg	✳	04/06/22 12:56	04/07/22 13:00	1
8:2 FTS	<0.21		0.21	ug/Kg	✳	04/06/22 12:56	04/07/22 13:00	1
NEtFOSA	<0.21		0.21	ug/Kg	✳	04/06/22 12:56	04/07/22 13:00	1
NMeFOSA	<0.21		0.21	ug/Kg	✳	04/06/22 12:56	04/07/22 13:00	1
NMeFOSE	<0.21		0.21	ug/Kg	✳	04/06/22 12:56	04/07/22 13:00	1
NEtFOSE	<0.21		0.21	ug/Kg	✳	04/06/22 12:56	04/07/22 13:00	1
9Cl-PF3ONS	<0.21		0.21	ug/Kg	✳	04/06/22 12:56	04/07/22 13:00	1
11Cl-PF3OUdS	<0.21		0.21	ug/Kg	✳	04/06/22 12:56	04/07/22 13:00	1
HFPO-DA (GenX)	<0.21		0.21	ug/Kg	✳	04/06/22 12:56	04/07/22 13:00	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.21		0.21	ug/Kg	✳	04/06/22 12:56	04/07/22 13:00	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	94		25 - 150	04/06/22 12:56	04/07/22 13:00	1
13C5 PFPeA	91		25 - 150	04/06/22 12:56	04/07/22 13:00	1
13C2 PFHxA	104		25 - 150	04/06/22 12:56	04/07/22 13:00	1
13C4 PFHpA	93		25 - 150	04/06/22 12:56	04/07/22 13:00	1
13C4 PFOA	89		25 - 150	04/06/22 12:56	04/07/22 13:00	1
13C5 PFNA	90		25 - 150	04/06/22 12:56	04/07/22 13:00	1
13C2 PFDA	83		25 - 150	04/06/22 12:56	04/07/22 13:00	1
13C2 PFUnA	88		25 - 150	04/06/22 12:56	04/07/22 13:00	1
13C2 PFDoA	77		25 - 150	04/06/22 12:56	04/07/22 13:00	1
13C2 PFTeDA	88		25 - 150	04/06/22 12:56	04/07/22 13:00	1
13C2 PFHxDA	88		25 - 150	04/06/22 12:56	04/07/22 13:00	1

Eurofins Sacramento

Client Sample Results

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: HA3 1.5-2

Lab Sample ID: 320-86450-3

Date Collected: 04/01/22 10:00

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 93.4

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFBS	89		25 - 150	04/06/22 12:56	04/07/22 13:00	1
18O2 PFHxS	96		25 - 150	04/06/22 12:56	04/07/22 13:00	1
13C4 PFOS	85		25 - 150	04/06/22 12:56	04/07/22 13:00	1
13C8 FOSA	101		25 - 150	04/06/22 12:56	04/07/22 13:00	1
M2-4:2 FTS	77		25 - 150	04/06/22 12:56	04/07/22 13:00	1
M2-6:2 FTS	73		25 - 150	04/06/22 12:56	04/07/22 13:00	1
M2-8:2 FTS	61		25 - 150	04/06/22 12:56	04/07/22 13:00	1
d5-NEtFOSAA	85		25 - 150	04/06/22 12:56	04/07/22 13:00	1
d3-NMeFOSAA	83		25 - 150	04/06/22 12:56	04/07/22 13:00	1
d-N-MeFOSA-M	67		25 - 150	04/06/22 12:56	04/07/22 13:00	1
d-N-EtFOSA-M	69		25 - 150	04/06/22 12:56	04/07/22 13:00	1
d7-N-MeFOSE-M	73		10 - 120	04/06/22 12:56	04/07/22 13:00	1
d9-N-EtFOSE-M	71		10 - 120	04/06/22 12:56	04/07/22 13:00	1
13C3 HFPO-DA	89		25 - 150	04/06/22 12:56	04/07/22 13:00	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	6.6		0.1	%			04/05/22 13:55	1
Percent Solids	93.4		0.1	%			04/05/22 13:55	1

Client Sample ID: HA4 1.5-2

Lab Sample ID: 320-86450-4

Date Collected: 04/01/22 10:10

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 90.9

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:11	1
Perfluoropentanoic acid (PFPeA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:11	1
Perfluorohexanoic acid (PFHxA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:11	1
Perfluoroheptanoic acid (PFHpA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:11	1
Perfluorooctanoic acid (PFOA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:11	1
Perfluorononanoic acid (PFNA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:11	1
Perfluorodecanoic acid (PFDA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:11	1
Perfluoroundecanoic acid (PFUnA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:11	1
Perfluorododecanoic acid (PFDoA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:11	1
Perfluorotridecanoic acid (PFTrDA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:11	1
Perfluorotetradecanoic acid (PFTeA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:11	1
Perfluorobutanesulfonic acid (PFBS)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:11	1
Perfluoropentanesulfonic acid (PFPeS)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:11	1
Perfluorohexanesulfonic acid (PFHxS)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:11	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:11	1
Perfluorooctanesulfonic acid (PFOS)	4.5		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:11	1
Perfluorononanesulfonic acid (PFNS)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:11	1
Perfluorodecanesulfonic acid (PFDS)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:11	1
Perfluorododecanesulfonic acid (PFDoS)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:11	1
Perfluorooctanesulfonamide (FOSA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:11	1
NMeFOSAA	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:11	1

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Client Sample Results

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: HA4 1.5-2

Lab Sample ID: 320-86450-4

Date Collected: 04/01/22 10:10

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 90.9

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
NEtFOSAA	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:11	1
4:2 FTS	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:11	1
6:2 FTS	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:11	1
8:2 FTS	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:11	1
NEtFOSA	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:11	1
NMeFOSA	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:11	1
NMeFOSE	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:11	1
NEtFOSE	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:11	1
9Cl-PF3ONS	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:11	1
11Cl-PF3OUdS	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:11	1
HFPO-DA (GenX)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:11	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:11	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	91		25 - 150	04/06/22 12:56	04/07/22 13:11	1
13C5 PFPeA	88		25 - 150	04/06/22 12:56	04/07/22 13:11	1
13C2 PFHxA	93		25 - 150	04/06/22 12:56	04/07/22 13:11	1
13C4 PFHpA	91		25 - 150	04/06/22 12:56	04/07/22 13:11	1
13C4 PFOA	94		25 - 150	04/06/22 12:56	04/07/22 13:11	1
13C5 PFNA	83		25 - 150	04/06/22 12:56	04/07/22 13:11	1
13C2 PFDA	87		25 - 150	04/06/22 12:56	04/07/22 13:11	1
13C2 PFUnA	88		25 - 150	04/06/22 12:56	04/07/22 13:11	1
13C2 PFDoA	80		25 - 150	04/06/22 12:56	04/07/22 13:11	1
13C2 PFTeDA	85		25 - 150	04/06/22 12:56	04/07/22 13:11	1
13C2 PFHxDA	86		25 - 150	04/06/22 12:56	04/07/22 13:11	1
13C3 PFBS	81		25 - 150	04/06/22 12:56	04/07/22 13:11	1
18O2 PFHxS	87		25 - 150	04/06/22 12:56	04/07/22 13:11	1
13C4 PFOS	76		25 - 150	04/06/22 12:56	04/07/22 13:11	1
13C8 FOSA	108		25 - 150	04/06/22 12:56	04/07/22 13:11	1
M2-4:2 FTS	63		25 - 150	04/06/22 12:56	04/07/22 13:11	1
M2-6:2 FTS	63		25 - 150	04/06/22 12:56	04/07/22 13:11	1
M2-8:2 FTS	55		25 - 150	04/06/22 12:56	04/07/22 13:11	1
d5-NEtFOSAA	109		25 - 150	04/06/22 12:56	04/07/22 13:11	1
d3-NMeFOSAA	91		25 - 150	04/06/22 12:56	04/07/22 13:11	1
d-N-MeFOSA-M	88		25 - 150	04/06/22 12:56	04/07/22 13:11	1
d-N-EtFOSA-M	77		25 - 150	04/06/22 12:56	04/07/22 13:11	1
d7-N-MeFOSE-M	76		10 - 120	04/06/22 12:56	04/07/22 13:11	1
d9-N-EtFOSE-M	78		10 - 120	04/06/22 12:56	04/07/22 13:11	1
13C3 HFPO-DA	88		25 - 150	04/06/22 12:56	04/07/22 13:11	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	9.1		0.1	%			04/05/22 13:55	1
Percent Solids	90.9		0.1	%			04/05/22 13:55	1

Client Sample Results

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: HA5 1.5-2

Lab Sample ID: 320-86450-5

Date Collected: 04/01/22 10:30

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 93.8

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 13:21	1
Perfluoropentanoic acid (PFPeA)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 13:21	1
Perfluorohexanoic acid (PFHxA)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 13:21	1
Perfluoroheptanoic acid (PFHpA)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 13:21	1
Perfluorooctanoic acid (PFOA)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 13:21	1
Perfluorononanoic acid (PFNA)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 13:21	1
Perfluorodecanoic acid (PFDA)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 13:21	1
Perfluoroundecanoic acid (PFUnA)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 13:21	1
Perfluorododecanoic acid (PFDoA)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 13:21	1
Perfluorotridecanoic acid (PFTrDA)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 13:21	1
Perfluorotetradecanoic acid (PFTeA)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 13:21	1
Perfluorobutanesulfonic acid (PFBS)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 13:21	1
Perfluoropentanesulfonic acid (PFPeS)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 13:21	1
Perfluorohexanesulfonic acid (PFHxS)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 13:21	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 13:21	1
Perfluorooctanesulfonic acid (PFOS)	7.6		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 13:21	1
Perfluorononanesulfonic acid (PFNS)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 13:21	1
Perfluorodecanesulfonic acid (PFDS)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 13:21	1
Perfluorododecanesulfonic acid (PFDoS)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 13:21	1
Perfluorooctanesulfonamide (FOSA)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 13:21	1
NMeFOSAA	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 13:21	1
NEtFOSAA	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 13:21	1
4:2 FTS	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 13:21	1
6:2 FTS	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 13:21	1
8:2 FTS	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 13:21	1
NEtFOSA	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 13:21	1
NMeFOSA	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 13:21	1
NMeFOSE	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 13:21	1
NEtFOSE	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 13:21	1
9Cl-PF3ONS	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 13:21	1
11Cl-PF3OUdS	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 13:21	1
HFPO-DA (GenX)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 13:21	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 13:21	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	79		25 - 150	04/06/22 12:56	04/07/22 13:21	1
13C5 PFPeA	89		25 - 150	04/06/22 12:56	04/07/22 13:21	1
13C2 PFHxA	92		25 - 150	04/06/22 12:56	04/07/22 13:21	1
13C4 PFHpA	87		25 - 150	04/06/22 12:56	04/07/22 13:21	1
13C4 PFOA	90		25 - 150	04/06/22 12:56	04/07/22 13:21	1
13C5 PFNA	86		25 - 150	04/06/22 12:56	04/07/22 13:21	1
13C2 PFDA	82		25 - 150	04/06/22 12:56	04/07/22 13:21	1
13C2 PFUnA	90		25 - 150	04/06/22 12:56	04/07/22 13:21	1
13C2 PFDoA	84		25 - 150	04/06/22 12:56	04/07/22 13:21	1
13C2 PFTeDA	91		25 - 150	04/06/22 12:56	04/07/22 13:21	1
13C2 PFHxDA	90		25 - 150	04/06/22 12:56	04/07/22 13:21	1

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Client Sample Results

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: HA5 1.5-2

Lab Sample ID: 320-86450-5

Date Collected: 04/01/22 10:30

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 93.8

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFBS	92		25 - 150	04/06/22 12:56	04/07/22 13:21	1
18O2 PFHxS	90		25 - 150	04/06/22 12:56	04/07/22 13:21	1
13C4 PFOS	86		25 - 150	04/06/22 12:56	04/07/22 13:21	1
13C8 FOSA	106		25 - 150	04/06/22 12:56	04/07/22 13:21	1
M2-4:2 FTS	76		25 - 150	04/06/22 12:56	04/07/22 13:21	1
M2-6:2 FTS	71		25 - 150	04/06/22 12:56	04/07/22 13:21	1
M2-8:2 FTS	58		25 - 150	04/06/22 12:56	04/07/22 13:21	1
d5-NEtFOSAA	97		25 - 150	04/06/22 12:56	04/07/22 13:21	1
d3-NMeFOSAA	88		25 - 150	04/06/22 12:56	04/07/22 13:21	1
d-N-MeFOSA-M	91		25 - 150	04/06/22 12:56	04/07/22 13:21	1
d-N-EtFOSA-M	83		25 - 150	04/06/22 12:56	04/07/22 13:21	1
d7-N-MeFOSE-M	74		10 - 120	04/06/22 12:56	04/07/22 13:21	1
d9-N-EtFOSE-M	73		10 - 120	04/06/22 12:56	04/07/22 13:21	1
13C3 HFPO-DA	85		25 - 150	04/06/22 12:56	04/07/22 13:21	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	6.2		0.1	%			04/05/22 13:55	1
Percent Solids	93.8		0.1	%			04/05/22 13:55	1

Client Sample ID: HA6 1.5-2

Lab Sample ID: 320-86450-6

Date Collected: 04/01/22 10:40

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 87.1

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.22		0.22	ug/Kg	✱	04/06/22 12:56	04/07/22 13:31	1
Perfluoropentanoic acid (PFPeA)	<0.22		0.22	ug/Kg	✱	04/06/22 12:56	04/07/22 13:31	1
Perfluorohexanoic acid (PFHxA)	<0.22		0.22	ug/Kg	✱	04/06/22 12:56	04/07/22 13:31	1
Perfluoroheptanoic acid (PFHpA)	<0.22		0.22	ug/Kg	✱	04/06/22 12:56	04/07/22 13:31	1
Perfluorooctanoic acid (PFOA)	<0.22		0.22	ug/Kg	✱	04/06/22 12:56	04/07/22 13:31	1
Perfluorononanoic acid (PFNA)	<0.22		0.22	ug/Kg	✱	04/06/22 12:56	04/07/22 13:31	1
Perfluorodecanoic acid (PFDA)	<0.22		0.22	ug/Kg	✱	04/06/22 12:56	04/07/22 13:31	1
Perfluoroundecanoic acid (PFUnA)	<0.22		0.22	ug/Kg	✱	04/06/22 12:56	04/07/22 13:31	1
Perfluorododecanoic acid (PFDoA)	<0.22		0.22	ug/Kg	✱	04/06/22 12:56	04/07/22 13:31	1
Perfluorotridecanoic acid (PFTrDA)	<0.22		0.22	ug/Kg	✱	04/06/22 12:56	04/07/22 13:31	1
Perfluorotetradecanoic acid (PFTeA)	<0.22		0.22	ug/Kg	✱	04/06/22 12:56	04/07/22 13:31	1
Perfluorobutanesulfonic acid (PFBS)	<0.22		0.22	ug/Kg	✱	04/06/22 12:56	04/07/22 13:31	1
Perfluoropentanesulfonic acid (PFPeS)	<0.22		0.22	ug/Kg	✱	04/06/22 12:56	04/07/22 13:31	1
Perfluorohexanesulfonic acid (PFHxS)	<0.22		0.22	ug/Kg	✱	04/06/22 12:56	04/07/22 13:31	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.22		0.22	ug/Kg	✱	04/06/22 12:56	04/07/22 13:31	1
Perfluorooctanesulfonic acid (PFOS)	2.8		0.22	ug/Kg	✱	04/06/22 12:56	04/07/22 13:31	1
Perfluorononanesulfonic acid (PFNS)	<0.22		0.22	ug/Kg	✱	04/06/22 12:56	04/07/22 13:31	1
Perfluorodecanesulfonic acid (PFDS)	<0.22		0.22	ug/Kg	✱	04/06/22 12:56	04/07/22 13:31	1
Perfluorododecanesulfonic acid (PFDoS)	<0.22		0.22	ug/Kg	✱	04/06/22 12:56	04/07/22 13:31	1
Perfluorooctanesulfonamide (FOSA)	<0.22		0.22	ug/Kg	✱	04/06/22 12:56	04/07/22 13:31	1
NMeFOSAA	<0.22		0.22	ug/Kg	✱	04/06/22 12:56	04/07/22 13:31	1

Eurofins Sacramento

Client Sample Results

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: HA6 1.5-2

Lab Sample ID: 320-86450-6

Date Collected: 04/01/22 10:40

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 87.1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
NEtFOSAA	<0.22		0.22	ug/Kg	✱	04/06/22 12:56	04/07/22 13:31	1
4:2 FTS	<0.22		0.22	ug/Kg	✱	04/06/22 12:56	04/07/22 13:31	1
6:2 FTS	<0.22		0.22	ug/Kg	✱	04/06/22 12:56	04/07/22 13:31	1
8:2 FTS	<0.22		0.22	ug/Kg	✱	04/06/22 12:56	04/07/22 13:31	1
NEtFOSA	<0.22		0.22	ug/Kg	✱	04/06/22 12:56	04/07/22 13:31	1
NMeFOSA	<0.22		0.22	ug/Kg	✱	04/06/22 12:56	04/07/22 13:31	1
NMeFOSE	<0.22		0.22	ug/Kg	✱	04/06/22 12:56	04/07/22 13:31	1
NEtFOSE	<0.22		0.22	ug/Kg	✱	04/06/22 12:56	04/07/22 13:31	1
9Cl-PF3ONS	<0.22		0.22	ug/Kg	✱	04/06/22 12:56	04/07/22 13:31	1
11Cl-PF3OUdS	<0.22		0.22	ug/Kg	✱	04/06/22 12:56	04/07/22 13:31	1
HFPO-DA (GenX)	<0.22		0.22	ug/Kg	✱	04/06/22 12:56	04/07/22 13:31	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.22		0.22	ug/Kg	✱	04/06/22 12:56	04/07/22 13:31	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	85		25 - 150	04/06/22 12:56	04/07/22 13:31	1
13C5 PFPeA	90		25 - 150	04/06/22 12:56	04/07/22 13:31	1
13C2 PFHxA	98		25 - 150	04/06/22 12:56	04/07/22 13:31	1
13C4 PFHpA	93		25 - 150	04/06/22 12:56	04/07/22 13:31	1
13C4 PFOA	98		25 - 150	04/06/22 12:56	04/07/22 13:31	1
13C5 PFNA	89		25 - 150	04/06/22 12:56	04/07/22 13:31	1
13C2 PFDA	99		25 - 150	04/06/22 12:56	04/07/22 13:31	1
13C2 PFUnA	98		25 - 150	04/06/22 12:56	04/07/22 13:31	1
13C2 PFDoA	97		25 - 150	04/06/22 12:56	04/07/22 13:31	1
13C2 PFTeDA	90		25 - 150	04/06/22 12:56	04/07/22 13:31	1
13C2 PFHxDA	96		25 - 150	04/06/22 12:56	04/07/22 13:31	1
13C3 PFBS	93		25 - 150	04/06/22 12:56	04/07/22 13:31	1
18O2 PFHxS	99		25 - 150	04/06/22 12:56	04/07/22 13:31	1
13C4 PFOS	93		25 - 150	04/06/22 12:56	04/07/22 13:31	1
13C8 FOSA	117		25 - 150	04/06/22 12:56	04/07/22 13:31	1
M2-4:2 FTS	80		25 - 150	04/06/22 12:56	04/07/22 13:31	1
M2-6:2 FTS	79		25 - 150	04/06/22 12:56	04/07/22 13:31	1
M2-8:2 FTS	66		25 - 150	04/06/22 12:56	04/07/22 13:31	1
d5-NEtFOSAA	114		25 - 150	04/06/22 12:56	04/07/22 13:31	1
d3-NMeFOSAA	100		25 - 150	04/06/22 12:56	04/07/22 13:31	1
d-N-MeFOSA-M	96		25 - 150	04/06/22 12:56	04/07/22 13:31	1
d-N-EtFOSA-M	92		25 - 150	04/06/22 12:56	04/07/22 13:31	1
d7-N-MeFOSE-M	79		10 - 120	04/06/22 12:56	04/07/22 13:31	1
d9-N-EtFOSE-M	77		10 - 120	04/06/22 12:56	04/07/22 13:31	1
13C3 HFPO-DA	95		25 - 150	04/06/22 12:56	04/07/22 13:31	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	12.9		0.1	%			04/05/22 13:55	1
Percent Solids	87.1		0.1	%			04/05/22 13:55	1

Client Sample Results

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: HA7 1.5-2

Lab Sample ID: 320-86450-7

Date Collected: 04/01/22 10:50

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 93.8

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:41	1
Perfluoropentanoic acid (PFPeA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:41	1
Perfluorohexanoic acid (PFHxA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:41	1
Perfluoroheptanoic acid (PFHpA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:41	1
Perfluorooctanoic acid (PFOA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:41	1
Perfluorononanoic acid (PFNA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:41	1
Perfluorodecanoic acid (PFDA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:41	1
Perfluoroundecanoic acid (PFUnA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:41	1
Perfluorododecanoic acid (PFDoA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:41	1
Perfluorotridecanoic acid (PFTrDA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:41	1
Perfluorotetradecanoic acid (PFTeA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:41	1
Perfluorobutanesulfonic acid (PFBS)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:41	1
Perfluoropentanesulfonic acid (PFPeS)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:41	1
Perfluorohexanesulfonic acid (PFHxS)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:41	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:41	1
Perfluorooctanesulfonic acid (PFOS)	2.1		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:41	1
Perfluorononanesulfonic acid (PFNS)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:41	1
Perfluorodecanesulfonic acid (PFDS)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:41	1
Perfluorododecanesulfonic acid (PFDoS)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:41	1
Perfluorooctanesulfonamide (FOSA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:41	1
NMeFOSAA	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:41	1
NEtFOSAA	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:41	1
4:2 FTS	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:41	1
6:2 FTS	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:41	1
8:2 FTS	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:41	1
NEtFOSA	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:41	1
NMeFOSA	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:41	1
NMeFOSE	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:41	1
NEtFOSE	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:41	1
9Cl-PF3ONS	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:41	1
11Cl-PF3OUdS	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:41	1
HFPO-DA (GenX)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:41	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 13:41	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	94		25 - 150	04/06/22 12:56	04/07/22 13:41	1
13C5 PFPeA	98		25 - 150	04/06/22 12:56	04/07/22 13:41	1
13C2 PFHxA	92		25 - 150	04/06/22 12:56	04/07/22 13:41	1
13C4 PFHpA	97		25 - 150	04/06/22 12:56	04/07/22 13:41	1
13C4 PFOA	94		25 - 150	04/06/22 12:56	04/07/22 13:41	1
13C5 PFNA	84		25 - 150	04/06/22 12:56	04/07/22 13:41	1
13C2 PFDA	81		25 - 150	04/06/22 12:56	04/07/22 13:41	1
13C2 PFUnA	87		25 - 150	04/06/22 12:56	04/07/22 13:41	1
13C2 PFDoA	76		25 - 150	04/06/22 12:56	04/07/22 13:41	1
13C2 PFTeDA	84		25 - 150	04/06/22 12:56	04/07/22 13:41	1
13C2 PFHxDA	96		25 - 150	04/06/22 12:56	04/07/22 13:41	1

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Client Sample Results

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: HA7 1.5-2

Lab Sample ID: 320-86450-7

Date Collected: 04/01/22 10:50

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 93.8

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFBS	91		25 - 150	04/06/22 12:56	04/07/22 13:41	1
18O2 PFHxS	97		25 - 150	04/06/22 12:56	04/07/22 13:41	1
13C4 PFOS	79		25 - 150	04/06/22 12:56	04/07/22 13:41	1
13C8 FOSA	102		25 - 150	04/06/22 12:56	04/07/22 13:41	1
M2-4:2 FTS	82		25 - 150	04/06/22 12:56	04/07/22 13:41	1
M2-6:2 FTS	69		25 - 150	04/06/22 12:56	04/07/22 13:41	1
M2-8:2 FTS	57		25 - 150	04/06/22 12:56	04/07/22 13:41	1
d5-NEtFOSAA	87		25 - 150	04/06/22 12:56	04/07/22 13:41	1
d3-NMeFOSAA	77		25 - 150	04/06/22 12:56	04/07/22 13:41	1
d-N-MeFOSA-M	67		25 - 150	04/06/22 12:56	04/07/22 13:41	1
d-N-EtFOSA-M	69		25 - 150	04/06/22 12:56	04/07/22 13:41	1
d7-N-MeFOSE-M	73		10 - 120	04/06/22 12:56	04/07/22 13:41	1
d9-N-EtFOSE-M	73		10 - 120	04/06/22 12:56	04/07/22 13:41	1
13C3 HFPO-DA	96		25 - 150	04/06/22 12:56	04/07/22 13:41	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	6.2		0.1	%			04/05/22 13:55	1
Percent Solids	93.8		0.1	%			04/05/22 13:55	1

Client Sample ID: HA8 1.5-2

Lab Sample ID: 320-86450-8

Date Collected: 04/01/22 11:05

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 90.9

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 13:51	1
Perfluoropentanoic acid (PFPeA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 13:51	1
Perfluorohexanoic acid (PFHxA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 13:51	1
Perfluoroheptanoic acid (PFHpA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 13:51	1
Perfluorooctanoic acid (PFOA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 13:51	1
Perfluorononanoic acid (PFNA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 13:51	1
Perfluorodecanoic acid (PFDA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 13:51	1
Perfluoroundecanoic acid (PFUnA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 13:51	1
Perfluorododecanoic acid (PFDoA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 13:51	1
Perfluorotridecanoic acid (PFTrDA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 13:51	1
Perfluorotetradecanoic acid (PFTeA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 13:51	1
Perfluorobutanesulfonic acid (PFBS)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 13:51	1
Perfluoropentanesulfonic acid (PFPeS)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 13:51	1
Perfluorohexanesulfonic acid (PFHxS)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 13:51	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 13:51	1
Perfluorooctanesulfonic acid (PFOS)	1.2		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 13:51	1
Perfluorononanesulfonic acid (PFNS)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 13:51	1
Perfluorodecanesulfonic acid (PFDS)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 13:51	1
Perfluorododecanesulfonic acid (PFDoS)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 13:51	1
Perfluorooctanesulfonamide (FOSA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 13:51	1
NMeFOSAA	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 13:51	1

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Client Sample Results

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: HA8 1.5-2

Lab Sample ID: 320-86450-8

Date Collected: 04/01/22 11:05

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 90.9

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
NEtFOSAA	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 13:51	1
4:2 FTS	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 13:51	1
6:2 FTS	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 13:51	1
8:2 FTS	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 13:51	1
NEtFOSA	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 13:51	1
NMeFOSA	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 13:51	1
NMeFOSE	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 13:51	1
NEtFOSE	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 13:51	1
9Cl-PF3ONS	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 13:51	1
11Cl-PF3OUdS	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 13:51	1
HFPO-DA (GenX)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 13:51	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 13:51	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	88		25 - 150	04/06/22 12:56	04/07/22 13:51	1
13C5 PFPeA	101		25 - 150	04/06/22 12:56	04/07/22 13:51	1
13C2 PFHxA	91		25 - 150	04/06/22 12:56	04/07/22 13:51	1
13C4 PFHpA	88		25 - 150	04/06/22 12:56	04/07/22 13:51	1
13C4 PFOA	86		25 - 150	04/06/22 12:56	04/07/22 13:51	1
13C5 PFNA	84		25 - 150	04/06/22 12:56	04/07/22 13:51	1
13C2 PFDA	87		25 - 150	04/06/22 12:56	04/07/22 13:51	1
13C2 PFUnA	89		25 - 150	04/06/22 12:56	04/07/22 13:51	1
13C2 PFDoA	88		25 - 150	04/06/22 12:56	04/07/22 13:51	1
13C2 PFTeDA	77		25 - 150	04/06/22 12:56	04/07/22 13:51	1
13C2 PFHxDA	95		25 - 150	04/06/22 12:56	04/07/22 13:51	1
13C3 PFBS	86		25 - 150	04/06/22 12:56	04/07/22 13:51	1
18O2 PFHxS	94		25 - 150	04/06/22 12:56	04/07/22 13:51	1
13C4 PFOS	86		25 - 150	04/06/22 12:56	04/07/22 13:51	1
13C8 FOSA	112		25 - 150	04/06/22 12:56	04/07/22 13:51	1
M2-4:2 FTS	78		25 - 150	04/06/22 12:56	04/07/22 13:51	1
M2-6:2 FTS	71		25 - 150	04/06/22 12:56	04/07/22 13:51	1
M2-8:2 FTS	57		25 - 150	04/06/22 12:56	04/07/22 13:51	1
d5-NEtFOSAA	99		25 - 150	04/06/22 12:56	04/07/22 13:51	1
d3-NMeFOSAA	85		25 - 150	04/06/22 12:56	04/07/22 13:51	1
d-N-MeFOSA-M	65		25 - 150	04/06/22 12:56	04/07/22 13:51	1
d-N-EtFOSA-M	64		25 - 150	04/06/22 12:56	04/07/22 13:51	1
d7-N-MeFOSE-M	71		10 - 120	04/06/22 12:56	04/07/22 13:51	1
d9-N-EtFOSE-M	73		10 - 120	04/06/22 12:56	04/07/22 13:51	1
13C3 HFPO-DA	86		25 - 150	04/06/22 12:56	04/07/22 13:51	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	9.1		0.1	%			04/05/22 13:55	1
Percent Solids	90.9		0.1	%			04/05/22 13:55	1

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Client Sample Results

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: HA9 1.5-2

Lab Sample ID: 320-86450-9

Date Collected: 04/01/22 11:15

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 86.6

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.22		0.22	ug/Kg	*	04/06/22 12:56	04/07/22 14:01	1
Perfluoropentanoic acid (PFPeA)	<0.22		0.22	ug/Kg	*	04/06/22 12:56	04/07/22 14:01	1
Perfluorohexanoic acid (PFHxA)	<0.22		0.22	ug/Kg	*	04/06/22 12:56	04/07/22 14:01	1
Perfluoroheptanoic acid (PFHpA)	<0.22		0.22	ug/Kg	*	04/06/22 12:56	04/07/22 14:01	1
Perfluorooctanoic acid (PFOA)	<0.22		0.22	ug/Kg	*	04/06/22 12:56	04/07/22 14:01	1
Perfluorononanoic acid (PFNA)	<0.22		0.22	ug/Kg	*	04/06/22 12:56	04/07/22 14:01	1
Perfluorodecanoic acid (PFDA)	<0.22		0.22	ug/Kg	*	04/06/22 12:56	04/07/22 14:01	1
Perfluoroundecanoic acid (PFUnA)	<0.22		0.22	ug/Kg	*	04/06/22 12:56	04/07/22 14:01	1
Perfluorododecanoic acid (PFDoA)	<0.22		0.22	ug/Kg	*	04/06/22 12:56	04/07/22 14:01	1
Perfluorotridecanoic acid (PFTrDA)	<0.22		0.22	ug/Kg	*	04/06/22 12:56	04/07/22 14:01	1
Perfluorotetradecanoic acid (PFTeA)	<0.22		0.22	ug/Kg	*	04/06/22 12:56	04/07/22 14:01	1
Perfluorobutanesulfonic acid (PFBS)	<0.22		0.22	ug/Kg	*	04/06/22 12:56	04/07/22 14:01	1
Perfluoropentanesulfonic acid (PFPeS)	<0.22		0.22	ug/Kg	*	04/06/22 12:56	04/07/22 14:01	1
Perfluorohexanesulfonic acid (PFHxS)	<0.22		0.22	ug/Kg	*	04/06/22 12:56	04/07/22 14:01	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.22		0.22	ug/Kg	*	04/06/22 12:56	04/07/22 14:01	1
Perfluorooctanesulfonic acid (PFOS)	1.3		0.22	ug/Kg	*	04/06/22 12:56	04/07/22 14:01	1
Perfluoronanesulfonic acid (PFNS)	<0.22		0.22	ug/Kg	*	04/06/22 12:56	04/07/22 14:01	1
Perfluorodecanesulfonic acid (PFDS)	<0.22		0.22	ug/Kg	*	04/06/22 12:56	04/07/22 14:01	1
Perfluorododecanesulfonic acid (PFDoS)	<0.22		0.22	ug/Kg	*	04/06/22 12:56	04/07/22 14:01	1
Perfluorooctanesulfonamide (FOSA)	<0.22		0.22	ug/Kg	*	04/06/22 12:56	04/07/22 14:01	1
NMeFOSAA	<0.22		0.22	ug/Kg	*	04/06/22 12:56	04/07/22 14:01	1
NEtFOSAA	<0.22		0.22	ug/Kg	*	04/06/22 12:56	04/07/22 14:01	1
4:2 FTS	<0.22		0.22	ug/Kg	*	04/06/22 12:56	04/07/22 14:01	1
6:2 FTS	<0.22		0.22	ug/Kg	*	04/06/22 12:56	04/07/22 14:01	1
8:2 FTS	<0.22		0.22	ug/Kg	*	04/06/22 12:56	04/07/22 14:01	1
NEtFOSA	<0.22		0.22	ug/Kg	*	04/06/22 12:56	04/07/22 14:01	1
NMeFOSA	<0.22		0.22	ug/Kg	*	04/06/22 12:56	04/07/22 14:01	1
NMeFOSE	<0.22		0.22	ug/Kg	*	04/06/22 12:56	04/07/22 14:01	1
NEtFOSE	<0.22		0.22	ug/Kg	*	04/06/22 12:56	04/07/22 14:01	1
9Cl-PF3ONS	<0.22		0.22	ug/Kg	*	04/06/22 12:56	04/07/22 14:01	1
11Cl-PF3OUdS	<0.22		0.22	ug/Kg	*	04/06/22 12:56	04/07/22 14:01	1
HFPO-DA (GenX)	<0.22		0.22	ug/Kg	*	04/06/22 12:56	04/07/22 14:01	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.22		0.22	ug/Kg	*	04/06/22 12:56	04/07/22 14:01	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	89		25 - 150	04/06/22 12:56	04/07/22 14:01	1
13C5 PFPeA	91		25 - 150	04/06/22 12:56	04/07/22 14:01	1
13C2 PFHxA	90		25 - 150	04/06/22 12:56	04/07/22 14:01	1
13C4 PFHpA	93		25 - 150	04/06/22 12:56	04/07/22 14:01	1
13C4 PFOA	89		25 - 150	04/06/22 12:56	04/07/22 14:01	1
13C5 PFNA	86		25 - 150	04/06/22 12:56	04/07/22 14:01	1
13C2 PFDA	81		25 - 150	04/06/22 12:56	04/07/22 14:01	1
13C2 PFUnA	85		25 - 150	04/06/22 12:56	04/07/22 14:01	1
13C2 PFDoA	80		25 - 150	04/06/22 12:56	04/07/22 14:01	1
13C2 PFTeDA	87		25 - 150	04/06/22 12:56	04/07/22 14:01	1
13C2 PFHxDA	82		25 - 150	04/06/22 12:56	04/07/22 14:01	1

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Client Sample Results

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: HA9 1.5-2

Lab Sample ID: 320-86450-9

Date Collected: 04/01/22 11:15

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 86.6

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFBS	91		25 - 150	04/06/22 12:56	04/07/22 14:01	1
18O2 PFHxS	86		25 - 150	04/06/22 12:56	04/07/22 14:01	1
13C4 PFOS	82		25 - 150	04/06/22 12:56	04/07/22 14:01	1
13C8 FOSA	96		25 - 150	04/06/22 12:56	04/07/22 14:01	1
M2-4:2 FTS	76		25 - 150	04/06/22 12:56	04/07/22 14:01	1
M2-6:2 FTS	63		25 - 150	04/06/22 12:56	04/07/22 14:01	1
M2-8:2 FTS	55		25 - 150	04/06/22 12:56	04/07/22 14:01	1
d5-NEtFOSAA	85		25 - 150	04/06/22 12:56	04/07/22 14:01	1
d3-NMeFOSAA	83		25 - 150	04/06/22 12:56	04/07/22 14:01	1
d-N-MeFOSA-M	60		25 - 150	04/06/22 12:56	04/07/22 14:01	1
d-N-EtFOSA-M	61		25 - 150	04/06/22 12:56	04/07/22 14:01	1
d7-N-MeFOSE-M	69		10 - 120	04/06/22 12:56	04/07/22 14:01	1
d9-N-EtFOSE-M	74		10 - 120	04/06/22 12:56	04/07/22 14:01	1
13C3 HFPO-DA	88		25 - 150	04/06/22 12:56	04/07/22 14:01	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	13.4		0.1	%			04/05/22 13:55	1
Percent Solids	86.6		0.1	%			04/05/22 13:55	1

Client Sample ID: HA10 1.5-2

Lab Sample ID: 320-86450-10

Date Collected: 04/01/22 11:30

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 86.2

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.3		2.3	ug/Kg	✱	04/06/22 12:56	04/07/22 15:12	10
Perfluoropentanoic acid (PFPeA)	<2.3		2.3	ug/Kg	✱	04/06/22 12:56	04/07/22 15:12	10
Perfluorohexanoic acid (PFHxA)	<2.3		2.3	ug/Kg	✱	04/06/22 12:56	04/07/22 15:12	10
Perfluoroheptanoic acid (PFHpA)	<2.3		2.3	ug/Kg	✱	04/06/22 12:56	04/07/22 15:12	10
Perfluorooctanoic acid (PFOA)	<2.3		2.3	ug/Kg	✱	04/06/22 12:56	04/07/22 15:12	10
Perfluorononanoic acid (PFNA)	<2.3		2.3	ug/Kg	✱	04/06/22 12:56	04/07/22 15:12	10
Perfluorodecanoic acid (PFDA)	<2.3		2.3	ug/Kg	✱	04/06/22 12:56	04/07/22 15:12	10
Perfluoroundecanoic acid (PFUnA)	<2.3		2.3	ug/Kg	✱	04/06/22 12:56	04/07/22 15:12	10
Perfluorododecanoic acid (PFDoA)	<2.3		2.3	ug/Kg	✱	04/06/22 12:56	04/07/22 15:12	10
Perfluorotridecanoic acid (PFTrDA)	<2.3		2.3	ug/Kg	✱	04/06/22 12:56	04/07/22 15:12	10
Perfluorotetradecanoic acid (PFTeA)	<2.3		2.3	ug/Kg	✱	04/06/22 12:56	04/07/22 15:12	10
Perfluorobutanesulfonic acid (PFBS)	<2.3		2.3	ug/Kg	✱	04/06/22 12:56	04/07/22 15:12	10
Perfluoropentanesulfonic acid (PFPeS)	<2.3		2.3	ug/Kg	✱	04/06/22 12:56	04/07/22 15:12	10
Perfluorohexanesulfonic acid (PFHxS)	<2.3		2.3	ug/Kg	✱	04/06/22 12:56	04/07/22 15:12	10
Perfluoroheptanesulfonic acid (PFHpS)	<2.3		2.3	ug/Kg	✱	04/06/22 12:56	04/07/22 15:12	10
Perfluorooctanesulfonic acid (PFOS)	75		2.3	ug/Kg	✱	04/06/22 12:56	04/07/22 15:12	10
Perfluorononanesulfonic acid (PFNS)	<2.3		2.3	ug/Kg	✱	04/06/22 12:56	04/07/22 15:12	10
Perfluorodecanesulfonic acid (PFDS)	<2.3		2.3	ug/Kg	✱	04/06/22 12:56	04/07/22 15:12	10
Perfluorododecanesulfonic acid (PFDoS)	<2.3		2.3	ug/Kg	✱	04/06/22 12:56	04/07/22 15:12	10
Perfluorooctanesulfonamide (FOSA)	<2.3		2.3	ug/Kg	✱	04/06/22 12:56	04/07/22 15:12	10
NMeFOSAA	<2.3		2.3	ug/Kg	✱	04/06/22 12:56	04/07/22 15:12	10

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Client Sample Results

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: HA10 1.5-2

Lab Sample ID: 320-86450-10

Date Collected: 04/01/22 11:30

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 86.2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
NEtFOSAA	<2.3		2.3	ug/Kg	✱	04/06/22 12:56	04/07/22 15:12	10
4:2 FTS	<2.3		2.3	ug/Kg	✱	04/06/22 12:56	04/07/22 15:12	10
6:2 FTS	<2.3		2.3	ug/Kg	✱	04/06/22 12:56	04/07/22 15:12	10
8:2 FTS	<2.3		2.3	ug/Kg	✱	04/06/22 12:56	04/07/22 15:12	10
NEtFOSA	<2.3		2.3	ug/Kg	✱	04/06/22 12:56	04/07/22 15:12	10
NMeFOSA	<2.3		2.3	ug/Kg	✱	04/06/22 12:56	04/07/22 15:12	10
NMeFOSE	<2.3		2.3	ug/Kg	✱	04/06/22 12:56	04/07/22 15:12	10
NEtFOSE	<2.3		2.3	ug/Kg	✱	04/06/22 12:56	04/07/22 15:12	10
9Cl-PF3ONS	<2.3		2.3	ug/Kg	✱	04/06/22 12:56	04/07/22 15:12	10
11Cl-PF3OUdS	<2.3		2.3	ug/Kg	✱	04/06/22 12:56	04/07/22 15:12	10
HFPO-DA (GenX)	<2.3		2.3	ug/Kg	✱	04/06/22 12:56	04/07/22 15:12	10
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.3		2.3	ug/Kg	✱	04/06/22 12:56	04/07/22 15:12	10

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	92		25 - 150	04/06/22 12:56	04/07/22 15:12	10
13C5 PFPeA	90		25 - 150	04/06/22 12:56	04/07/22 15:12	10
13C2 PFHxA	94		25 - 150	04/06/22 12:56	04/07/22 15:12	10
13C4 PFHpA	90		25 - 150	04/06/22 12:56	04/07/22 15:12	10
13C4 PFOA	85		25 - 150	04/06/22 12:56	04/07/22 15:12	10
13C5 PFNA	77		25 - 150	04/06/22 12:56	04/07/22 15:12	10
13C2 PFDA	80		25 - 150	04/06/22 12:56	04/07/22 15:12	10
13C2 PFUnA	78		25 - 150	04/06/22 12:56	04/07/22 15:12	10
13C2 PFDoA	75		25 - 150	04/06/22 12:56	04/07/22 15:12	10
13C2 PFTeDA	75		25 - 150	04/06/22 12:56	04/07/22 15:12	10
13C2 PFHxDA	72		25 - 150	04/06/22 12:56	04/07/22 15:12	10
13C3 PFBS	75		25 - 150	04/06/22 12:56	04/07/22 15:12	10
18O2 PFHxS	83		25 - 150	04/06/22 12:56	04/07/22 15:12	10
13C4 PFOS	69		25 - 150	04/06/22 12:56	04/07/22 15:12	10
13C8 FOSA	101		25 - 150	04/06/22 12:56	04/07/22 15:12	10
M2-4:2 FTS	73		25 - 150	04/06/22 12:56	04/07/22 15:12	10
M2-6:2 FTS	63		25 - 150	04/06/22 12:56	04/07/22 15:12	10
M2-8:2 FTS	52		25 - 150	04/06/22 12:56	04/07/22 15:12	10
d5-NEtFOSAA	80		25 - 150	04/06/22 12:56	04/07/22 15:12	10
d3-NMeFOSAA	70		25 - 150	04/06/22 12:56	04/07/22 15:12	10
d-N-MeFOSA-M	61		25 - 150	04/06/22 12:56	04/07/22 15:12	10
d-N-EtFOSA-M	60		25 - 150	04/06/22 12:56	04/07/22 15:12	10
d7-N-MeFOSE-M	77		10 - 120	04/06/22 12:56	04/07/22 15:12	10
d9-N-EtFOSE-M	76		10 - 120	04/06/22 12:56	04/07/22 15:12	10
13C3 HFPO-DA	92		25 - 150	04/06/22 12:56	04/07/22 15:12	10

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	13.8		0.1	%			04/05/22 13:55	1
Percent Solids	86.2		0.1	%			04/05/22 13:55	1

Client Sample Results

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: HA11 1.5-2

Lab Sample ID: 320-86450-11

Date Collected: 04/01/22 12:30

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 90.2

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:22	10
Perfluoropentanoic acid (PFPeA)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:22	10
Perfluorohexanoic acid (PFHxA)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:22	10
Perfluoroheptanoic acid (PFHpA)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:22	10
Perfluorooctanoic acid (PFOA)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:22	10
Perfluorononanoic acid (PFNA)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:22	10
Perfluorodecanoic acid (PFDA)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:22	10
Perfluoroundecanoic acid (PFUnA)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:22	10
Perfluorododecanoic acid (PFDoA)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:22	10
Perfluorotridecanoic acid (PFTrDA)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:22	10
Perfluorotetradecanoic acid (PFTeA)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:22	10
Perfluorobutanesulfonic acid (PFBS)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:22	10
Perfluoropentanesulfonic acid (PFPeS)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:22	10
Perfluorohexanesulfonic acid (PFHxS)	3.8		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:22	10
Perfluoroheptanesulfonic acid (PFHpS)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:22	10
Perfluorooctanesulfonic acid (PFOS)	210 E		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:22	10
Perfluorononanesulfonic acid (PFNS)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:22	10
Perfluorodecanesulfonic acid (PFDS)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:22	10
Perfluorododecanesulfonic acid (PFDoS)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:22	10
Perfluorooctanesulfonamide (FOSA)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:22	10
NMeFOSAA	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:22	10
NEtFOSAA	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:22	10
4:2 FTS	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:22	10
6:2 FTS	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:22	10
8:2 FTS	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:22	10
NEtFOSA	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:22	10
NMeFOSA	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:22	10
NMeFOSE	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:22	10
NEtFOSE	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:22	10
9CI-PF3ONS	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:22	10
11CI-PF3OUdS	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:22	10
HFPO-DA (GenX)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:22	10
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:22	10

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	96		25 - 150	04/06/22 12:56	04/07/22 15:22	10
13C5 PFPeA	99		25 - 150	04/06/22 12:56	04/07/22 15:22	10
13C2 PFHxA	101		25 - 150	04/06/22 12:56	04/07/22 15:22	10
13C4 PFHpA	106		25 - 150	04/06/22 12:56	04/07/22 15:22	10
13C4 PFOA	96		25 - 150	04/06/22 12:56	04/07/22 15:22	10
13C5 PFNA	80		25 - 150	04/06/22 12:56	04/07/22 15:22	10
13C2 PFDA	73		25 - 150	04/06/22 12:56	04/07/22 15:22	10
13C2 PFUnA	70		25 - 150	04/06/22 12:56	04/07/22 15:22	10
13C2 PFDoA	73		25 - 150	04/06/22 12:56	04/07/22 15:22	10
13C2 PFTeDA	86		25 - 150	04/06/22 12:56	04/07/22 15:22	10
13C2 PFHxDA	84		25 - 150	04/06/22 12:56	04/07/22 15:22	10

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Client Sample Results

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: HA11 1.5-2

Lab Sample ID: 320-86450-11

Date Collected: 04/01/22 12:30

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 90.2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFBS	81		25 - 150	04/06/22 12:56	04/07/22 15:22	10
18O2 PFHxS	85		25 - 150	04/06/22 12:56	04/07/22 15:22	10
13C4 PFOS	75		25 - 150	04/06/22 12:56	04/07/22 15:22	10
13C8 FOSA	100		25 - 150	04/06/22 12:56	04/07/22 15:22	10
M2-4:2 FTS	80		25 - 150	04/06/22 12:56	04/07/22 15:22	10
M2-6:2 FTS	68		25 - 150	04/06/22 12:56	04/07/22 15:22	10
M2-8:2 FTS	53		25 - 150	04/06/22 12:56	04/07/22 15:22	10
d5-NEtFOSAA	80		25 - 150	04/06/22 12:56	04/07/22 15:22	10
d3-NMeFOSAA	70		25 - 150	04/06/22 12:56	04/07/22 15:22	10
d-N-MeFOSA-M	72		25 - 150	04/06/22 12:56	04/07/22 15:22	10
d-N-EtFOSA-M	66		25 - 150	04/06/22 12:56	04/07/22 15:22	10
d7-N-MeFOSE-M	71		10 - 120	04/06/22 12:56	04/07/22 15:22	10
d9-N-EtFOSE-M	66		10 - 120	04/06/22 12:56	04/07/22 15:22	10
13C3 HFPO-DA	101		25 - 150	04/06/22 12:56	04/07/22 15:22	10

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	9.8		0.1	%			04/05/22 13:55	1
Percent Solids	90.2		0.1	%			04/05/22 13:55	1

Client Sample ID: HA12 1.5-2

Lab Sample ID: 320-86450-12

Date Collected: 04/01/22 12:40

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 92.9

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 14:32	1
Perfluoropentanoic acid (PFPeA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 14:32	1
Perfluorohexanoic acid (PFHxA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 14:32	1
Perfluoroheptanoic acid (PFHpA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 14:32	1
Perfluorooctanoic acid (PFOA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 14:32	1
Perfluorononanoic acid (PFNA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 14:32	1
Perfluorodecanoic acid (PFDA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 14:32	1
Perfluoroundecanoic acid (PFUnA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 14:32	1
Perfluorododecanoic acid (PFDoA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 14:32	1
Perfluorotridecanoic acid (PFTrDA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 14:32	1
Perfluorotetradecanoic acid (PFTeA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 14:32	1
Perfluorobutanesulfonic acid (PFBS)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 14:32	1
Perfluoropentanesulfonic acid (PFPeS)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 14:32	1
Perfluorohexanesulfonic acid (PFHxS)	0.83		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 14:32	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 14:32	1
Perfluorooctanesulfonic acid (PFOS)	54 E		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 14:32	1
Perfluorononanesulfonic acid (PFNS)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 14:32	1
Perfluorodecanesulfonic acid (PFDS)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 14:32	1
Perfluorododecanesulfonic acid (PFDoS)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 14:32	1
Perfluorooctanesulfonamide (FOSA)	<0.21		0.21	ug/Kg	✱	04/06/22 12:56	04/07/22 14:32	1

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Client Sample Results

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: HA12 1.5-2

Lab Sample ID: 320-86450-12

Date Collected: 04/01/22 12:40

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 92.9

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
NMeFOSAA	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 14:32	1
NEtFOSAA	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 14:32	1
4:2 FTS	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 14:32	1
6:2 FTS	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 14:32	1
8:2 FTS	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 14:32	1
NEtFOSA	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 14:32	1
NMeFOSA	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 14:32	1
NMeFOSE	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 14:32	1
NEtFOSE	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 14:32	1
9Cl-PF3ONS	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 14:32	1
11Cl-PF3OUdS	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 14:32	1
HFPO-DA (GenX)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 14:32	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 14:32	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	86		25 - 150	04/06/22 12:56	04/07/22 14:32	1
13C5 PFPeA	85		25 - 150	04/06/22 12:56	04/07/22 14:32	1
13C2 PFHxA	94		25 - 150	04/06/22 12:56	04/07/22 14:32	1
13C4 PFHpA	83		25 - 150	04/06/22 12:56	04/07/22 14:32	1
13C4 PFOA	90		25 - 150	04/06/22 12:56	04/07/22 14:32	1
13C5 PFNA	73		25 - 150	04/06/22 12:56	04/07/22 14:32	1
13C2 PFDA	83		25 - 150	04/06/22 12:56	04/07/22 14:32	1
13C2 PFUnA	80		25 - 150	04/06/22 12:56	04/07/22 14:32	1
13C2 PFDoA	85		25 - 150	04/06/22 12:56	04/07/22 14:32	1
13C2 PFTeDA	80		25 - 150	04/06/22 12:56	04/07/22 14:32	1
13C2 PFHxDA	86		25 - 150	04/06/22 12:56	04/07/22 14:32	1
13C3 PFBS	81		25 - 150	04/06/22 12:56	04/07/22 14:32	1
18O2 PFHxS	84		25 - 150	04/06/22 12:56	04/07/22 14:32	1
13C4 PFOS	74		25 - 150	04/06/22 12:56	04/07/22 14:32	1
13C8 FOSA	103		25 - 150	04/06/22 12:56	04/07/22 14:32	1
M2-4:2 FTS	70		25 - 150	04/06/22 12:56	04/07/22 14:32	1
M2-6:2 FTS	62		25 - 150	04/06/22 12:56	04/07/22 14:32	1
M2-8:2 FTS	53		25 - 150	04/06/22 12:56	04/07/22 14:32	1
d5-NEtFOSAA	85		25 - 150	04/06/22 12:56	04/07/22 14:32	1
d3-NMeFOSAA	83		25 - 150	04/06/22 12:56	04/07/22 14:32	1
d-N-MeFOSA-M	78		25 - 150	04/06/22 12:56	04/07/22 14:32	1
d-N-EtFOSA-M	67		25 - 150	04/06/22 12:56	04/07/22 14:32	1
d7-N-MeFOSE-M	63		10 - 120	04/06/22 12:56	04/07/22 14:32	1
d9-N-EtFOSE-M	67		10 - 120	04/06/22 12:56	04/07/22 14:32	1
13C3 HFPO-DA	91		25 - 150	04/06/22 12:56	04/07/22 14:32	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	7.1		0.1	%			04/05/22 13:55	1
Percent Solids	92.9		0.1	%			04/05/22 13:55	1

Client Sample Results

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: HA13 1.5-2

Lab Sample ID: 320-86450-13

Date Collected: 04/01/22 12:45

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 90.8

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:42	1
Perfluoropentanoic acid (PFPeA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:42	1
Perfluorohexanoic acid (PFHxA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:42	1
Perfluoroheptanoic acid (PFHpA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:42	1
Perfluorooctanoic acid (PFOA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:42	1
Perfluorononanoic acid (PFNA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:42	1
Perfluorodecanoic acid (PFDA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:42	1
Perfluoroundecanoic acid (PFUnA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:42	1
Perfluorododecanoic acid (PFDoA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:42	1
Perfluorotridecanoic acid (PFTrDA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:42	1
Perfluorotetradecanoic acid (PFTeA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:42	1
Perfluorobutanesulfonic acid (PFBS)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:42	1
Perfluoropentanesulfonic acid (PFPeS)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:42	1
Perfluorohexanesulfonic acid (PFHxS)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:42	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:42	1
Perfluorooctanesulfonic acid (PFOS)	19		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:42	1
Perfluorononanesulfonic acid (PFNS)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:42	1
Perfluorodecanesulfonic acid (PFDS)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:42	1
Perfluorododecanesulfonic acid (PFDoS)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:42	1
Perfluorooctanesulfonamide (FOSA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:42	1
NMeFOSAA	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:42	1
NEtFOSAA	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:42	1
4:2 FTS	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:42	1
6:2 FTS	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:42	1
8:2 FTS	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:42	1
NEtFOSA	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:42	1
NMeFOSA	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:42	1
NMeFOSE	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:42	1
NEtFOSE	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:42	1
9Cl-PF3ONS	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:42	1
11Cl-PF3OUdS	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:42	1
HFPO-DA (GenX)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:42	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:42	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	95		25 - 150	04/06/22 12:56	04/07/22 14:42	1
13C5 PFPeA	89		25 - 150	04/06/22 12:56	04/07/22 14:42	1
13C2 PFHxA	97		25 - 150	04/06/22 12:56	04/07/22 14:42	1
13C4 PFHpA	87		25 - 150	04/06/22 12:56	04/07/22 14:42	1
13C4 PFOA	89		25 - 150	04/06/22 12:56	04/07/22 14:42	1
13C5 PFNA	80		25 - 150	04/06/22 12:56	04/07/22 14:42	1
13C2 PFDA	75		25 - 150	04/06/22 12:56	04/07/22 14:42	1
13C2 PFUnA	81		25 - 150	04/06/22 12:56	04/07/22 14:42	1
13C2 PFDoA	72		25 - 150	04/06/22 12:56	04/07/22 14:42	1
13C2 PFTeDA	75		25 - 150	04/06/22 12:56	04/07/22 14:42	1
13C2 PFHxDA	81		25 - 150	04/06/22 12:56	04/07/22 14:42	1

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Client Sample Results

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: HA13 1.5-2

Lab Sample ID: 320-86450-13

Date Collected: 04/01/22 12:45

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 90.8

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFBS	82		25 - 150	04/06/22 12:56	04/07/22 14:42	1
18O2 PFHxS	90		25 - 150	04/06/22 12:56	04/07/22 14:42	1
13C4 PFOS	74		25 - 150	04/06/22 12:56	04/07/22 14:42	1
13C8 FOSA	93		25 - 150	04/06/22 12:56	04/07/22 14:42	1
M2-4:2 FTS	80		25 - 150	04/06/22 12:56	04/07/22 14:42	1
M2-6:2 FTS	67		25 - 150	04/06/22 12:56	04/07/22 14:42	1
M2-8:2 FTS	54		25 - 150	04/06/22 12:56	04/07/22 14:42	1
d5-NEtFOSAA	81		25 - 150	04/06/22 12:56	04/07/22 14:42	1
d3-NMeFOSAA	72		25 - 150	04/06/22 12:56	04/07/22 14:42	1
d-N-MeFOSA-M	55		25 - 150	04/06/22 12:56	04/07/22 14:42	1
d-N-EtFOSA-M	56		25 - 150	04/06/22 12:56	04/07/22 14:42	1
d7-N-MeFOSE-M	69		10 - 120	04/06/22 12:56	04/07/22 14:42	1
d9-N-EtFOSE-M	60		10 - 120	04/06/22 12:56	04/07/22 14:42	1
13C3 HFPO-DA	90		25 - 150	04/06/22 12:56	04/07/22 14:42	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	9.2		0.1	%			04/05/22 13:55	1
Percent Solids	90.8		0.1	%			04/05/22 13:55	1

Client Sample ID: HA14 1.5-2

Lab Sample ID: 320-86450-14

Date Collected: 04/01/22 12:55

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 93.8

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:52	1
Perfluoropentanoic acid (PFPeA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:52	1
Perfluorohexanoic acid (PFHxA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:52	1
Perfluoroheptanoic acid (PFHpA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:52	1
Perfluorooctanoic acid (PFOA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:52	1
Perfluorononanoic acid (PFNA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:52	1
Perfluorodecanoic acid (PFDA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:52	1
Perfluoroundecanoic acid (PFUnA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:52	1
Perfluorododecanoic acid (PFDoA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:52	1
Perfluorotridecanoic acid (PFTrDA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:52	1
Perfluorotetradecanoic acid (PFTeA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:52	1
Perfluorobutanesulfonic acid (PFBS)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:52	1
Perfluoropentanesulfonic acid (PFPeS)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:52	1
Perfluorohexanesulfonic acid (PFHxS)	0.30		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:52	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:52	1
Perfluorooctanesulfonic acid (PFOS)	42 E		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:52	1
Perfluorononanesulfonic acid (PFNS)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:52	1
Perfluorodecanesulfonic acid (PFDS)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:52	1
Perfluorododecanesulfonic acid (PFDoS)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:52	1
Perfluorooctanesulfonamide (FOSA)	<0.20		0.20	ug/Kg	✱	04/06/22 12:56	04/07/22 14:52	1

Euromins Sacramento

Client Sample Results

Client: 3M Company
 Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: HA14 1.5-2

Lab Sample ID: 320-86450-14

Date Collected: 04/01/22 12:55

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 93.8

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
NMeFOSAA	<0.20		0.20	ug/Kg	*	04/06/22 12:56	04/07/22 14:52	1
NEtFOSAA	<0.20		0.20	ug/Kg	*	04/06/22 12:56	04/07/22 14:52	1
4:2 FTS	<0.20		0.20	ug/Kg	*	04/06/22 12:56	04/07/22 14:52	1
6:2 FTS	<0.20		0.20	ug/Kg	*	04/06/22 12:56	04/07/22 14:52	1
8:2 FTS	<0.20		0.20	ug/Kg	*	04/06/22 12:56	04/07/22 14:52	1
NEtFOSA	<0.20		0.20	ug/Kg	*	04/06/22 12:56	04/07/22 14:52	1
NMeFOSA	<0.20		0.20	ug/Kg	*	04/06/22 12:56	04/07/22 14:52	1
NMeFOSE	<0.20		0.20	ug/Kg	*	04/06/22 12:56	04/07/22 14:52	1
NEtFOSE	<0.20		0.20	ug/Kg	*	04/06/22 12:56	04/07/22 14:52	1
9Cl-PF3ONS	<0.20		0.20	ug/Kg	*	04/06/22 12:56	04/07/22 14:52	1
11Cl-PF3OUdS	<0.20		0.20	ug/Kg	*	04/06/22 12:56	04/07/22 14:52	1
HFPO-DA (GenX)	<0.20		0.20	ug/Kg	*	04/06/22 12:56	04/07/22 14:52	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.20		0.20	ug/Kg	*	04/06/22 12:56	04/07/22 14:52	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	92		25 - 150	04/06/22 12:56	04/07/22 14:52	1
13C5 PFPeA	90		25 - 150	04/06/22 12:56	04/07/22 14:52	1
13C2 PFHxA	96		25 - 150	04/06/22 12:56	04/07/22 14:52	1
13C4 PFHpA	94		25 - 150	04/06/22 12:56	04/07/22 14:52	1
13C4 PFOA	88		25 - 150	04/06/22 12:56	04/07/22 14:52	1
13C5 PFNA	85		25 - 150	04/06/22 12:56	04/07/22 14:52	1
13C2 PFDA	89		25 - 150	04/06/22 12:56	04/07/22 14:52	1
13C2 PFUnA	84		25 - 150	04/06/22 12:56	04/07/22 14:52	1
13C2 PFDoA	82		25 - 150	04/06/22 12:56	04/07/22 14:52	1
13C2 PFTeDA	72		25 - 150	04/06/22 12:56	04/07/22 14:52	1
13C2 PFHxDA	76		25 - 150	04/06/22 12:56	04/07/22 14:52	1
13C3 PFBS	83		25 - 150	04/06/22 12:56	04/07/22 14:52	1
18O2 PFHxS	85		25 - 150	04/06/22 12:56	04/07/22 14:52	1
13C4 PFOS	78		25 - 150	04/06/22 12:56	04/07/22 14:52	1
13C8 FOSA	103		25 - 150	04/06/22 12:56	04/07/22 14:52	1
M2-4:2 FTS	72		25 - 150	04/06/22 12:56	04/07/22 14:52	1
M2-6:2 FTS	63		25 - 150	04/06/22 12:56	04/07/22 14:52	1
M2-8:2 FTS	55		25 - 150	04/06/22 12:56	04/07/22 14:52	1
d5-NEtFOSAA	94		25 - 150	04/06/22 12:56	04/07/22 14:52	1
d3-NMeFOSAA	80		25 - 150	04/06/22 12:56	04/07/22 14:52	1
d-N-MeFOSA-M	69		25 - 150	04/06/22 12:56	04/07/22 14:52	1
d-N-EtFOSA-M	65		25 - 150	04/06/22 12:56	04/07/22 14:52	1
d7-N-MeFOSE-M	71		10 - 120	04/06/22 12:56	04/07/22 14:52	1
d9-N-EtFOSE-M	71		10 - 120	04/06/22 12:56	04/07/22 14:52	1
13C3 HFPO-DA	88		25 - 150	04/06/22 12:56	04/07/22 14:52	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	6.2		0.1	%			04/05/22 13:55	1
Percent Solids	93.8		0.1	%			04/05/22 13:55	1

Client Sample Results

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: HA15 1.5-2

Lab Sample ID: 320-86450-15

Date Collected: 04/01/22 13:15

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 90.8

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 15:02	1
Perfluoropentanoic acid (PFPeA)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 15:02	1
Perfluorohexanoic acid (PFHxA)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 15:02	1
Perfluoroheptanoic acid (PFHpA)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 15:02	1
Perfluorooctanoic acid (PFOA)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 15:02	1
Perfluorononanoic acid (PFNA)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 15:02	1
Perfluorodecanoic acid (PFDA)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 15:02	1
Perfluoroundecanoic acid (PFUnA)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 15:02	1
Perfluorododecanoic acid (PFDoA)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 15:02	1
Perfluorotridecanoic acid (PFTrDA)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 15:02	1
Perfluorotetradecanoic acid (PFTeA)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 15:02	1
Perfluorobutanesulfonic acid (PFBS)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 15:02	1
Perfluoropentanesulfonic acid (PFPeS)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 15:02	1
Perfluorohexanesulfonic acid (PFHxS)	1.5		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 15:02	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 15:02	1
Perfluorooctanesulfonic acid (PFOS)	69 E		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 15:02	1
Perfluorononanesulfonic acid (PFNS)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 15:02	1
Perfluorodecanesulfonic acid (PFDS)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 15:02	1
Perfluorododecanesulfonic acid (PFDoS)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 15:02	1
Perfluorooctanesulfonamide (FOSA)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 15:02	1
NMeFOSAA	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 15:02	1
NEtFOSAA	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 15:02	1
4:2 FTS	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 15:02	1
6:2 FTS	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 15:02	1
8:2 FTS	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 15:02	1
NEtFOSA	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 15:02	1
NMeFOSA	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 15:02	1
NMeFOSE	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 15:02	1
NEtFOSE	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 15:02	1
9CI-PF3ONS	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 15:02	1
11CI-PF3OUdS	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 15:02	1
HFPO-DA (GenX)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 15:02	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.21		0.21	ug/Kg	*	04/06/22 12:56	04/07/22 15:02	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	92		25 - 150	04/06/22 12:56	04/07/22 15:02	1
13C5 PFPeA	100		25 - 150	04/06/22 12:56	04/07/22 15:02	1
13C2 PFHxA	93		25 - 150	04/06/22 12:56	04/07/22 15:02	1
13C4 PFHpA	91		25 - 150	04/06/22 12:56	04/07/22 15:02	1
13C4 PFOA	87		25 - 150	04/06/22 12:56	04/07/22 15:02	1
13C5 PFNA	77		25 - 150	04/06/22 12:56	04/07/22 15:02	1
13C2 PFDA	76		25 - 150	04/06/22 12:56	04/07/22 15:02	1
13C2 PFUnA	76		25 - 150	04/06/22 12:56	04/07/22 15:02	1
13C2 PFDoA	72		25 - 150	04/06/22 12:56	04/07/22 15:02	1
13C2 PFTeDA	79		25 - 150	04/06/22 12:56	04/07/22 15:02	1
13C2 PFHxDA	80		25 - 150	04/06/22 12:56	04/07/22 15:02	1

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Client Sample Results

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: HA15 1.5-2

Lab Sample ID: 320-86450-15

Date Collected: 04/01/22 13:15

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 90.8

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFBS	83		25 - 150	04/06/22 12:56	04/07/22 15:02	1
18O2 PFHxS	90		25 - 150	04/06/22 12:56	04/07/22 15:02	1
13C4 PFOS	69		25 - 150	04/06/22 12:56	04/07/22 15:02	1
13C8 FOSA	94		25 - 150	04/06/22 12:56	04/07/22 15:02	1
M2-4:2 FTS	72		25 - 150	04/06/22 12:56	04/07/22 15:02	1
M2-6:2 FTS	65		25 - 150	04/06/22 12:56	04/07/22 15:02	1
M2-8:2 FTS	52		25 - 150	04/06/22 12:56	04/07/22 15:02	1
d5-NEtFOSAA	76		25 - 150	04/06/22 12:56	04/07/22 15:02	1
d3-NMeFOSAA	67		25 - 150	04/06/22 12:56	04/07/22 15:02	1
d-N-MeFOSA-M	60		25 - 150	04/06/22 12:56	04/07/22 15:02	1
d-N-EtFOSA-M	67		25 - 150	04/06/22 12:56	04/07/22 15:02	1
d7-N-MeFOSE-M	64		10 - 120	04/06/22 12:56	04/07/22 15:02	1
d9-N-EtFOSE-M	67		10 - 120	04/06/22 12:56	04/07/22 15:02	1
13C3 HFPO-DA	96		25 - 150	04/06/22 12:56	04/07/22 15:02	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	9.2		0.1	%			04/05/22 13:55	1
Percent Solids	90.8		0.1	%			04/05/22 13:55	1

Client Sample ID: HA16 1.5-2

Lab Sample ID: 320-86450-16

Date Collected: 04/01/22 13:30

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 93.6

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:32	10
Perfluoropentanoic acid (PFPeA)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:32	10
Perfluorohexanoic acid (PFHxA)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:32	10
Perfluoroheptanoic acid (PFHpA)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:32	10
Perfluorooctanoic acid (PFOA)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:32	10
Perfluorononanoic acid (PFNA)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:32	10
Perfluorodecanoic acid (PFDA)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:32	10
Perfluoroundecanoic acid (PFUnA)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:32	10
Perfluorododecanoic acid (PFDoA)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:32	10
Perfluorotridecanoic acid (PFTrDA)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:32	10
Perfluorotetradecanoic acid (PFTeA)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:32	10
Perfluorobutanesulfonic acid (PFBS)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:32	10
Perfluoropentanesulfonic acid (PFPeS)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:32	10
Perfluorohexanesulfonic acid (PFHxS)	8.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:32	10
Perfluoroheptanesulfonic acid (PFHpS)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:32	10
Perfluorooctanesulfonic acid (PFOS)	120		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:32	10
Perfluorononanesulfonic acid (PFNS)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:32	10
Perfluorodecanesulfonic acid (PFDS)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:32	10
Perfluorododecanesulfonic acid (PFDoS)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:32	10
Perfluorooctanesulfonamide (FOSA)	<2.1		2.1	ug/Kg	✱	04/06/22 12:56	04/07/22 15:32	10

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Client Sample Results

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: HA16 1.5-2

Lab Sample ID: 320-86450-16

Date Collected: 04/01/22 13:30

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 93.6

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
NMeFOSAA	<2.1		2.1	ug/Kg	*	04/06/22 12:56	04/07/22 15:32	10
NEtFOSAA	<2.1		2.1	ug/Kg	*	04/06/22 12:56	04/07/22 15:32	10
4:2 FTS	<2.1		2.1	ug/Kg	*	04/06/22 12:56	04/07/22 15:32	10
6:2 FTS	<2.1		2.1	ug/Kg	*	04/06/22 12:56	04/07/22 15:32	10
8:2 FTS	<2.1		2.1	ug/Kg	*	04/06/22 12:56	04/07/22 15:32	10
NEtFOSA	<2.1		2.1	ug/Kg	*	04/06/22 12:56	04/07/22 15:32	10
NMeFOSA	<2.1		2.1	ug/Kg	*	04/06/22 12:56	04/07/22 15:32	10
NMeFOSE	<2.1		2.1	ug/Kg	*	04/06/22 12:56	04/07/22 15:32	10
NEtFOSE	<2.1		2.1	ug/Kg	*	04/06/22 12:56	04/07/22 15:32	10
9Cl-PF3ONS	<2.1		2.1	ug/Kg	*	04/06/22 12:56	04/07/22 15:32	10
11Cl-PF3OUdS	<2.1		2.1	ug/Kg	*	04/06/22 12:56	04/07/22 15:32	10
HFPO-DA (GenX)	<2.1		2.1	ug/Kg	*	04/06/22 12:56	04/07/22 15:32	10
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.1		2.1	ug/Kg	*	04/06/22 12:56	04/07/22 15:32	10

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	93		25 - 150	04/06/22 12:56	04/07/22 15:32	10
13C5 PFPeA	94		25 - 150	04/06/22 12:56	04/07/22 15:32	10
13C2 PFHxA	93		25 - 150	04/06/22 12:56	04/07/22 15:32	10
13C4 PFHpA	84		25 - 150	04/06/22 12:56	04/07/22 15:32	10
13C4 PFOA	87		25 - 150	04/06/22 12:56	04/07/22 15:32	10
13C5 PFNA	80		25 - 150	04/06/22 12:56	04/07/22 15:32	10
13C2 PFDA	77		25 - 150	04/06/22 12:56	04/07/22 15:32	10
13C2 PFUnA	70		25 - 150	04/06/22 12:56	04/07/22 15:32	10
13C2 PFDoA	66		25 - 150	04/06/22 12:56	04/07/22 15:32	10
13C2 PFTeDA	67		25 - 150	04/06/22 12:56	04/07/22 15:32	10
13C2 PFHxDA	74		25 - 150	04/06/22 12:56	04/07/22 15:32	10
13C3 PFBS	86		25 - 150	04/06/22 12:56	04/07/22 15:32	10
18O2 PFHxS	80		25 - 150	04/06/22 12:56	04/07/22 15:32	10
13C4 PFOS	77		25 - 150	04/06/22 12:56	04/07/22 15:32	10
13C8 FOSA	97		25 - 150	04/06/22 12:56	04/07/22 15:32	10
M2-4:2 FTS	67		25 - 150	04/06/22 12:56	04/07/22 15:32	10
M2-6:2 FTS	66		25 - 150	04/06/22 12:56	04/07/22 15:32	10
M2-8:2 FTS	52		25 - 150	04/06/22 12:56	04/07/22 15:32	10
d5-NEtFOSAA	73		25 - 150	04/06/22 12:56	04/07/22 15:32	10
d3-NMeFOSAA	73		25 - 150	04/06/22 12:56	04/07/22 15:32	10
d-N-MeFOSA-M	63		25 - 150	04/06/22 12:56	04/07/22 15:32	10
d-N-EtFOSA-M	69		25 - 150	04/06/22 12:56	04/07/22 15:32	10
d7-N-MeFOSE-M	67		10 - 120	04/06/22 12:56	04/07/22 15:32	10
d9-N-EtFOSE-M	62		10 - 120	04/06/22 12:56	04/07/22 15:32	10
13C3 HFPO-DA	101		25 - 150	04/06/22 12:56	04/07/22 15:32	10

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	6.4		0.1	%			04/05/22 13:55	1
Percent Solids	93.6		0.1	%			04/05/22 13:55	1

Client Sample Results

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: Field Blank

Lab Sample ID: 320-86450-17

Date Collected: 04/01/22 14:05

Matrix: Water

Date Received: 04/05/22 09:50

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.0047		0.0047	ug/L		04/06/22 12:24	04/07/22 20:17	1
Perfluoropentanoic acid (PFPeA)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:17	1
Perfluorohexanoic acid (PFHxA)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:17	1
Perfluoroheptanoic acid (PFHpA)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:17	1
Perfluorooctanoic acid (PFOA)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:17	1
Perfluorononanoic acid (PFNA)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:17	1
Perfluorodecanoic acid (PFDA)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:17	1
Perfluoroundecanoic acid (PFUnA)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:17	1
Perfluorododecanoic acid (PFDoA)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:17	1
Perfluorotridecanoic acid (PFTrDA)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:17	1
Perfluorotetradecanoic acid (PFTeA)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:17	1
Perfluorobutanesulfonic acid (PFBS)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:17	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:17	1
Perfluorohexanesulfonic acid (PFHxS)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:17	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:17	1
Perfluorooctanesulfonic acid (PFOS)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:17	1
Perfluorononanesulfonic acid (PFNS)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:17	1
Perfluorodecanesulfonic acid (PFDS)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:17	1
Perfluorododecanesulfonic acid (PFDoS)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:17	1
Perfluorooctanesulfonamide (FOSA)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:17	1
NMeFOSAA	<0.0047		0.0047	ug/L		04/06/22 12:24	04/07/22 20:17	1
NEtFOSAA	<0.0047		0.0047	ug/L		04/06/22 12:24	04/07/22 20:17	1
4:2 FTS	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:17	1
6:2 FTS	<0.0047		0.0047	ug/L		04/06/22 12:24	04/07/22 20:17	1
8:2 FTS	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:17	1
NEtFOSA	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:17	1
NMeFOSA	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:17	1
NMeFOSE	<0.0038		0.0038	ug/L		04/06/22 12:24	04/07/22 20:17	1
NEtFOSE	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:17	1
9Cl-PF3ONS	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:17	1
11Cl-PF3OUdS	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:17	1
HFPO-DA (GenX)	<0.0038		0.0038	ug/L		04/06/22 12:24	04/07/22 20:17	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:17	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	88		25 - 150	04/06/22 12:24	04/07/22 20:17	1
13C5 PFPeA	84		25 - 150	04/06/22 12:24	04/07/22 20:17	1
13C2 PFHxA	90		25 - 150	04/06/22 12:24	04/07/22 20:17	1
13C4 PFHpA	90		25 - 150	04/06/22 12:24	04/07/22 20:17	1
13C4 PFOA	95		25 - 150	04/06/22 12:24	04/07/22 20:17	1
13C5 PFNA	96		25 - 150	04/06/22 12:24	04/07/22 20:17	1
13C2 PFDA	95		25 - 150	04/06/22 12:24	04/07/22 20:17	1
13C2 PFUnA	90		25 - 150	04/06/22 12:24	04/07/22 20:17	1
13C2 PFDoA	91		25 - 150	04/06/22 12:24	04/07/22 20:17	1
13C2 PFTeDA	86		25 - 150	04/06/22 12:24	04/07/22 20:17	1
13C3 PFBS	77		25 - 150	04/06/22 12:24	04/07/22 20:17	1
18O2 PFHxS	84		25 - 150	04/06/22 12:24	04/07/22 20:17	1

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Client Sample Results

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: Field Blank

Date Collected: 04/01/22 14:05

Date Received: 04/05/22 09:50

Lab Sample ID: 320-86450-17

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	83		25 - 150	04/06/22 12:24	04/07/22 20:17	1
13C8 FOSA	93		25 - 150	04/06/22 12:24	04/07/22 20:17	1
M2-4:2 FTS	90		25 - 150	04/06/22 12:24	04/07/22 20:17	1
M2-6:2 FTS	89		25 - 150	04/06/22 12:24	04/07/22 20:17	1
M2-8:2 FTS	87		25 - 150	04/06/22 12:24	04/07/22 20:17	1
d5-NEtFOSAA	75		25 - 150	04/06/22 12:24	04/07/22 20:17	1
d3-NMeFOSAA	72		25 - 150	04/06/22 12:24	04/07/22 20:17	1
d-N-MeFOSA-M	61		20 - 150	04/06/22 12:24	04/07/22 20:17	1
d-N-EtFOSA-M	61		20 - 150	04/06/22 12:24	04/07/22 20:17	1
d7-N-MeFOSE-M	72		10 - 120	04/06/22 12:24	04/07/22 20:17	1
d9-N-EtFOSE-M	75		10 - 120	04/06/22 12:24	04/07/22 20:17	1
13C3 HFPO-DA	95		25 - 150	04/06/22 12:24	04/07/22 20:17	1

Client Sample ID: Rinsate Blank

Date Collected: 04/01/22 14:00

Date Received: 04/05/22 09:50

Lab Sample ID: 320-86450-18

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.0047		0.0047	ug/L		04/06/22 12:24	04/07/22 20:27	1
Perfluoropentanoic acid (PFPeA)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:27	1
Perfluorohexanoic acid (PFHxA)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:27	1
Perfluoroheptanoic acid (PFHpA)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:27	1
Perfluorooctanoic acid (PFOA)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:27	1
Perfluorononanoic acid (PFNA)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:27	1
Perfluorodecanoic acid (PFDA)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:27	1
Perfluoroundecanoic acid (PFUnA)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:27	1
Perfluorododecanoic acid (PFDoA)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:27	1
Perfluorotridecanoic acid (PFTrDA)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:27	1
Perfluorotetradecanoic acid (PFTeA)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:27	1
Perfluorobutanesulfonic acid (PFBS)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:27	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:27	1
Perfluorohexanesulfonic acid (PFHxS)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:27	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:27	1
Perfluorooctanesulfonic acid (PFOS)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:27	1
Perfluorononanesulfonic acid (PFNS)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:27	1
Perfluorodecanesulfonic acid (PFDS)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:27	1
Perfluorododecanesulfonic acid (PFDoS)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:27	1
Perfluorooctanesulfonamide (FOSA)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:27	1
NMeFOSAA	<0.0047		0.0047	ug/L		04/06/22 12:24	04/07/22 20:27	1
NEtFOSAA	<0.0047		0.0047	ug/L		04/06/22 12:24	04/07/22 20:27	1
4:2 FTS	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:27	1
6:2 FTS	<0.0047		0.0047	ug/L		04/06/22 12:24	04/07/22 20:27	1
8:2 FTS	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:27	1
NEtFOSA	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:27	1
NMeFOSA	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:27	1
NMeFOSE	<0.0037		0.0037	ug/L		04/06/22 12:24	04/07/22 20:27	1
NEtFOSE	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:27	1

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Client Sample Results

Client: 3M Company
 Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: Rinsate Blank

Lab Sample ID: 320-86450-18

Date Collected: 04/01/22 14:00

Matrix: Water

Date Received: 04/05/22 09:50

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
9Cl-PF3ONS	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:27	1
11Cl-PF3OUdS	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:27	1
HFPO-DA (GenX)	<0.0037		0.0037	ug/L		04/06/22 12:24	04/07/22 20:27	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0019		0.0019	ug/L		04/06/22 12:24	04/07/22 20:27	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C4 PFBA	84		25 - 150			04/06/22 12:24	04/07/22 20:27	1
13C5 PFPeA	78		25 - 150			04/06/22 12:24	04/07/22 20:27	1
13C2 PFHxA	87		25 - 150			04/06/22 12:24	04/07/22 20:27	1
13C4 PFHpA	88		25 - 150			04/06/22 12:24	04/07/22 20:27	1
13C4 PFOA	92		25 - 150			04/06/22 12:24	04/07/22 20:27	1
13C5 PFNA	91		25 - 150			04/06/22 12:24	04/07/22 20:27	1
13C2 PFDA	93		25 - 150			04/06/22 12:24	04/07/22 20:27	1
13C2 PFUnA	90		25 - 150			04/06/22 12:24	04/07/22 20:27	1
13C2 PFDoA	93		25 - 150			04/06/22 12:24	04/07/22 20:27	1
13C2 PFTeDA	94		25 - 150			04/06/22 12:24	04/07/22 20:27	1
13C3 PFBS	79		25 - 150			04/06/22 12:24	04/07/22 20:27	1
18O2 PFHxS	86		25 - 150			04/06/22 12:24	04/07/22 20:27	1
13C4 PFOS	83		25 - 150			04/06/22 12:24	04/07/22 20:27	1
13C8 FOSA	102		25 - 150			04/06/22 12:24	04/07/22 20:27	1
M2-4:2 FTS	93		25 - 150			04/06/22 12:24	04/07/22 20:27	1
M2-6:2 FTS	92		25 - 150			04/06/22 12:24	04/07/22 20:27	1
M2-8:2 FTS	84		25 - 150			04/06/22 12:24	04/07/22 20:27	1
d5-NEtFOSAA	79		25 - 150			04/06/22 12:24	04/07/22 20:27	1
d3-NMeFOSAA	76		25 - 150			04/06/22 12:24	04/07/22 20:27	1
d-N-MeFOSA-M	70		20 - 150			04/06/22 12:24	04/07/22 20:27	1
d-N-EtFOSA-M	70		20 - 150			04/06/22 12:24	04/07/22 20:27	1
d7-N-MeFOSE-M	74		10 - 120			04/06/22 12:24	04/07/22 20:27	1
d9-N-EtFOSE-M	77		10 - 120			04/06/22 12:24	04/07/22 20:27	1
13C3 HFPO-DA	94		25 - 150			04/06/22 12:24	04/07/22 20:27	1

Isotope Dilution Summary

Client: 3M Company
 Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Solid

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFUnA (25-150)
320-86450-1	HA1-1.5-2.0	85	84	87	83	90	77	82	83
320-86450-1 MS	HA1-1.5-2.0	71	84	88	87	85	81	77	81
320-86450-1 MSD	HA1-1.5-2.0	80	84	93	84	84	82	86	85
320-86450-2	HA2 1.5-2	82	88	92	84	86	77	79	84
320-86450-3	HA3 1.5-2	94	91	104	93	89	90	83	88
320-86450-4	HA4 1.5-2	91	88	93	91	94	83	87	88
320-86450-5	HA5 1.5-2	79	89	92	87	90	86	82	90
320-86450-6	HA6 1.5-2	85	90	98	93	98	89	99	98
320-86450-7	HA7 1.5-2	94	98	92	97	94	84	81	87
320-86450-8	HA8 1.5-2	88	101	91	88	86	84	87	89
320-86450-9	HA9 1.5-2	89	91	90	93	89	86	81	85
320-86450-10	HA10 1.5-2	92	90	94	90	85	77	80	78
320-86450-11	HA11 1.5-2	96	99	101	106	96	80	73	70
320-86450-12	HA12 1.5-2	86	85	94	83	90	73	83	80
320-86450-13	HA13 1.5-2	95	89	97	87	89	80	75	81
320-86450-14	HA14 1.5-2	92	90	96	94	88	85	89	84
320-86450-15	HA15 1.5-2	92	100	93	91	87	77	76	76
320-86450-16	HA16 1.5-2	93	94	93	84	87	80	77	70
LCS 320-578613/2-A	Lab Control Sample	76	90	92	97	89	84	85	89
MB 320-578613/1-A	Method Blank	89	88	95	87	85	78	84	87

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFDaA (25-150)	PFTDA (25-150)	PFHxDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (25-150)	M242FTS (25-150)
320-86450-1	HA1-1.5-2.0	82	79	81	82	85	79	102	73
320-86450-1 MS	HA1-1.5-2.0	83	80	91	80	85	78	102	71
320-86450-1 MSD	HA1-1.5-2.0	94	81	91	79	85	77	101	69
320-86450-2	HA2 1.5-2	84	79	85	84	89	82	102	75
320-86450-3	HA3 1.5-2	77	88	88	89	96	85	101	77
320-86450-4	HA4 1.5-2	80	85	86	81	87	76	108	63
320-86450-5	HA5 1.5-2	84	91	90	92	90	86	106	76
320-86450-6	HA6 1.5-2	97	90	96	93	99	93	117	80
320-86450-7	HA7 1.5-2	76	84	96	91	97	79	102	82
320-86450-8	HA8 1.5-2	88	77	95	86	94	86	112	78
320-86450-9	HA9 1.5-2	80	87	82	91	86	82	96	76
320-86450-10	HA10 1.5-2	75	75	72	75	83	69	101	73
320-86450-11	HA11 1.5-2	73	86	84	81	85	75	100	80
320-86450-12	HA12 1.5-2	85	80	86	81	84	74	103	70
320-86450-13	HA13 1.5-2	72	75	81	82	90	74	93	80
320-86450-14	HA14 1.5-2	82	72	76	83	85	78	103	72
320-86450-15	HA15 1.5-2	72	79	80	83	90	69	94	72
320-86450-16	HA16 1.5-2	66	67	74	86	80	77	97	67
LCS 320-578613/2-A	Lab Control Sample	91	90	95	89	93	91	112	87
MB 320-578613/1-A	Method Blank	82	86	82	95	92	87	103	86

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M262FTS (25-150)	M282FTS (25-150)	d5NEFOS (25-150)	d3NMFOS (25-150)	dMeFOSA (25-150)	dEtFOSA (25-150)	NMFM (10-120)	NEFM (10-120)
320-86450-1	HA1-1.5-2.0	62	58	88	81	66	61	75	71
320-86450-1 MS	HA1-1.5-2.0	65	56	93	83	85	75	73	77
320-86450-1 MSD	HA1-1.5-2.0	60	54	89	79	73	67	72	72

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Isotope Dilution Summary

Client: 3M Company
 Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Matrix: Solid

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M262FTS (25-150)	M282FTS (25-150)	d5NEFOS (25-150)	d3NMFOS (25-150)	dMeFOSA (25-150)	dEtFOSA (25-150)	NMFM (10-120)	NEFM (10-120)
320-86450-2	HA2 1.5-2	65	56	78	74	65	62	76	72
320-86450-3	HA3 1.5-2	73	61	85	83	67	69	73	71
320-86450-4	HA4 1.5-2	63	55	109	91	88	77	76	78
320-86450-5	HA5 1.5-2	71	58	97	88	91	83	74	73
320-86450-6	HA6 1.5-2	79	66	114	100	96	92	79	77
320-86450-7	HA7 1.5-2	69	57	87	77	67	69	73	73
320-86450-8	HA8 1.5-2	71	57	99	85	65	64	71	73
320-86450-9	HA9 1.5-2	63	55	85	83	60	61	69	74
320-86450-10	HA10 1.5-2	63	52	80	70	61	60	77	76
320-86450-11	HA11 1.5-2	68	53	80	70	72	66	71	66
320-86450-12	HA12 1.5-2	62	53	85	83	78	67	63	67
320-86450-13	HA13 1.5-2	67	54	81	72	55	56	69	60
320-86450-14	HA14 1.5-2	63	55	94	80	69	65	71	71
320-86450-15	HA15 1.5-2	65	52	76	67	60	67	64	67
320-86450-16	HA16 1.5-2	66	52	73	73	63	69	67	62
LCS 320-578613/2-A	Lab Control Sample	72	65	95	91	93	83	87	71
MB 320-578613/1-A	Method Blank	70	62	95	82	54	58	68	69

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HFPODA (25-150)
320-86450-1	HA1-1.5-2.0	82
320-86450-1 MS	HA1-1.5-2.0	80
320-86450-1 MSD	HA1-1.5-2.0	89
320-86450-2	HA2 1.5-2	81
320-86450-3	HA3 1.5-2	89
320-86450-4	HA4 1.5-2	88
320-86450-5	HA5 1.5-2	85
320-86450-6	HA6 1.5-2	95
320-86450-7	HA7 1.5-2	96
320-86450-8	HA8 1.5-2	86
320-86450-9	HA9 1.5-2	88
320-86450-10	HA10 1.5-2	92
320-86450-11	HA11 1.5-2	101
320-86450-12	HA12 1.5-2	91
320-86450-13	HA13 1.5-2	90
320-86450-14	HA14 1.5-2	88
320-86450-15	HA15 1.5-2	96
320-86450-16	HA16 1.5-2	101
LCS 320-578613/2-A	Lab Control Sample	83
MB 320-578613/1-A	Method Blank	80

Surrogate Legend

- PFBA = 13C4 PFBA
- PFPeA = 13C5 PFPeA
- PFHxA = 13C2 PFHxA
- C4PFHA = 13C4 PFHpA
- PFOA = 13C4 PFOA
- PFNA = 13C5 PFNA
- PFDA = 13C2 PFDA
- PFUnA = 13C2 PFUnA

Isotope Dilution Summary

Client: 3M Company

Job ID: 320-86450-1

Project/Site: E22-0203 Menomonie Soils

PFDoA = 13C2 PFDaA
 PFTDA = 13C2 PFTeDA
 PFHxDA = 13C2 PFHxDA
 C3PFBS = 13C3 PFBS
 PFHxS = 18O2 PFHxS
 PFOS = 13C4 PFOS
 PFOSA = 13C8 FOSA
 M242FTS = M2-4:2 FTS
 M262FTS = M2-6:2 FTS
 M282FTS = M2-8:2 FTS
 d5NEFOS = d5-NEtFOSAA
 d3NMFOS = d3-NMeFOSAA
 dMeFOSA = d-N-MeFOSA-M
 dEtFOSA = d-N-EtFOSA-M
 NMFM = d7-N-MeFOSE-M
 NEFM = d9-N-EtFOSE-M
 HFPODA = 13C3 HFPO-DA

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFUnA (25-150)
320-86450-17	Field Blank	88	84	90	90	95	96	95	90
320-86450-18	Rinsate Blank	84	78	87	88	92	91	93	90
LCS 320-578250/2-A	Lab Control Sample	87	84	85	90	93	100	92	86
LCSD 320-578250/3-A	Lab Control Sample Dup	91	88	91	92	95	98	101	97
MB 320-578250/1-A	Method Blank	93	85	97	97	95	97	96	90

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFDoA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (25-150)	M242FTS (25-150)	M262FTS (25-150)
320-86450-17	Field Blank	91	86	77	84	83	93	90	89
320-86450-18	Rinsate Blank	93	94	79	86	83	102	93	92
LCS 320-578250/2-A	Lab Control Sample	92	96	78	88	88	101	88	89
LCSD 320-578250/3-A	Lab Control Sample Dup	95	96	88	97	95	112	97	93
MB 320-578250/1-A	Method Blank	95	89	82	89	83	99	94	96

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M282FTS (25-150)	d5NEFOS (25-150)	d3NMFOS (25-150)	dMeFOSA (20-150)	dEtFOSA (20-150)	NMFM (10-120)	NEFM (10-120)	HFPODA (25-150)
320-86450-17	Field Blank	87	75	72	61	61	72	75	95
320-86450-18	Rinsate Blank	84	79	76	70	70	74	77	94
LCS 320-578250/2-A	Lab Control Sample	86	92	84	65	67	74	81	91
LCSD 320-578250/3-A	Lab Control Sample Dup	91	90	89	67	69	80	83	95
MB 320-578250/1-A	Method Blank	96	85	80	59	56	76	75	103

Surrogate Legend

PFBA = 13C4 PFBA
 PFPeA = 13C5 PFPeA
 PFHxA = 13C2 PFHxA
 C4PFHA = 13C4 PFHpA
 PFOA = 13C4 PFOA
 PFNA = 13C5 PFNA
 PFDA = 13C2 PFDA
 PFUnA = 13C2 PFUnA
 PFDoA = 13C2 PFDaA

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Isotope Dilution Summary

Client: 3M Company

Job ID: 320-86450-1

Project/Site: E22-0203 Menomonie Soils

PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
PFOSA = 13C8 FOSA
M242FTS = M2-4:2 FTS
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
d5NEFOS = d5-NEtFOSAA
d3NMFOS = d3-NMeFOSAA
dMeFOSA = d-N-MeFOSA-M
dEtFOSA = d-N-EtFOSA-M
NMFm = d7-N-MeFOSE-M
NEFM = d9-N-EtFOSE-M
HFPODA = 13C3 HFPO-DA

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QC Sample Results

Client: 3M Company
 Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-578250/1-A
Matrix: Water
Analysis Batch: 578535

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 578250

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Perfluorobutanoic acid (PFBA)	<0.0050		0.0050	ug/L		04/06/22 12:24	04/07/22 18:06	1
Perfluoropentanoic acid (PFPeA)	<0.0020		0.0020	ug/L		04/06/22 12:24	04/07/22 18:06	1
Perfluorohexanoic acid (PFHxA)	<0.0020		0.0020	ug/L		04/06/22 12:24	04/07/22 18:06	1
Perfluoroheptanoic acid (PFHpA)	<0.0020		0.0020	ug/L		04/06/22 12:24	04/07/22 18:06	1
Perfluorooctanoic acid (PFOA)	<0.0020		0.0020	ug/L		04/06/22 12:24	04/07/22 18:06	1
Perfluorononanoic acid (PFNA)	<0.0020		0.0020	ug/L		04/06/22 12:24	04/07/22 18:06	1
Perfluorodecanoic acid (PFDA)	<0.0020		0.0020	ug/L		04/06/22 12:24	04/07/22 18:06	1
Perfluoroundecanoic acid (PFUnA)	<0.0020		0.0020	ug/L		04/06/22 12:24	04/07/22 18:06	1
Perfluorododecanoic acid (PFDoA)	<0.0020		0.0020	ug/L		04/06/22 12:24	04/07/22 18:06	1
Perfluorotridecanoic acid (PFTrDA)	<0.0020		0.0020	ug/L		04/06/22 12:24	04/07/22 18:06	1
Perfluorotetradecanoic acid (PFTeA)	<0.0020		0.0020	ug/L		04/06/22 12:24	04/07/22 18:06	1
Perfluorobutanesulfonic acid (PFBS)	<0.0020		0.0020	ug/L		04/06/22 12:24	04/07/22 18:06	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0020		0.0020	ug/L		04/06/22 12:24	04/07/22 18:06	1
Perfluorohexanesulfonic acid (PFHxS)	<0.0020		0.0020	ug/L		04/06/22 12:24	04/07/22 18:06	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.0020		0.0020	ug/L		04/06/22 12:24	04/07/22 18:06	1
Perfluorooctanesulfonic acid (PFOS)	<0.0020		0.0020	ug/L		04/06/22 12:24	04/07/22 18:06	1
Perfluorononanesulfonic acid (PFNS)	<0.0020		0.0020	ug/L		04/06/22 12:24	04/07/22 18:06	1
Perfluorodecanesulfonic acid (PFDS)	<0.0020		0.0020	ug/L		04/06/22 12:24	04/07/22 18:06	1
Perfluorododecanesulfonic acid (PFDoS)	<0.0020		0.0020	ug/L		04/06/22 12:24	04/07/22 18:06	1
Perfluorooctanesulfonamide (FOSA)	<0.0020		0.0020	ug/L		04/06/22 12:24	04/07/22 18:06	1
NMeFOSAA	<0.0050		0.0050	ug/L		04/06/22 12:24	04/07/22 18:06	1
NEtFOSAA	<0.0050		0.0050	ug/L		04/06/22 12:24	04/07/22 18:06	1
4:2 FTS	<0.0020		0.0020	ug/L		04/06/22 12:24	04/07/22 18:06	1
6:2 FTS	<0.0050		0.0050	ug/L		04/06/22 12:24	04/07/22 18:06	1
8:2 FTS	<0.0020		0.0020	ug/L		04/06/22 12:24	04/07/22 18:06	1
NEtFOSA	<0.0020		0.0020	ug/L		04/06/22 12:24	04/07/22 18:06	1
NMeFOSA	<0.0020		0.0020	ug/L		04/06/22 12:24	04/07/22 18:06	1
NMeFOSE	<0.0040		0.0040	ug/L		04/06/22 12:24	04/07/22 18:06	1
NEtFOSE	<0.0020		0.0020	ug/L		04/06/22 12:24	04/07/22 18:06	1
9Cl-PF3ONS	<0.0020		0.0020	ug/L		04/06/22 12:24	04/07/22 18:06	1
11Cl-PF3OUdS	<0.0020		0.0020	ug/L		04/06/22 12:24	04/07/22 18:06	1
HFPO-DA (GenX)	<0.0040		0.0040	ug/L		04/06/22 12:24	04/07/22 18:06	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0020		0.0020	ug/L		04/06/22 12:24	04/07/22 18:06	1

Isotope Dilution	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C4 PFBA	93		25 - 150	04/06/22 12:24	04/07/22 18:06	1
13C5 PFPeA	85		25 - 150	04/06/22 12:24	04/07/22 18:06	1
13C2 PFHxA	97		25 - 150	04/06/22 12:24	04/07/22 18:06	1
13C4 PFHpA	97		25 - 150	04/06/22 12:24	04/07/22 18:06	1
13C4 PFOA	95		25 - 150	04/06/22 12:24	04/07/22 18:06	1
13C5 PFNA	97		25 - 150	04/06/22 12:24	04/07/22 18:06	1
13C2 PFDA	96		25 - 150	04/06/22 12:24	04/07/22 18:06	1
13C2 PFUnA	90		25 - 150	04/06/22 12:24	04/07/22 18:06	1
13C2 PFDoA	95		25 - 150	04/06/22 12:24	04/07/22 18:06	1
13C2 PFTeDA	89		25 - 150	04/06/22 12:24	04/07/22 18:06	1

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QC Sample Results

Client: 3M Company
 Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-578250/1-A
Matrix: Water
Analysis Batch: 578535

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 578250

Isotope Dilution	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C3 PFBS	82		25 - 150	04/06/22 12:24	04/07/22 18:06	1
18O2 PFHxS	89		25 - 150	04/06/22 12:24	04/07/22 18:06	1
13C4 PFOS	83		25 - 150	04/06/22 12:24	04/07/22 18:06	1
13C8 FOSA	99		25 - 150	04/06/22 12:24	04/07/22 18:06	1
M2-4:2 FTS	94		25 - 150	04/06/22 12:24	04/07/22 18:06	1
M2-6:2 FTS	96		25 - 150	04/06/22 12:24	04/07/22 18:06	1
M2-8:2 FTS	96		25 - 150	04/06/22 12:24	04/07/22 18:06	1
d5-NEtFOSAA	85		25 - 150	04/06/22 12:24	04/07/22 18:06	1
d3-NMeFOSAA	80		25 - 150	04/06/22 12:24	04/07/22 18:06	1
d-N-MeFOSA-M	59		20 - 150	04/06/22 12:24	04/07/22 18:06	1
d-N-EtFOSA-M	56		20 - 150	04/06/22 12:24	04/07/22 18:06	1
d7-N-MeFOSE-M	76		10 - 120	04/06/22 12:24	04/07/22 18:06	1
d9-N-EtFOSE-M	75		10 - 120	04/06/22 12:24	04/07/22 18:06	1
13C3 HFPO-DA	103		25 - 150	04/06/22 12:24	04/07/22 18:06	1

Lab Sample ID: LCS 320-578250/2-A
Matrix: Water
Analysis Batch: 578561

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 578250

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Perfluorobutanoic acid (PFBA)	0.0400	0.0459		ug/L		115	76 - 136
Perfluoropentanoic acid (PFPeA)	0.0400	0.0472		ug/L		118	71 - 131
Perfluorohexanoic acid (PFHxA)	0.0400	0.0466		ug/L		117	73 - 133
Perfluoroheptanoic acid (PFHpA)	0.0400	0.0466		ug/L		117	72 - 132
Perfluorooctanoic acid (PFOA)	0.0400	0.0419		ug/L		105	70 - 130
Perfluorononanoic acid (PFNA)	0.0400	0.0432		ug/L		108	75 - 135
Perfluorodecanoic acid (PFDA)	0.0400	0.0434		ug/L		108	76 - 136
Perfluoroundecanoic acid (PFUnA)	0.0400	0.0474		ug/L		119	68 - 128
Perfluorododecanoic acid (PFDoA)	0.0400	0.0453		ug/L		113	71 - 131
Perfluorotridecanoic acid (PFTTrDA)	0.0400	0.0440		ug/L		110	71 - 131
Perfluorotetradecanoic acid (PFTeA)	0.0400	0.0407		ug/L		102	70 - 130
Perfluorobutanesulfonic acid (PFBS)	0.0354	0.0426		ug/L		120	67 - 127
Perfluoropentanesulfonic acid (PFPeS)	0.0375	0.0460		ug/L		123	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	0.0364	0.0384		ug/L		106	59 - 119
Perfluoroheptanesulfonic acid (PFHpS)	0.0381	0.0419		ug/L		110	76 - 136
Perfluorooctanesulfonic acid (PFOS)	0.0371	0.0403		ug/L		109	70 - 130
Perfluorononanesulfonic acid (PFNS)	0.0384	0.0422		ug/L		110	75 - 135
Perfluorodecanesulfonic acid (PFDS)	0.0386	0.0422		ug/L		109	71 - 131
Perfluorododecanesulfonic acid (PFDoS)	0.0387	0.0407		ug/L		105	67 - 127

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QC Sample Results

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-578250/2-A
Matrix: Water
Analysis Batch: 578561

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 578250

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
							Lower	Upper
Perfluorooctanesulfonamide (FOSA)	0.0400	0.0377		ug/L		94	73 - 133	
NMeFOSAA	0.0400	0.0466		ug/L		117	76 - 136	
NEtFOSAA	0.0400	0.0431		ug/L		108	76 - 136	
4:2 FTS	0.0374	0.0434		ug/L		116	79 - 139	
6:2 FTS	0.0379	0.0414		ug/L		109	59 - 175	
8:2 FTS	0.0383	0.0442		ug/L		115	75 - 135	
NEtFOSA	0.0400	0.0449		ug/L		112	78 - 138	
NMeFOSA	0.0400	0.0446		ug/L		112	67 - 154	
NMeFOSE	0.0400	0.0477		ug/L		119	70 - 130	
NEtFOSE	0.0400	0.0456		ug/L		114	71 - 131	
9Cl-PF3ONS	0.0373	0.0424		ug/L		114	75 - 135	
11Cl-PF3OUdS	0.0377	0.0422		ug/L		112	54 - 114	
HFPO-DA (GenX)	0.0400	0.0434		ug/L		109	51 - 173	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.0377	0.0447		ug/L		119	79 - 139	

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	87		25 - 150
13C5 PFPeA	84		25 - 150
13C2 PFHxA	85		25 - 150
13C4 PFHpA	90		25 - 150
13C4 PFOA	93		25 - 150
13C5 PFNA	100		25 - 150
13C2 PFDA	92		25 - 150
13C2 PFUnA	86		25 - 150
13C2 PFDaA	92		25 - 150
13C2 PFTeDA	96		25 - 150
13C3 PFBS	78		25 - 150
18O2 PFHxS	88		25 - 150
13C4 PFOS	88		25 - 150
13C8 FOSA	101		25 - 150
M2-4:2 FTS	88		25 - 150
M2-6:2 FTS	89		25 - 150
M2-8:2 FTS	86		25 - 150
d5-NEtFOSAA	92		25 - 150
d3-NMeFOSAA	84		25 - 150
d-N-MeFOSA-M	65		20 - 150
d-N-EtFOSA-M	67		20 - 150
d7-N-MeFOSE-M	74		10 - 120
d9-N-EtFOSE-M	81		10 - 120
13C3 HFPO-DA	91		25 - 150

Lab Sample ID: LCSD 320-578250/3-A
Matrix: Water
Analysis Batch: 578561

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 578250

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits		RPD
							Lower	Upper	
Perfluorobutanoic acid (PFBA)	0.0400	0.0432		ug/L		108	76 - 136	6	30

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QC Sample Results

Client: 3M Company
 Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-578250/3-A
Matrix: Water
Analysis Batch: 578561

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 578250

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD
									Limit
Perfluoropentanoic acid (PFPeA)	0.0400	0.0467		ug/L		117	71 - 131	1	30
Perfluorohexanoic acid (PFHxA)	0.0400	0.0452		ug/L		113	73 - 133	3	30
Perfluoroheptanoic acid (PFHpA)	0.0400	0.0442		ug/L		110	72 - 132	5	30
Perfluorooctanoic acid (PFOA)	0.0400	0.0429		ug/L		107	70 - 130	2	30
Perfluorononanoic acid (PFNA)	0.0400	0.0454		ug/L		114	75 - 135	5	30
Perfluorodecanoic acid (PFDA)	0.0400	0.0409		ug/L		102	76 - 136	6	30
Perfluoroundecanoic acid (PFUnA)	0.0400	0.0422		ug/L		105	68 - 128	12	30
Perfluorododecanoic acid (PFDoA)	0.0400	0.0438		ug/L		109	71 - 131	4	30
Perfluorotridecanoic acid (PFTrDA)	0.0400	0.0410		ug/L		103	71 - 131	7	30
Perfluorotetradecanoic acid (PFTeA)	0.0400	0.0412		ug/L		103	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)	0.0354	0.0405		ug/L		115	67 - 127	5	30
Perfluoropentanesulfonic acid (PFPeS)	0.0375	0.0422		ug/L		112	66 - 126	9	30
Perfluorohexanesulfonic acid (PFHxS)	0.0364	0.0368		ug/L		101	59 - 119	4	30
Perfluoroheptanesulfonic acid (PFHpS)	0.0381	0.0410		ug/L		108	76 - 136	2	30
Perfluorooctanesulfonic acid (PFOS)	0.0371	0.0388		ug/L		105	70 - 130	4	30
Perfluorononanesulfonic acid (PFNS)	0.0384	0.0405		ug/L		105	75 - 135	4	30
Perfluorodecanesulfonic acid (PFDS)	0.0386	0.0414		ug/L		107	71 - 131	2	30
Perfluorododecanesulfonic acid (PFDoS)	0.0387	0.0387		ug/L		100	67 - 127	5	30
Perfluorooctanesulfonamide (FOSA)	0.0400	0.0365		ug/L		91	73 - 133	3	30
NMeFOSAA	0.0400	0.0432		ug/L		108	76 - 136	8	30
NEtFOSAA	0.0400	0.0460		ug/L		115	76 - 136	6	30
4:2 FTS	0.0374	0.0399		ug/L		107	79 - 139	8	30
6:2 FTS	0.0379	0.0445		ug/L		117	59 - 175	7	30
8:2 FTS	0.0383	0.0424		ug/L		111	75 - 135	4	30
NEtFOSA	0.0400	0.0447		ug/L		112	78 - 138	0	30
NMeFOSA	0.0400	0.0434		ug/L		108	67 - 154	3	30
NMeFOSE	0.0400	0.0438		ug/L		109	70 - 130	9	30
NEtFOSE	0.0400	0.0449		ug/L		112	71 - 131	2	30
9Cl-PF3ONS	0.0373	0.0406		ug/L		109	75 - 135	4	30
11Cl-PF3OUdS	0.0377	0.0421		ug/L		112	54 - 114	0	30
HFPO-DA (GenX)	0.0400	0.0441		ug/L		110	51 - 173	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.0377	0.0430		ug/L		114	79 - 139	4	30

Isotope Dilution	LCSD		Limits
	%Recovery	Qualifier	
13C4 PFBA	91		25 - 150
13C5 PFPeA	88		25 - 150
13C2 PFHxA	91		25 - 150
13C4 PFHpA	92		25 - 150

QC Sample Results

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-578250/3-A
Matrix: Water
Analysis Batch: 578561

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 578250

<i>Isotope Dilution</i>	<i>LCSD LCSD</i>		<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
13C4 PFOA	95		25 - 150
13C5 PFNA	98		25 - 150
13C2 PFDA	101		25 - 150
13C2 PFUnA	97		25 - 150
13C2 PFDoA	95		25 - 150
13C2 PFTeDA	96		25 - 150
13C3 PFBS	88		25 - 150
18O2 PFHxS	97		25 - 150
13C4 PFOS	95		25 - 150
13C8 FOSA	112		25 - 150
M2-4:2 FTS	97		25 - 150
M2-6:2 FTS	93		25 - 150
M2-8:2 FTS	91		25 - 150
d5-NEtFOSAA	90		25 - 150
d3-NMeFOSAA	89		25 - 150
d-N-MeFOSA-M	67		20 - 150
d-N-EtFOSA-M	69		20 - 150
d7-N-MeFOSE-M	80		10 - 120
d9-N-EtFOSE-M	83		10 - 120
13C3 HFPO-DA	95		25 - 150

Lab Sample ID: MB 320-578613/1-A
Matrix: Solid
Analysis Batch: 578411

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 578613

<i>Analyte</i>	<i>MB MB</i>		<i>RL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
	<i>Result</i>	<i>Qualifier</i>						
Perfluorobutanoic acid (PFBA)	<0.20		0.20	ug/Kg		04/06/22 12:56	04/07/22 10:29	1
Perfluoropentanoic acid (PFPeA)	<0.20		0.20	ug/Kg		04/06/22 12:56	04/07/22 10:29	1
Perfluorohexanoic acid (PFHxA)	<0.20		0.20	ug/Kg		04/06/22 12:56	04/07/22 10:29	1
Perfluoroheptanoic acid (PFHpA)	<0.20		0.20	ug/Kg		04/06/22 12:56	04/07/22 10:29	1
Perfluorooctanoic acid (PFOA)	<0.20		0.20	ug/Kg		04/06/22 12:56	04/07/22 10:29	1
Perfluorononanoic acid (PFNA)	<0.20		0.20	ug/Kg		04/06/22 12:56	04/07/22 10:29	1
Perfluorodecanoic acid (PFDA)	<0.20		0.20	ug/Kg		04/06/22 12:56	04/07/22 10:29	1
Perfluoroundecanoic acid (PFUnA)	<0.20		0.20	ug/Kg		04/06/22 12:56	04/07/22 10:29	1
Perfluorododecanoic acid (PFDoA)	<0.20		0.20	ug/Kg		04/06/22 12:56	04/07/22 10:29	1
Perfluorotridecanoic acid (PFTTrDA)	<0.20		0.20	ug/Kg		04/06/22 12:56	04/07/22 10:29	1
Perfluorotetradecanoic acid (PFTeA)	<0.20		0.20	ug/Kg		04/06/22 12:56	04/07/22 10:29	1
Perfluorobutanesulfonic acid (PFBS)	<0.20		0.20	ug/Kg		04/06/22 12:56	04/07/22 10:29	1
Perfluoropentanesulfonic acid (PFPeS)	<0.20		0.20	ug/Kg		04/06/22 12:56	04/07/22 10:29	1
Perfluorohexanesulfonic acid (PFHxS)	<0.20		0.20	ug/Kg		04/06/22 12:56	04/07/22 10:29	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.20		0.20	ug/Kg		04/06/22 12:56	04/07/22 10:29	1
Perfluorooctanesulfonic acid (PFOS)	<0.20		0.20	ug/Kg		04/06/22 12:56	04/07/22 10:29	1
Perfluorononanesulfonic acid (PFNS)	<0.20		0.20	ug/Kg		04/06/22 12:56	04/07/22 10:29	1
Perfluorodecanesulfonic acid (PFDS)	<0.20		0.20	ug/Kg		04/06/22 12:56	04/07/22 10:29	1
Perfluorododecanesulfonic acid (PFDoS)	<0.20		0.20	ug/Kg		04/06/22 12:56	04/07/22 10:29	1
Perfluorooctanesulfonamide (FOSA)	<0.20		0.20	ug/Kg		04/06/22 12:56	04/07/22 10:29	1
NMeFOSAA	<0.20		0.20	ug/Kg		04/06/22 12:56	04/07/22 10:29	1

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QC Sample Results

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-578613/1-A
Matrix: Solid
Analysis Batch: 578411

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 578613

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
NEtFOSAA	<0.20		0.20	ug/Kg		04/06/22 12:56	04/07/22 10:29	1
4:2 FTS	<0.20		0.20	ug/Kg		04/06/22 12:56	04/07/22 10:29	1
6:2 FTS	<0.20		0.20	ug/Kg		04/06/22 12:56	04/07/22 10:29	1
8:2 FTS	<0.20		0.20	ug/Kg		04/06/22 12:56	04/07/22 10:29	1
NEtFOSA	<0.20		0.20	ug/Kg		04/06/22 12:56	04/07/22 10:29	1
NMeFOSA	<0.20		0.20	ug/Kg		04/06/22 12:56	04/07/22 10:29	1
NMeFOSE	<0.20		0.20	ug/Kg		04/06/22 12:56	04/07/22 10:29	1
NEtFOSE	<0.20		0.20	ug/Kg		04/06/22 12:56	04/07/22 10:29	1
9Cl-PF3ONS	<0.20		0.20	ug/Kg		04/06/22 12:56	04/07/22 10:29	1
11Cl-PF3OUdS	<0.20		0.20	ug/Kg		04/06/22 12:56	04/07/22 10:29	1
HFPO-DA (GenX)	<0.20		0.20	ug/Kg		04/06/22 12:56	04/07/22 10:29	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.20		0.20	ug/Kg		04/06/22 12:56	04/07/22 10:29	1

Isotope Dilution	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C4 PFBA	89		25 - 150	04/06/22 12:56	04/07/22 10:29	1
13C5 PFPeA	88		25 - 150	04/06/22 12:56	04/07/22 10:29	1
13C2 PFHxA	95		25 - 150	04/06/22 12:56	04/07/22 10:29	1
13C4 PFHpA	87		25 - 150	04/06/22 12:56	04/07/22 10:29	1
13C4 PFOA	85		25 - 150	04/06/22 12:56	04/07/22 10:29	1
13C5 PFNA	78		25 - 150	04/06/22 12:56	04/07/22 10:29	1
13C2 PFDA	84		25 - 150	04/06/22 12:56	04/07/22 10:29	1
13C2 PFUnA	87		25 - 150	04/06/22 12:56	04/07/22 10:29	1
13C2 PFDoA	82		25 - 150	04/06/22 12:56	04/07/22 10:29	1
13C2 PFHxDA	82		25 - 150	04/06/22 12:56	04/07/22 10:29	1
13C2 PFTeDA	86		25 - 150	04/06/22 12:56	04/07/22 10:29	1
13C3 PFBS	95		25 - 150	04/06/22 12:56	04/07/22 10:29	1
18O2 PFHxS	92		25 - 150	04/06/22 12:56	04/07/22 10:29	1
13C4 PFOS	87		25 - 150	04/06/22 12:56	04/07/22 10:29	1
13C8 FOSA	103		25 - 150	04/06/22 12:56	04/07/22 10:29	1
M2-4:2 FTS	86		25 - 150	04/06/22 12:56	04/07/22 10:29	1
M2-6:2 FTS	70		25 - 150	04/06/22 12:56	04/07/22 10:29	1
M2-8:2 FTS	62		25 - 150	04/06/22 12:56	04/07/22 10:29	1
d5-NEtFOSAA	95		25 - 150	04/06/22 12:56	04/07/22 10:29	1
d3-NMeFOSAA	82		25 - 150	04/06/22 12:56	04/07/22 10:29	1
d-N-MeFOSA-M	54		25 - 150	04/06/22 12:56	04/07/22 10:29	1
d-N-EtFOSA-M	58		25 - 150	04/06/22 12:56	04/07/22 10:29	1
d7-N-MeFOSE-M	68		10 - 120	04/06/22 12:56	04/07/22 10:29	1
d9-N-EtFOSE-M	69		10 - 120	04/06/22 12:56	04/07/22 10:29	1
13C3 HFPO-DA	80		25 - 150	04/06/22 12:56	04/07/22 10:29	1

Lab Sample ID: LCS 320-578613/2-A
Matrix: Solid
Analysis Batch: 578411

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 578613

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Perfluorobutanoic acid (PFBA)	2.00	2.29		ug/Kg		115	76 - 136
Perfluoropentanoic acid (PFPeA)	2.00	2.12		ug/Kg		106	69 - 129
Perfluorohexanoic acid (PFHxA)	2.00	2.09		ug/Kg		105	71 - 131

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QC Sample Results

Client: 3M Company
 Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-578613/2-A
Matrix: Solid
Analysis Batch: 578411

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 578613

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec
							Limits
Perfluoroheptanoic acid (PFHpA)	2.00	2.15		ug/Kg		107	71 - 131
Perfluorooctanoic acid (PFOA)	2.00	2.19		ug/Kg		109	72 - 132
Perfluorononanoic acid (PFNA)	2.00	2.36		ug/Kg		118	73 - 133
Perfluorodecanoic acid (PFDA)	2.00	2.21		ug/Kg		111	72 - 132
Perfluoroundecanoic acid (PFUnA)	2.00	2.45		ug/Kg		123	66 - 126
Perfluorododecanoic acid (PFDoA)	2.00	2.09		ug/Kg		104	71 - 131
Perfluorotridecanoic acid (PFTrDA)	2.00	1.78		ug/Kg		89	71 - 131
Perfluorotetradecanoic acid (PFTeA)	2.00	2.15		ug/Kg		107	67 - 127
Perfluorobutanesulfonic acid (PFBS)	1.77	2.16		ug/Kg		122	69 - 129
Perfluoropentanesulfonic acid (PFPeS)	1.88	2.13		ug/Kg		114	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	1.82	1.98		ug/Kg		109	62 - 122
Perfluoroheptanesulfonic acid (PFHpS)	1.90	2.21		ug/Kg		116	76 - 136
Perfluorooctanesulfonic acid (PFOS)	1.86	2.02		ug/Kg		109	68 - 141
Perfluorononanesulfonic acid (PFNS)	1.92	2.09		ug/Kg		109	72 - 132
Perfluorodecanesulfonic acid (PFDS)	1.93	2.13		ug/Kg		111	71 - 131
Perfluorododecanesulfonic acid (PFDoS)	1.94	2.21		ug/Kg		114	70 - 130
Perfluorooctanesulfonamide (FOSA)	2.00	1.90		ug/Kg		95	77 - 137
NMeFOSAA	2.00	2.22		ug/Kg		111	72 - 132
NEtFOSAA	2.00	2.26		ug/Kg		113	72 - 132
4:2 FTS	1.87	2.29		ug/Kg		122	68 - 143
6:2 FTS	1.90	1.78		ug/Kg		94	73 - 139
8:2 FTS	1.92	2.18		ug/Kg		114	75 - 135
NEtFOSA	2.00	2.26		ug/Kg		113	47 - 161
NMeFOSA	2.00	2.06		ug/Kg		103	63 - 148
NMeFOSE	2.00	2.27		ug/Kg		114	43 - 153
NEtFOSE	2.00	2.40		ug/Kg		120	44 - 155
9Cl-PF3ONS	1.86	2.12		ug/Kg		114	74 - 134
11Cl-PF3OUdS	1.88	2.16		ug/Kg		115	66 - 136
HFPO-DA (GenX)	2.00	2.46		ug/Kg		123	53 - 158
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.88	2.17		ug/Kg		115	79 - 139

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	76		25 - 150
13C5 PFPeA	90		25 - 150
13C2 PFHxA	92		25 - 150
13C4 PFHpA	97		25 - 150
13C4 PFOA	89		25 - 150
13C5 PFNA	84		25 - 150



QC Sample Results

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-578613/2-A
Matrix: Solid
Analysis Batch: 578411

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 578613

Isotope Dilution	LCS		Limits
	%Recovery	Qualifier	
13C2 PFDA	85		25 - 150
13C2 PFUnA	89		25 - 150
13C2 PFDoA	91		25 - 150
13C2 PFHxDA	95		25 - 150
13C2 PFTeDA	90		25 - 150
13C3 PFBS	89		25 - 150
18O2 PFHxS	93		25 - 150
13C4 PFOS	91		25 - 150
13C8 FOSA	112		25 - 150
M2-4:2 FTS	87		25 - 150
M2-6:2 FTS	72		25 - 150
M2-8:2 FTS	65		25 - 150
d5-NEtFOSAA	95		25 - 150
d3-NMeFOSAA	91		25 - 150
d-N-MeFOSA-M	93		25 - 150
d-N-EtFOSA-M	83		25 - 150
d7-N-MeFOSE-M	87		10 - 120
d9-N-EtFOSE-M	71		10 - 120
13C3 HFPO-DA	83		25 - 150

Lab Sample ID: 320-86450-1 MS
Matrix: Solid
Analysis Batch: 578411

Client Sample ID: HA1-1.5-2.0
Prep Type: Total/NA
Prep Batch: 578613

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
Perfluorobutanoic acid (PFBA)	<0.21		2.09	2.27		ug/Kg	☼	109	76 - 136
Perfluoropentanoic acid (PFPeA)	<0.21		2.09	2.34		ug/Kg	☼	112	69 - 129
Perfluorohexanoic acid (PFHxA)	<0.21		2.09	2.14		ug/Kg	☼	103	71 - 131
Perfluoroheptanoic acid (PFHpA)	<0.21		2.09	2.40		ug/Kg	☼	115	71 - 131
Perfluorooctanoic acid (PFOA)	<0.21		2.09	2.25		ug/Kg	☼	108	72 - 132
Perfluorononanoic acid (PFNA)	<0.21		2.09	2.38		ug/Kg	☼	114	73 - 133
Perfluorodecanoic acid (PFDA)	<0.21		2.09	2.31		ug/Kg	☼	110	72 - 132
Perfluoroundecanoic acid (PFUnA)	<0.21	F1	2.09	2.75	F1	ug/Kg	☼	132	66 - 126
Perfluorododecanoic acid (PFDoA)	<0.21		2.09	2.36		ug/Kg	☼	113	71 - 131
Perfluorotridecanoic acid (PFTTrDA)	<0.21		2.09	2.14		ug/Kg	☼	103	71 - 131
Perfluorotetradecanoic acid (PFTeA)	<0.21		2.09	2.25		ug/Kg	☼	108	67 - 127
Perfluorobutanesulfonic acid (PFBS)	<0.21		1.85	2.04		ug/Kg	☼	110	69 - 129
Perfluoropentanesulfonic acid (PFPeS)	<0.21		1.96	2.07		ug/Kg	☼	106	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	<0.21		1.90	1.98		ug/Kg	☼	104	62 - 122
Perfluoroheptanesulfonic acid (PFHpS)	<0.21		1.99	2.45		ug/Kg	☼	123	76 - 136
Perfluorooctanesulfonic acid (PFOS)	<0.21		1.94	2.22		ug/Kg	☼	114	68 - 141

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QC Sample Results

Client: 3M Company
 Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 320-86450-1 MS
Matrix: Solid
Analysis Batch: 578411

Client Sample ID: HA1-1.5-2.0
Prep Type: Total/NA
Prep Batch: 578613

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
Perfluorononanesulfonic acid (PFNS)	<0.21		2.01	2.41		ug/Kg	☼	120	72 - 132
Perfluorodecanesulfonic acid (PFDS)	<0.21		2.02	2.37		ug/Kg	☼	117	71 - 131
Perfluorododecanesulfonic acid (PFDoS)	<0.21		2.02	2.25		ug/Kg	☼	111	70 - 130
Perfluorooctanesulfonamide (FOSA)	<0.21		2.09	1.91		ug/Kg	☼	91	77 - 137
NMeFOSAA	<0.21		2.09	2.14		ug/Kg	☼	103	72 - 132
NEtFOSAA	<0.21		2.09	2.28		ug/Kg	☼	109	72 - 132
4:2 FTS	<0.21		1.95	2.21		ug/Kg	☼	113	68 - 143
6:2 FTS	<0.21		1.98	1.83		ug/Kg	☼	92	73 - 139
8:2 FTS	<0.21		2.00	2.17		ug/Kg	☼	108	75 - 135
NEtFOSA	<0.21		2.09	2.56		ug/Kg	☼	122	47 - 161
NMeFOSA	<0.21		2.09	2.11		ug/Kg	☼	101	63 - 148
NMeFOSE	<0.21		2.09	2.36		ug/Kg	☼	113	43 - 153
NEtFOSE	<0.21		2.09	2.09		ug/Kg	☼	100	44 - 155
9Cl-PF3ONS	<0.21		1.95	2.22		ug/Kg	☼	114	74 - 134
11Cl-PF3OUdS	<0.21		1.97	2.29		ug/Kg	☼	116	66 - 136
HFPO-DA (GenX)	<0.21		2.09	2.45		ug/Kg	☼	117	53 - 158
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.21		1.97	2.52		ug/Kg	☼	128	79 - 139

Isotope Dilution	MS	MS	Limits
	%Recovery	Qualifier	
13C4 PFBA	71		25 - 150
13C5 PFPeA	84		25 - 150
13C2 PFHxA	88		25 - 150
13C4 PFHpA	87		25 - 150
13C4 PFOA	85		25 - 150
13C5 PFNA	81		25 - 150
13C2 PFDA	77		25 - 150
13C2 PFUnA	81		25 - 150
13C2 PFDoA	83		25 - 150
13C2 PFHxDA	91		25 - 150
13C2 PFTeDA	80		25 - 150
13C3 PFBS	80		25 - 150
18O2 PFHxS	85		25 - 150
13C4 PFOS	78		25 - 150
13C8 FOSA	102		25 - 150
M2-4:2 FTS	71		25 - 150
M2-6:2 FTS	65		25 - 150
M2-8:2 FTS	56		25 - 150
d5-NEtFOSAA	93		25 - 150
d3-NMeFOSAA	83		25 - 150
d-N-MeFOSA-M	85		25 - 150
d-N-EtFOSA-M	75		25 - 150
d7-N-MeFOSE-M	73		10 - 120
d9-N-EtFOSE-M	77		10 - 120
13C3 HFPO-DA	80		25 - 150



QC Sample Results

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 320-86450-1 MSD
Matrix: Solid
Analysis Batch: 578411

Client Sample ID: HA1-1.5-2.0
Prep Type: Total/NA
Prep Batch: 578613

Analyte	Sample	Sample Qualifier	Spike Added	MSD	MSD	Unit	D	%Rec	%Rec	RPD	Limit
	Result			Result	Qualifier				Limits		
Perfluorobutanoic acid (PFBA)	<0.21		2.08	2.24		ug/Kg	*	108	76 - 136	1	30
Perfluoropentanoic acid (PFPeA)	<0.21		2.08	2.38		ug/Kg	*	114	69 - 129	2	30
Perfluorohexanoic acid (PFHxA)	<0.21		2.08	2.04		ug/Kg	*	98	71 - 131	5	30
Perfluoroheptanoic acid (PFHpA)	<0.21		2.08	2.48		ug/Kg	*	119	71 - 131	3	30
Perfluorooctanoic acid (PFOA)	<0.21		2.08	2.33		ug/Kg	*	112	72 - 132	3	30
Perfluorononanoic acid (PFNA)	<0.21		2.08	2.26		ug/Kg	*	108	73 - 133	5	30
Perfluorodecanoic acid (PFDA)	<0.21		2.08	2.08		ug/Kg	*	100	72 - 132	10	30
Perfluoroundecanoic acid (PFUnA)	<0.21	F1	2.08	2.51		ug/Kg	*	120	66 - 126	9	30
Perfluorododecanoic acid (PFDoA)	<0.21		2.08	2.14		ug/Kg	*	103	71 - 131	10	30
Perfluorotridecanoic acid (PFTrDA)	<0.21		2.08	1.78		ug/Kg	*	85	71 - 131	19	30
Perfluorotetradecanoic acid (PFTeA)	<0.21		2.08	2.29		ug/Kg	*	110	67 - 127	2	30
Perfluorobutanesulfonic acid (PFBS)	<0.21		1.84	2.24		ug/Kg	*	121	69 - 129	9	30
Perfluoropentanesulfonic acid (PFPeS)	<0.21		1.95	2.10		ug/Kg	*	107	66 - 126	1	30
Perfluorohexanesulfonic acid (PFHxS)	<0.21		1.90	2.07		ug/Kg	*	109	62 - 122	4	30
Perfluoroheptanesulfonic acid (PFHpS)	<0.21		1.98	2.48		ug/Kg	*	125	76 - 136	1	30
Perfluorooctanesulfonic acid (PFOS)	<0.21		1.93	2.18		ug/Kg	*	113	68 - 141	2	30
Perfluorononanesulfonic acid (PFNS)	<0.21		2.00	2.28		ug/Kg	*	114	72 - 132	6	30
Perfluorodecanesulfonic acid (PFDS)	<0.21		2.01	2.33		ug/Kg	*	116	71 - 131	1	30
Perfluorododecanesulfonic acid (PFDoS)	<0.21		2.02	2.32		ug/Kg	*	115	70 - 130	3	30
Perfluorooctanesulfonamide (FOSA)	<0.21		2.08	2.13		ug/Kg	*	102	77 - 137	11	30
NMeFOSAA	<0.21		2.08	2.22		ug/Kg	*	107	72 - 132	3	30
NEtFOSAA	<0.21		2.08	2.26		ug/Kg	*	109	72 - 132	1	30
4:2 FTS	<0.21		1.95	2.15		ug/Kg	*	111	68 - 143	3	30
6:2 FTS	<0.21		1.97	1.91		ug/Kg	*	97	73 - 139	4	30
8:2 FTS	<0.21		2.00	2.30		ug/Kg	*	115	75 - 135	6	30
NEtFOSA	<0.21		2.08	2.43		ug/Kg	*	117	47 - 161	5	30
NMeFOSA	<0.21		2.08	2.35		ug/Kg	*	113	63 - 148	11	30
NMeFOSE	<0.21		2.08	2.44		ug/Kg	*	117	43 - 153	3	30
NEtFOSE	<0.21		2.08	2.24		ug/Kg	*	108	44 - 155	7	30
9Cl-PF3ONS	<0.21		1.94	2.17		ug/Kg	*	112	74 - 134	2	30
11Cl-PF3OUdS	<0.21		1.96	2.28		ug/Kg	*	116	66 - 136	0	30
HFPO-DA (GenX)	<0.21		2.08	2.34		ug/Kg	*	112	53 - 158	4	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.21		1.96	2.63		ug/Kg	*	134	79 - 139	4	30

Isotope Dilution	MSD	MSD	Limits
	%Recovery	Qualifier	
13C4 PFBA	80		25 - 150
13C5 PFPeA	84		25 - 150
13C2 PFHxA	93		25 - 150

QC Sample Results

Client: 3M Company
 Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 320-86450-1 MSD
Matrix: Solid
Analysis Batch: 578411

Client Sample ID: HA1-1.5-2.0
Prep Type: Total/NA
Prep Batch: 578613

Isotope Dilution	MSD MSD		Limits
	%Recovery	Qualifier	
13C4 PFHpA	84		25 - 150
13C4 PFOA	84		25 - 150
13C5 PFNA	82		25 - 150
13C2 PFDA	86		25 - 150
13C2 PFUnA	85		25 - 150
13C2 PFDoA	94		25 - 150
13C2 PFHxDA	91		25 - 150
13C2 PFTeDA	81		25 - 150
13C3 PFBS	79		25 - 150
18O2 PFHxS	85		25 - 150
13C4 PFOS	77		25 - 150
13C8 FOSA	101		25 - 150
M2-4:2 FTS	69		25 - 150
M2-6:2 FTS	60		25 - 150
M2-8:2 FTS	54		25 - 150
d5-NEtFOSAA	89		25 - 150
d3-NMeFOSAA	79		25 - 150
d-N-MeFOSA-M	73		25 - 150
d-N-EtFOSA-M	67		25 - 150
d7-N-MeFOSE-M	72		10 - 120
d9-N-EtFOSE-M	72		10 - 120
13C3 HFPO-DA	89		25 - 150

Method: D 2216 - Percent Moisture

Lab Sample ID: 320-86450-1 DU
Matrix: Solid
Analysis Batch: 577994

Client Sample ID: HA1-1.5-2.0
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU	DU	Unit	D	RPD	RPD
			Result	Qualifier				Limit
Percent Moisture	5.9		5.6		%		5	20
Percent Solids	94.1		94.4		%		0.3	20

QC Association Summary

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

LCMS

Prep Batch: 578250

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-86450-17	Field Blank	Total/NA	Water	3535	
320-86450-18	Rinsate Blank	Total/NA	Water	3535	
MB 320-578250/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-578250/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-578250/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 578411

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-86450-1	HA1-1.5-2.0	Total/NA	Solid	537 (modified)	578613
320-86450-2	HA2 1.5-2	Total/NA	Solid	537 (modified)	578613
320-86450-3	HA3 1.5-2	Total/NA	Solid	537 (modified)	578613
320-86450-4	HA4 1.5-2	Total/NA	Solid	537 (modified)	578613
320-86450-5	HA5 1.5-2	Total/NA	Solid	537 (modified)	578613
320-86450-6	HA6 1.5-2	Total/NA	Solid	537 (modified)	578613
320-86450-7	HA7 1.5-2	Total/NA	Solid	537 (modified)	578613
320-86450-8	HA8 1.5-2	Total/NA	Solid	537 (modified)	578613
320-86450-9	HA9 1.5-2	Total/NA	Solid	537 (modified)	578613
320-86450-10	HA10 1.5-2	Total/NA	Solid	537 (modified)	578613
320-86450-11	HA11 1.5-2	Total/NA	Solid	537 (modified)	578613
320-86450-12	HA12 1.5-2	Total/NA	Solid	537 (modified)	578613
320-86450-13	HA13 1.5-2	Total/NA	Solid	537 (modified)	578613
320-86450-14	HA14 1.5-2	Total/NA	Solid	537 (modified)	578613
320-86450-15	HA15 1.5-2	Total/NA	Solid	537 (modified)	578613
320-86450-16	HA16 1.5-2	Total/NA	Solid	537 (modified)	578613
MB 320-578613/1-A	Method Blank	Total/NA	Solid	537 (modified)	578613
LCS 320-578613/2-A	Lab Control Sample	Total/NA	Solid	537 (modified)	578613
320-86450-1 MS	HA1-1.5-2.0	Total/NA	Solid	537 (modified)	578613
320-86450-1 MSD	HA1-1.5-2.0	Total/NA	Solid	537 (modified)	578613

Analysis Batch: 578535

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-86450-17	Field Blank	Total/NA	Water	537 (modified)	578250
320-86450-18	Rinsate Blank	Total/NA	Water	537 (modified)	578250
MB 320-578250/1-A	Method Blank	Total/NA	Water	537 (modified)	578250

Analysis Batch: 578561

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 320-578250/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	578250
LCSD 320-578250/3-A	Lab Control Sample Dup	Total/NA	Water	537 (modified)	578250

Prep Batch: 578613

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-86450-1	HA1-1.5-2.0	Total/NA	Solid	SHAKE	
320-86450-2	HA2 1.5-2	Total/NA	Solid	SHAKE	
320-86450-3	HA3 1.5-2	Total/NA	Solid	SHAKE	
320-86450-4	HA4 1.5-2	Total/NA	Solid	SHAKE	
320-86450-5	HA5 1.5-2	Total/NA	Solid	SHAKE	
320-86450-6	HA6 1.5-2	Total/NA	Solid	SHAKE	
320-86450-7	HA7 1.5-2	Total/NA	Solid	SHAKE	
320-86450-8	HA8 1.5-2	Total/NA	Solid	SHAKE	
320-86450-9	HA9 1.5-2	Total/NA	Solid	SHAKE	

Eurofins Sacramento

QC Association Summary

Client: 3M Company
 Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

LCMS (Continued)

Prep Batch: 578613 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-86450-10	HA10 1.5-2	Total/NA	Solid	SHAKE	
320-86450-11	HA11 1.5-2	Total/NA	Solid	SHAKE	
320-86450-12	HA12 1.5-2	Total/NA	Solid	SHAKE	
320-86450-13	HA13 1.5-2	Total/NA	Solid	SHAKE	
320-86450-14	HA14 1.5-2	Total/NA	Solid	SHAKE	
320-86450-15	HA15 1.5-2	Total/NA	Solid	SHAKE	
320-86450-16	HA16 1.5-2	Total/NA	Solid	SHAKE	
MB 320-578613/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 320-578613/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
320-86450-1 MS	HA1-1.5-2.0	Total/NA	Solid	SHAKE	
320-86450-1 MSD	HA1-1.5-2.0	Total/NA	Solid	SHAKE	

General Chemistry

Analysis Batch: 577994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-86450-1	HA1-1.5-2.0	Total/NA	Solid	D 2216	
320-86450-2	HA2 1.5-2	Total/NA	Solid	D 2216	
320-86450-3	HA3 1.5-2	Total/NA	Solid	D 2216	
320-86450-4	HA4 1.5-2	Total/NA	Solid	D 2216	
320-86450-5	HA5 1.5-2	Total/NA	Solid	D 2216	
320-86450-6	HA6 1.5-2	Total/NA	Solid	D 2216	
320-86450-7	HA7 1.5-2	Total/NA	Solid	D 2216	
320-86450-8	HA8 1.5-2	Total/NA	Solid	D 2216	
320-86450-9	HA9 1.5-2	Total/NA	Solid	D 2216	
320-86450-10	HA10 1.5-2	Total/NA	Solid	D 2216	
320-86450-11	HA11 1.5-2	Total/NA	Solid	D 2216	
320-86450-12	HA12 1.5-2	Total/NA	Solid	D 2216	
320-86450-13	HA13 1.5-2	Total/NA	Solid	D 2216	
320-86450-14	HA14 1.5-2	Total/NA	Solid	D 2216	
320-86450-15	HA15 1.5-2	Total/NA	Solid	D 2216	
320-86450-16	HA16 1.5-2	Total/NA	Solid	D 2216	
320-86450-1 DU	HA1-1.5-2.0	Total/NA	Solid	D 2216	

Lab Chronicle

Client: 3M Company
 Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: HA1-1.5-2.0

Lab Sample ID: 320-86450-1

Date Collected: 04/01/22 09:45

Matrix: Solid

Date Received: 04/05/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			577994	04/05/22 13:55	DJW	TAL SAC

Client Sample ID: HA1-1.5-2.0

Lab Sample ID: 320-86450-1

Date Collected: 04/01/22 09:45

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 94.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.12 g	10.0 mL	578613	04/06/22 12:56	EH	TAL SAC
Total/NA	Analysis	537 (modified)		1			578411	04/07/22 12:30	S1M	TAL SAC

Client Sample ID: HA2 1.5-2

Lab Sample ID: 320-86450-2

Date Collected: 04/01/22 09:55

Matrix: Solid

Date Received: 04/05/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			577994	04/05/22 13:55	DJW	TAL SAC

Client Sample ID: HA2 1.5-2

Lab Sample ID: 320-86450-2

Date Collected: 04/01/22 09:55

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 82.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.14 g	10.0 mL	578613	04/06/22 12:56	EH	TAL SAC
Total/NA	Analysis	537 (modified)		1			578411	04/07/22 12:00	S1M	TAL SAC

Client Sample ID: HA3 1.5-2

Lab Sample ID: 320-86450-3

Date Collected: 04/01/22 10:00

Matrix: Solid

Date Received: 04/05/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			577994	04/05/22 13:55	DJW	TAL SAC

Client Sample ID: HA3 1.5-2

Lab Sample ID: 320-86450-3

Date Collected: 04/01/22 10:00

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 93.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.20 g	10.0 mL	578613	04/06/22 12:56	EH	TAL SAC
Total/NA	Analysis	537 (modified)		1			578411	04/07/22 13:00	S1M	TAL SAC

Client Sample ID: HA4 1.5-2

Lab Sample ID: 320-86450-4

Date Collected: 04/01/22 10:10

Matrix: Solid

Date Received: 04/05/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			577994	04/05/22 13:55	DJW	TAL SAC

Eurofins Sacramento

Lab Chronicle

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: HA4 1.5-2

Date Collected: 04/01/22 10:10

Date Received: 04/05/22 09:50

Lab Sample ID: 320-86450-4

Matrix: Solid

Percent Solids: 90.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.40 g	10.0 mL	578613	04/06/22 12:56	EH	TAL SAC
Total/NA	Analysis	537 (modified)		1			578411	04/07/22 13:11	S1M	TAL SAC

Client Sample ID: HA5 1.5-2

Date Collected: 04/01/22 10:30

Date Received: 04/05/22 09:50

Lab Sample ID: 320-86450-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			577994	04/05/22 13:55	DJW	TAL SAC

Client Sample ID: HA5 1.5-2

Date Collected: 04/01/22 10:30

Date Received: 04/05/22 09:50

Lab Sample ID: 320-86450-5

Matrix: Solid

Percent Solids: 93.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.16 g	10.0 mL	578613	04/06/22 12:56	EH	TAL SAC
Total/NA	Analysis	537 (modified)		1			578411	04/07/22 13:21	S1M	TAL SAC

Client Sample ID: HA6 1.5-2

Date Collected: 04/01/22 10:40

Date Received: 04/05/22 09:50

Lab Sample ID: 320-86450-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			577994	04/05/22 13:55	DJW	TAL SAC

Client Sample ID: HA6 1.5-2

Date Collected: 04/01/22 10:40

Date Received: 04/05/22 09:50

Lab Sample ID: 320-86450-6

Matrix: Solid

Percent Solids: 87.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.28 g	10.0 mL	578613	04/06/22 12:56	EH	TAL SAC
Total/NA	Analysis	537 (modified)		1			578411	04/07/22 13:31	S1M	TAL SAC

Client Sample ID: HA7 1.5-2

Date Collected: 04/01/22 10:50

Date Received: 04/05/22 09:50

Lab Sample ID: 320-86450-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			577994	04/05/22 13:55	DJW	TAL SAC

Lab Chronicle

Client: 3M Company
 Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: HA7 1.5-2

Lab Sample ID: 320-86450-7

Date Collected: 04/01/22 10:50

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 93.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.20 g	10.0 mL	578613	04/06/22 12:56	EH	TAL SAC
Total/NA	Analysis	537 (modified)		1			578411	04/07/22 13:41	S1M	TAL SAC

Client Sample ID: HA8 1.5-2

Lab Sample ID: 320-86450-8

Date Collected: 04/01/22 11:05

Matrix: Solid

Date Received: 04/05/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			577994	04/05/22 13:55	DJW	TAL SAC

Client Sample ID: HA8 1.5-2

Lab Sample ID: 320-86450-8

Date Collected: 04/01/22 11:05

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 90.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.18 g	10.0 mL	578613	04/06/22 12:56	EH	TAL SAC
Total/NA	Analysis	537 (modified)		1			578411	04/07/22 13:51	S1M	TAL SAC

Client Sample ID: HA9 1.5-2

Lab Sample ID: 320-86450-9

Date Collected: 04/01/22 11:15

Matrix: Solid

Date Received: 04/05/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			577994	04/05/22 13:55	DJW	TAL SAC

Client Sample ID: HA9 1.5-2

Lab Sample ID: 320-86450-9

Date Collected: 04/01/22 11:15

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 86.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.14 g	10.0 mL	578613	04/06/22 12:56	EH	TAL SAC
Total/NA	Analysis	537 (modified)		1			578411	04/07/22 14:01	S1M	TAL SAC

Client Sample ID: HA10 1.5-2

Lab Sample ID: 320-86450-10

Date Collected: 04/01/22 11:30

Matrix: Solid

Date Received: 04/05/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			577994	04/05/22 13:55	DJW	TAL SAC

Lab Chronicle

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: HA10 1.5-2

Lab Sample ID: 320-86450-10

Date Collected: 04/01/22 11:30

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 86.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.12 g	10.0 mL	578613	04/06/22 12:56	EH	TAL SAC
Total/NA	Analysis	537 (modified)		10			578411	04/07/22 15:12	S1M	TAL SAC

Client Sample ID: HA11 1.5-2

Lab Sample ID: 320-86450-11

Date Collected: 04/01/22 12:30

Matrix: Solid

Date Received: 04/05/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			577994	04/05/22 13:55	DJW	TAL SAC

Client Sample ID: HA11 1.5-2

Lab Sample ID: 320-86450-11

Date Collected: 04/01/22 12:30

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 90.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.20 g	10.0 mL	578613	04/06/22 12:56	EH	TAL SAC
Total/NA	Analysis	537 (modified)		10			578411	04/07/22 15:22	S1M	TAL SAC

Client Sample ID: HA12 1.5-2

Lab Sample ID: 320-86450-12

Date Collected: 04/01/22 12:40

Matrix: Solid

Date Received: 04/05/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			577994	04/05/22 13:55	DJW	TAL SAC

Client Sample ID: HA12 1.5-2

Lab Sample ID: 320-86450-12

Date Collected: 04/01/22 12:40

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 92.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.22 g	10.0 mL	578613	04/06/22 12:56	EH	TAL SAC
Total/NA	Analysis	537 (modified)		1			578411	04/07/22 14:32	S1M	TAL SAC

Client Sample ID: HA13 1.5-2

Lab Sample ID: 320-86450-13

Date Collected: 04/01/22 12:45

Matrix: Solid

Date Received: 04/05/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			577994	04/05/22 13:55	DJW	TAL SAC

Lab Chronicle

Client: 3M Company
 Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: HA13 1.5-2

Lab Sample ID: 320-86450-13

Date Collected: 04/01/22 12:45

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 90.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.38 g	10.0 mL	578613	04/06/22 12:56	EH	TAL SAC
Total/NA	Analysis	537 (modified)		1			578411	04/07/22 14:42	S1M	TAL SAC

Client Sample ID: HA14 1.5-2

Lab Sample ID: 320-86450-14

Date Collected: 04/01/22 12:55

Matrix: Solid

Date Received: 04/05/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			577994	04/05/22 13:55	DJW	TAL SAC

Client Sample ID: HA14 1.5-2

Lab Sample ID: 320-86450-14

Date Collected: 04/01/22 12:55

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 93.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.32 g	10.0 mL	578613	04/06/22 12:56	EH	TAL SAC
Total/NA	Analysis	537 (modified)		1			578411	04/07/22 14:52	S1M	TAL SAC

Client Sample ID: HA15 1.5-2

Lab Sample ID: 320-86450-15

Date Collected: 04/01/22 13:15

Matrix: Solid

Date Received: 04/05/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			577994	04/05/22 13:55	DJW	TAL SAC

Client Sample ID: HA15 1.5-2

Lab Sample ID: 320-86450-15

Date Collected: 04/01/22 13:15

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 90.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.22 g	10.0 mL	578613	04/06/22 12:56	EH	TAL SAC
Total/NA	Analysis	537 (modified)		1			578411	04/07/22 15:02	S1M	TAL SAC

Client Sample ID: HA16 1.5-2

Lab Sample ID: 320-86450-16

Date Collected: 04/01/22 13:30

Matrix: Solid

Date Received: 04/05/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			577994	04/05/22 13:55	DJW	TAL SAC

Lab Chronicle

Client: 3M Company
 Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Client Sample ID: HA16 1.5-2

Lab Sample ID: 320-86450-16

Date Collected: 04/01/22 13:30

Matrix: Solid

Date Received: 04/05/22 09:50

Percent Solids: 93.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.18 g	10.0 mL	578613	04/06/22 12:56	EH	TAL SAC
Total/NA	Analysis	537 (modified)		10			578411	04/07/22 15:32	S1M	TAL SAC

Client Sample ID: Field Blank

Lab Sample ID: 320-86450-17

Date Collected: 04/01/22 14:05

Matrix: Water

Date Received: 04/05/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			265.2 mL	10.0 mL	578250	04/06/22 12:24	KAA	TAL SAC
Total/NA	Analysis	537 (modified)		1			578535	04/07/22 20:17	K1S	TAL SAC

Client Sample ID: Rinsate Blank

Lab Sample ID: 320-86450-18

Date Collected: 04/01/22 14:00

Matrix: Water

Date Received: 04/05/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			268.4 mL	10.0 mL	578250	04/06/22 12:24	KAA	TAL SAC
Total/NA	Analysis	537 (modified)		1			578535	04/07/22 20:27	K1S	TAL SAC

Laboratory References:

TAL SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: 3M Company
 Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Laboratory: Eurofins Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	02-20-24
ANAB	Dept. of Defense ELAP	L2468	01-20-24
ANAB	Dept. of Energy	L2468.01	01-20-24
ANAB	ISO/IEC 17025	L2468	01-20-24
Arizona	State	AZ0708	08-11-22
Arkansas DEQ	State	88-0691	06-17-22
California	State	2897	01-31-23
Colorado	State	CA0004	08-31-22
Florida	NELAP	E87570	06-30-22
Georgia	State	4040	01-30-23
Hawaii	State	<cert No.>	01-29-23
Illinois	NELAP	200060	03-17-23
Louisiana	NELAP	01944	06-30-22
Maine	State	CA00004	04-14-22
Michigan	State	9947	01-31-23
Nevada	State	CA00044	08-31-22
New Hampshire	NELAP	2997	04-18-22
New Jersey	NELAP	CA005	06-30-22
New York	NELAP	11666	04-02-23
Ohio	State	41252	01-29-23
Oregon	NELAP	4040	01-29-23
Texas	NELAP	T104704399-19-13	05-31-22
US Fish & Wildlife	US Federal Programs	58448	07-31-22
USDA	US Federal Programs	P330-18-00239	01-23-23
Utah	NELAP	CA000442021-12	03-01-22 *
Virginia	NELAP	460278	03-14-23
Washington	State	C581	05-05-22
West Virginia (DW)	State	9930C	12-31-22
Wisconsin	State	998204680	08-31-22
Wyoming	State Program	8TMS-L	01-28-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC
3535	Solid-Phase Extraction (SPE)	SW846	TAL SAC
SHAKE	Shake Extraction with Ultrasonic Bath Extraction	SW846	TAL SAC

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600



Sample Summary

Client: 3M Company
Project/Site: E22-0203 Menomonie Soils

Job ID: 320-86450-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-86450-1	HA1-1.5-2.0	Solid	04/01/22 09:45	04/05/22 09:50
320-86450-2	HA2 1.5-2	Solid	04/01/22 09:55	04/05/22 09:50
320-86450-3	HA3 1.5-2	Solid	04/01/22 10:00	04/05/22 09:50
320-86450-4	HA4 1.5-2	Solid	04/01/22 10:10	04/05/22 09:50
320-86450-5	HA5 1.5-2	Solid	04/01/22 10:30	04/05/22 09:50
320-86450-6	HA6 1.5-2	Solid	04/01/22 10:40	04/05/22 09:50
320-86450-7	HA7 1.5-2	Solid	04/01/22 10:50	04/05/22 09:50
320-86450-8	HA8 1.5-2	Solid	04/01/22 11:05	04/05/22 09:50
320-86450-9	HA9 1.5-2	Solid	04/01/22 11:15	04/05/22 09:50
320-86450-10	HA10 1.5-2	Solid	04/01/22 11:30	04/05/22 09:50
320-86450-11	HA11 1.5-2	Solid	04/01/22 12:30	04/05/22 09:50
320-86450-12	HA12 1.5-2	Solid	04/01/22 12:40	04/05/22 09:50
320-86450-13	HA13 1.5-2	Solid	04/01/22 12:45	04/05/22 09:50
320-86450-14	HA14 1.5-2	Solid	04/01/22 12:55	04/05/22 09:50
320-86450-15	HA15 1.5-2	Solid	04/01/22 13:15	04/05/22 09:50
320-86450-16	HA16 1.5-2	Solid	04/01/22 13:30	04/05/22 09:50
320-86450-17	Field Blank	Water	04/01/22 14:05	04/05/22 09:50
320-86450-18	Rinsate Blank	Water	04/01/22 14:00	04/05/22 09:50



182

**3M Global EHS Laboratory -
Managed Outsourced Testing**

Shipping Address:
Eurofins Environment Testing America - Sacramento
880 Riverside Parkway
West Sacramento, CA 95605

Chain of Custody / Request for Analytical

Project Description: 3M Menomonic Construction Area Soils
Requester: Ryan, Christopher (MAPLEWOOD-3MUS-MN 3M CENTER)
Department: Site Source: 01J9C020
Date Created: 3/28/2022

Project: E22-0203



Project Lead: Amanda Albrecht
Phone Number: 651-736-9414
Email Address: aalbrecht2@mimm.com 320-86450 Chain of Custody

NUMERIC LABELS

Item	3M Sample Number	Sample Description	Date/Time Sampled	Matrix	Type of Sample	Record each container type/ preservative collected
1	E22-0203-001	HA1- 1.5-2.0	4-1-22 09:45	SOIL	<input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite	1
2	E22-0203-002	HA 2 1.5-2	4-1-22 09:55	SOIL	<input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite	1
3	E22-0203-003	HA 3 1.5-2	4-1-22 10:00	SOIL	<input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite	1
4	E22-0203-004	HA 4 1.5-2	4-1-22 10:10	SOIL	<input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite	1
5	E22-0203-005	HA 5 1.5-2	4-1-22 10:30	SOIL	<input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite	1
6	E22-0203-006	HA 6 1.5-2	4-1-22 10:40	SOIL	<input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite	1
7	E22-0203-007	HA 7 1.5-2	4-1-22 10:50	SOIL	<input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite	1
8	E22-0203-008	HA 8 1.5-2	4-1-22 11:05	SOIL	<input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite	1
9	E22-0203-009	HA 9 1.5-2	4-1-22 11:15	SOIL	<input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite	1
10	E22-0203-010	HA 10 1.5-2	4-1-22 11:30	SOIL	<input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite	1
11	E22-0203-011	HA 11 1.5-2	4-1-22 12:30 pm	SOIL	<input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite	1
12	E22-0203-012	HA 12 1.5-2	4-1-22 12:40 pm	SOIL	<input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite	1
13	E22-0203-013	HA 13 1.5-2	4-1-22 12:45 pm	SOIL	<input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite	1
14	E22-0203-014	HA 14 1.5-2	4-1-22 12:55 pm	SOIL	<input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite	1
15	E22-0203-015	HA 15 1.5-2	4-1-22 1:15 pm	SOIL	<input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite	1
16	E22-0203-016	HA 16 1.5-2	4-1-22 1:30 pm	SOIL	<input checked="" type="checkbox"/> Grab <input type="checkbox"/> Composite	1

Collected by (print): ERIC CARMAN Collector's signature: [Signature]

Item	Relinquished by:	Date	Time	Shipped Via	Received by:	Date	Time
1	<u>Eric Carman</u>	4/4/22	12:30pm	FedEx	<u>[Signature]</u>	4/12/22	7:52

Comments: Sample description was/is the field ID.

Contact EHS Lab project lead for requested tests and target analytes.
For composite samples, add start/stop times into sample comment section.



2 of 2

**3M Global EHS Laboratory -
Managed Outsourced Testing**

Chain of Custody / Request for Analytical

Project: E22-0203 (cont.)

Shipping Address:
Eurofins Environment Testing America - Sacramento
880 Riverside Parkway
West Sacramento, CA 95605

Project Description: 3M Menomonie Construction Area Soils
Requester: Ryan, Christopher (MAPLEWOOD-3MUS-MN 3M CENTER)
Department: Site Source: 01J9C020
Date Created: 3/28/2022

Project Lead: Amanda Albrecht
Phone Number: 651-736-9414
Email Address: aalbrecht2@mmm.com

Item	3M Sample Number	Sample Description	Date/Time Sampled	Matrix	Type of Sample	Sample Comment	Record each container type/ preservative collected	Number of Containers
17	E22-0203-017	Field Blank	4-1-22 2:45 PM	SOIL	<input type="checkbox"/> Grab <input type="checkbox"/> Composite	SAR/C		1
18	E22-0203-018	Rinsate Blank	4-1-22 2:46	SOIL	<input type="checkbox"/> Grab <input type="checkbox"/> Composite	CA/AL		1
19	E22-0203-019			SOIL	<input type="checkbox"/> Grab <input type="checkbox"/> Composite			
20	E22-0203-020			SOIL	<input type="checkbox"/> Grab <input type="checkbox"/> Composite			
21	E22-0203-021			SOIL	<input type="checkbox"/> Grab <input type="checkbox"/> Composite			
22	E22-0203-022			SOIL	<input type="checkbox"/> Grab <input type="checkbox"/> Composite			

Water samples not soil - DT 9/5/22

Item	Date	Time	Shipped Via	Received by:	Date	Time	Comments
1	4/14/22	12:30	FedEx	Eric Carman	4/15/22	9:50	Sample description is/was the field ID.

Contact EHS Lab project lead for requested tests and target analytes.
For composite samples, add start/stop times into sample comment section.



Order #	Ordered By:	Deliver to:	Return to:
66	Chris Ryan Menomonie	1425 Stokke Pkwy Menomonie, WI 54751 Attn: Lijane Brunner 715-578-2370	Eurofins Environment Testing America - Sacramento 880 Riverside Parkway West Sacramento, CA 95605

Need by date:	Delivery Method:
Tuesday, March 29, 2022	Pick up
LIMS#:	Project Name:
0	Menomonie Soil Project
TAT needed:	Analytical Lab:
5 day rush	SAME

Test parameters	Analytes	Matrix	Container Type
537 (modified)	33 Analytes	SL	4oz jar
# of Containers per sample	# of samples (including duplicates)	# of MS/MSD	
1	22	0	
# of QC (FB, EB)	TB needed?	# of containers total?	
0 2 1FG 1EB	0	22	

COC included in shipment?	1	Notes:
GPO included in shipment?	No	
Sample labels included in shipment?	Yes	
Custody seal included in shipment?	No	



Login Sample Receipt Checklist

Client: 3M Company

Job Number: 320-86450-1

Login Number: 86450

List Source: Eurofins Sacramento

List Number: 1

Creator: Her, David A

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	1846330/1846331
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	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	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
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	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
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	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Report Prepared for:

Amanda Albrecht
3M Cottage Grove
3M Center, 260-05-N-17
St. Paul MN 55144

**REPORT OF
LABORATORY
ANALYSIS
FOR PFAAs**

Report Prepared Date:
September 21, 2022

Report Information:

Pace Project #: 10623513
Sample Receipt Date: 08/30/2022
Client Project #: E22-0514
Client Sub PO #: 3501522477
State Cert #: N/A

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PFAA Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Kirsten Hogberg, your Pace Project Manager.

This report has been reviewed by:



September 22, 2022

Kirsten Hogberg, Project Manager
(612) 607-6407
(612) 607-6444 (fax)
kirsten.hogberg@pacelabs.com



Report of Laboratory Analysis

This report should not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

The results relate only to the samples included in this report.

DISCUSSION

This report presents the results from the analyses performed on nine samples, one matrix spike, and one matrix spike duplicate submitted by Tetra Tech on behalf of 3M Menomonie. The samples were analyzed for twenty-nine perfluorinated compounds using DOD QSM 5.3 for PFAS. Reporting limits were set to quantification limits. Results for solid samples are expressed on dry weight basis. This report was revised September 21, 2022 to update the narrative on who submitted the samples.

A laboratory method blank was prepared and analyzed with each sample batch as part of our routine quality control procedures. The results show the blank was free of the target perfluorinated compounds at the reporting limits. This indicates that the sample processing procedures did not significantly contribute to the analyte content determined for the sample material.

A laboratory spike sample was also prepared with each sample batch using clean reference matrix that had been fortified with native standards. With the exception of PFNS and PFPeS in LCS-101005, the recovery results were within the method limits. However since, PFNS and PFPeS were not detected in the sample material and recovery was on the high side, the results were accepted.

On the matrix spikes there are several analytes that are marked R as the recoveries are diminished or elevated from the expected levels. These deviations may be due to the presence of the affected analytes in the sample material and/or sample inhomogeneity.

Diminished/elevated extracted internal standard (EIS) recovery ("R" flagged) was present in samples and CCV, however, the use of the isotope dilution method generally precludes any adverse impact on those individual native compounds that have a directly associated standard.

Sample "MEN-FB-S-220826" has recoveries less than 1% for d5EtFOSA. The results for these native compounds should be considered estimated.

The four injection internal standards (13C4 PFOA, 13C4 PFOS, 13C2_PFDA, and 13C2_PFHxA) pass for each analysis in the batch verifying that the instrument detector is working as expected.

Results for selected analytes were taken from secondary dilutions of the sample extracts in order to bring the results within the calibration range. The affected values were flagged "D" on the results tables.

DISCUSSION

Values were flagged "I" where incorrect isotope ratios were obtained.

Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
A2LA	2926.01	Mississippi	MN00064
Alabama	40770	Missouri	10100
Alaska-DW	MN00064	Montana	CERT0092
Alaska-UST	17-009	Nebraska	NE-OS-18-06
Arizona	AZ0014	Nevada	MN00064
Arkansas - WW	88-0680	New Hampshire	2081
Arkansas-DW	MN00064	New Jersey	MN002
California	2929	New York	11647
Colorado	MN00064	North Carolina-	27700
Connecticut	PH-0256	North Carolina-	530
Florida	E87605	North Dakota	R-036
Georgia	959	Ohio-DW	41244
Hawaii	MN00064	Ohio-VAP (170	CL101
Idaho	MN00064	Ohio-VAP (180	CL110
Illinois	200011	Oklahoma	9507
Indiana	C-MN-01	Oregon- rimary	MN300001
Iowa	368	Oregon-Second	MN200001
Kansas	E-10167	Pennsylvania	68-00563
Kentucky-DW	90062	Puerto Rico	MN00064
Kentucky-WW	90062	South Carolina	74003
Louisiana-DEQ	AI-84596	Tennessee	TN02818
Louisiana-DW	MN00064	Texas	T104704192
Maine	MN00064	Utah	MN00064
Maryland	322	Vermont	VT-027053137
Michigan	9909	Virginia	460163
Minnesota	027-053-137	Washington	C486
Minnesota-Ag	via MN 027-053	West Virginia-D	382
Minnesota-Petr	1240	West Virginia-D	9952C
		Wisconsin	999407970
		Wyoming-UST	via A2LA 2926.

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1700 Elm Street, Suite 200
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444
www.pacelabs.com

Appendix A

Sample Management

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
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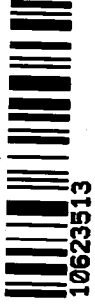
Sample ID Cross Reference

<u>Client Sample ID</u>	<u>Pace Sample ID</u>	<u>Date Received</u>	<u>Sample Type</u>
1-MEN-S-220826	10623513001	08/30/2022	Solid
2-MEN-S-220826	10623513002	08/30/2022	Solid
3-MEN-S-220826	10623513003	08/30/2022	Solid
4-MEN-S-220826	10623513004	08/30/2022	Solid
5-MEN-S-220826	10623513005	08/30/2022	Solid
6 MEN-S-220826	10623513006	08/30/2022	Solid
7 MEN-S-220826	10623513007	08/30/2022	Solid
MEN-EB-S-220826	10623513008	08/30/2022	Water
MEN-FB-S-220826	10623513009	08/30/2022	Water

REPORT OF LABORATORY ANALYSIS

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W0#: 10623513



LAB USE ONLY - Affix Workorder/Lof MTJLI

ALL SHADED ARE Container Preservative Type **

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

Billing Information:

3-M, 3M CENTER
225-IN-22
ST. PAUL, MN 55144-1000

Email To:

BITTA CHAMBERS

Site Collection Info/Address:

State: County/City: Time Zone Collected:

WI / MEMPHIS, TN [] PT [] MT [] ET

Compliance Monitoring?

[] Yes [] No

DW PWS ID #:

DW Location Code:

Immediately Packed on Ice:

[] Yes [] No

Field Filtered (if applicable):

[] Yes [] No

Analysis:

Analysis:

Analysis:

Analysis:

Analysis:

Analysis:

Analysis:

Analysis:

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Analysis:

Customer Sample ID	Matrix *	Grab	Composite Start	Time	Date	Wet	Blue	Dry	None	Res Cl	# of Ctns
1-MEN-S-220826	SL	Comp	8/26/22	14:30							1
2-MEN-S-220826	SL			15:55							1
3-MEN-S-220826	SL			13:00							1
4-MEN-S-220826	SL			13:30							1
5-MEN-S-220826	SL			14:45							1
6-MEN-S-220826	SL			15:30							1
7-MEN-S-220826	SL			16:00							1
MEN-EB-S-220826	OT			8/26/22	16:30						1
MEN-FB-S-220826	OT			8/26/22	16:40						1

Customer Sample ID	Matrix *	Grab	Composite Start	Time	Date	Wet	Blue	Dry	None	Res Cl	# of Ctns
1-MEN-S-220826	SL	Comp	8/26/22	14:30							1
2-MEN-S-220826	SL			15:55							1
3-MEN-S-220826	SL			13:00							1
4-MEN-S-220826	SL			13:30							1
5-MEN-S-220826	SL			14:45							1
6-MEN-S-220826	SL			15:30							1
7-MEN-S-220826	SL			16:00							1
MEN-EB-S-220826	OT			8/26/22	16:30						1
MEN-FB-S-220826	OT			8/26/22	16:40						1

Customer Remarks / Special Conditions / Possible Hazards:	SHORT HOLDS PRESENT (<72 hours): Y N N/A
Packing Material Used:	Lab Tracking #: 2802272
Raddchem sample(s) screened (<500 cpm): Y N NA	Samples received via: FEDEX UPS Client Courier Pace Courier
Date/Time:	Date/Time: 8/29/22 16:00
Date/Time:	Date/Time: 8/29/22 9:30
Date/Time:	Date/Time:

Relinquished by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:
Report No. 10623513_ID36_R1_DER	Revision 2

Lab Profile/Line: 44979
 Lab Sample Receipt Checklist:
 Custody Seals Present/Intact Y N NA
 Custody Signatures Present Y N NA
 Collector Signatures Present Y N NA
 Bottles Intact Y N NA
 Corrupt Bottles Y N NA
 Sufficient Volume Y N NA
 VOA - Headspace Acceptable Y N NA
 USDA Regulated Soils Y N NA
 Samples in Holding Time Y N NA
 Residual Chlorine Present Y N NA
 Cl Strips: Y N NA
 Sample pH Acceptable Y N NA
 pH Strips: Y N NA
 Sulfide Present Y N NA
 Lead Acetate Strips: Y N NA
 LAB USE ONLY: / Comments:
 Lab Sample # /

Lab Sample Temperature Info:
 Temp Blank Received: 9 N NA
 Therm ID#: T9
 Cooler 1 Temp Upon Receipt: 9.4 OC
 Cooler 1 Therm Corr. Factor: T OC
 Cooler 1 Corrected Temp: T OC
 Comments:
 Trip Blank Received: Y N NA
 HCL MeOH TSP Other
 Non Conformance(s): YES / NO
 Page: 1 of 1

Effective Date:

Sample Condition Upon Receipt **Client Name:** 3M

Project #: **WO# : 10623513**
 PM: KNH Due Date: 09/07/22
 CLIENT: 3M-COTTAGE

Courier: FedEx UPS USPS Client
 Pace SpeeDee Commercial
 See Exceptions

Tracking Number: _____ ENV-FRM-MIN4-0142
 Custody Seal on Cooler/Box Present? Yes No
 Seals Intact? Yes No
 Packing Material: Bubble Wrap Bubble Bags None Other
 Thermometer: T1 (0461) T2 (1336) T3 (0459)
 T4 (0254) T5 (0178) 01339252/1710

Biological Tissue Frozen? Yes No N/A
 Temp Blank? Yes No
 Type of Ice: Wet Blue Dry None
 Melted

Did Samples Originate in West Virginia? Yes No
 Were All Container Temps Taken? Yes No N/A
 Temp should be above freezing to 6 °C Cooler temp Read w/Temp Blank: 4.9 °C
 Average Corrected Temp (no temp blank only): _____ °C
 Correction Factor: True Cooler Temp Corrected w/temp blank: 4.9 °C
 See Exceptions ENV-FRM-MIN4-0142 1 Container

JSDA Regulated Soil: N/A, Water sample/other: _____ Date/Initials of Person Examining Contents: KN 8/30/22

Did samples originate in a quarantine zone within the United States: AL, AR, AZ, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check maps)? Yes No
 Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

If Yes to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.

Location (Check one): <input type="checkbox"/> Duluth <input checked="" type="checkbox"/> Minneapolis <input type="checkbox"/> Virginia	COMMENTS
Chain of Custody Present and Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 1.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 2.
Sampler Name and/or Signature on COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A 3.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 4. If fecal: <input type="checkbox"/> <8 hrs <input type="checkbox"/> >8 hr, <24 <input type="checkbox"/> No
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 5. <input type="checkbox"/> Fecal Coliform <input type="checkbox"/> HPC <input type="checkbox"/> Total Coliform/E.coli <input type="checkbox"/> BOD/cBOD <input type="checkbox"/> Hex Chrom <input type="checkbox"/> Turbidity <input type="checkbox"/> Nitrate <input type="checkbox"/> Nitrite <input type="checkbox"/> Orthophos <input type="checkbox"/> Other
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 6.
Sufficient Sample Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 7.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A 8.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 9.
Field Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A 10. Is sediment visible in the dissolved container? <input type="checkbox"/> Yes <input type="checkbox"/> No
Is sufficient information available to reconcile the samples to the COC? Matrix: <input checked="" type="checkbox"/> Water <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Oil <input type="checkbox"/> Other	11. If no, write ID/Date/Time of container below: <input type="checkbox"/> See Exceptions ENV-FRM-MIN4-0142
All containers needing acid/base preservation have been checked?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A 12. Sample # <input type="checkbox"/> NaOH <input type="checkbox"/> HNO3 <input type="checkbox"/> H2SO4 <input type="checkbox"/> Zinc Acetate
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO3, H2SO4, <2pH, NaOH >9 Sulfide, NaOH >10 Cyanide)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxins, PFAS (*If adding preservative to a container, it must be added to associated field and equipment blanks—verify with PM first.)	Positive for Residual Chlorine? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> See Exceptions ENV-FRM-MIN4-0142 pH Paper Lot # Residual Chlorine 0-6 Roll 0-6 Strip 0-14 Strip
Headspace in Methyl Mercury Container?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A 13.
Extra labels present on soil VOA or WIDRO containers?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A 14. <input type="checkbox"/> See Exceptions ENV-FRM-MIN4-0142
Headspace in VOA Vials (greater than 6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
3 Trip Blanks Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A 15.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Pace Trip Blank Lot # (if purchased): _____

CLIENT NOTIFICATION/RESOLUTION
 Person Contacted: _____ Date/Time: _____
 Comments/Resolution: _____ Field Data Required? Yes No

Project Manager Review: Kirsten Hojberg Date: 8/31/2022
 NOTE: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e., out of hold, incorrect preservative, out of temp, incorrect containers).

Page 8 of 71
Revision 2
Report No.....10623513_ID36_R1_DFR

KN 3

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10623513001	1-MEN-S-220826	SW3535	33806	PFAS-36	Q220907A_02
10623513002	2-MEN-S-220826	SW3535	33806	PFAS-36	Q220907A_02
10623513003	3-MEN-S-220826	SW3535	33806	PFAS-36	Q220907A_02
10623513004	4-MEN-S-220826	SW3535	33806	PFAS-36	Q220907A_02
10623513005	5-MEN-S-220826	SW3535	33806	PFAS-36	Q220907A_02
10623513005	5-MEN-S-220826	SW3535	33806	PFAS-36	Q220912A_02
10623513006	6 MEN-S-220826	SW3535	33806	PFAS-36	Q220907A_02
10623513007	7 MEN-S-220826	SW3535	33806	PFAS-36	Q220907A_02
10623513008	MEN-EB-S-220826	SW3535	33804	PFAS-36	Q220912A_02
10623513009	MEN-FB-S-220826	SW3535	33804	PFAS-36	Q220912A_02



Reporting Flags

- A = Reporting Limit based on signal to noise (EDL)
- B = Less than 10x higher than method blank level
- C = Result obtained from confirmation analysis
- D = Result obtained from analysis of diluted sample
- E = Exceeds calibration range
- I = Isotope ratio out of specification
- J = Estimated value
- L = Suppressive interference, analyte may be biased low
- Nn = Value obtained from additional analysis
- P = PCDE Interference
- R = Recovery outside target range
- S = Peak saturated
- U = Analyte not detected
- V = Result verified by confirmation analysis
- X = %D Exceeds limits
- Y = Calculated using average of daily RFs
- * = See Discussion

REPORT OF LABORATORY ANALYSIS

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Minneapolis, MN 55414
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Appendix B

Sample Analysis Summary

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID 1-MEN-S-220826
 Lab Sample ID 10623513001
 Lab File ID Q220907A_029
 Matrix Solid
 Collected 08/26/2022 14:50
 Received 08/30/2022 09:50
 Extraction Date 09/02/2022 12:24

Total Amount Extracted 5.30g
 Percent Moisture 5.0753%
 Dry Weight Extracted 5.04g
 Ical ID 220906A01
 CCal File Q220907A_028
 Ending CCal File Q220907A_038
 Blank File B220907A_008

Compound	Concentration (ug/Kg)	QL (ug/Kg)	RL (ug/Kg)	MDL (ug/Kg)	Dil.	CAS No.	Qual.	Analyzed
PFBA	ND	0.099	0.099	0.028	1	375-22-4		09/07/2022 16:35
PFPeA	ND	0.099	0.099	0.028	1	2706-90-3		09/07/2022 16:35
HFPO-DA	ND	0.099	0.099	0.028	1	13252-13-6		09/07/2022 16:35
PFBS	ND	0.088	0.088	0.026	1	375-73-5		09/07/2022 16:35
PFHxA	ND	0.099	0.099	0.027	1	307-24-4		09/07/2022 16:35
4:2 FTS	ND	0.093	0.093	0.023	1	757124-72-4		09/07/2022 16:35
PFPeS	ND	0.093	0.093	0.024	1	2706-91-4		09/07/2022 16:35
PFHpA	ND	0.099	0.099	0.034	1	375-85-9		09/07/2022 16:35
DONA	ND	0.094	0.094	0.036	1	919005-14-4		09/07/2022 16:35
PFHxS	0.13	0.090	0.090	0.022	1	355-46-4		09/07/2022 16:35
PFOA	ND	0.099	0.099	0.031	1	335-67-1		09/07/2022 16:35
6:2 FTS	ND	0.094	0.094	0.041	1	27619-97-2		09/07/2022 16:35
PFHpS	ND	0.094	0.094	0.028	1	375-92-8		09/07/2022 16:35
PFNA	ND	0.099	0.099	0.031	1	375-95-1		09/07/2022 16:35
PFOSAm	ND	0.099	0.099	0.029	1	754-91-6		09/07/2022 16:35
PFOS	4.9	0.092	0.092	0.029	1	1763-23-1		09/07/2022 16:35
PFDA	ND	0.099	0.099	0.023	1	335-76-2		09/07/2022 16:35
EtFOSAm	ND	0.099	0.099	0.025	1	4151-50-2		09/07/2022 16:35
8:2 FTS	ND	0.095	0.095	0.044	1	39108-34-4		09/07/2022 16:35
9-Cl-PF3ON	ND	0.093	0.093	0.025	1	756426-58-1		09/07/2022 16:35
PFNS	ND	0.095	0.095	0.034	1	68259-12-1		09/07/2022 16:35
PFUnDA	ND	0.099	0.099	0.030	1	2058-94-8		09/07/2022 16:35
NMeFOSAA	ND	0.099	0.099	0.028	1	2355-31-9		09/07/2022 16:35
NEtFOSAA	ND	0.099	0.099	0.040	1	2991-50-6		09/07/2022 16:35
PFDS	ND	0.096	0.096	0.028	1	335-77-3		09/07/2022 16:35
PFDOA	ND	0.099	0.099	0.033	1	307-55-1		09/07/2022 16:35
11-Cl-PF3OUdS	ND	0.094	0.094	0.025	1	763051-92-9		09/07/2022 16:35
PFTTrDA	ND	0.099	0.099	0.032	1	72629-94-8		09/07/2022 16:35
PFTDA	ND	0.099	0.099	0.034	1	376-06-7		09/07/2022 16:35

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	1-MEN-S-220826	Total Amount Extracted	5.30g
Lab Sample ID	10623513001	Percent Moisture	5.0753%
Lab File ID	Q220907A_029	Dry Weight Extracted	5.04g
Matrix	Solid	Ical ID	220906A01
Collected	08/26/2022 14:50	CCal File	Q220907A_028
Received	08/30/2022 09:50	Ending CCal File	Q220907A_038
Extraction Date	09/02/2022 12:24	Blank File	B220907A_008

Injection Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	0.99	0.99	100	50-150		09/07/2022 16:35
13C4 PFOA	0.99	0.99	100	50-150		09/07/2022 16:35
13C2 PFDA	0.99	0.97	98	50-150		09/07/2022 16:35
13C4 PFOS	0.95	0.93	98	50-150		09/07/2022 16:35

Extracted Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	0.99	0.88	89	50-150		09/07/2022 16:35
13C5 PFPeA	0.99	0.88	88	50-150		09/07/2022 16:35
13C3 PFBS	0.92	0.85	92	50-150		09/07/2022 16:35
13C2 4:2FTS	0.93	0.77	83	50-150		09/07/2022 16:35
13C5 PFHxA	0.99	0.89	90	50-150		09/07/2022 16:35
13C4 PFHpA	0.99	0.85	86	50-150		09/07/2022 16:35
13C3 PFHxS	0.94	0.85	91	50-150		09/07/2022 16:35
13C2 6:2FTS	0.94	0.78	83	50-150		09/07/2022 16:35
13C8 PFOA	0.99	0.83	84	50-150		09/07/2022 16:35
13C9 PFNA	0.99	0.90	90	50-150		09/07/2022 16:35
13C8 PFOS	0.95	0.76	80	50-150		09/07/2022 16:35
13C2 8:2FTS	0.95	0.73	77	50-150		09/07/2022 16:35
13C6 PFDA	0.99	0.77	77	50-150		09/07/2022 16:35
d3-MeFOSAA	0.99	0.76	76	50-150		09/07/2022 16:35
13C8 PFOSA	0.99	0.76	76	50-150		09/07/2022 16:35
d5-EtFOSAA	0.99	0.99	100	50-150		09/07/2022 16:35
13C7 PFUdA	0.99	0.79	79	50-150		09/07/2022 16:35
13C2 PFDaA	0.99	0.75	76	50-150		09/07/2022 16:35
13C2 PFTeDA	0.99	0.72	73	50-150		09/07/2022 16:35
13C3 HFPO-DA	0.99	0.80	81	50-150		09/07/2022 16:35
d5-N-EtFOSA	0.99	0.48	48	10-150		09/07/2022 16:35

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	1-MEN-S-220826	Total Amount Extracted	5.30g
Lab Sample ID	10623513001	Percent Moisture	5.0753%
Lab File ID	Q220907A_029	Dry Weight Extracted	5.04g
Matrix	Solid	Ical ID	220906A01
Collected	08/26/2022 14:50	CCal File	Q220907A_028
Received	08/30/2022 09:50	Ending CCal File	Q220907A_038
Extraction Date	09/02/2022 12:24	Blank File	B220907A_008

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	6.48	6.49	13		09/07/2022 16:35
13C4 PFOA	N/A	N/A	7.69	7.70	16		09/07/2022 16:35
13C2 PFDA	N/A	N/A	8.95	8.97	20		09/07/2022 16:35
13C4 PFOS	N/A	N/A	9.44	9.48	17		09/07/2022 16:35

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	5.13	5.15	22		09/07/2022 16:35
13C5 PFPeA	N/A	N/A	5.88	5.91	15		09/07/2022 16:35
13C3 PFBS	N/A	N/A	6.76	6.81	14		09/07/2022 16:35
13C2 4:2FTS	N/A	N/A	6.23	6.26	48		09/07/2022 16:35
13C5 PFHxA	N/A	N/A	6.49	6.52	13		09/07/2022 16:35
13C4 PFHpA	N/A	N/A	7.08	7.12	87		09/07/2022 16:35
13C3 PFHxS	N/A	N/A	8.12	8.10	10		09/07/2022 16:35
13C2 6:2FTS	N/A	N/A	7.37	7.37	15		09/07/2022 16:35
13C8 PFOA	N/A	N/A	7.69	7.69	11		09/07/2022 16:35
13C9 PFNA	N/A	N/A	8.31	8.31	95		09/07/2022 16:35
13C8 PFOS	N/A	N/A	9.44	9.47	14		09/07/2022 16:35
13C2 8:2FTS	N/A	N/A	8.59	8.59	18		09/07/2022 16:35
13C6 PFDA	N/A	N/A	8.95	8.95	99		09/07/2022 16:35
d3-MeFOSAA	N/A	N/A	8.83	8.87	13		09/07/2022 16:35
13C8 PFOSA	N/A	N/A	11.51	11.51	18		09/07/2022 16:35
d5-EtFOSAA	N/A	N/A	9.13	9.16	11		09/07/2022 16:35
13C7 PFUdA	N/A	N/A	9.60	9.57	15		09/07/2022 16:35
13C2 PFDoA	N/A	N/A	10.26	10.27	80		09/07/2022 16:35
13C2 PFTeDA	N/A	N/A	11.56	11.57	64		09/07/2022 16:35
13C3 HFPO-DA	N/A	N/A	6.73	6.74	82		09/07/2022 16:35
d5-N-EtFOSA	N/A	N/A	14.00	13.97	20		09/07/2022 16:35

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	1-MEN-S-220826	Total Amount Extracted	5.30g
Lab Sample ID	10623513001	Percent Moisture	5.0753%
Lab File ID	Q220907A_029	Dry Weight Extracted	5.04g
Matrix	Solid	Ical ID	220906A01
Collected	08/26/2022 14:50	CCal File	Q220907A_028
Received	08/30/2022 09:50	Ending CCal File	Q220907A_038
Extraction Date	09/02/2022 12:24	Blank File	B220907A_008

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	5.14	5.15	ND		09/07/2022 16:35
PFPeA	N/A	N/A	5.89	5.91	ND		09/07/2022 16:35
HFPO-DA	9.20	0.61	6.75	6.76	ND		09/07/2022 16:35
PFBS	0.40	0.37	6.77	6.78	ND		09/07/2022 16:35
PFHxA	0.07	0.07	6.49	6.50	ND		09/07/2022 16:35
4:2 FTS	0.00	0.90	0.00	6.24	ND		09/07/2022 16:35
PFPeS	0.32	0.41	7.46	7.48	ND		09/07/2022 16:35
PFHpA	0.00	0.34	0.00	7.10	ND		09/07/2022 16:35
DONA	0.00	0.38	0.00	7.32	ND		09/07/2022 16:35
PFHxS	0.30	0.35	8.12	8.19	75		09/07/2022 16:35
PFOA	0.00	0.33	0.00	7.74	ND		09/07/2022 16:35
6:2 FTS	0.00	1.40	0.00	7.41	ND		09/07/2022 16:35
PFHpS	0.84	0.35	8.79	8.80	ND		09/07/2022 16:35
PFNA	0.13	0.20	8.31	8.36	ND		09/07/2022 16:35
PFOSAm	N/A	N/A	11.54	11.54	ND		09/07/2022 16:35
PFOS	0.25	0.24	9.45	9.53	34		09/07/2022 16:35
PFDA	0.00	0.15	0.00	9.02	ND		09/07/2022 16:35
EtFOSAm	0.00	0.57	0.00	13.99	ND		09/07/2022 16:35
8:2 FTS	0.00	1.80	0.00	8.63	ND		09/07/2022 16:35
9-CI-PF3ON	0.00	0.06	0.00	10.01	ND		09/07/2022 16:35
PFNS	0.00	0.21	0.00	10.19	ND		09/07/2022 16:35
PFUnDA	0.00	0.16	0.00	9.67	ND		09/07/2022 16:35
NMeFOSAA	0.00	0.53	0.00	8.89	ND		09/07/2022 16:35
NEtFOSAA	0.00	0.62	0.00	9.15	ND		09/07/2022 16:35
PFDS	0.31	0.33	10.76	10.84	ND		09/07/2022 16:35
PFDOA	0.00	0.14	0.00	10.34	ND		09/07/2022 16:35
11-CI-PF3OUdS	0.00	0.02	0.00	11.31	ND		09/07/2022 16:35
PFTTrDA	0.00	0.14	0.00	10.99	ND		09/07/2022 16:35
PFTDA	0.00	0.14	0.00	11.61	ND		09/07/2022 16:35

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID 2-MEN-S-220826
 Lab Sample ID 10623513002
 Lab File ID Q220907A_030
 Matrix Solid
 Collected 08/26/2022 15:55
 Received 08/30/2022 09:50
 Extraction Date 09/02/2022 12:24

Total Amount Extracted 5.34g
 Percent Moisture 4.8631%
 Dry Weight Extracted 5.08g
 Ical ID 220906A01
 CCal File Q220907A_028
 Ending CCal File Q220907A_038
 Blank File B220907A_008

Compound	Concentration (ug/Kg)	QL (ug/Kg)	RL (ug/Kg)	MDL (ug/Kg)	Dil.	CAS No.	Qual.	Analyzed
PFBA	ND	0.098	0.098	0.028	1	375-22-4		09/07/2022 16:54
PFPeA	ND	0.098	0.098	0.028	1	2706-90-3		09/07/2022 16:54
HFPO-DA	ND	0.098	0.098	0.027	1	13252-13-6		09/07/2022 16:54
PFBS	ND	0.087	0.087	0.026	1	375-73-5		09/07/2022 16:54
PFHxA	ND	0.098	0.098	0.027	1	307-24-4		09/07/2022 16:54
4:2 FTS	ND	0.092	0.092	0.023	1	757124-72-4		09/07/2022 16:54
PFPeS	ND	0.093	0.093	0.024	1	2706-91-4		09/07/2022 16:54
PFHpA	ND	0.098	0.098	0.034	1	375-85-9		09/07/2022 16:54
DONA	ND	0.093	0.093	0.036	1	919005-14-4		09/07/2022 16:54
PFHxS	ND	0.090	0.090	0.022	1	355-46-4		09/07/2022 16:54
PFOA	ND	0.098	0.098	0.031	1	335-67-1		09/07/2022 16:54
6:2 FTS	ND	0.094	0.094	0.041	1	27619-97-2		09/07/2022 16:54
PFHpS	ND	0.094	0.094	0.027	1	375-92-8		09/07/2022 16:54
PFNA	ND	0.098	0.098	0.031	1	375-95-1		09/07/2022 16:54
PFOSAm	ND	0.098	0.098	0.029	1	754-91-6		09/07/2022 16:54
PFOS	2.2	0.091	0.091	0.029	1	1763-23-1		09/07/2022 16:54
PFDA	ND	0.098	0.098	0.022	1	335-76-2		09/07/2022 16:54
EtFOSAm	ND	0.098	0.098	0.025	1	4151-50-2		09/07/2022 16:54
8:2 FTS	ND	0.095	0.095	0.043	1	39108-34-4		09/07/2022 16:54
9-Cl-PF3ON	ND	0.092	0.092	0.025	1	756426-58-1		09/07/2022 16:54
PFNS	ND	0.095	0.095	0.034	1	68259-12-1		09/07/2022 16:54
PFUnDA	ND	0.098	0.098	0.030	1	2058-94-8		09/07/2022 16:54
NMeFOSAA	ND	0.098	0.098	0.028	1	2355-31-9		09/07/2022 16:54
NEtFOSAA	ND	0.098	0.098	0.040	1	2991-50-6		09/07/2022 16:54
PFDS	ND	0.095	0.095	0.028	1	335-77-3		09/07/2022 16:54
PFDOA	ND	0.098	0.098	0.032	1	307-55-1		09/07/2022 16:54
11-Cl-PF3OUdS	ND	0.093	0.093	0.025	1	763051-92-9		09/07/2022 16:54
PFTTrDA	ND	0.098	0.098	0.031	1	72629-94-8		09/07/2022 16:54
PFTDA	ND	0.098	0.098	0.034	1	376-06-7		09/07/2022 16:54

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	2-MEN-S-220826	Total Amount Extracted	5.34g
Lab Sample ID	10623513002	Percent Moisture	4.8631%
Lab File ID	Q220907A_030	Dry Weight Extracted	5.08g
Matrix	Solid	Ical ID	220906A01
Collected	08/26/2022 15:55	CCal File	Q220907A_028
Received	08/30/2022 09:50	Ending CCal File	Q220907A_038
Extraction Date	09/02/2022 12:24	Blank File	B220907A_008

Injection Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	0.98	0.98	99	50-150		09/07/2022 16:54
13C4 PFOA	0.98	0.99	100	50-150		09/07/2022 16:54
13C2 PFDA	0.98	0.98	99	50-150		09/07/2022 16:54
13C4 PFOS	0.94	0.97	103	50-150		09/07/2022 16:54

Extracted Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	0.98	0.86	87	50-150		09/07/2022 16:54
13C5 PFPeA	0.98	0.85	87	50-150		09/07/2022 16:54
13C3 PFBS	0.91	0.82	89	50-150		09/07/2022 16:54
13C2 4:2FTS	0.92	0.78	85	50-150		09/07/2022 16:54
13C5 PFHxA	0.98	0.90	92	50-150		09/07/2022 16:54
13C4 PFHpA	0.98	0.84	85	50-150		09/07/2022 16:54
13C3 PFHxS	0.93	0.87	93	50-150		09/07/2022 16:54
13C2 6:2FTS	0.93	0.77	82	50-150		09/07/2022 16:54
13C8 PFOA	0.98	0.87	89	50-150		09/07/2022 16:54
13C9 PFNA	0.98	0.79	80	50-150		09/07/2022 16:54
13C8 PFOS	0.94	0.77	81	50-150		09/07/2022 16:54
13C2 8:2FTS	0.94	0.67	71	50-150		09/07/2022 16:54
13C6 PFDA	0.98	0.81	82	50-150		09/07/2022 16:54
d3-MeFOSAA	0.98	0.83	84	50-150		09/07/2022 16:54
13C8 PFOSA	0.98	0.74	75	50-150		09/07/2022 16:54
d5-EtFOSAA	0.98	1.1	111	50-150		09/07/2022 16:54
13C7 PFUdA	0.98	0.81	82	50-150		09/07/2022 16:54
13C2 PFDoA	0.98	0.73	74	50-150		09/07/2022 16:54
13C2 PFTeDA	0.98	0.65	66	50-150		09/07/2022 16:54
13C3 HFPO-DA	0.98	0.77	78	50-150		09/07/2022 16:54
d5-N-EtFOSA	0.98	0.30	30	10-150		09/07/2022 16:54

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID 2-MEN-S-220826
 Lab Sample ID 10623513002
 Lab File ID Q220907A_030
 Matrix Solid
 Collected 08/26/2022 15:55
 Received 08/30/2022 09:50
 Extraction Date 09/02/2022 12:24

Total Amount Extracted 5.34g
 Percent Moisture 4.8631%
 Dry Weight Extracted 5.08g
 Ical ID 220906A01
 CCal File Q220907A_028
 Ending CCal File Q220907A_038
 Blank File B220907A_008

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	6.49	6.49	91		09/07/2022 16:54
13C4 PFOA	N/A	N/A	7.70	7.70	11		09/07/2022 16:54
13C2 PFDA	N/A	N/A	8.96	8.97	32		09/07/2022 16:54
13C4 PFOS	N/A	N/A	9.45	9.48	13		09/07/2022 16:54

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	5.13	5.15	18		09/07/2022 16:54
13C5 PFPeA	N/A	N/A	5.89	5.91	17		09/07/2022 16:54
13C3 PFBS	N/A	N/A	6.77	6.81	11		09/07/2022 16:54
13C2 4:2FTS	N/A	N/A	6.24	6.26	46		09/07/2022 16:54
13C5 PFHxA	N/A	N/A	6.49	6.52	88		09/07/2022 16:54
13C4 PFHpA	N/A	N/A	7.09	7.12	10		09/07/2022 16:54
13C3 PFHxS	N/A	N/A	8.13	8.10	13		09/07/2022 16:54
13C2 6:2FTS	N/A	N/A	7.38	7.37	12		09/07/2022 16:54
13C8 PFOA	N/A	N/A	7.70	7.69	12		09/07/2022 16:54
13C9 PFNA	N/A	N/A	8.32	8.31	11		09/07/2022 16:54
13C8 PFOS	N/A	N/A	9.45	9.47	95		09/07/2022 16:54
13C2 8:2FTS	N/A	N/A	8.59	8.59	11		09/07/2022 16:54
13C6 PFDA	N/A	N/A	8.96	8.95	15		09/07/2022 16:54
d3-MeFOSAA	N/A	N/A	8.84	8.87	29		09/07/2022 16:54
13C8 PFOSA	N/A	N/A	11.52	11.51	29		09/07/2022 16:54
d5-EtFOSAA	N/A	N/A	9.13	9.16	15		09/07/2022 16:54
13C7 PFUdA	N/A	N/A	9.61	9.57	81		09/07/2022 16:54
13C2 PFDoA	N/A	N/A	10.27	10.27	66		09/07/2022 16:54
13C2 PFTeDA	N/A	N/A	11.56	11.57	10		09/07/2022 16:54
13C3 HFPO-DA	N/A	N/A	6.74	6.74	99		09/07/2022 16:54
d5-N-EtFOSA	N/A	N/A	14.00	13.97	54		09/07/2022 16:54

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID 2-MEN-S-220826
 Lab Sample ID 10623513002
 Lab File ID Q220907A_030
 Matrix Solid
 Collected 08/26/2022 15:55
 Received 08/30/2022 09:50
 Extraction Date 09/02/2022 12:24

Total Amount Extracted 5.34g
 Percent Moisture 4.8631%
 Dry Weight Extracted 5.08g
 Ical ID 220906A01
 CCal File Q220907A_028
 Ending CCal File Q220907A_038
 Blank File B220907A_008

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	5.14	5.15	ND		09/07/2022 16:54
PFPeA	N/A	N/A	5.89	5.91	ND		09/07/2022 16:54
HFPO-DA	1.10	0.61	6.76	6.76	ND		09/07/2022 16:54
PFBS	0.41	0.37	6.78	6.78	ND		09/07/2022 16:54
PFHxA	0.07	0.07	6.50	6.50	ND		09/07/2022 16:54
4:2 FTS	1.10	0.90	6.25	6.24	ND		09/07/2022 16:54
PFPeS	0.00	0.41	0.00	7.48	ND		09/07/2022 16:54
PFHpA	0.60	0.34	7.09	7.10	ND		09/07/2022 16:54
DONA	0.38	0.38	7.32	7.32	ND		09/07/2022 16:54
PFHxS	0.40	0.35	8.13	8.19	ND		09/07/2022 16:54
PFOA	0.33	0.33	7.70	7.74	ND		09/07/2022 16:54
6:2 FTS	0.00	1.40	0.00	7.41	ND		09/07/2022 16:54
PFHpS	0.00	0.35	0.00	8.80	ND		09/07/2022 16:54
PFNA	0.24	0.20	8.32	8.36	ND		09/07/2022 16:54
PFOSAm	N/A	N/A	11.52	11.51	ND		09/07/2022 16:54
PFOS	0.27	0.24	9.46	9.53	41		09/07/2022 16:54
PFDA	0.00	0.15	0.00	9.02	ND		09/07/2022 16:54
EtFOSAm	0.00	0.57	0.00	13.99	ND		09/07/2022 16:54
8:2 FTS	0.00	1.80	0.00	8.63	ND		09/07/2022 16:54
9-CI-PF3ON	0.00	0.06	0.00	10.01	ND		09/07/2022 16:54
PFNS	0.00	0.21	0.00	10.19	ND		09/07/2022 16:54
PFUnDA	0.00	0.16	0.00	9.67	ND		09/07/2022 16:54
NMeFOSAA	0.00	0.53	0.00	8.89	ND		09/07/2022 16:54
NEtFOSAA	0.00	0.62	0.00	9.15	ND		09/07/2022 16:54
PFDS	0.23	0.33	10.76	10.84	ND		09/07/2022 16:54
PFDOA	0.00	0.14	0.00	10.34	ND		09/07/2022 16:54
11-CI-PF3OUdS	0.00	0.02	0.00	11.31	ND		09/07/2022 16:54
PFTTrDA	0.00	0.14	0.00	10.99	ND		09/07/2022 16:54
PFTDA	0.00	0.14	0.00	11.61	ND		09/07/2022 16:54

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID 3-MEN-S-220826
 Lab Sample ID 10623513003
 Lab File ID Q220907A_031
 Matrix Solid
 Collected 08/26/2022 13:00
 Received 08/30/2022 09:50
 Extraction Date 09/02/2022 12:24

Total Amount Extracted 5.13g
 Percent Moisture 3.9742%
 Dry Weight Extracted 4.93g
 Ical ID 220906A01
 CCal File Q220907A_028
 Ending CCal File Q220907A_038
 Blank File B220907A_008

Compound	Concentration (ug/Kg)	QL (ug/Kg)	RL (ug/Kg)	MDL (ug/Kg)	Dil.	CAS No.	Qual.	Analyzed
PFBA	ND	0.10	0.10	0.029	1	375-22-4		09/07/2022 17:12
PFPeA	ND	0.10	0.10	0.029	1	2706-90-3		09/07/2022 17:12
HFPO-DA	ND	0.10	0.10	0.028	1	13252-13-6		09/07/2022 17:12
PFBS	ND	0.090	0.090	0.027	1	375-73-5		09/07/2022 17:12
PFHxA	ND	0.10	0.10	0.028	1	307-24-4		09/07/2022 17:12
4:2 FTS	ND	0.095	0.095	0.023	1	757124-72-4		09/07/2022 17:12
PFPeS	ND	0.095	0.095	0.024	1	2706-91-4		09/07/2022 17:12
PFHpA	ND	0.10	0.10	0.035	1	375-85-9		09/07/2022 17:12
DONA	ND	0.096	0.096	0.037	1	919005-14-4		09/07/2022 17:12
PFHxS	0.12	0.092	0.092	0.022	1	355-46-4		09/07/2022 17:12
PFOA	ND	0.10	0.10	0.032	1	335-67-1		09/07/2022 17:12
6:2 FTS	ND	0.096	0.096	0.042	1	27619-97-2		09/07/2022 17:12
PFHpS	ND	0.096	0.096	0.028	1	375-92-8		09/07/2022 17:12
PFNA	ND	0.10	0.10	0.032	1	375-95-1		09/07/2022 17:12
PFOSAm	ND	0.10	0.10	0.030	1	754-91-6		09/07/2022 17:12
PFOS	1.2	0.094	0.094	0.030	1	1763-23-1		09/07/2022 17:12
PFDA	ND	0.10	0.10	0.023	1	335-76-2		09/07/2022 17:12
EtFOSAm	ND	0.10	0.10	0.026	1	4151-50-2		09/07/2022 17:12
8:2 FTS	ND	0.097	0.097	0.045	1	39108-34-4		09/07/2022 17:12
9-Cl-PF3ON	ND	0.095	0.095	0.025	1	756426-58-1		09/07/2022 17:12
PFNS	ND	0.097	0.097	0.035	1	68259-12-1		09/07/2022 17:12
PFUnDA	ND	0.10	0.10	0.031	1	2058-94-8		09/07/2022 17:12
NMeFOSAA	ND	0.10	0.10	0.029	1	2355-31-9		09/07/2022 17:12
NEtFOSAA	ND	0.10	0.10	0.041	1	2991-50-6		09/07/2022 17:12
PFDS	ND	0.098	0.098	0.029	1	335-77-3		09/07/2022 17:12
PFDOA	ND	0.10	0.10	0.033	1	307-55-1		09/07/2022 17:12
11-Cl-PF3OUdS	ND	0.096	0.096	0.026	1	763051-92-9		09/07/2022 17:12
PFTTrDA	ND	0.10	0.10	0.032	1	72629-94-8		09/07/2022 17:12
PFTDA	ND	0.10	0.10	0.035	1	376-06-7		09/07/2022 17:12

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID 3-MEN-S-220826
 Lab Sample ID 10623513003
 Lab File ID Q220907A_031
 Matrix Solid
 Collected 08/26/2022 13:00
 Received 08/30/2022 09:50
 Extraction Date 09/02/2022 12:24

Total Amount Extracted 5.13g
 Percent Moisture 3.9742%
 Dry Weight Extracted 4.93g
 Ical ID 220906A01
 CCal File Q220907A_028
 Ending CCal File Q220907A_038
 Blank File B220907A_008

Injection Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	1.0	1.1	106	50-150		09/07/2022 17:12
13C4 PFOA	1.0	1.2	119	50-150		09/07/2022 17:12
13C2 PFDA	1.0	1.2	120	50-150		09/07/2022 17:12
13C4 PFOS	0.97	1.0	103	50-150		09/07/2022 17:12

Extracted Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	1.0	0.92	91	50-150		09/07/2022 17:12
13C5 PFPeA	1.0	0.92	91	50-150		09/07/2022 17:12
13C3 PFBS	0.94	0.85	90	50-150		09/07/2022 17:12
13C2 4:2FTS	0.95	0.99	104	50-150		09/07/2022 17:12
13C5 PFHxA	1.0	1.0	103	50-150		09/07/2022 17:12
13C4 PFHpA	1.0	0.98	97	50-150		09/07/2022 17:12
13C3 PFHxS	0.96	0.88	92	50-150		09/07/2022 17:12
13C2 6:2FTS	0.96	1.00	104	50-150		09/07/2022 17:12
13C8 PFOA	1.0	0.98	97	50-150		09/07/2022 17:12
13C9 PFNA	1.0	1.0	103	50-150		09/07/2022 17:12
13C8 PFOS	0.97	0.79	82	50-150		09/07/2022 17:12
13C2 8:2FTS	0.97	1.0	107	50-150		09/07/2022 17:12
13C6 PFDA	1.0	0.99	97	50-150		09/07/2022 17:12
d3-MeFOSAA	1.0	0.91	90	50-150		09/07/2022 17:12
13C8 PFOSA	1.0	0.85	84	50-150		09/07/2022 17:12
d5-EtFOSAA	1.0	1.0	100	50-150		09/07/2022 17:12
13C7 PFUdA	1.0	1.0	103	50-150		09/07/2022 17:12
13C2 PFDoA	1.0	1.0	102	50-150		09/07/2022 17:12
13C2 PFTeDA	1.0	0.87	86	50-150		09/07/2022 17:12
13C3 HFPO-DA	1.0	0.87	85	50-150		09/07/2022 17:12
d5-N-EtFOSA	1.0	0.65	64	10-150		09/07/2022 17:12

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID 3-MEN-S-220826
 Lab Sample ID 10623513003
 Lab File ID Q220907A_031
 Matrix Solid
 Collected 08/26/2022 13:00
 Received 08/30/2022 09:50
 Extraction Date 09/02/2022 12:24

Total Amount Extracted 5.13g
 Percent Moisture 3.9742%
 Dry Weight Extracted 4.93g
 Ical ID 220906A01
 CCal File Q220907A_028
 Ending CCal File Q220907A_038
 Blank File B220907A_008

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	6.49	6.49	15		09/07/2022 17:12
13C4 PFOA	N/A	N/A	7.70	7.70	12		09/07/2022 17:12
13C2 PFDA	N/A	N/A	8.96	8.97	10		09/07/2022 17:12
13C4 PFOS	N/A	N/A	9.45	9.48	68		09/07/2022 17:12

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	5.13	5.15	18		09/07/2022 17:12
13C5 PFPeA	N/A	N/A	5.89	5.91	20		09/07/2022 17:12
13C3 PFBS	N/A	N/A	6.77	6.81	65		09/07/2022 17:12
13C2 4:2FTS	N/A	N/A	6.24	6.26	37		09/07/2022 17:12
13C5 PFHxA	N/A	N/A	6.49	6.52	99		09/07/2022 17:12
13C4 PFHpA	N/A	N/A	7.10	7.12	87		09/07/2022 17:12
13C3 PFHxS	N/A	N/A	8.13	8.10	11		09/07/2022 17:12
13C2 6:2FTS	N/A	N/A	7.38	7.37	92		09/07/2022 17:12
13C8 PFOA	N/A	N/A	7.70	7.69	12		09/07/2022 17:12
13C9 PFNA	N/A	N/A	8.32	8.31	25		09/07/2022 17:12
13C8 PFOS	N/A	N/A	9.46	9.47	95		09/07/2022 17:12
13C2 8:2FTS	N/A	N/A	8.59	8.59	38		09/07/2022 17:12
13C6 PFDA	N/A	N/A	8.97	8.95	92		09/07/2022 17:12
d3-MeFOSAA	N/A	N/A	8.85	8.87	14		09/07/2022 17:12
13C8 PFOSA	N/A	N/A	11.52	11.51	10		09/07/2022 17:12
d5-EtFOSAA	N/A	N/A	9.14	9.16	12		09/07/2022 17:12
13C7 PFUdA	N/A	N/A	9.62	9.57	23		09/07/2022 17:12
13C2 PFDoA	N/A	N/A	10.27	10.27	61		09/07/2022 17:12
13C2 PFTeDA	N/A	N/A	11.57	11.57	22		09/07/2022 17:12
13C3 HFPO-DA	N/A	N/A	6.74	6.74	84		09/07/2022 17:12
d5-N-EtFOSA	N/A	N/A	14.00	13.97	54		09/07/2022 17:12

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	3-MEN-S-220826	Total Amount Extracted	5.13g
Lab Sample ID	10623513003	Percent Moisture	3.9742%
Lab File ID	Q220907A_031	Dry Weight Extracted	4.93g
Matrix	Solid	Ical ID	220906A01
Collected	08/26/2022 13:00	CCal File	Q220907A_028
Received	08/30/2022 09:50	Ending CCal File	Q220907A_038
Extraction Date	09/02/2022 12:24	Blank File	B220907A_008

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	5.14	5.15	ND		09/07/2022 17:12
PFPeA	N/A	N/A	5.89	5.91	ND		09/07/2022 17:12
HFPO-DA	0.00	0.61	0.00	6.76	ND		09/07/2022 17:12
PFBS	0.33	0.37	6.78	6.78	ND		09/07/2022 17:12
PFHxA	0.05	0.07	6.50	6.50	ND		09/07/2022 17:12
4:2 FTS	0.00	0.90	0.00	6.24	ND		09/07/2022 17:12
PFPeS	0.41	0.41	7.46	7.48	ND		09/07/2022 17:12
PFHpA	0.74	0.34	7.10	7.10	ND		09/07/2022 17:12
DONA	0.00	0.38	0.00	7.32	ND		09/07/2022 17:12
PFHxS	0.32	0.35	8.14	8.19	30		09/07/2022 17:12
PFOA	0.29	0.33	7.71	7.74	ND		09/07/2022 17:12
6:2 FTS	0.00	1.40	0.00	7.41	ND		09/07/2022 17:12
PFHpS	0.00	0.35	0.00	8.80	ND		09/07/2022 17:12
PFNA	0.30	0.20	8.33	8.36	ND		09/07/2022 17:12
PFOSAm	N/A	N/A	11.53	11.51	ND		09/07/2022 17:12
PFOS	0.30	0.24	9.47	9.53	53		09/07/2022 17:12
PFDA	0.14	0.15	8.97	9.02	ND		09/07/2022 17:12
EtFOSAm	0.00	0.57	0.00	13.99	ND		09/07/2022 17:12
8:2 FTS	0.00	1.80	0.00	8.63	ND		09/07/2022 17:12
9-Cl-PF3ON	0.00	0.06	0.00	10.01	ND		09/07/2022 17:12
PFNS	0.00	0.21	0.00	10.19	ND		09/07/2022 17:12
PFUnDA	0.07	0.16	9.63	9.67	ND		09/07/2022 17:12
NMeFOSAA	1.40	0.53	8.83	8.89	ND		09/07/2022 17:12
NEtFOSAA	0.00	0.62	0.00	9.15	ND		09/07/2022 17:12
PFDS	0.24	0.33	10.76	10.84	ND		09/07/2022 17:12
PFDOA	0.00	0.14	0.00	10.34	ND		09/07/2022 17:12
11-Cl-PF3OUdS	0.00	0.02	0.00	11.31	ND		09/07/2022 17:12
PFTTrDA	0.00	0.14	0.00	10.99	ND		09/07/2022 17:12
PFTDA	0.00	0.14	0.00	11.61	ND		09/07/2022 17:12

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID 4-MEN-S-220826
 Lab Sample ID 10623513004
 Lab File ID Q220907A_032
 Matrix Solid
 Collected 08/26/2022 13:30
 Received 08/30/2022 09:50
 Extraction Date 09/02/2022 12:24

Total Amount Extracted 5.09g
 Percent Moisture 19.97%
 Dry Weight Extracted 4.07g
 Ical ID 220906A01
 CCal File Q220907A_028
 Ending CCal File Q220907A_038
 Blank File B220907A_008

Compound	Concentration (ug/Kg)	QL (ug/Kg)	RL (ug/Kg)	MDL (ug/Kg)	Dil.	CAS No.	Qual.	Analyzed
PFBA	ND	0.12	0.12	0.035	1	375-22-4		09/07/2022 17:31
PFPeA	ND	0.12	0.12	0.035	1	2706-90-3		09/07/2022 17:31
HFPO-DA	ND	0.12	0.12	0.034	1	13252-13-6		09/07/2022 17:31
PFBS	ND	0.11	0.11	0.032	1	375-73-5		09/07/2022 17:31
PFHxA	ND	0.12	0.12	0.034	1	307-24-4		09/07/2022 17:31
4:2 FTS	ND	0.11	0.11	0.028	1	757124-72-4		09/07/2022 17:31
PFPeS	ND	0.12	0.12	0.029	1	2706-91-4		09/07/2022 17:31
PFHpA	ND	0.12	0.12	0.043	1	375-85-9		09/07/2022 17:31
DONA	ND	0.12	0.12	0.045	1	919005-14-4		09/07/2022 17:31
PFHxS	0.41	0.11	0.11	0.027	1	355-46-4		09/07/2022 17:31
PFOA	ND	0.12	0.12	0.038	1	335-67-1		09/07/2022 17:31
6:2 FTS	ND	0.12	0.12	0.051	1	27619-97-2		09/07/2022 17:31
PFHpS	ND	0.12	0.12	0.034	1	375-92-8		09/07/2022 17:31
PFNA	ND	0.12	0.12	0.038	1	375-95-1		09/07/2022 17:31
PFOSAm	ND	0.12	0.12	0.036	1	754-91-6		09/07/2022 17:31
PFOS	1.3	0.11	0.11	0.036	1	1763-23-1		09/07/2022 17:31
PFDA	ND	0.12	0.12	0.028	1	335-76-2		09/07/2022 17:31
EtFOSAm	ND	0.12	0.12	0.031	1	4151-50-2		09/07/2022 17:31
8:2 FTS	ND	0.12	0.12	0.054	1	39108-34-4		09/07/2022 17:31
9-CI-PF3ON	ND	0.11	0.11	0.031	1	756426-58-1		09/07/2022 17:31
PFNS	ND	0.12	0.12	0.043	1	68259-12-1		09/07/2022 17:31
PFUnDA	ND	0.12	0.12	0.037	1	2058-94-8		09/07/2022 17:31
NMeFOSAA	ND	0.12	0.12	0.035	1	2355-31-9		09/07/2022 17:31
NEtFOSAA	ND	0.12	0.12	0.049	1	2991-50-6		09/07/2022 17:31
PFDS	ND	0.12	0.12	0.035	1	335-77-3		09/07/2022 17:31
PFDOA	ND	0.12	0.12	0.040	1	307-55-1		09/07/2022 17:31
11-CI-PF3OUdS	ND	0.12	0.12	0.031	1	763051-92-9		09/07/2022 17:31
PFTTrDA	ND	0.12	0.12	0.039	1	72629-94-8		09/07/2022 17:31
PFTDA	ND	0.12	0.12	0.042	1	376-06-7		09/07/2022 17:31

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	4-MEN-S-220826	Total Amount Extracted	5.09g
Lab Sample ID	10623513004	Percent Moisture	19.97%
Lab File ID	Q220907A_032	Dry Weight Extracted	4.07g
Matrix	Solid	Ical ID	220906A01
Collected	08/26/2022 13:30	CCal File	Q220907A_028
Received	08/30/2022 09:50	Ending CCal File	Q220907A_038
Extraction Date	09/02/2022 12:24	Blank File	B220907A_008

Injection Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	1.2	1.4	112	50-150		09/07/2022 17:31
13C4 PFOA	1.2	1.4	115	50-150		09/07/2022 17:31
13C2 PFDA	1.2	1.4	117	50-150		09/07/2022 17:31
13C4 PFOS	1.2	1.2	105	50-150		09/07/2022 17:31

Extracted Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	1.2	1.2	95	50-150		09/07/2022 17:31
13C5 PFPeA	1.2	1.2	94	50-150		09/07/2022 17:31
13C3 PFBS	1.1	1.1	100	50-150		09/07/2022 17:31
13C2 4:2FTS	1.1	1.2	100	50-150		09/07/2022 17:31
13C5 PFHxA	1.2	1.3	104	50-150		09/07/2022 17:31
13C4 PFHpA	1.2	1.3	107	50-150		09/07/2022 17:31
13C3 PFHxS	1.2	1.2	101	50-150		09/07/2022 17:31
13C2 6:2FTS	1.2	1.2	104	50-150		09/07/2022 17:31
13C8 PFOA	1.2	1.4	115	50-150		09/07/2022 17:31
13C9 PFNA	1.2	1.2	99	50-150		09/07/2022 17:31
13C8 PFOS	1.2	0.98	84	50-150		09/07/2022 17:31
13C2 8:2FTS	1.2	1.3	110	50-150		09/07/2022 17:31
13C6 PFDA	1.2	1.3	107	50-150		09/07/2022 17:31
d3-MeFOSAA	1.2	1.1	92	50-150		09/07/2022 17:31
13C8 PFOSA	1.2	0.99	81	50-150		09/07/2022 17:31
d5-EtFOSAA	1.2	1.4	114	50-150		09/07/2022 17:31
13C7 PFUdA	1.2	1.2	96	50-150		09/07/2022 17:31
13C2 PFDoA	1.2	1.1	92	50-150		09/07/2022 17:31
13C2 PFTeDA	1.2	1.2	99	50-150		09/07/2022 17:31
13C3 HFPO-DA	1.2	1.1	90	50-150		09/07/2022 17:31
d5-N-EtFOSA	1.2	0.089	7	10-150	R	09/07/2022 17:31

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	4-MEN-S-220826	Total Amount Extracted	5.09g
Lab Sample ID	10623513004	Percent Moisture	19.97%
Lab File ID	Q220907A_032	Dry Weight Extracted	4.07g
Matrix	Solid	Ical ID	220906A01
Collected	08/26/2022 13:30	CCal File	Q220907A_028
Received	08/30/2022 09:50	Ending CCal File	Q220907A_038
Extraction Date	09/02/2022 12:24	Blank File	B220907A_008

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	6.49	6.49	11		09/07/2022 17:31
13C4 PFOA	N/A	N/A	7.69	7.70	28		09/07/2022 17:31
13C2 PFDA	N/A	N/A	8.96	8.97	15		09/07/2022 17:31
13C4 PFOS	N/A	N/A	9.45	9.48	80		09/07/2022 17:31

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	5.13	5.15	22		09/07/2022 17:31
13C5 PFPeA	N/A	N/A	5.88	5.91	15		09/07/2022 17:31
13C3 PFBS	N/A	N/A	6.76	6.81	88		09/07/2022 17:31
13C2 4:2FTS	N/A	N/A	6.23	6.26	37		09/07/2022 17:31
13C5 PFHxA	N/A	N/A	6.49	6.52	11		09/07/2022 17:31
13C4 PFHpA	N/A	N/A	7.09	7.12	94		09/07/2022 17:31
13C3 PFHxS	N/A	N/A	8.12	8.10	10		09/07/2022 17:31
13C2 6:2FTS	N/A	N/A	7.38	7.37	57		09/07/2022 17:31
13C8 PFOA	N/A	N/A	7.70	7.69	27		09/07/2022 17:31
13C9 PFNA	N/A	N/A	8.32	8.31	15		09/07/2022 17:31
13C8 PFOS	N/A	N/A	9.45	9.47	70		09/07/2022 17:31
13C2 8:2FTS	N/A	N/A	8.59	8.59	38		09/07/2022 17:31
13C6 PFDA	N/A	N/A	8.97	8.95	20		09/07/2022 17:31
d3-MeFOSAA	N/A	N/A	8.85	8.87	10		09/07/2022 17:31
13C8 PFOSA	N/A	N/A	11.51	11.51	10		09/07/2022 17:31
d5-EtFOSAA	N/A	N/A	9.14	9.16	11		09/07/2022 17:31
13C7 PFUdA	N/A	N/A	9.61	9.57	76		09/07/2022 17:31
13C2 PFDoA	N/A	N/A	10.27	10.27	80		09/07/2022 17:31
13C2 PFTeDA	N/A	N/A	11.56	11.57	13		09/07/2022 17:31
13C3 HFPO-DA	N/A	N/A	6.73	6.74	95		09/07/2022 17:31
d5-N-EtFOSA	N/A	N/A	14.00	13.97	42	R	09/07/2022 17:31

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	4-MEN-S-220826	Total Amount Extracted	5.09g
Lab Sample ID	10623513004	Percent Moisture	19.97%
Lab File ID	Q220907A_032	Dry Weight Extracted	4.07g
Matrix	Solid	Ical ID	220906A01
Collected	08/26/2022 13:30	CCal File	Q220907A_028
Received	08/30/2022 09:50	Ending CCal File	Q220907A_038
Extraction Date	09/02/2022 12:24	Blank File	B220907A_008

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	5.13	5.15	ND		09/07/2022 17:31
PFPeA	N/A	N/A	5.89	5.91	ND		09/07/2022 17:31
HFPO-DA	0.00	0.61	0.00	6.76	ND		09/07/2022 17:31
PFBS	0.36	0.37	6.77	6.78	ND		09/07/2022 17:31
PFHxA	0.07	0.07	6.50	6.50	ND		09/07/2022 17:31
4:2 FTS	0.00	0.90	0.00	6.24	ND		09/07/2022 17:31
PFPeS	0.42	0.41	7.46	7.48	ND		09/07/2022 17:31
PFHpA	0.00	0.34	0.00	7.10	ND		09/07/2022 17:31
DONA	0.00	0.38	0.00	7.32	ND		09/07/2022 17:31
PFHxS	0.29	0.35	8.13	8.19	42		09/07/2022 17:31
PFOA	0.33	0.33	7.71	7.74	ND		09/07/2022 17:31
6:2 FTS	0.00	1.40	0.00	7.41	ND		09/07/2022 17:31
PFHpS	0.55	0.35	8.80	8.80	ND		09/07/2022 17:31
PFNA	0.00	0.20	0.00	8.36	ND		09/07/2022 17:31
PFOSAm	N/A	N/A	11.53	11.51	ND		09/07/2022 17:31
PFOS	0.26	0.24	9.47	9.53	38		09/07/2022 17:31
PFDA	0.15	0.15	8.98	9.02	ND		09/07/2022 17:31
EtFOSAm	0.00	0.57	0.00	13.99	ND		09/07/2022 17:31
8:2 FTS	0.00	1.80	0.00	8.63	ND		09/07/2022 17:31
9-Cl-PF3ON	0.00	0.06	0.00	10.01	ND		09/07/2022 17:31
PFNS	0.25	0.21	10.12	10.19	ND		09/07/2022 17:31
PFUnDA	0.00	0.16	0.00	9.67	ND		09/07/2022 17:31
NMeFOSAA	0.00	0.53	0.00	8.89	ND		09/07/2022 17:31
NEtFOSAA	0.00	0.62	0.00	9.15	ND		09/07/2022 17:31
PFDS	0.24	0.33	10.76	10.84	ND		09/07/2022 17:31
PFDOA	0.00	0.14	0.00	10.34	ND		09/07/2022 17:31
11-Cl-PF3OUdS	0.00	0.02	0.00	11.31	ND		09/07/2022 17:31
PFTTrDA	0.00	0.14	0.00	10.99	ND		09/07/2022 17:31
PFTDA	0.00	0.14	0.00	11.61	ND		09/07/2022 17:31

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID 5-MEN-S-220826
 Lab Sample ID 10623513005
 Lab File ID Q220907A_033
 Matrix Solid
 Collected 08/26/2022 14:25
 Received 08/30/2022 09:50
 Extraction Date 09/02/2022 12:24

Total Amount Extracted 5.50g
 Percent Moisture 6.9084%
 Dry Weight Extracted 5.12g
 Ical ID 220906A01
 CCal File Q220907A_028
 Ending CCal File Q220907A_038
 Blank File B220907A_008

Compound	Concentration (ug/Kg)	QL (ug/Kg)	RL (ug/Kg)	MDL (ug/Kg)	Dil.	CAS No.	Qual.	Analyzed
PFBA	ND	0.098	0.098	0.028	1	375-22-4		09/07/2022 17:50
PFPeA	ND	0.098	0.098	0.028	1	2706-90-3		09/07/2022 17:50
HFPO-DA	ND	0.098	0.098	0.027	1	13252-13-6		09/07/2022 17:50
PFBS	ND	0.086	0.086	0.026	1	375-73-5		09/07/2022 17:50
PFHxA	ND	0.098	0.098	0.027	1	307-24-4		09/07/2022 17:50
4:2 FTS	ND	0.091	0.091	0.023	1	757124-72-4		09/07/2022 17:50
PFPeS	ND	0.092	0.092	0.023	1	2706-91-4		09/07/2022 17:50
PFHpA	ND	0.098	0.098	0.034	1	375-85-9		09/07/2022 17:50
DONA	ND	0.092	0.092	0.035	1	919005-14-4		09/07/2022 17:50
PFHxS	0.73	0.089	0.089	0.021	1	355-46-4		09/07/2022 17:50
PFOA	0.13	0.098	0.098	0.030	1	335-67-1		09/07/2022 17:50
6:2 FTS	ND	0.093	0.093	0.040	1	27619-97-2		09/07/2022 17:50
PFHpS	0.13	0.093	0.093	0.027	1	375-92-8		09/07/2022 17:50
PFNA	ND	0.098	0.098	0.030	1	375-95-1		09/07/2022 17:50
PFOSAm	ND	0.098	0.098	0.029	1	754-91-6		09/07/2022 17:50
PFOS	34 D	0.45	0.45	0.14	5	1763-23-1		09/13/2022 00:15
PFDA	ND	0.098	0.098	0.022	1	335-76-2		09/07/2022 17:50
EtFOSAm	ND	0.098	0.098	0.025	1	4151-50-2		09/07/2022 17:50
8:2 FTS	ND	0.094	0.094	0.043	1	39108-34-4		09/07/2022 17:50
9-Cl-PF3ON	ND	0.091	0.091	0.025	1	756426-58-1		09/07/2022 17:50
PFNS	ND	0.094	0.094	0.034	1	68259-12-1		09/07/2022 17:50
PFUnDA	ND	0.098	0.098	0.029	1	2058-94-8		09/07/2022 17:50
NMeFOSAA	ND	0.098	0.098	0.027	1	2355-31-9		09/07/2022 17:50
NEtFOSAA	ND	0.098	0.098	0.039	1	2991-50-6		09/07/2022 17:50
PFDS	ND	0.094	0.094	0.028	1	335-77-3		09/07/2022 17:50
PFDOA	ND	0.098	0.098	0.032	1	307-55-1		09/07/2022 17:50
11-Cl-PF3OUdS	ND	0.092	0.092	0.025	1	763051-92-9		09/07/2022 17:50
PFTTrDA	ND	0.098	0.098	0.031	1	72629-94-8		09/07/2022 17:50
PFTDA	ND	0.098	0.098	0.033	1	376-06-7		09/07/2022 17:50

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID 5-MEN-S-220826
 Lab Sample ID 10623513005
 Lab File ID Q220907A_033
 Matrix Solid
 Collected 08/26/2022 14:25
 Received 08/30/2022 09:50
 Extraction Date 09/02/2022 12:24

Total Amount Extracted 5.50g
 Percent Moisture 6.9084%
 Dry Weight Extracted 5.12g
 Ical ID 220906A01
 CCal File Q220907A_028
 Ending CCal File Q220907A_038
 Blank File B220907A_008

Injection Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	0.98	1.0	106	50-150		09/07/2022 17:50
13C4 PFOA	0.98	0.97	99	50-150		09/07/2022 17:50
13C2 PFDA	0.98	1.0	107	50-150		09/07/2022 17:50
13C4 PFOS	0.93	0.74	80	50-150		09/07/2022 17:50

Extracted Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	0.98	0.82	84	50-150		09/07/2022 17:50
13C5 PFPeA	0.98	0.83	85	50-150		09/07/2022 17:50
13C3 PFBS	0.91	0.86	94	50-150		09/07/2022 17:50
13C2 4:2FTS	0.91	0.86	95	50-150		09/07/2022 17:50
13C5 PFHxA	0.98	0.88	90	50-150		09/07/2022 17:50
13C4 PFHpA	0.98	0.84	86	50-150		09/07/2022 17:50
13C3 PFHxS	0.92	0.85	92	50-150		09/07/2022 17:50
13C2 6:2FTS	0.93	0.94	101	50-150		09/07/2022 17:50
13C8 PFOA	0.98	0.83	85	50-150		09/07/2022 17:50
13C9 PFNA	0.98	0.94	96	50-150		09/07/2022 17:50
13C8 PFOS	0.93	0.91	98	50-150	D	09/13/2022 00:15
13C2 8:2FTS	0.94	0.75	81	50-150		09/07/2022 17:50
13C6 PFDA	0.98	0.98	100	50-150		09/07/2022 17:50
d3-MeFOSAA	0.98	0.84	86	50-150		09/07/2022 17:50
13C8 PFOSA	0.98	0.69	71	50-150		09/07/2022 17:50
d5-EtFOSAA	0.98	1.0	107	50-150		09/07/2022 17:50
13C7 PFUdA	0.98	0.82	84	50-150		09/07/2022 17:50
13C2 PFDoA	0.98	0.81	83	50-150		09/07/2022 17:50
13C2 PFTeDA	0.98	0.76	78	50-150		09/07/2022 17:50
13C3 HFPO-DA	0.98	0.87	90	50-150		09/07/2022 17:50
d5-N-EtFOSA	0.98	0.10	11	10-150		09/07/2022 17:50

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID 5-MEN-S-220826
 Lab Sample ID 10623513005
 Lab File ID Q220907A_033
 Matrix Solid
 Collected 08/26/2022 14:25
 Received 08/30/2022 09:50
 Extraction Date 09/02/2022 12:24

Total Amount Extracted 5.50g
 Percent Moisture 6.9084%
 Dry Weight Extracted 5.12g
 Ical ID 220906A01
 CCal File Q220907A_028
 Ending CCal File Q220907A_038
 Blank File B220907A_008

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	6.50	6.49	15		09/07/2022 17:50
13C4 PFOA	N/A	N/A	7.71	7.70	14		09/07/2022 17:50
13C2 PFDA	N/A	N/A	8.97	8.97	14		09/07/2022 17:50
13C4 PFOS	N/A	N/A	9.46	9.48	98		09/07/2022 17:50

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	5.14	5.15	20		09/07/2022 17:50
13C5 PFPeA	N/A	N/A	5.89	5.91	14		09/07/2022 17:50
13C3 PFBS	N/A	N/A	6.78	6.81	13		09/07/2022 17:50
13C2 4:2FTS	N/A	N/A	6.24	6.26	40		09/07/2022 17:50
13C5 PFHxA	N/A	N/A	6.50	6.52	12		09/07/2022 17:50
13C4 PFHpA	N/A	N/A	7.10	7.12	90		09/07/2022 17:50
13C3 PFHxS	N/A	N/A	8.13	8.10	99		09/07/2022 17:50
13C2 6:2FTS	N/A	N/A	7.39	7.37	51		09/07/2022 17:50
13C8 PFOA	N/A	N/A	7.71	7.69	26		09/07/2022 17:50
13C9 PFNA	N/A	N/A	8.33	8.31	97		09/07/2022 17:50
13C8 PFOS	N/A	N/A	9.38	9.36	33	D	09/13/2022 00:15
13C2 8:2FTS	N/A	N/A	8.60	8.59	18		09/07/2022 17:50
13C6 PFDA	N/A	N/A	8.97	8.95	11		09/07/2022 17:50
d3-MeFOSAA	N/A	N/A	8.85	8.87	13		09/07/2022 17:50
13C8 PFOSA	N/A	N/A	11.53	11.51	12		09/07/2022 17:50
d5-EtFOSAA	N/A	N/A	9.14	9.16	16		09/07/2022 17:50
13C7 PFUdA	N/A	N/A	9.62	9.57	33		09/07/2022 17:50
13C2 PFDoA	N/A	N/A	10.28	10.27	79		09/07/2022 17:50
13C2 PFTeDA	N/A	N/A	11.57	11.57	15		09/07/2022 17:50
13C3 HFPO-DA	N/A	N/A	6.75	6.74	16		09/07/2022 17:50
d5-N-EtFOSA	N/A	N/A	14.01	13.97	36		09/07/2022 17:50

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	5-MEN-S-220826	Total Amount Extracted	5.50g
Lab Sample ID	10623513005	Percent Moisture	6.9084%
Lab File ID	Q220907A_033	Dry Weight Extracted	5.12g
Matrix	Solid	Ical ID	220906A01
Collected	08/26/2022 14:25	CCal File	Q220907A_028
Received	08/30/2022 09:50	Ending CCal File	Q220907A_038
Extraction Date	09/02/2022 12:24	Blank File	B220907A_008

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	5.15	5.15	ND		09/07/2022 17:50
PFPeA	N/A	N/A	5.90	5.91	ND		09/07/2022 17:50
HFPO-DA	0.00	0.61	0.00	6.76	ND		09/07/2022 17:50
PFBS	0.34	0.37	6.78	6.78	ND		09/07/2022 17:50
PFHxA	0.10	0.07	6.51	6.50	ND		09/07/2022 17:50
4:2 FTS	0.77	0.90	6.25	6.24	ND		09/07/2022 17:50
PFPeS	0.40	0.41	7.48	7.48	ND		09/07/2022 17:50
PFHpA	0.41	0.34	7.10	7.10	ND		09/07/2022 17:50
DONA	0.90	0.38	7.34	7.32	ND		09/07/2022 17:50
PFHxS	0.32	0.35	8.14	8.19	62		09/07/2022 17:50
PFOA	0.26	0.33	7.71	7.74	81		09/07/2022 17:50
6:2 FTS	0.00	1.40	0.00	7.41	ND		09/07/2022 17:50
PFHpS	0.40	0.35	8.81	8.80	23		09/07/2022 17:50
PFNA	0.32	0.20	8.34	8.36	ND		09/07/2022 17:50
PFOSAm	N/A	N/A	11.53	11.51	ND		09/07/2022 17:50
PFOS	0.25	0.22	9.39	9.37	38	D	09/13/2022 00:15
PFDA	0.00	0.15	0.00	9.02	ND		09/07/2022 17:50
EtFOSAm	0.00	0.57	0.00	13.99	ND		09/07/2022 17:50
8:2 FTS	0.00	1.80	0.00	8.63	ND		09/07/2022 17:50
9-CI-PF3ON	0.00	0.06	0.00	10.01	ND		09/07/2022 17:50
PFNS	0.23	0.21	10.13	10.19	ND		09/07/2022 17:50
PFUnDA	0.00	0.16	0.00	9.67	ND		09/07/2022 17:50
NMeFOSAA	0.00	0.53	0.00	8.89	ND		09/07/2022 17:50
NEtFOSAA	0.00	0.62	0.00	9.15	ND		09/07/2022 17:50
PFDS	0.38	0.33	10.77	10.84	ND		09/07/2022 17:50
PFDOA	0.00	0.14	0.00	10.34	ND		09/07/2022 17:50
11-CI-PF3OUdS	0.00	0.02	0.00	11.31	ND		09/07/2022 17:50
PFTTrDA	0.00	0.14	0.00	10.99	ND		09/07/2022 17:50
PFTDA	0.00	0.14	0.00	11.61	ND		09/07/2022 17:50

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID 6 MEN-S-220826
 Lab Sample ID 10623513006
 Lab File ID Q220907A_034
 Matrix Solid
 Collected 08/26/2022 15:30
 Received 08/30/2022 09:50
 Extraction Date 09/02/2022 12:24

Total Amount Extracted 5.12g
 Percent Moisture 6.3561%
 Dry Weight Extracted 4.79g
 Ical ID 220906A01
 CCal File Q220907A_028
 Ending CCal File Q220907A_038
 Blank File B220907A_008

Compound	Concentration (ug/Kg)	QL (ug/Kg)	RL (ug/Kg)	MDL (ug/Kg)	Dil.	CAS No.	Qual.	Analyzed
PFBA	0.16	0.10	0.10	0.030	1	375-22-4		09/07/2022 18:08
PFPeA	ND	0.10	0.10	0.030	1	2706-90-3		09/07/2022 18:08
HFPO-DA	ND	0.10	0.10	0.029	1	13252-13-6		09/07/2022 18:08
PFBS	ND	0.092	0.092	0.027	1	375-73-5		09/07/2022 18:08
PFHxA	ND	0.10	0.10	0.029	1	307-24-4		09/07/2022 18:08
4:2 FTS	ND	0.098	0.098	0.024	1	757124-72-4		09/07/2022 18:08
PFPeS	ND	0.098	0.098	0.025	1	2706-91-4		09/07/2022 18:08
PFHpA	ND	0.10	0.10	0.036	1	375-85-9		09/07/2022 18:08
DONA	ND	0.099	0.099	0.038	1	919005-14-4		09/07/2022 18:08
PFHxS	ND	0.095	0.095	0.023	1	355-46-4		09/07/2022 18:08
PFOA	ND	0.10	0.10	0.032	1	335-67-1		09/07/2022 18:08
6:2 FTS	ND	0.099	0.099	0.043	1	27619-97-2		09/07/2022 18:08
PFHpS	ND	0.099	0.099	0.029	1	375-92-8		09/07/2022 18:08
PFNA	ND	0.10	0.10	0.032	1	375-95-1		09/07/2022 18:08
PFOSAm	ND	0.10	0.10	0.031	1	754-91-6		09/07/2022 18:08
PFOS	4.9	0.097	0.097	0.031	1	1763-23-1		09/07/2022 18:08
PFDA	ND	0.10	0.10	0.024	1	335-76-2		09/07/2022 18:08
EtFOSAm	ND	0.10	0.10	0.027	1	4151-50-2		09/07/2022 18:08
8:2 FTS	ND	0.10	0.10	0.046	1	39108-34-4		09/07/2022 18:08
9-Cl-PF3ON	ND	0.097	0.097	0.026	1	756426-58-1		09/07/2022 18:08
PFNS	ND	0.10	0.10	0.036	1	68259-12-1		09/07/2022 18:08
PFUnDA	ND	0.10	0.10	0.032	1	2058-94-8		09/07/2022 18:08
NMeFOSAA	ND	0.10	0.10	0.029	1	2355-31-9		09/07/2022 18:08
NEtFOSAA	ND	0.10	0.10	0.042	1	2991-50-6		09/07/2022 18:08
PFDS	ND	0.10	0.10	0.029	1	335-77-3		09/07/2022 18:08
PFDOA	ND	0.10	0.10	0.034	1	307-55-1		09/07/2022 18:08
11-Cl-PF3OUdS	ND	0.098	0.098	0.026	1	763051-92-9		09/07/2022 18:08
PFTTrDA	ND	0.10	0.10	0.033	1	72629-94-8		09/07/2022 18:08
PFTDA	ND	0.10	0.10	0.036	1	376-06-7		09/07/2022 18:08

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID 6 MEN-S-220826
 Lab Sample ID 10623513006
 Lab File ID Q220907A_034
 Matrix Solid
 Collected 08/26/2022 15:30
 Received 08/30/2022 09:50
 Extraction Date 09/02/2022 12:24

Total Amount Extracted 5.12g
 Percent Moisture 6.3561%
 Dry Weight Extracted 4.79g
 Ical ID 220906A01
 CCal File Q220907A_028
 Ending CCal File Q220907A_038
 Blank File B220907A_008

Injection Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	1.0	1.1	108	50-150		09/07/2022 18:08
13C4 PFOA	1.0	1.1	107	50-150		09/07/2022 18:08
13C2 PFDA	1.0	1.2	117	50-150		09/07/2022 18:08
13C4 PFOS	1.00	1.0	100	50-150		09/07/2022 18:08

Extracted Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	1.0	0.97	93	50-150		09/07/2022 18:08
13C5 PFPeA	1.0	0.95	91	50-150		09/07/2022 18:08
13C3 PFBS	0.97	0.98	101	50-150		09/07/2022 18:08
13C2 4:2FTS	0.98	0.96	98	50-150		09/07/2022 18:08
13C5 PFHxA	1.0	1.1	103	50-150		09/07/2022 18:08
13C4 PFHpA	1.0	0.97	93	50-150		09/07/2022 18:08
13C3 PFHxS	0.99	0.91	92	50-150		09/07/2022 18:08
13C2 6:2FTS	0.99	0.91	92	50-150		09/07/2022 18:08
13C8 PFOA	1.0	0.99	95	50-150		09/07/2022 18:08
13C9 PFNA	1.0	1.0	100	50-150		09/07/2022 18:08
13C8 PFOS	1.00	0.81	81	50-150		09/07/2022 18:08
13C2 8:2FTS	1.00	0.82	82	50-150		09/07/2022 18:08
13C6 PFDA	1.0	1.0	97	50-150		09/07/2022 18:08
d3-MeFOSAA	1.0	0.84	81	50-150		09/07/2022 18:08
13C8 PFOSA	1.0	0.85	81	50-150		09/07/2022 18:08
d5-EtFOSAA	1.0	1.2	113	50-150		09/07/2022 18:08
13C7 PFUdA	1.0	1.0	97	50-150		09/07/2022 18:08
13C2 PFDoA	1.0	0.90	86	50-150		09/07/2022 18:08
13C2 PFTeDA	1.0	0.88	84	50-150		09/07/2022 18:08
13C3 HFPO-DA	1.0	0.97	93	50-150		09/07/2022 18:08
d5-N-EtFOSA	1.0	0.41	40	10-150		09/07/2022 18:08

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID 6 MEN-S-220826
 Lab Sample ID 10623513006
 Lab File ID Q220907A_034
 Matrix Solid
 Collected 08/26/2022 15:30
 Received 08/30/2022 09:50
 Extraction Date 09/02/2022 12:24

Total Amount Extracted 5.12g
 Percent Moisture 6.3561%
 Dry Weight Extracted 4.79g
 Ical ID 220906A01
 CCal File Q220907A_028
 Ending CCal File Q220907A_038
 Blank File B220907A_008

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	6.49	6.49	13		09/07/2022 18:08
13C4 PFOA	N/A	N/A	7.69	7.70	14		09/07/2022 18:08
13C2 PFDA	N/A	N/A	8.96	8.97	15		09/07/2022 18:08
13C4 PFOS	N/A	N/A	9.45	9.48	17		09/07/2022 18:08

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	5.13	5.15	25		09/07/2022 18:08
13C5 PFPeA	N/A	N/A	5.88	5.91	16		09/07/2022 18:08
13C3 PFBS	N/A	N/A	6.77	6.81	17		09/07/2022 18:08
13C2 4:2FTS	N/A	N/A	6.23	6.26	66		09/07/2022 18:08
13C5 PFHxA	N/A	N/A	6.49	6.52	11		09/07/2022 18:08
13C4 PFHpA	N/A	N/A	7.09	7.12	76		09/07/2022 18:08
13C3 PFHxS	N/A	N/A	8.12	8.10	13		09/07/2022 18:08
13C2 6:2FTS	N/A	N/A	7.37	7.37	30		09/07/2022 18:08
13C8 PFOA	N/A	N/A	7.69	7.69	17		09/07/2022 18:08
13C9 PFNA	N/A	N/A	8.32	8.31	95		09/07/2022 18:08
13C8 PFOS	N/A	N/A	9.46	9.47	33		09/07/2022 18:08
13C2 8:2FTS	N/A	N/A	8.59	8.59	77		09/07/2022 18:08
13C6 PFDA	N/A	N/A	8.96	8.95	10		09/07/2022 18:08
d3-MeFOSAA	N/A	N/A	8.84	8.87	79		09/07/2022 18:08
13C8 PFOSA	N/A	N/A	11.52	11.51	12		09/07/2022 18:08
d5-EtFOSAA	N/A	N/A	9.13	9.16	11		09/07/2022 18:08
13C7 PFUdA	N/A	N/A	9.61	9.57	14		09/07/2022 18:08
13C2 PFDoA	N/A	N/A	10.27	10.27	55		09/07/2022 18:08
13C2 PFTeDA	N/A	N/A	11.57	11.57	90		09/07/2022 18:08
13C3 HFPO-DA	N/A	N/A	6.73	6.74	12		09/07/2022 18:08
d5-N-EtFOSA	N/A	N/A	14.01	13.97	95		09/07/2022 18:08

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID 6 MEN-S-220826
 Lab Sample ID 10623513006
 Lab File ID Q220907A_034
 Matrix Solid
 Collected 08/26/2022 15:30
 Received 08/30/2022 09:50
 Extraction Date 09/02/2022 12:24

Total Amount Extracted 5.12g
 Percent Moisture 6.3561%
 Dry Weight Extracted 4.79g
 Ical ID 220906A01
 CCal File Q220907A_028
 Ending CCal File Q220907A_038
 Blank File B220907A_008

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	5.13	5.15	11		09/07/2022 18:08
PFPeA	N/A	N/A	5.89	5.91	ND		09/07/2022 18:08
HFPO-DA	0.00	0.61	0.00	6.76	ND		09/07/2022 18:08
PFBS	0.39	0.37	6.77	6.78	ND		09/07/2022 18:08
PFHxA	0.09	0.07	6.50	6.50	ND		09/07/2022 18:08
4:2 FTS	0.00	0.90	0.00	6.24	ND		09/07/2022 18:08
PFPeS	0.12	0.41	7.45	7.48	ND		09/07/2022 18:08
PFHpA	0.29	0.34	7.09	7.10	ND		09/07/2022 18:08
DONA	0.00	0.38	0.00	7.32	ND		09/07/2022 18:08
PFHxS	0.32	0.35	8.13	8.19	ND		09/07/2022 18:08
PFOA	0.28	0.33	7.70	7.74	ND		09/07/2022 18:08
6:2 FTS	0.00	1.40	0.00	7.41	ND		09/07/2022 18:08
PFHpS	0.13	0.35	8.80	8.80	ND		09/07/2022 18:08
PFNA	0.23	0.20	8.32	8.36	ND		09/07/2022 18:08
PFOSAm	N/A	N/A	11.53	11.51	ND		09/07/2022 18:08
PFOS	0.25	0.24	9.46	9.53	33		09/07/2022 18:08
PFDA	0.22	0.15	8.96	9.02	ND		09/07/2022 18:08
EtFOSAm	0.00	0.57	0.00	13.99	ND		09/07/2022 18:08
8:2 FTS	0.00	1.80	0.00	8.63	ND		09/07/2022 18:08
9-CI-PF3ON	0.00	0.06	0.00	10.01	ND		09/07/2022 18:08
PFNS	0.67	0.21	10.13	10.19	ND		09/07/2022 18:08
PFUnDA	0.00	0.16	0.00	9.67	ND		09/07/2022 18:08
NMeFOSAA	0.00	0.53	0.00	8.89	ND		09/07/2022 18:08
NEtFOSAA	0.00	0.62	0.00	9.15	ND		09/07/2022 18:08
PFDS	0.26	0.33	10.76	10.84	ND		09/07/2022 18:08
PFDOA	0.00	0.14	0.00	10.34	ND		09/07/2022 18:08
11-CI-PF3OUdS	0.00	0.02	0.00	11.31	ND		09/07/2022 18:08
PFTTrDA	0.00	0.14	0.00	10.99	ND		09/07/2022 18:08
PFTDA	0.00	0.14	0.00	11.61	ND		09/07/2022 18:08

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID 7 MEN-S-220826
 Lab Sample ID 10623513007
 Lab File ID Q220907A_035
 Matrix Solid
 Collected 08/26/2022 16:00
 Received 08/30/2022 09:50
 Extraction Date 09/02/2022 12:24

Total Amount Extracted 5.44g
 Percent Moisture 10.1532%
 Dry Weight Extracted 4.89g
 Ical ID 220906A01
 CCal File Q220907A_028
 Ending CCal File Q220907A_038
 Blank File B220907A_008

Compound	Concentration (ug/Kg)	QL (ug/Kg)	RL (ug/Kg)	MDL (ug/Kg)	Dil.	CAS No.	Qual.	Analyzed
PFBA	0.11	0.10	0.10	0.029	1	375-22-4		09/07/2022 18:27
PFPeA	ND	0.10	0.10	0.029	1	2706-90-3		09/07/2022 18:27
HFPO-DA	ND	0.10	0.10	0.028	1	13252-13-6		09/07/2022 18:27
PFBS	ND	0.091	0.091	0.027	1	375-73-5		09/07/2022 18:27
PFHxA	ND	0.10	0.10	0.028	1	307-24-4		09/07/2022 18:27
4:2 FTS	ND	0.096	0.096	0.024	1	757124-72-4		09/07/2022 18:27
PFPeS	ND	0.096	0.096	0.025	1	2706-91-4		09/07/2022 18:27
PFHpA	ND	0.10	0.10	0.036	1	375-85-9		09/07/2022 18:27
DONA	ND	0.097	0.097	0.037	1	919005-14-4		09/07/2022 18:27
PFHxS	0.23	0.093	0.093	0.022	1	355-46-4		09/07/2022 18:27
PFOA	ND	0.10	0.10	0.032	1	335-67-1		09/07/2022 18:27
6:2 FTS	ND	0.097	0.097	0.042	1	27619-97-2		09/07/2022 18:27
PFHpS	ND	0.097	0.097	0.028	1	375-92-8		09/07/2022 18:27
PFNA	ND	0.10	0.10	0.032	1	375-95-1		09/07/2022 18:27
PFOSAm	ND	0.10	0.10	0.030	1	754-91-6		09/07/2022 18:27
PFOS	2.3	0.095	0.095	0.030	1	1763-23-1		09/07/2022 18:27
PFDA	ND	0.10	0.10	0.023	1	335-76-2		09/07/2022 18:27
EtFOSAm	ND	0.10	0.10	0.026	1	4151-50-2		09/07/2022 18:27
8:2 FTS	ND	0.098	0.098	0.045	1	39108-34-4		09/07/2022 18:27
9-Cl-PF3ON	ND	0.095	0.095	0.026	1	756426-58-1		09/07/2022 18:27
PFNS	ND	0.098	0.098	0.036	1	68259-12-1		09/07/2022 18:27
PFUnDA	ND	0.10	0.10	0.031	1	2058-94-8		09/07/2022 18:27
NMeFOSAA	ND	0.10	0.10	0.029	1	2355-31-9		09/07/2022 18:27
NEtFOSAA	ND	0.10	0.10	0.041	1	2991-50-6		09/07/2022 18:27
PFDS	ND	0.099	0.099	0.029	1	335-77-3		09/07/2022 18:27
PFDOA	ND	0.10	0.10	0.034	1	307-55-1		09/07/2022 18:27
11-Cl-PF3OUdS	ND	0.096	0.096	0.026	1	763051-92-9		09/07/2022 18:27
PFTTrDA	ND	0.10	0.10	0.033	1	72629-94-8		09/07/2022 18:27
PFTDA	ND	0.10	0.10	0.035	1	376-06-7		09/07/2022 18:27

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary

PFAS by Isotope Dilution

Page 2 of 4

Client Sample ID 7 MEN-S-220826
 Lab Sample ID 10623513007
 Lab File ID Q220907A_035
 Matrix Solid
 Collected 08/26/2022 16:00
 Received 08/30/2022 09:50
 Extraction Date 09/02/2022 12:24

Total Amount Extracted 5.44g
 Percent Moisture 10.1532%
 Dry Weight Extracted 4.89g
 Ical ID 220906A01
 CCal File Q220907A_028
 Ending CCal File Q220907A_038
 Blank File B220907A_008

Injection Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	1.0	1.3	124	50-150		09/07/2022 18:27
13C4 PFOA	1.0	1.2	115	50-150		09/07/2022 18:27
13C2 PFDA	1.0	1.3	123	50-150		09/07/2022 18:27
13C4 PFOS	0.98	1.1	117	50-150		09/07/2022 18:27

Extracted Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	1.0	1.0	101	50-150		09/07/2022 18:27
13C5 PFPeA	1.0	1.1	103	50-150		09/07/2022 18:27
13C3 PFBS	0.95	1.1	111	50-150		09/07/2022 18:27
13C2 4:2FTS	0.96	1.1	113	50-150		09/07/2022 18:27
13C5 PFHxA	1.0	1.2	113	50-150		09/07/2022 18:27
13C4 PFHpA	1.0	1.1	104	50-150		09/07/2022 18:27
13C3 PFHxS	0.97	1.1	112	50-150		09/07/2022 18:27
13C2 6:2FTS	0.97	1.2	127	50-150		09/07/2022 18:27
13C8 PFOA	1.0	1.1	103	50-150		09/07/2022 18:27
13C9 PFNA	1.0	1.1	108	50-150		09/07/2022 18:27
13C8 PFOS	0.98	0.92	94	50-150		09/07/2022 18:27
13C2 8:2FTS	0.98	1.1	108	50-150		09/07/2022 18:27
13C6 PFDA	1.0	0.99	97	50-150		09/07/2022 18:27
d3-MeFOSAA	1.0	1.0	101	50-150		09/07/2022 18:27
13C8 PFOSA	1.0	0.65	64	50-150		09/07/2022 18:27
d5-EtFOSAA	1.0	1.3	125	50-150		09/07/2022 18:27
13C7 PFUdA	1.0	1.0	101	50-150		09/07/2022 18:27
13C2 PFDoA	1.0	0.96	94	50-150		09/07/2022 18:27
13C2 PFTeDA	1.0	0.89	87	50-150		09/07/2022 18:27
13C3 HFPO-DA	1.0	0.99	96	50-150		09/07/2022 18:27
d5-N-EtFOSA	1.0	0.065	6	10-150	R	09/07/2022 18:27

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	7 MEN-S-220826	Total Amount Extracted	5.44g
Lab Sample ID	10623513007	Percent Moisture	10.1532%
Lab File ID	Q220907A_035	Dry Weight Extracted	4.89g
Matrix	Solid	Ical ID	220906A01
Collected	08/26/2022 16:00	CCal File	Q220907A_028
Received	08/30/2022 09:50	Ending CCal File	Q220907A_038
Extraction Date	09/02/2022 12:24	Blank File	B220907A_008

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	6.48	6.49	11		09/07/2022 18:27
13C4 PFOA	N/A	N/A	7.69	7.70	16		09/07/2022 18:27
13C2 PFDA	N/A	N/A	8.95	8.97	28		09/07/2022 18:27
13C4 PFOS	N/A	N/A	9.44	9.48	11		09/07/2022 18:27

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	5.13	5.15	20		09/07/2022 18:27
13C5 PFPeA	N/A	N/A	5.88	5.91	16		09/07/2022 18:27
13C3 PFBS	N/A	N/A	6.76	6.81	15		09/07/2022 18:27
13C2 4:2FTS	N/A	N/A	6.23	6.26	38		09/07/2022 18:27
13C5 PFHxA	N/A	N/A	6.49	6.52	11		09/07/2022 18:27
13C4 PFHpA	N/A	N/A	7.08	7.12	73		09/07/2022 18:27
13C3 PFHxS	N/A	N/A	8.12	8.10	11		09/07/2022 18:27
13C2 6:2FTS	N/A	N/A	7.37	7.37	54		09/07/2022 18:27
13C8 PFOA	N/A	N/A	7.69	7.69	17		09/07/2022 18:27
13C9 PFNA	N/A	N/A	8.31	8.31	11		09/07/2022 18:27
13C8 PFOS	N/A	N/A	9.44	9.47	15		09/07/2022 18:27
13C2 8:2FTS	N/A	N/A	8.58	8.59	19		09/07/2022 18:27
13C6 PFDA	N/A	N/A	8.95	8.95	23		09/07/2022 18:27
d3-MeFOSAA	N/A	N/A	8.83	8.87	17		09/07/2022 18:27
13C8 PFOSA	N/A	N/A	11.51	11.51	41		09/07/2022 18:27
d5-EtFOSAA	N/A	N/A	9.13	9.16	75		09/07/2022 18:27
13C7 PFUdA	N/A	N/A	9.60	9.57	12		09/07/2022 18:27
13C2 PFDoA	N/A	N/A	10.26	10.27	65		09/07/2022 18:27
13C2 PFTeDA	N/A	N/A	11.56	11.57	14		09/07/2022 18:27
13C3 HFPO-DA	N/A	N/A	6.73	6.74	12		09/07/2022 18:27
d5-N-EtFOSA	N/A	N/A	14.00	13.97	20	R	09/07/2022 18:27

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID 7 MEN-S-220826
 Lab Sample ID 10623513007
 Lab File ID Q220907A_035
 Matrix Solid
 Collected 08/26/2022 16:00
 Received 08/30/2022 09:50
 Extraction Date 09/02/2022 12:24

Total Amount Extracted 5.44g
 Percent Moisture 10.1532%
 Dry Weight Extracted 4.89g
 Ical ID 220906A01
 CCal File Q220907A_028
 Ending CCal File Q220907A_038
 Blank File B220907A_008

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	5.13	5.15	12		09/07/2022 18:27
PFPeA	N/A	N/A	5.89	5.91	ND		09/07/2022 18:27
HFPO-DA	0.00	0.61	0.00	6.76	ND		09/07/2022 18:27
PFBS	0.36	0.37	6.77	6.78	ND		09/07/2022 18:27
PFHxA	0.11	0.07	6.49	6.50	ND		09/07/2022 18:27
4:2 FTS	1.00	0.90	6.24	6.24	ND		09/07/2022 18:27
PFPeS	0.81	0.41	7.46	7.48	ND		09/07/2022 18:27
PFHpA	0.38	0.34	7.09	7.10	ND		09/07/2022 18:27
DONA	0.00	0.38	0.00	7.32	ND		09/07/2022 18:27
PFHxS	0.33	0.35	8.12	8.19	67		09/07/2022 18:27
PFOA	0.21	0.33	7.69	7.74	ND		09/07/2022 18:27
6:2 FTS	0.00	1.40	0.00	7.41	ND		09/07/2022 18:27
PFHpS	0.56	0.35	8.79	8.80	ND		09/07/2022 18:27
PFNA	0.16	0.20	8.32	8.36	ND		09/07/2022 18:27
PFOSAm	N/A	N/A	11.52	11.51	ND		09/07/2022 18:27
PFOS	0.28	0.24	9.45	9.53	60		09/07/2022 18:27
PFDA	0.44	0.15	8.96	9.02	ND		09/07/2022 18:27
EtFOSAm	0.00	0.57	0.00	13.99	ND		09/07/2022 18:27
8:2 FTS	0.00	1.80	0.00	8.63	ND		09/07/2022 18:27
9-CI-PF3ON	0.00	0.06	0.00	10.01	ND		09/07/2022 18:27
PFNS	0.26	0.21	10.10	10.19	ND		09/07/2022 18:27
PFUnDA	0.11	0.16	9.61	9.67	ND		09/07/2022 18:27
NMeFOSAA	0.00	0.53	0.00	8.89	ND		09/07/2022 18:27
NEtFOSAA	0.00	0.62	0.00	9.15	ND		09/07/2022 18:27
PFDS	0.32	0.33	10.76	10.84	ND		09/07/2022 18:27
PFDOA	0.00	0.14	0.00	10.34	ND		09/07/2022 18:27
11-CI-PF3OUdS	0.00	0.02	0.00	11.31	ND		09/07/2022 18:27
PFTTrDA	0.00	0.14	0.00	10.99	ND		09/07/2022 18:27
PFTDA	0.00	0.14	0.00	11.61	ND		09/07/2022 18:27

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID MEN-EB-S-220826
 Lab Sample ID 10623513008
 Lab File ID Q220912A_032
 Matrix Non_Potable_Water
 Collected 08/26/2022 16:30
 Received 08/30/2022 09:50
 Extraction Date 09/01/2022 19:34

Total Amount Extracted 228mL
 Ical ID 220909B01
 CCal File Q220912A_027
 Ending CCal File Q220912A_035
 Blank File B220908A_006

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	MDL (ng/L)	Dil.	CAS No.	Qual.	Analyzed
PFBA	ND	2.2	2.2	0.55	1	375-22-4		09/12/2022 23:38
PFPeA	ND	2.2	2.2	0.90	1	2706-90-3		09/12/2022 23:38
HFPO-DA	ND	2.2	2.2	0.54	1	13252-13-6		09/12/2022 23:38
PFBS	ND	1.9	1.9	0.53	1	375-73-5		09/12/2022 23:38
PFHxA	ND	2.2	2.2	1.00	1	307-24-4		09/12/2022 23:38
4:2 FTS	ND	2.0	2.0	0.51	1	757124-72-4		09/12/2022 23:38
PFPeS	ND	2.1	2.1	0.66	1	2706-91-4		09/12/2022 23:38
PFHpA	ND	2.2	2.2	0.75	1	375-85-9		09/12/2022 23:38
DONA	ND	2.1	2.1	1.0	1	919005-14-4		09/12/2022 23:38
PFHxS	ND	2.0	2.0	0.58	1	355-46-4		09/12/2022 23:38
PFOA	ND	2.2	2.2	0.94	1	335-67-1		09/12/2022 23:38
6:2 FTS	3.5	2.1	2.1	0.74	1	27619-97-2		09/12/2022 23:38
PFHpS	ND	2.1	2.1	0.73	1	375-92-8		09/12/2022 23:38
PFNA	ND	2.2	2.2	0.87	1	375-95-1		09/12/2022 23:38
PFOSAm	ND	2.2	2.2	0.79	1	754-91-6		09/12/2022 23:38
PFOS	ND	2.0	2.0	0.73	1	1763-23-1		09/12/2022 23:38
PFDA	ND	2.2	2.2	0.67	1	335-76-2		09/12/2022 23:38
EtFOSAm	ND	2.2	2.2	0.63	1	4151-50-2		09/12/2022 23:38
8:2 FTS	ND	2.1	2.1	0.55	1	39108-34-4		09/12/2022 23:38
9-CI-PF3ON	ND	2.0	2.0	0.51	1	756426-58-1		09/12/2022 23:38
PFNS	ND	2.1	2.1	0.64	1	68259-12-1		09/12/2022 23:38
PFUnDA	ND	2.2	2.2	0.53	1	2058-94-8		09/12/2022 23:38
NMeFOSAA	ND	2.2	2.2	0.76	1	2355-31-9		09/12/2022 23:38
NEtFOSAA	ND	2.2	2.2	0.89	1	2991-50-6		09/12/2022 23:38
PFDS	ND	2.1	2.1	0.70	1	335-77-3		09/12/2022 23:38
PFDOA	ND	2.2	2.2	0.53	1	307-55-1		09/12/2022 23:38
11-CI-PF3OUdS	ND	2.1	2.1	0.61	1	763051-92-9		09/12/2022 23:38
PFTTrDA	ND	2.2	2.2	0.68	1	72629-94-8		09/12/2022 23:38
PFTDA	ND	2.2	2.2	0.66	1	376-06-7		09/12/2022 23:38

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID MEN-EB-S-220826
 Lab Sample ID 10623513008
 Lab File ID Q220912A_032
 Matrix Non_Potable_Water
 Collected 08/26/2022 16:30
 Received 08/30/2022 09:50
 Extraction Date 09/01/2022 19:34

Total Amount Extracted 228mL
 Ical ID 220909B01
 CCal File Q220912A_027
 Ending CCal File Q220912A_035
 Blank File B220908A_006

Injection Internal Standards

Compound	Known Conc. (ng/L)	Conc.Found (ng/L)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	22	22	99	50-150		09/12/2022 23:38
13C4 PFOA	22	23	103	50-150		09/12/2022 23:38
13C2 PFDA	22	28	126	50-150		09/12/2022 23:38
13C4 PFOS	21	23	111	50-150		09/12/2022 23:38

Extracted Internal Standards

Compound	Known Conc. (ng/L)	Conc.Found (ng/L)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	22	25	114	50-150		09/12/2022 23:38
13C5 PFPeA	22	20	92	50-150		09/12/2022 23:38
13C3 PFBS	20	20	96	50-150		09/12/2022 23:38
13C2 4:2FTS	20	18	86	50-150		09/12/2022 23:38
13C5 PFHxA	22	21	95	50-150		09/12/2022 23:38
13C4 PFHpA	22	22	101	50-150		09/12/2022 23:38
13C3 PFHxS	21	19	92	50-150		09/12/2022 23:38
13C2 6:2FTS	21	21	101	50-150		09/12/2022 23:38
13C8 PFOA	22	19	88	50-150		09/12/2022 23:38
13C9 PFNA	22	22	100	50-150		09/12/2022 23:38
13C8 PFOS	21	23	108	50-150		09/12/2022 23:38
13C2 8:2FTS	21	20	93	50-150		09/12/2022 23:38
13C6 PFDA	22	21	97	50-150		09/12/2022 23:38
d3-MeFOSAA	22	25	115	50-150		09/12/2022 23:38
13C8 PFOSA	22	12	53	50-150		09/12/2022 23:38
d5-EtFOSAA	22	17	79	50-150		09/12/2022 23:38
13C7 PFUdA	22	20	92	50-150		09/12/2022 23:38
13C2 PFDoA	22	26	118	50-150		09/12/2022 23:38
13C2 PFTeDA	22	15	70	50-150		09/12/2022 23:38
13C3 HFPO-DA	22	21	97	50-150		09/12/2022 23:38
d5-N-EtFOSA	22	0.31	1	10-150	R	09/12/2022 23:38

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID MEN-EB-S-220826
 Lab Sample ID 10623513008
 Lab File ID Q220912A_032
 Matrix Non_Potable_Water
 Collected 08/26/2022 16:30
 Received 08/30/2022 09:50
 Extraction Date 09/01/2022 19:34

Total Amount Extracted 228mL
 Ical ID 220909B01
 CCal File Q220912A_027
 Ending CCal File Q220912A_035
 Blank File B220908A_006

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	6.45	6.47	72		09/12/2022 23:38
13C4 PFOA	N/A	N/A	7.66	7.67	74		09/12/2022 23:38
13C2 PFDA	N/A	N/A	8.94	8.92	93		09/12/2022 23:38
13C4 PFOS	N/A	N/A	9.38	9.36	90		09/12/2022 23:38

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	5.08	5.09	34		09/12/2022 23:38
13C5 PFPeA	N/A	N/A	5.85	5.87	10		09/12/2022 23:38
13C3 PFBS	N/A	N/A	6.67	6.70	42		09/12/2022 23:38
13C2 4:2FTS	N/A	N/A	6.20	6.23	68		09/12/2022 23:38
13C5 PFHxA	N/A	N/A	6.45	6.48	62		09/12/2022 23:38
13C4 PFHpA	N/A	N/A	7.05	7.07	60		09/12/2022 23:38
13C3 PFHxS	N/A	N/A	8.04	8.05	12		09/12/2022 23:38
13C2 6:2FTS	N/A	N/A	7.35	7.36	19		09/12/2022 23:38
13C8 PFOA	N/A	N/A	7.66	7.68	83		09/12/2022 23:38
13C9 PFNA	N/A	N/A	8.30	8.28	79		09/12/2022 23:38
13C8 PFOS	N/A	N/A	9.38	9.36	71		09/12/2022 23:38
13C2 8:2FTS	N/A	N/A	8.58	8.56	35		09/12/2022 23:38
13C6 PFDA	N/A	N/A	8.94	8.92	71		09/12/2022 23:38
d3-MeFOSAA	N/A	N/A	8.84	8.83	75		09/12/2022 23:38
13C8 PFOSA	N/A	N/A	11.40	11.37	47		09/12/2022 23:38
d5-EtFOSAA	N/A	N/A	9.14	9.13	10		09/12/2022 23:38
13C7 PFUdA	N/A	N/A	9.60	9.40	42		09/12/2022 23:38
13C2 PFDoA	N/A	N/A	10.26	10.04	54		09/12/2022 23:38
13C2 PFTeDA	N/A	N/A	11.56	11.58	37		09/12/2022 23:38
13C3 HFPO-DA	N/A	N/A	6.70	6.72	47		09/12/2022 23:38
d5-N-EtFOSA	N/A	N/A	13.91	13.89	38	R	09/12/2022 23:38

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	MEN-EB-S-220826	Total Amount Extracted	228mL
Lab Sample ID	10623513008	Ical ID	220909B01
Lab File ID	Q220912A_032	CCal File	Q220912A_027
Matrix	Non_Potable_Water	Ending CCal File	Q220912A_035
Collected	08/26/2022 16:30	Blank File	B220908A_006
Received	08/30/2022 09:50		
Extraction Date	09/01/2022 19:34		

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	5.09	5.10	ND		09/12/2022 23:38
PFPeA	N/A	N/A	5.86	5.87	ND		09/12/2022 23:38
HFPO-DA	0.00	0.71	0.00	6.73	ND		09/12/2022 23:38
PFBS	0.23	0.36	6.68	6.71	ND		09/12/2022 23:38
PFHxA	0.08	0.07	6.46	6.49	ND		09/12/2022 23:38
4:2 FTS	0.00	0.86	0.00	6.24	ND		09/12/2022 23:38
PFPeS	0.00	0.44	0.00	7.39	ND		09/12/2022 23:38
PFHpA	0.00	0.35	0.00	7.08	ND		09/12/2022 23:38
DONA	0.00	0.50	0.00	7.30	ND		09/12/2022 23:38
PFHxS	0.00	0.32	0.00	8.05	ND		09/12/2022 23:38
PFOA	0.42	0.29	7.67	7.68	ND		09/12/2022 23:38
6:2 FTS	0.98	1.10	7.35	7.36	15		09/12/2022 23:38
PFHpS	0.00	0.43	0.00	8.71	ND		09/12/2022 23:38
PFNA	0.00	0.19	0.00	8.29	ND		09/12/2022 23:38
PFOSAm	N/A	N/A	0.00	11.37	ND		09/12/2022 23:38
PFOS	0.00	0.22	0.00	9.37	ND		09/12/2022 23:38
PFDA	0.00	0.16	0.00	8.93	ND		09/12/2022 23:38
EtFOSAm	0.00	0.51	0.00	13.91	ND		09/12/2022 23:38
8:2 FTS	0.00	0.94	0.00	8.57	ND		09/12/2022 23:38
9-CI-PF3ON	0.00	0.03	0.00	9.84	ND		09/12/2022 23:38
PFNS	0.00	0.22	0.00	10.03	ND		09/12/2022 23:38
PFUnDA	0.00	0.14	0.00	9.59	ND		09/12/2022 23:38
NMeFOSAA	0.00	0.64	0.00	8.83	ND		09/12/2022 23:38
NEtFOSAA	0.00	0.44	0.00	9.13	ND		09/12/2022 23:38
PFDS	0.00	0.29	0.00	10.69	ND		09/12/2022 23:38
PFDOA	0.00	0.20	0.00	10.24	ND		09/12/2022 23:38
11-CI-PF3OUdS	0.00	0.02	0.00	11.15	ND		09/12/2022 23:38
PFTTrDA	0.00	0.17	0.00	10.89	ND		09/12/2022 23:38
PFTDA	0.00	0.12	0.00	11.52	ND		09/12/2022 23:38

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID MEN-FB-S-220826
 Lab Sample ID 10623513009
 Lab File ID Q220912A_033
 Matrix Non_Potable_Water
 Collected 08/26/2022 16:40
 Received 08/30/2022 09:50
 Extraction Date 09/01/2022 19:34

Total Amount Extracted 246mL
 Ical ID 220909B01
 CCal File Q220912A_027
 Ending CCal File Q220912A_035
 Blank File B220908A_006

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	MDL (ng/L)	Dil.	CAS No.	Qual.	Analyzed
PFBA	ND	2.0	2.0	0.51	1	375-22-4		09/12/2022 23:56
PFPeA	ND	2.0	2.0	0.84	1	2706-90-3		09/12/2022 23:56
HFPO-DA	ND	2.0	2.0	0.50	1	13252-13-6		09/12/2022 23:56
PFBS	ND	1.8	1.8	0.49	1	375-73-5		09/12/2022 23:56
PFHxA	ND	2.0	2.0	0.93	1	307-24-4		09/12/2022 23:56
4:2 FTS	ND	1.9	1.9	0.47	1	757124-72-4		09/12/2022 23:56
PFPeS	ND	1.9	1.9	0.61	1	2706-91-4		09/12/2022 23:56
PFHpA	ND	2.0	2.0	0.70	1	375-85-9		09/12/2022 23:56
DONA	ND	1.9	1.9	0.93	1	919005-14-4		09/12/2022 23:56
PFHxS	ND	1.9	1.9	0.54	1	355-46-4		09/12/2022 23:56
PFOA	ND	2.0	2.0	0.88	1	335-67-1		09/12/2022 23:56
6:2 FTS	ND	1.9	1.9	0.69	1	27619-97-2		09/12/2022 23:56
PFHpS	ND	1.9	1.9	0.68	1	375-92-8		09/12/2022 23:56
PFNA	ND	2.0	2.0	0.81	1	375-95-1		09/12/2022 23:56
PFOSAm	ND	2.0	2.0	0.73	1	754-91-6		09/12/2022 23:56
PFOS	ND	1.9	1.9	0.68	1	1763-23-1		09/12/2022 23:56
PFDA	ND	2.0	2.0	0.62	1	335-76-2		09/12/2022 23:56
EtFOSAm	ND	2.0	2.0	0.58	1	4151-50-2		09/12/2022 23:56
8:2 FTS	ND	2.0	2.0	0.51	1	39108-34-4		09/12/2022 23:56
9-CI-PF3ON	ND	1.9	1.9	0.48	1	756426-58-1		09/12/2022 23:56
PFNS	ND	2.0	2.0	0.60	1	68259-12-1		09/12/2022 23:56
PFUnDA	ND	2.0	2.0	0.49	1	2058-94-8		09/12/2022 23:56
NMeFOSAA	ND	2.0	2.0	0.71	1	2355-31-9		09/12/2022 23:56
NEtFOSAA	ND	2.0	2.0	0.83	1	2991-50-6		09/12/2022 23:56
PFDS	ND	2.0	2.0	0.65	1	335-77-3		09/12/2022 23:56
PFDOA	ND	2.0	2.0	0.49	1	307-55-1		09/12/2022 23:56
11-CI-PF3OUdS	ND	1.9	1.9	0.57	1	763051-92-9		09/12/2022 23:56
PFTTrDA	ND	2.0	2.0	0.63	1	72629-94-8		09/12/2022 23:56
PFTDA	ND	2.0	2.0	0.61	1	376-06-7		09/12/2022 23:56

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID MEN-FB-S-220826
 Lab Sample ID 10623513009
 Lab File ID Q220912A_033
 Matrix Non_Potable_Water
 Collected 08/26/2022 16:40
 Received 08/30/2022 09:50
 Extraction Date 09/01/2022 19:34

Total Amount Extracted 246mL
 Ical ID 220909B01
 CCal File Q220912A_027
 Ending CCal File Q220912A_035
 Blank File B220908A_006

Injection Internal Standards

Compound	Known Conc. (ng/L)	Conc.Found (ng/L)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	20	22	108	50-150		09/12/2022 23:56
13C4 PFOA	20	20	99	50-150		09/12/2022 23:56
13C2 PFDA	20	24	119	50-150		09/12/2022 23:56
13C4 PFOS	19	22	115	50-150		09/12/2022 23:56

Extracted Internal Standards

Compound	Known Conc. (ng/L)	Conc.Found (ng/L)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	20	26	130	50-150		09/12/2022 23:56
13C5 PFPeA	20	20	99	50-150		09/12/2022 23:56
13C3 PFBS	19	21	112	50-150		09/12/2022 23:56
13C2 4:2FTS	19	19	99	50-150		09/12/2022 23:56
13C5 PFHxA	20	21	102	50-150		09/12/2022 23:56
13C4 PFHpA	20	22	108	50-150		09/12/2022 23:56
13C3 PFHxS	19	21	107	50-150		09/12/2022 23:56
13C2 6:2FTS	19	21	111	50-150		09/12/2022 23:56
13C8 PFOA	20	19	92	50-150		09/12/2022 23:56
13C9 PFNA	20	22	108	50-150		09/12/2022 23:56
13C8 PFOS	19	21	110	50-150		09/12/2022 23:56
13C2 8:2FTS	20	20	102	50-150		09/12/2022 23:56
13C6 PFDA	20	20	99	50-150		09/12/2022 23:56
d3-MeFOSAA	20	20	97	50-150		09/12/2022 23:56
13C8 PFOSA	20	5.1	25	50-150	R	09/12/2022 23:56
d5-EtFOSAA	20	17	82	50-150		09/12/2022 23:56
13C7 PFUdA	20	19	96	50-150		09/12/2022 23:56
13C2 PFDaA	20	19	95	50-150		09/12/2022 23:56
13C2 PFTeDA	20	17	83	50-150		09/12/2022 23:56
13C3 HFPO-DA	20	23	112	50-150		09/12/2022 23:56
d5-N-EtFOSA	20	0.00	0	10-150	R	09/12/2022 23:56

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID MEN-FB-S-220826
 Lab Sample ID 10623513009
 Lab File ID Q220912A_033
 Matrix Non_Potable_Water
 Collected 08/26/2022 16:40
 Received 08/30/2022 09:50
 Extraction Date 09/01/2022 19:34

Total Amount Extracted 246mL
 Ical ID 220909B01
 CCal File Q220912A_027
 Ending CCal File Q220912A_035
 Blank File B220908A_006

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	6.45	6.47	84		09/12/2022 23:56
13C4 PFOA	N/A	N/A	7.66	7.67	93		09/12/2022 23:56
13C2 PFDA	N/A	N/A	8.94	8.92	66		09/12/2022 23:56
13C4 PFOS	N/A	N/A	9.38	9.36	52		09/12/2022 23:56

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	5.08	5.09	35		09/12/2022 23:56
13C5 PFPeA	N/A	N/A	5.85	5.87	12		09/12/2022 23:56
13C3 PFBS	N/A	N/A	6.67	6.70	42		09/12/2022 23:56
13C2 4:2FTS	N/A	N/A	6.20	6.23	68		09/12/2022 23:56
13C5 PFHxA	N/A	N/A	6.45	6.48	81		09/12/2022 23:56
13C4 PFHpA	N/A	N/A	7.05	7.07	48		09/12/2022 23:56
13C3 PFHxS	N/A	N/A	8.04	8.05	10		09/12/2022 23:56
13C2 6:2FTS	N/A	N/A	7.34	7.36	14		09/12/2022 23:56
13C8 PFOA	N/A	N/A	7.66	7.68	99		09/12/2022 23:56
13C9 PFNA	N/A	N/A	8.30	8.28	58		09/12/2022 23:56
13C8 PFOS	N/A	N/A	9.39	9.36	78		09/12/2022 23:56
13C2 8:2FTS	N/A	N/A	8.58	8.56	30		09/12/2022 23:56
13C6 PFDA	N/A	N/A	8.95	8.92	51		09/12/2022 23:56
d3-MeFOSAA	N/A	N/A	8.85	8.83	55		09/12/2022 23:56
13C8 PFOSA	N/A	N/A	11.41	11.37	42	R	09/12/2022 23:56
d5-EtFOSAA	N/A	N/A	9.14	9.13	38		09/12/2022 23:56
13C7 PFUdA	N/A	N/A	9.60	9.40	33		09/12/2022 23:56
13C2 PFDoA	N/A	N/A	10.27	10.04	60		09/12/2022 23:56
13C2 PFTeDA	N/A	N/A	11.56	11.58	43		09/12/2022 23:56
13C3 HFPO-DA	N/A	N/A	6.70	6.72	70		09/12/2022 23:56
d5-N-EtFOSA	N/A	N/A	0.00	13.89	ND	R	09/12/2022 23:56

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID MEN-FB-S-220826
 Lab Sample ID 10623513009
 Lab File ID Q220912A_033
 Matrix Non_Potable_Water
 Collected 08/26/2022 16:40
 Received 08/30/2022 09:50
 Extraction Date 09/01/2022 19:34

Total Amount Extracted 246mL
 Ical ID 220909B01
 CCal File Q220912A_027
 Ending CCal File Q220912A_035
 Blank File B220908A_006

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	5.09	5.10	ND		09/12/2022 23:56
PFPeA	N/A	N/A	5.86	5.87	ND		09/12/2022 23:56
HFPO-DA	0.00	0.71	0.00	6.73	ND		09/12/2022 23:56
PFBS	0.36	0.36	6.68	6.71	ND		09/12/2022 23:56
PFHxA	0.00	0.07	0.00	6.49	ND		09/12/2022 23:56
4:2 FTS	0.00	0.86	0.00	6.24	ND		09/12/2022 23:56
PFPeS	0.00	0.44	0.00	7.39	ND		09/12/2022 23:56
PFHpA	0.00	0.35	0.00	7.08	ND		09/12/2022 23:56
DONA	0.00	0.50	0.00	7.30	ND		09/12/2022 23:56
PFHxS	0.00	0.32	0.00	8.05	ND		09/12/2022 23:56
PFOA	0.00	0.29	0.00	7.68	ND		09/12/2022 23:56
6:2 FTS	0.00	1.10	0.00	7.36	ND		09/12/2022 23:56
PFHpS	0.00	0.43	0.00	8.71	ND		09/12/2022 23:56
PFNA	0.00	0.19	0.00	8.29	ND		09/12/2022 23:56
PFOSAm	N/A	N/A	0.00	11.37	ND		09/12/2022 23:56
PFOS	0.00	0.22	0.00	9.37	ND		09/12/2022 23:56
PFDA	0.00	0.16	0.00	8.93	ND		09/12/2022 23:56
EtFOSAm	0.00	0.51	0.00	13.91	ND		09/12/2022 23:56
8:2 FTS	0.00	0.94	0.00	8.57	ND		09/12/2022 23:56
9-CI-PF3ON	0.00	0.03	0.00	9.84	ND		09/12/2022 23:56
PFNS	0.00	0.22	0.00	10.03	ND		09/12/2022 23:56
PFUnDA	0.00	0.14	0.00	9.59	ND		09/12/2022 23:56
NMeFOSAA	0.00	0.64	0.00	8.83	ND		09/12/2022 23:56
NEtFOSAA	0.00	0.44	0.00	9.13	ND		09/12/2022 23:56
PFDS	0.00	0.29	0.00	10.69	ND		09/12/2022 23:56
PFDOA	0.00	0.20	0.00	10.24	ND		09/12/2022 23:56
11-CI-PF3OUdS	0.00	0.02	0.00	11.15	ND		09/12/2022 23:56
PFTTrDA	0.00	0.17	0.00	10.89	ND		09/12/2022 23:56
PFTDA	0.00	0.12	0.00	11.52	ND		09/12/2022 23:56

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Method Blank Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID BLKDS
 Lab Sample ID BLANK-101004
 Lab File ID B220907A_008
 Matrix Soil
 Collected 08/31/2022 13:06
 Received 08/31/2022 13:06
 Extraction Date 09/02/2022 12:24

Total Amount Extracted 5.00g
 Ical ID 220831A02
 CCal File B220907A_007
 Ending CCal File B220907A_012
 Blank File B220907A_008

Compound	Concentration (ug/Kg)	QL (ug/Kg)	RL (ug/Kg)	MDL (ug/Kg)	Dil.	CAS No.	Qual.	Analyzed
PFBA	ND	0.10	0.10	0.028	1	375-22-4		09/07/2022 09:30
PFPeA	ND	0.10	0.10	0.029	1	2706-90-3		09/07/2022 09:30
HFPO-DA	ND	0.10	0.10	0.028	1	13252-13-6		09/07/2022 09:30
PFBS	ND	0.088	0.088	0.026	1	375-73-5		09/07/2022 09:30
PFHxA	ND	0.10	0.10	0.028	1	307-24-4		09/07/2022 09:30
4:2 FTS	ND	0.094	0.094	0.023	1	757124-72-4		09/07/2022 09:30
PFPeS	ND	0.094	0.094	0.024	1	2706-91-4		09/07/2022 09:30
PFHpA	ND	0.10	0.10	0.035	1	375-85-9		09/07/2022 09:30
DONA	ND	0.095	0.095	0.036	1	919005-14-4		09/07/2022 09:30
PFHxS	ND	0.091	0.091	0.022	1	355-46-4		09/07/2022 09:30
PFOA	ND	0.10	0.10	0.031	1	335-67-1		09/07/2022 09:30
6:2 FTS	ND	0.095	0.095	0.041	1	27619-97-2		09/07/2022 09:30
PFHpS	ND	0.095	0.095	0.028	1	375-92-8		09/07/2022 09:30
PFNA	ND	0.10	0.10	0.031	1	375-95-1		09/07/2022 09:30
PFOSAm	ND	0.10	0.10	0.029	1	754-91-6		09/07/2022 09:30
PFOS	ND	0.092	0.092	0.030	1	1763-23-1		09/07/2022 09:30
PFDA	ND	0.10	0.10	0.023	1	335-76-2		09/07/2022 09:30
EtFOSAm	ND	0.10	0.10	0.026	1	4151-50-2		09/07/2022 09:30
8:2 FTS	ND	0.096	0.096	0.044	1	39108-34-4		09/07/2022 09:30
9-Cl-PF3ON	ND	0.093	0.093	0.025	1	756426-58-1		09/07/2022 09:30
PFNS	ND	0.096	0.096	0.035	1	68259-12-1		09/07/2022 09:30
PFUnDA	ND	0.10	0.10	0.030	1	2058-94-8		09/07/2022 09:30
NMeFOSAA	ND	0.10	0.10	0.028	1	2355-31-9		09/07/2022 09:30
NEtFOSAA	ND	0.10	0.10	0.040	1	2991-50-6		09/07/2022 09:30
PFDS	ND	0.096	0.096	0.028	1	335-77-3		09/07/2022 09:30
PFDOA	ND	0.10	0.10	0.033	1	307-55-1		09/07/2022 09:30
11-Cl-PF3OUdS	ND	0.094	0.094	0.025	1	763051-92-9		09/07/2022 09:30
PFTTrDA	ND	0.10	0.10	0.032	1	72629-94-8		09/07/2022 09:30
PFTDA	ND	0.10	0.10	0.034	1	376-06-7		09/07/2022 09:30

REPORT OF LABORATORY ANALYSIS

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Method Blank Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	BLKDS	Total Amount Extracted	5.00g
Lab Sample ID	BLANK-101004	Ical ID	220831A02
Lab File ID	B220907A_008	CCal File	B220907A_007
Matrix	Soil	Ending CCal File	B220907A_012
Collected	08/31/2022 13:06	Blank File	B220907A_008
Received	08/31/2022 13:06		
Extraction Date	09/02/2022 12:24		

Injection Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	1.0	1.1	109	50-150		09/07/2022 09:30
13C4 PFOA	1.0	1.0	103	50-150		09/07/2022 09:30
13C2 PFDA	1.0	1.1	110	50-150		09/07/2022 09:30
13C4 PFOS	0.96	1.1	112	50-150		09/07/2022 09:30

Extracted Internal Standards

Compound	Known Conc. (ug/Kg)	Conc.Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	1.0	0.85	85	50-150		09/07/2022 09:30
13C5 PFPeA	1.0	0.82	82	50-150		09/07/2022 09:30
13C3 PFBS	0.93	0.79	85	50-150		09/07/2022 09:30
13C2 4:2FTS	0.94	0.76	81	50-150		09/07/2022 09:30
13C5 PFHxA	1.0	0.87	87	50-150		09/07/2022 09:30
13C4 PFHpA	1.0	0.75	75	50-150		09/07/2022 09:30
13C3 PFHxS	0.95	0.78	83	50-150		09/07/2022 09:30
13C2 6:2FTS	0.95	0.82	86	50-150		09/07/2022 09:30
13C8 PFOA	1.0	0.81	81	50-150		09/07/2022 09:30
13C9 PFNA	1.0	0.84	84	50-150		09/07/2022 09:30
13C8 PFOS	0.96	0.86	90	50-150		09/07/2022 09:30
13C2 8:2FTS	0.96	0.87	91	50-150		09/07/2022 09:30
13C6 PFDA	1.0	0.83	83	50-150		09/07/2022 09:30
d3-MeFOSAA	1.0	0.81	81	50-150		09/07/2022 09:30
13C8 PFOSA	1.0	0.85	85	50-150		09/07/2022 09:30
d5-EtFOSAA	1.0	0.83	83	50-150		09/07/2022 09:30
13C7 PFUdA	1.0	0.84	84	50-150		09/07/2022 09:30
13C2 PFDoA	1.0	0.95	95	50-150		09/07/2022 09:30
13C2 PFTeDA	1.0	0.73	73	50-150		09/07/2022 09:30
13C3 HFPO-DA	1.0	0.77	77	50-150		09/07/2022 09:30
d5-N-EtFOSA	1.0	0.24	24	10-150		09/07/2022 09:30

REPORT OF LABORATORY ANALYSIS

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Method Blank Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	BLKDS	Total Amount Extracted	5.00g
Lab Sample ID	BLANK-101004	Ical ID	220831A02
Lab File ID	B220907A_008	CCal File	B220907A_007
Matrix	Soil	Ending CCal File	B220907A_012
Collected	08/31/2022 13:06	Blank File	B220907A_008
Received	08/31/2022 13:06		
Extraction Date	09/02/2022 12:24		

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	5.81	5.85	16		09/07/2022 09:30
13C4 PFOA	N/A	N/A	7.05	7.12	16		09/07/2022 09:30
13C2 PFDA	N/A	N/A	8.38	8.38	17		09/07/2022 09:30
13C4 PFOS	N/A	N/A	8.88	8.93	17		09/07/2022 09:30

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	4.35	4.26	25		09/07/2022 09:30
13C5 PFPeA	N/A	N/A	5.18	5.16	18		09/07/2022 09:30
13C3 PFBS	N/A	N/A	6.07	6.09	21		09/07/2022 09:30
13C2 4:2FTS	N/A	N/A	5.55	5.57	82		09/07/2022 09:30
13C5 PFHxA	N/A	N/A	5.81	5.85	14		09/07/2022 09:30
13C4 PFHpA	N/A	N/A	6.42	6.49	16		09/07/2022 09:30
13C3 PFHxS	N/A	N/A	7.49	7.55	20		09/07/2022 09:30
13C2 6:2FTS	N/A	N/A	6.71	6.79	10		09/07/2022 09:30
13C8 PFOA	N/A	N/A	7.05	7.12	16		09/07/2022 09:30
13C9 PFNA	N/A	N/A	7.70	7.80	19		09/07/2022 09:30
13C8 PFOS	N/A	N/A	8.88	8.93	21		09/07/2022 09:30
13C2 8:2FTS	N/A	N/A	7.99	8.09	48		09/07/2022 09:30
13C6 PFDA	N/A	N/A	8.38	8.47	15		09/07/2022 09:30
d3-MeFOSAA	N/A	N/A	8.23	8.33	58		09/07/2022 09:30
13C8 PFOSA	N/A	N/A	10.55	10.34	29		09/07/2022 09:30
d5-EtFOSAA	N/A	N/A	8.52	8.61	10		09/07/2022 09:30
13C7 PFUdA	N/A	N/A	9.04	9.12	18		09/07/2022 09:30
13C2 PFDoA	N/A	N/A	9.71	9.77	13		09/07/2022 09:30
13C2 PFTeDA	N/A	N/A	11.01	11.06	18		09/07/2022 09:30
13C3 HFPO-DA	N/A	N/A	6.06	6.11	14		09/07/2022 09:30
d5-N-EtFOSA	N/A	N/A	13.12	13.11	64		09/07/2022 09:30

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Method Blank Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	BLKDS	Total Amount Extracted	5.00g
Lab Sample ID	BLANK-101004	Ical ID	220831A02
Lab File ID	B220907A_008	CCal File	B220907A_007
Matrix	Soil	Ending CCal File	B220907A_012
Collected	08/31/2022 13:06	Blank File	B220907A_008
Received	08/31/2022 13:06		
Extraction Date	09/02/2022 12:24		

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	0.00	4.27	ND		09/07/2022 09:30
PFPeA	N/A	N/A	5.20	5.16	ND		09/07/2022 09:30
HFPO-DA	0.34	0.29	6.08	6.12	ND		09/07/2022 09:30
PFBS	0.36	0.40	6.08	6.10	ND		09/07/2022 09:30
PFHxA	0.00	0.08	0.00	5.86	ND		09/07/2022 09:30
4:2 FTS	0.00	0.79	0.00	5.58	ND		09/07/2022 09:30
PFPeS	0.00	0.42	0.00	6.83	ND		09/07/2022 09:30
PFHpA	0.29	0.31	6.43	6.49	ND		09/07/2022 09:30
DONA	0.00	0.56	0.00	6.72	ND		09/07/2022 09:30
PFHxS	0.72	0.36	7.51	7.55	ND		09/07/2022 09:30
PFOA	0.00	0.40	0.00	7.13	ND		09/07/2022 09:30
6:2 FTS	0.88	0.82	6.72	6.79	ND		09/07/2022 09:30
PFHpS	0.00	0.40	0.00	8.27	ND		09/07/2022 09:30
PFNA	0.00	0.14	0.00	7.80	ND		09/07/2022 09:30
PFOSAm	N/A	N/A	10.55	10.35	ND		09/07/2022 09:30
PFOS	0.29	0.40	8.89	8.94	ND		09/07/2022 09:30
PFDA	0.00	0.18	0.00	8.48	ND		09/07/2022 09:30
EtFOSAm	0.00	0.53	0.00	13.13	ND		09/07/2022 09:30
8:2 FTS	0.00	0.95	0.00	8.09	ND		09/07/2022 09:30
9-CI-PF3ON	0.00	0.05	0.00	9.42	ND		09/07/2022 09:30
PFNS	0.00	0.48	0.00	9.60	ND		09/07/2022 09:30
PFUnDA	0.00	0.12	0.00	9.12	ND		09/07/2022 09:30
NMeFOSAA	0.00	0.83	0.00	8.34	ND		09/07/2022 09:30
NEtFOSAA	0.00	0.69	0.00	8.62	ND		09/07/2022 09:30
PFDS	0.00	0.35	0.00	10.25	ND		09/07/2022 09:30
PFDOA	0.00	0.19	0.00	9.78	ND		09/07/2022 09:30
11-CI-PF3OUdS	0.00	0.02	0.00	10.71	ND		09/07/2022 09:30
PFTTrDA	0.00	0.17	0.00	10.43	ND		09/07/2022 09:30
PFTDA	0.00	0.26	0.00	11.06	ND		09/07/2022 09:30

REPORT OF LABORATORY ANALYSIS

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Method Blank Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	BLKDP	Total Amount Extracted	253mL
Lab Sample ID	BLANK-100999	Ical ID	220831A02
Lab File ID	B220908A_006	CCal File	B220908A_002
Matrix	Water	Ending CCal File	B220908A_013
Collected	08/31/2022 12:59	Blank File	B220908A_006
Received	08/31/2022 12:59		
Extraction Date	09/01/2022 19:34		

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	MDL (ng/L)	Dil.	CAS No.	Qual.	Analyzed
PFBA	ND	2.0	2.0	0.49	1	375-22-4		09/08/2022 10:11
PFPeA	ND	2.0	2.0	0.81	1	2706-90-3		09/08/2022 10:11
HFPO-DA	ND	2.0	2.0	0.49	1	13252-13-6		09/08/2022 10:11
PFBS	ND	1.8	1.8	0.48	1	375-73-5		09/08/2022 10:11
PFHxA	ND	2.0	2.0	0.90	1	307-24-4		09/08/2022 10:11
4:2 FTS	ND	1.9	1.9	0.46	1	757124-72-4		09/08/2022 10:11
PFPeS	ND	1.9	1.9	0.59	1	2706-91-4		09/08/2022 10:11
PFHpA	ND	2.0	2.0	0.68	1	375-85-9		09/08/2022 10:11
DONA	ND	1.9	1.9	0.91	1	919005-14-4		09/08/2022 10:11
PFHxS	ND	1.8	1.8	0.53	1	355-46-4		09/08/2022 10:11
PFOA	ND	2.0	2.0	0.85	1	335-67-1		09/08/2022 10:11
6:2 FTS	ND	1.9	1.9	0.67	1	27619-97-2		09/08/2022 10:11
PFHpS	ND	1.9	1.9	0.66	1	375-92-8		09/08/2022 10:11
PFNA	ND	2.0	2.0	0.79	1	375-95-1		09/08/2022 10:11
PFOSAm	ND	2.0	2.0	0.71	1	754-91-6		09/08/2022 10:11
PFOS	ND	1.8	1.8	0.66	1	1763-23-1		09/08/2022 10:11
PFDA	ND	2.0	2.0	0.60	1	335-76-2		09/08/2022 10:11
EtFOSAm	ND	2.0	2.0	0.57	1	4151-50-2		09/08/2022 10:11
8:2 FTS	ND	1.9	1.9	0.50	1	39108-34-4		09/08/2022 10:11
9-CI-PF3ON	ND	1.8	1.8	0.47	1	756426-58-1		09/08/2022 10:11
PFNS	ND	1.9	1.9	0.58	1	68259-12-1		09/08/2022 10:11
PFUnDA	ND	2.0	2.0	0.48	1	2058-94-8		09/08/2022 10:11
NMeFOSAA	ND	2.0	2.0	0.69	1	2355-31-9		09/08/2022 10:11
NEtFOSAA	ND	2.0	2.0	0.81	1	2991-50-6		09/08/2022 10:11
PFDS	ND	1.9	1.9	0.63	1	335-77-3		09/08/2022 10:11
PFDOA	ND	2.0	2.0	0.47	1	307-55-1		09/08/2022 10:11
11-CI-PF3OUdS	ND	1.9	1.9	0.55	1	763051-92-9		09/08/2022 10:11
PFTTrDA	ND	2.0	2.0	0.62	1	72629-94-8		09/08/2022 10:11
PFTDA	ND	2.0	2.0	0.59	1	376-06-7		09/08/2022 10:11

REPORT OF LABORATORY ANALYSIS

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Method Blank Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	BLKDP	Total Amount Extracted	253mL
Lab Sample ID	BLANK-100999	Ical ID	220831A02
Lab File ID	B220908A_006	CCal File	B220908A_002
Matrix	Water	Ending CCal File	B220908A_013
Collected	08/31/2022 12:59	Blank File	B220908A_006
Received	08/31/2022 12:59		
Extraction Date	09/01/2022 19:34		

Injection Internal Standards

Compound	Known Conc. (ng/L)	Conc.Found (ng/L)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	20	21	106	50-150		09/08/2022 10:11
13C4 PFOA	20	21	104	50-150		09/08/2022 10:11
13C2 PFDA	20	23	115	50-150		09/08/2022 10:11
13C4 PFOS	19	22	116	50-150		09/08/2022 10:11

Extracted Internal Standards

Compound	Known Conc. (ng/L)	Conc.Found (ng/L)	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	20	20	101	50-150		09/08/2022 10:11
13C5 PFPeA	20	20	99	50-150		09/08/2022 10:11
13C3 PFBS	18	19	102	50-150		09/08/2022 10:11
13C2 4:2FTS	19	20	111	50-150		09/08/2022 10:11
13C5 PFHxA	20	20	100	50-150		09/08/2022 10:11
13C4 PFHpA	20	18	91	50-150		09/08/2022 10:11
13C3 PFHxS	19	19	102	50-150		09/08/2022 10:11
13C2 6:2FTS	19	20	104	50-150		09/08/2022 10:11
13C8 PFOA	20	20	102	50-150		09/08/2022 10:11
13C9 PFNA	20	19	97	50-150		09/08/2022 10:11
13C8 PFOS	19	20	107	50-150		09/08/2022 10:11
13C2 8:2FTS	19	16	84	50-150		09/08/2022 10:11
13C6 PFDA	20	22	109	50-150		09/08/2022 10:11
d3-MeFOSAA	20	15	74	50-150		09/08/2022 10:11
13C8 PFOSA	20	15	78	50-150		09/08/2022 10:11
d5-EtFOSAA	20	14	71	50-150		09/08/2022 10:11
13C7 PFUdA	20	16	79	50-150		09/08/2022 10:11
13C2 PFDaA	20	14	73	50-150		09/08/2022 10:11
13C2 PFTeDA	20	16	79	50-150		09/08/2022 10:11
13C3 HFPO-DA	20	19	95	50-150		09/08/2022 10:11
d5-N-EtFOSA	20	3.8	19	10-150		09/08/2022 10:11

REPORT OF LABORATORY ANALYSIS

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Method Blank Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	BLKDP	Total Amount Extracted	253mL
Lab Sample ID	BLANK-100999	Ical ID	220831A02
Lab File ID	B220908A_006	CCal File	B220908A_002
Matrix	Water	Ending CCal File	B220908A_013
Collected	08/31/2022 12:59	Blank File	B220908A_006
Received	08/31/2022 12:59		
Extraction Date	09/01/2022 19:34		

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	5.82	5.85	15		09/08/2022 10:11
13C4 PFOA	N/A	N/A	7.05	7.12	18		09/08/2022 10:11
13C2 PFDA	N/A	N/A	8.37	8.47	19		09/08/2022 10:11
13C4 PFOS	N/A	N/A	8.87	8.93	13		09/08/2022 10:11

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	4.37	4.26	29		09/08/2022 10:11
13C5 PFPeA	N/A	N/A	5.19	5.16	24		09/08/2022 10:11
13C3 PFBS	N/A	N/A	6.08	6.09	18		09/08/2022 10:11
13C2 4:2FTS	N/A	N/A	5.57	5.57	75		09/08/2022 10:11
13C5 PFHxA	N/A	N/A	5.82	5.85	16		09/08/2022 10:11
13C4 PFHpA	N/A	N/A	6.43	6.49	16		09/08/2022 10:11
13C3 PFHxS	N/A	N/A	7.49	7.55	20		09/08/2022 10:11
13C2 6:2FTS	N/A	N/A	6.72	6.79	40		09/08/2022 10:11
13C8 PFOA	N/A	N/A	7.05	7.12	21		09/08/2022 10:11
13C9 PFNA	N/A	N/A	7.69	7.80	19		09/08/2022 10:11
13C8 PFOS	N/A	N/A	8.87	8.93	18		09/08/2022 10:11
13C2 8:2FTS	N/A	N/A	7.98	8.09	61		09/08/2022 10:11
13C6 PFDA	N/A	N/A	8.37	8.47	16		09/08/2022 10:11
d3-MeFOSAA	N/A	N/A	8.22	8.33	30		09/08/2022 10:11
13C8 PFOSA	N/A	N/A	10.65	10.34	72		09/08/2022 10:11
d5-EtFOSAA	N/A	N/A	8.51	8.61	11		09/08/2022 10:11
13C7 PFUdA	N/A	N/A	9.04	9.12	20		09/08/2022 10:11
13C2 PFDoA	N/A	N/A	9.70	9.77	10		09/08/2022 10:11
13C2 PFTeDA	N/A	N/A	11.01	11.06	11		09/08/2022 10:11
13C3 HFPO-DA	N/A	N/A	6.07	6.11	16		09/08/2022 10:11
d5-N-EtFOSA	N/A	N/A	13.13	13.11	63		09/08/2022 10:11

REPORT OF LABORATORY ANALYSIS

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Method Blank Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	BLKDP	Total Amount Extracted	253mL
Lab Sample ID	BLANK-100999	Ical ID	220831A02
Lab File ID	B220908A_006	CCal File	B220908A_002
Matrix	Water	Ending CCal File	B220908A_013
Collected	08/31/2022 12:59	Blank File	B220908A_006
Received	08/31/2022 12:59		
Extraction Date	09/01/2022 19:34		

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	4.37	4.27	ND		09/08/2022 10:11
PFPeA	N/A	N/A	5.21	5.16	ND		09/08/2022 10:11
HFPO-DA	0.00	0.28	0.00	6.12	ND		09/08/2022 10:11
PFBS	0.50	0.42	6.09	6.10	ND		09/08/2022 10:11
PFHxA	0.07	0.08	5.83	5.86	ND		09/08/2022 10:11
4:2 FTS	0.00	0.78	0.00	5.58	ND		09/08/2022 10:11
PFPeS	0.00	0.40	0.00	6.83	ND		09/08/2022 10:11
PFHpA	0.24	0.34	6.44	6.49	ND		09/08/2022 10:11
DONA	0.00	0.55	0.00	6.72	ND		09/08/2022 10:11
PFHxS	0.33	0.37	7.50	7.55	ND		09/08/2022 10:11
PFOA	0.00	0.39	0.00	7.13	ND		09/08/2022 10:11
6:2 FTS	1.00	0.90	6.72	6.79	ND		09/08/2022 10:11
PFHpS	0.00	0.38	0.00	8.27	ND		09/08/2022 10:11
PFNA	0.08	0.15	7.71	7.80	ND		09/08/2022 10:11
PFOSAm	N/A	N/A	10.66	10.35	ND		09/08/2022 10:11
PFOS	0.25	0.39	8.88	8.94	ND		09/08/2022 10:11
PFDA	0.00	0.18	0.00	8.48	ND		09/08/2022 10:11
EtFOSAm	0.00	0.53	0.00	13.13	ND		09/08/2022 10:11
8:2 FTS	0.00	0.87	0.00	8.09	ND		09/08/2022 10:11
9-CI-PF3ON	0.00	0.05	0.00	9.42	ND		09/08/2022 10:11
PFNS	0.00	0.47	0.00	9.60	ND		09/08/2022 10:11
PFUnDA	0.00	0.15	0.00	9.12	ND		09/08/2022 10:11
NMeFOSAA	0.00	0.85	0.00	8.34	ND		09/08/2022 10:11
NEtFOSAA	0.00	0.66	0.00	8.62	ND		09/08/2022 10:11
PFDS	0.00	0.30	0.00	10.25	ND		09/08/2022 10:11
PFDOA	0.00	0.19	0.00	9.78	ND		09/08/2022 10:11
11-CI-PF3OUdS	0.00	0.02	0.00	10.71	ND		09/08/2022 10:11
PFTTrDA	0.00	0.14	0.00	10.43	ND		09/08/2022 10:11
PFTDA	0.00	0.26	0.00	11.06	ND		09/08/2022 10:11

REPORT OF LABORATORY ANALYSIS

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LCS Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID	LCS-101005	Instrument ID	10LCMS02
Run File Name	B220907A_009	Column ID	118AB10133
Analyzed	09/07/2022 09:50	Ical ID	220831A02
Injected By	NH	Level	L

Injection Internal Standards

Compound	Known Conc. ug/Kg	Conc. Found ug/Kg	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	1.0	1.0	105	50-150	
13C4_PFOA	1.0	1.1	106	50-150	
13C2_PFDA	1.0	1.0	103	50-150	
13C4_PFOS	0.96	1.1	114	50-150	

Extracted Internal Standards

Compound	Known Conc. ug/Kg	Conc. Found ug/Kg	%Recovery	Recovery Limits	Qualifiers
13C4_PFBFA	1.0	0.87	87	50-150	
13C5_PFPeA	1.0	0.89	89	50-150	
13C3_PFBFS	0.93	0.83	89	50-150	
13C2_4:2FTS	0.94	0.81	86	50-150	
13C5_PFHxA	1.0	0.91	91	50-150	
13C4_PFHpA	1.0	0.81	81	50-150	
13C3_PFHxS	0.95	0.86	91	50-150	
13C2_6:2FTS	0.95	0.89	94	50-150	
13C8_PFOA	1.0	0.82	82	50-150	
13C9_PFNA	1.0	0.85	85	50-150	
13C8_PFOS	0.96	0.92	97	50-150	
13C2_8:2FTS	0.96	0.87	91	50-150	
13C6_PFDA	1.0	0.83	83	50-150	
d3-MeFOSAA	1.0	0.83	83	50-150	
13C8_PFOA	1.0	0.94	94	50-150	
d5-EtFOSAA	1.0	0.82	82	50-150	
13C7_PFUdA	1.0	0.89	89	50-150	
13C2_PFDaA	1.0	1.1	107	50-150	
13C2_PFTeDA	1.0	0.84	84	50-150	
13C3_HFPO-DA	1.0	0.90	90	50-150	
d5-N-EtFOSA	1.0	0.87	87	10-150	

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LCS Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID LCS-101005
 Run File Name B220907A_009
 Analyzed 09/07/2022 09:50
 Injected By NH

Instrument ID 10LCMS02
 Column ID 118AB10133
 Ical ID 220831A02
 Level L

Native Analytes

Compound	Known Conc. ug/Kg	Conc. Found ug/Kg	%Recovery	Recovery Limits	Qualifiers	CAS No.
PFBA	0.20	0.26	128	71-135		375-22-4
PFPeA	0.20	0.26	129	69-132		2706-90-3
HFPO-DA	0.20	0.22	110	70-140		13252-13-6
PFBS	0.18	0.20	113	72-128		375-73-5
PFHxA	0.20	0.26	130	70-132		307-24-4
4:2 FTS	0.19	0.24	126	62-145		757124-72-4
PFPeS	0.19	0.24	130	73-123	R	2706-91-4
PFHpA	0.20	0.23	117	71-131		375-85-9
DONA	0.19	0.26	136	70-140		919005-14-4
PFHxS	0.18	0.21	117	67-130		355-46-4
PFOA	0.20	0.25	124	69-133		335-67-1
6:2 FTS	0.19	0.23	121	64-140		27619-97-2
PFHpS	0.19	0.21	110	70-132		375-92-8
PFNA	0.20	0.22	112	72-129		375-95-1
PFOSAm	0.20	0.24	122	67-137		754-91-6
PFOS	0.18	0.21	116	68-136		1763-23-1
PFDA	0.20	0.26	129	69-133		335-76-2
EtFOSAm	0.20	0.24	122	70-140		4151-50-2
8:2 FTS	0.19	0.24	123	65-137		39108-34-4
9-Cl-PF3ON	0.19	0.22	119	70-140		756426-58-1
PFNS	0.19	0.25	130	69-125	R	68259-12-1
PFUnDA	0.20	0.25	127	64-136		2058-94-8
NMeFOSAA	0.20	0.26	128	63-144		2355-31-9
NEtFOSAA	0.20	0.24	118	61-139		2991-50-6
PFDS	0.19	0.22	112	59-134		335-77-3
PFDOA	0.20	0.23	115	69-135		307-55-1
11-Cl-PF3OUdS	0.19	0.21	111	70-140		763051-92-9
PFTTrDA	0.20	0.18	90	66-139		72629-94-8
PFTDA	0.20	0.24	121	69-133		376-06-7

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers
13C2 PFHxA	N/A	N/A	5.81	5.85	1563	
13C4 PFOA	N/A	N/A	7.05	7.12	1801	
13C2 PFDA	N/A	N/A	8.38	8.47	1424	
13C4 PFOS	N/A	N/A	8.88	8.93	1886	

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LCS Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID LCS-101005
 Run File Name B220907A_009
 Analyzed 09/07/2022 09:50
 Injected By NH

Instrument ID 10LCMS02
 Column ID 118AB10133
 Ical ID 220831A02
 Level L

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers
13C4 PFBA	N/A	N/A	4.35	4.26	2481	
13C5 PFPeA	N/A	N/A	5.18	5.16	2132	
13C3 PFBS	N/A	N/A	6.08	6.09	2253	
13C2 4:2FTS	N/A	N/A	5.55	5.57	661	
13C5 PFHxA	N/A	N/A	5.81	5.85	1383	
13C4 PFHpA	N/A	N/A	6.43	6.49	1339	
13C3 PFHxS	N/A	N/A	7.50	7.55	2123	
13C2 6:2FTS	N/A	N/A	6.72	6.79	1629	
13C8 PFOA	N/A	N/A	7.05	7.12	1701	
13C9 PFNA	N/A	N/A	7.70	7.80	1780	
13C8 PFOS	N/A	N/A	8.88	8.93	2727	
13C2 8:2FTS	N/A	N/A	8.00	8.09	3131	
13C6 PFDA	N/A	N/A	8.38	8.47	1766	
d3-MeFOSAA	N/A	N/A	8.24	8.33	1008	
13C8 PFOSA	N/A	N/A	10.55	10.34	2135	
d5-EtFOSAA	N/A	N/A	8.52	8.61	928	
13C7 PFUdA	N/A	N/A	9.04	9.12	1615	
13C2 PFDoA	N/A	N/A	9.71	9.77	1287	
13C2 PFTeDA	N/A	N/A	11.01	11.06	1690	
13C3 HFPO-DA	N/A	N/A	6.06	6.11	1729	
d5-N-EtFOSA	N/A	N/A	13.12	13.11	620	

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LCS Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID LCS-101005
 Run File Name B220907A_009
 Analyzed 09/07/2022 09:50
 Injected By NH

Instrument ID 10LCMS02
 Column ID 118AB10133
 Ical ID 220831A02
 Level L

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers
PFBA	N/A	N/A	4.36	4.27	120	
PFPeA	N/A	N/A	5.19	5.16	304	
HFPO-DA	0.28	0.29	6.08	6.12	751	
PFBS	0.47	0.40	6.08	6.10	1060	
PFHxA	0.08	0.08	5.82	5.86	177	
4:2 FTS	0.88	0.79	5.56	5.58	4658	
PFPeS	0.42	0.42	6.79	6.83	1170	R
PFHpA	0.30	0.31	6.43	6.49	22	
DONA	0.59	0.56	6.66	6.72	755	
PFHxS	0.36	0.36	7.50	7.55	1706	
PFOA	0.41	0.40	7.06	7.13	152	
6:2 FTS	0.89	0.82	6.72	6.79	506	
PFHpS	0.39	0.40	8.21	8.27	1138	
PFNA	0.15	0.14	7.71	7.80	583	
PFOSAm	N/A	N/A	10.56	10.35	1176	
PFOS	0.36	0.40	8.89	8.94	779	
PFDA	0.17	0.18	8.39	8.48	428	
EtFOSAm	0.54	0.53	13.14	13.13	959	
8:2 FTS	0.87	0.95	8.00	8.09	25792	
9-CI-PF3ON	0.06	0.05	9.37	9.42	1139	
PFNS	0.47	0.48	9.56	9.60	1612	R
PFUnDA	0.12	0.12	9.05	9.12	411	
NMeFOSAA	0.81	0.83	8.24	8.34	854	
NEtFOSAA	0.66	0.69	8.53	8.62	274	
PFDS	0.37	0.35	10.21	10.25	2909	
PFDOA	0.19	0.19	9.71	9.78	268	
11-CI-PF3OUdS	0.02	0.02	10.68	10.71	580	
PFTTrDA	0.16	0.17	10.37	10.43	253	
PFTDA	0.28	0.26	11.02	11.06	264	

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LCS Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID	LCS-101000	Instrument ID	10LCMS02
Run File Name	B220917A_007	Column ID	125GA90033
Analyzed	09/17/2022 05:53	Ical ID	220916A02
Injected By	NH	Level	L

Injection Internal Standards

Compound	Known Conc. ng/L	Conc. Found ng/L	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	19	18	91	50-150	
13C4_PFOA	19	20	103	50-150	
13C2_PFDA	19	19	99	50-150	
13C4_PFOS	18	19	104	50-150	

Extracted Internal Standards

Compound	Known Conc. ng/L	Conc. Found ng/L	%Recovery	Recovery Limits	Qualifiers
13C4_PFBFA	19	19	97	50-150	
13C5_PFPeA	19	19	96	50-150	
13C3_PFBFS	18	17	94	50-150	
13C2_4:2FTS	18	17	94	50-150	
13C5_PFHxA	19	18	95	50-150	
13C4_PFHpA	19	17	86	50-150	
13C3_PFHxS	18	16	89	50-150	
13C2_6:2FTS	18	17	94	50-150	
13C8_PFOA	19	18	96	50-150	
13C9_PFNA	19	18	94	50-150	
13C8_PFOS	18	16	90	50-150	
13C2_8:2FTS	18	16	85	50-150	
13C6_PFDA	19	16	84	50-150	
d3-MeFOSAA	19	14	72	50-150	
13C8_PFOA	19	14	74	50-150	
d5-EtFOSAA	19	13	68	50-150	
13C7_PFUdA	19	16	82	50-150	
13C2_PFDaA	19	14	73	50-150	
13C2_PFTeDA	19	12	60	50-150	
13C3_HFPO-DA	19	17	89	50-150	
d5-N-EtFOSA	19	4.7	25	10-150	

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LCS Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID LCS-101000
 Run File Name B220917A_007
 Analyzed 09/17/2022 05:53
 Injected By NH

Instrument ID 10LCMS02
 Column ID 125GA90033
 Ical ID 220916A02
 Level L

Native Analytes

Compound	Known Conc. ng/L	Conc. Found ng/L	%Recovery	Recovery Limits	Qualifiers	CAS No.
PFBA	3.8	3.9	102	73-129		375-22-4
PFPeA	3.8	3.9	103	72-129		2706-90-3
HFPO-DA	3.8	4.2	109	70-140		13252-13-6
PFBS	3.4	3.4	101	72-130		375-73-5
PFHxA	3.8	3.8	100	72-129		307-24-4
4:2 FTS	3.6	3.5	98	63-143		757124-72-4
PFPeS	3.6	3.7	102	71-127		2706-91-4
PFHpA	3.8	4.1	106	72-130		375-85-9
DONA	3.6	3.4	92	70-140		919005-14-4
PFHxS	3.5	3.7	105	68-131		355-46-4
PFOA	3.8	3.9	102	71-133		335-67-1
6:2 FTS	3.7	3.8	104	64-140		27619-97-2
PFHpS	3.7	3.6	100	69-134		375-92-8
PFNA	3.8	3.8	98	69-130		375-95-1
PFOSAm	3.8	3.7	97	67-137		754-91-6
PFOS	3.6	3.1	88	65-140		1763-23-1
PFDA	3.8	3.3	85	71-129		335-76-2
EtFOSAm	3.8	3.2	83	70-140		4151-50-2
8:2 FTS	3.7	3.7	101	67-138		39108-34-4
9-Cl-PF3ON	3.6	3.8	105	70-130		756426-58-1
PFNS	3.7	3.3	88	69-127		68259-12-1
PFUnDA	3.8	3.8	100	69-133		2058-94-8
NMeFOSAA	3.8	3.6	95	65-136		2355-31-9
NEtFOSAA	3.8	3.8	99	61-135		2991-50-6
PFDS	3.7	2.8	75	53-142		335-77-3
PFDOA	3.8	3.2	84	72-134		307-55-1
11-Cl-PF3OUdS	3.6	2.7	75	70-140		763051-92-9
PFTTrDA	3.8	3.1	81	65-144		72629-94-8
PFTDA	3.8	4.1	108	71-132		376-06-7

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers
13C2 PFHxA	N/A	N/A	5.66	5.72	1921	
13C4 PFOA	N/A	N/A	6.82	6.87	2138	
13C2 PFDA	N/A	N/A	8.05	8.08	1632	
13C4 PFOS	N/A	N/A	8.47	8.49	2465	

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LCS Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID LCS-101000
 Run File Name B220917A_007
 Analyzed 09/17/2022 05:53
 Injected By NH

Instrument ID 10LCMS02
 Column ID 125GA90033
 Ical ID 220916A02
 Level L

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers
13C4 PFBA	N/A	N/A	4.24	4.26	2810	
13C5 PFPeA	N/A	N/A	5.06	5.07	2583	
13C3 PFBS	N/A	N/A	5.86	5.90	2497	
13C2 4:2FTS	N/A	N/A	5.43	5.47	601	
13C5 PFHxA	N/A	N/A	5.66	5.70	2305	
13C4 PFHpA	N/A	N/A	6.24	6.27	2416	
13C3 PFHxS	N/A	N/A	7.16	7.17	2472	
13C2 6:2FTS	N/A	N/A	6.53	6.56	2669	
13C8 PFOA	N/A	N/A	6.82	6.84	3092	
13C9 PFNA	N/A	N/A	7.43	7.43	2063	
13C8 PFOS	N/A	N/A	8.48	8.47	3309	
13C2 8:2FTS	N/A	N/A	7.71	7.71	4429183	
13C6 PFDA	N/A	N/A	8.05	8.05	1639	
d3-MeFOSAA	N/A	N/A	7.96	8.00	1010	
13C8 PFOSA	N/A	N/A	10.64	10.64	1112	
d5-EtFOSAA	N/A	N/A	8.25	8.27	1182	
13C7 PFUdA	N/A	N/A	8.70	8.73	1776	
13C2 PFDoA	N/A	N/A	9.34	9.36	1349	
13C2 PFTeDA	N/A	N/A	10.56	10.57	920	
13C3 HFPO-DA	N/A	N/A	5.89	5.94	2232	
d5-N-EtFOSA	N/A	N/A	13.11	13.17	645	

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LCS Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID	LCS-101000	Instrument ID	10LCMS02
Run File Name	B220917A_007	Column ID	125GA90033
Analyzed	09/17/2022 05:53	Ical ID	220916A02
Injected By	NH	Level	L

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers
PFBA	N/A	N/A	4.24	4.26	163	
PFPeA	N/A	N/A	5.07	5.11	288	
HFPO-DA	0.26	0.29	5.91	5.97	757	
PFBS	0.43	0.44	5.87	5.92	937	
PFHxA	0.08	0.08	5.67	5.73	212	
4:2 FTS	0.82	0.92	5.44	5.49	1641	
PFPeS	0.42	0.41	6.52	6.52	1291	
PFHpA	0.30	0.31	6.24	6.31	18	
DONA	0.53	0.56	6.46	6.52	1577	
PFHxS	0.35	0.36	7.17	7.21	1286	
PFOA	0.39	0.37	6.83	6.88	251	
6:2 FTS	0.92	0.79	6.53	6.58	768	
PFHpS	0.39	0.41	7.83	7.87	2668	
PFNA	0.14	0.12	7.43	7.47	479	
PFOSAm	N/A	N/A	10.65	10.67	214	
PFOS	0.36	0.41	8.48	8.51	496	
PFDA	0.22	0.21	8.06	8.09	330	
EtFOSAm	0.59	0.50	13.13	13.12	668	
8:2 FTS	0.91	0.82	7.71	7.75	2981	
9-Cl-PF3ON	0.05	0.05	8.96	9.00	1007	
PFNS	0.45	0.48	9.14	9.18	1622	
PFUnDA	0.14	0.14	8.70	8.74	398	
NMeFOSAA	0.90	0.89	7.98	8.01	146539	
NEtFOSAA	0.58	0.63	8.26	8.29	205	
PFDS	0.33	0.35	9.76	9.80	1935	
PFDOA	0.19	0.18	9.34	9.39	217	
11-Cl-PF3OUdS	0.01	0.02	10.20	10.23	499	
PFTTrDA	0.16	0.14	9.96	10.00	187	
PFTDA	0.18	0.26	10.57	10.59	153	

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MS Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID 10623513003-MS
 Run File Name Q220914A_008
 Analyzed 09/14/2022 11:47
 Injected By NH

Instrument ID 10LCMS01
 Column ID 118AB10133
 Ical ID 220909B01
 Level

Injection Internal Standards

Compound	Known Conc. (ug/Kg)	Conc. Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	0.99	0.91	92	50-150	
13C4_PFOA	0.99	0.84	85	50-150	
13C2_PFDA	0.99	0.99	100	50-150	
13C4_PFOS	0.95	0.81	86	50-150	

Extracted Internal Standards

Compound	Known Conc. (ug/Kg)	Conc. Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers
13C4_PFBFA	0.99	0.79	80	50-150	
13C5_PFPeA	0.99	0.81	82	50-150	
13C3_PFBFS	0.92	0.71	77	50-150	
13C2_4:2FTS	0.93	0.79	85	50-150	
13C5_PFHxA	0.99	0.71	72	50-150	
13C4_PFHpA	0.99	0.70	71	50-150	
13C3_PFHxS	0.94	0.73	78	50-150	
13C2_6:2FTS	0.94	0.78	83	50-150	
13C8_PFOA	0.99	0.78	79	50-150	
13C9_PFNA	0.99	0.80	81	50-150	
13C8_PFOS	0.95	0.66	70	50-150	
13C2_8:2FTS	0.95	0.69	72	50-150	
13C6_PFDA	0.99	0.77	77	50-150	
d3-MeFOSAA	0.99	0.84	85	50-150	
13C8_PFOA	0.99	0.69	69	25-150	
d5-EtFOSAA	0.99	0.74	75	50-150	
13C7_PFUdA	0.99	0.76	77	50-150	
13C2_PFDaA	0.99	0.75	75	50-150	
13C2_PFTeDA	0.99	0.85	86	50-150	
13C3_HFPO-DA	0.99	0.81	82	50-150	
d5-N-EtFOA	0.99	0.53	53	10-150	

REPORT OF LABORATORY ANALYSIS

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MS Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID 10623513003-MS
 Run File Name Q220914A_008
 Analyzed 09/14/2022 11:47
 Injected By NH

Instrument ID 10LCMS01
 Column ID 118AB10133
 Ical ID 220909B01
 Level

Native Analytes

Compound	Sample Conc. (ug/Kg)	Known Conc. (ug/Kg)	Conc. Found (ug/Kg)	%Recovery	Recovery Limits	Qualifiers	CAS No.
PFBA	0.00	0.20	0.31	156	70-140	R	375-22-4
PFPeA	0.00	0.20	0.23	118	70-140		2706-90-3
HFPO-DA	0.00	0.20	0.18	91	70-140		13252-13-6
PFBS	0.00	0.18	0.22	123	70-140		375-73-5
PFHxA	0.00	0.20	0.24	121	70-140		307-24-4
4:2 FTS	0.00	0.19	0.21	116	70-140		757124-72-4
PFPeS	0.00	0.19	0.20	110	70-140		2706-91-4
PFHpA	0.00	0.20	0.24	123	70-140		375-85-9
DONA	0.00	0.19	0.22	117	70-140		919005-14-4
PFHxS	0.12	0.18	0.27	81	70-140		355-46-4
PFOA	0.00	0.20	0.24	119	70-140		335-67-1
6:2 FTS	0.00	0.19	0.20	107	70-140		27619-97-2
PFHpS	0.00	0.19	0.20	107	70-140		375-92-8
PFNA	0.00	0.20	0.19	97	70-140		375-95-1
PFOSAm	0.00	0.20	0.22	111	70-140		754-91-6
PFOS	1.2	0.18	1.4	109	70-140	I	1763-23-1
PFDA	0.00	0.20	0.27	135	70-140		335-76-2
EtFOSAm	0.00	0.20	0.21	106	70-140		4151-50-2
8:2 FTS	0.00	0.19	0.18	96	70-140	I	39108-34-4
9-Cl-PF3ON	0.00	0.18	0.19	102	70-140		756426-58-1
PFNS	0.00	0.19	0.22	117	70-140		68259-12-1
PFUnDA	0.00	0.20	0.26	134	70-140		2058-94-8
NMeFOSAA	0.00	0.20	0.17	86	70-140		2355-31-9
NEtFOSAA	0.00	0.20	0.23	114	70-140		2991-50-6
PFDS	0.00	0.19	0.22	117	70-140		335-77-3
PFDOA	0.00	0.20	0.26	132	70-140		307-55-1
11-Cl-PF3OUdS	0.00	0.19	0.19	102	70-140		763051-92-9
PFTTrDA	0.00	0.20	0.21	104	70-140		72629-94-8
PFTDA	0.00	0.20	0.21	104	70-140		376-06-7

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers
13C2 PFHxA	N/A	N/A	6.47	6.47	1004	
13C4 PFOA	N/A	N/A	7.70	7.67	1070	
13C2 PFDA	N/A	N/A	8.98	8.92	1879	
13C4 PFOS	N/A	N/A	9.42	9.36	827	

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MS Analysis Summary
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Lab Sample ID 10623513003-MS
 Run File Name Q220914A_008
 Analyzed 09/14/2022 11:47
 Injected By NH

Instrument ID 10LCMS01
 Column ID 118AB10133
 Ical ID 220909B01
 Level

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers
13C4 PFBA	N/A	N/A	5.07	5.08	2418	
13C5 PFPeA	N/A	N/A	5.84	5.87	1792	
13C3 PFBS	N/A	N/A	6.70	6.70	977	
13C2 4:2FTS	N/A	N/A	6.21	6.22	367	
13C5 PFHxA	N/A	N/A	6.47	6.47	1287	
13C4 PFHpA	N/A	N/A	7.09	7.07	1078	
13C3 PFHxS	N/A	N/A	8.08	8.04	944	
13C2 6:2FTS	N/A	N/A	7.38	7.36	468	
13C8 PFOA	N/A	N/A	7.70	7.67	2035	
13C9 PFNA	N/A	N/A	8.33	8.28	1852	
13C8 PFOS	N/A	N/A	9.43	9.36	721	
13C2 8:2FTS	N/A	N/A	8.62	8.56	297	
13C6 PFDA	N/A	N/A	8.99	8.92	4035	
d3-MeFOSAA	N/A	N/A	8.89	8.83	4195	
13C8 PFOSA	N/A	N/A	11.43	11.36	1048	
d5-EtFOSAA	N/A	N/A	9.18	9.12	476	
13C7 PFUdA	N/A	N/A	9.64	9.57	1931	
13C2 PFDoA	N/A	N/A	10.31	10.24	560	
13C2 PFTeDA	N/A	N/A	11.59	11.52	975	
13C3 HFPO-DA	N/A	N/A	6.72	6.72	2436	
d5-N-EtFOSA	N/A	N/A	13.92	13.89	629	

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 Analyzed 09/14/2022 11:47
 Injected By NH

Instrument ID 10LCMS01
 Column ID 118AB10133
 Ical ID 220909B01
 Level

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers
PFBA	N/A	N/A	5.07	5.09	186	R
PFPeA	N/A	N/A	5.85	5.87	268	
HFPO-DA	0.80	0.80	6.74	6.73	66262	
PFBS	0.34	0.32	6.70	6.71	286	
PFHxA	0.06	0.09	6.48	6.48	50	
4:2 FTS	0.79	0.95	6.21	6.23	1021	
PFPeS	0.36	0.39	7.40	7.39	328	
PFHpA	0.35	0.34	7.09	7.08	20	
DONA	0.43	0.45	7.32	7.30	984	
PFHxS	0.36	0.36	8.08	8.04	335	
PFOA	0.32	0.30	7.71	7.68	115	
6:2 FTS	1.10	1.30	7.38	7.36	594	
PFHpS	0.45	0.31	8.76	8.71	484	
PFNA	0.21	0.17	8.34	8.29	314	
PFOSAm	N/A	N/A	11.43	11.37	676	
PFOS	0.26	0.16	9.43	9.37	452	I
PFDA	0.17	0.15	8.99	8.93	207	
EtFOSAm	0.43	0.45	13.94	13.91	896	
8:2 FTS	1.80	1.20	8.63	8.57	44	I
9-Cl-PF3ON	0.03	0.04	9.92	9.84	568	
PFNS	0.24	0.26	10.10	10.03	297	
PFUnDA	0.13	0.16	9.65	9.59	212	
NMeFOSAA	0.72	0.72	8.89	8.83	169	
NEtFOSAA	0.44	0.46	9.20	9.13	208	
PFDS	0.30	0.32	10.75	10.68	377	
PFDOA	0.16	0.15	10.31	10.24	187	
11-Cl-PF3OUdS	0.03	0.02	11.22	11.13	506	
PFTTrDA	0.21	0.18	10.96	10.89	162	
PFTDA	0.17	0.12	11.59	11.52	79	

REPORT OF LABORATORY ANALYSIS

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MSD Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID 10623513003-MSD
 Run File Name Q220914A_009
 Analyzed 09/14/2022 12:06
 Injected By NH

Instrument ID 10LCMS01
 Column ID 118AB10133
 Ical ID 220909B01
 Level

Injection Internal Standards

Compound	Known Conc. (ug/Kg)	Conc. Found (ug/Kg)	%Recovery	Recovery Limits	RPD	Qualifiers
13C2_PFHxA	0.99	0.88	88	50-150	4.4	
13C4_PFOA	0.99	0.77	78	50-150	8.8	
13C2_PFDA	0.99	1.0	105	50-150	5.2	
13C4_PFOS	0.95	0.80	84	50-150	2.1	

Extracted Internal Standards

Compound	Known Conc. (ug/Kg)	Conc. Found (ug/Kg)	%Recovery	Recovery Limits	RPD	Qualifiers
13C4_PFBFA	0.99	0.77	78	50-150	2.8	
13C5_PFPeA	0.99	0.77	78	50-150	5.6	
13C3_PFBFS	0.92	0.64	70	50-150	9.8	
13C2_4:2FTS	0.93	0.83	90	50-150	4.9	
13C5_PFHxA	0.99	0.69	70	50-150	2.5	
13C4_PFHpA	0.99	0.69	69	50-150	2.7	
13C3_PFHxS	0.94	0.72	77	50-150	0.8	
13C2_6:2FTS	0.94	0.71	75	50-150	10.0	
13C8_PFOA	0.99	0.63	64	50-150	21.1	
13C9_PFNA	0.99	0.72	73	50-150	10.4	
13C8_PFOS	0.95	0.62	65	50-150	6.7	
13C2_8:2FTS	0.95	0.66	70	50-150	4.0	
13C6_PFDA	0.99	0.75	75	50-150	2.7	
d3-MeFOSAA	0.99	0.71	72	50-150	16.4	
13C8_PFOA	0.99	0.65	66	25-150	5.9	
d5-EtFOSAA	0.99	0.69	70	50-150	6.8	
13C7_PFUdA	0.99	0.81	82	50-150	6.2	
13C2_PFDaA	0.99	0.77	78	50-150	3.6	
13C2_PFTeDA	0.99	0.97	98	50-150	13.2	
13C3_HFPO-DA	0.99	0.71	72	50-150	13.2	
d5-N-EtFOA	0.99	0.50	51	10-150	5.5	

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MSD Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID 10623513003-MSD
 Run File Name Q220914A_009
 Analyzed 09/14/2022 12:06
 Injected By NH

Instrument ID 10LCMS01
 Column ID 118AB10133
 Ical ID 220909B01
 Level

Native Analytes

Compound	Sample Conc. (ug/Kg)	Known Conc. (ug/Kg)	Conc. Found (ug/Kg)	%Recovery	Recovery Limits	RPD	Qualifiers	CAS No.
PFBA	0.00	0.20	0.31	157	70-140	0.5	R	375-22-4
PFPeA	0.00	0.20	0.25	127	70-140	7.3		2706-90-3
HFPO-DA	0.00	0.20	0.22	109	70-140	18.4		13252-13-6
PFBS	0.00	0.18	0.24	136	70-140	10.3		375-73-5
PFHxA	0.00	0.20	0.25	128	70-140	5.6		307-24-4
4:2 FTS	0.00	0.19	0.18	99	70-140	16.0		757124-72-4
PFPeS	0.00	0.19	0.19	103	70-140	6.1		2706-91-4
PFHpA	0.00	0.20	0.24	120	70-140	2.3		375-85-9
DONA	0.00	0.19	0.27	144	70-140	20.8	R	919005-14-4
PFHxS	0.12	0.18	0.30	96	70-140	10.0		355-46-4
PFOA	0.00	0.20	0.28	141	70-140	16.6	R	335-67-1
6:2 FTS	0.00	0.19	0.19	100	70-140	6.6		27619-97-2
PFHpS	0.00	0.19	0.21	112	70-140	5.4		375-92-8
PFNA	0.00	0.20	0.21	104	70-140	7.7		375-95-1
PFOSAm	0.00	0.20	0.24	123	70-140	10.4		754-91-6
PFOS	1.2	0.18	1.4	98	70-140	1.5		1763-23-1
PFDA	0.00	0.20	0.19	97	70-140	32.3		335-76-2
EtFOSAm	0.00	0.20	0.23	118	70-140	10.9		4151-50-2
8:2 FTS	0.00	0.19	0.21	111	70-140	13.8		39108-34-4
9-Cl-PF3ON	0.00	0.18	0.21	114	70-140	11.5		756426-58-1
PFNS	0.00	0.19	0.25	130	70-140	10.7		68259-12-1
PFUnDA	0.00	0.20	0.22	113	70-140	16.5		2058-94-8
NMeFOSAA	0.00	0.20	0.21	106	70-140	20.0		2355-31-9
NEtFOSAA	0.00	0.20	0.18	92	70-140	22.1		2991-50-6
PFDS	0.00	0.19	0.24	125	70-140	6.5		335-77-3
PFDOA	0.00	0.20	0.22	112	70-140	16.9		307-55-1
11-Cl-PF3OUdS	0.00	0.19	0.19	100	70-140	2.1	I	763051-92-9
PFTTrDA	0.00	0.20	0.21	108	70-140	4.4		72629-94-8
PFTDA	0.00	0.20	0.19	97	70-140	7.0		376-06-7

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers
13C2 PFHxA	N/A	N/A	6.47	6.47	1148	
13C4 PFOA	N/A	N/A	7.70	7.67	1437	
13C2 PFDA	N/A	N/A	8.99	8.92	1478	
13C4 PFOS	N/A	N/A	9.42	9.36	920	

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MSD Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID 10623513003-MSD
 Run File Name Q220914A_009
 Analyzed 09/14/2022 12:06
 Injected By NH

Instrument ID 10LCMS01
 Column ID 118AB10133
 Ical ID 220909B01
 Level

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers
13C4 PFBA	N/A	N/A	5.07	5.08	1896	
13C5 PFPeA	N/A	N/A	5.84	5.87	2457	
13C3 PFBS	N/A	N/A	6.69	6.70	995	
13C2 4:2FTS	N/A	N/A	6.21	6.22	421	
13C5 PFHxA	N/A	N/A	6.47	6.47	1105	
13C4 PFHpA	N/A	N/A	7.08	7.07	1037	
13C3 PFHxS	N/A	N/A	8.07	8.04	897	
13C2 6:2FTS	N/A	N/A	7.38	7.36	329	
13C8 PFOA	N/A	N/A	7.70	7.67	921	
13C9 PFNA	N/A	N/A	8.33	8.28	1690	
13C8 PFOS	N/A	N/A	9.43	9.36	767	
13C2 8:2FTS	N/A	N/A	8.62	8.56	1299	
13C6 PFDA	N/A	N/A	8.98	8.92	1436	
d3-MeFOSAA	N/A	N/A	8.89	8.83	15161	
13C8 PFOSA	N/A	N/A	11.43	11.36	942	
d5-EtFOSAA	N/A	N/A	9.18	9.12	3839	
13C7 PFUdA	N/A	N/A	9.64	9.57	2243	
13C2 PFDoA	N/A	N/A	10.31	10.24	535	
13C2 PFTeDA	N/A	N/A	11.60	11.52	1477	
13C3 HFPO-DA	N/A	N/A	6.72	6.72	1365	
d5-N-EtFOSA	N/A	N/A	13.92	13.89	922	

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Instrument ID 10LCMS01
 Column ID 118AB10133
 Ical ID 220909B01
 Level

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers
PFBA	N/A	N/A	5.07	5.09	163	R
PFPeA	N/A	N/A	5.85	5.87	275	
HFPO-DA	0.65	0.80	6.74	6.73	68375	
PFBS	0.29	0.32	6.70	6.71	308	
PFHxA	0.07	0.09	6.48	6.48	54	
4:2 FTS	0.89	0.95	6.22	6.23	7523	
PFPeS	0.42	0.39	7.40	7.39	355	
PFHpA	0.37	0.34	7.09	7.08	22	
DONA	0.45	0.45	7.31	7.30	953	R
PFHxS	0.33	0.36	8.08	8.04	344	
PFOA	0.33	0.30	7.70	7.68	119	R
6:2 FTS	1.30	1.30	7.38	7.36	262	
PFHpS	0.36	0.31	8.76	8.71	476	
PFNA	0.18	0.17	8.34	8.29	243	
PFOSAm	N/A	N/A	11.44	11.37	1061	
PFOS	0.24	0.16	9.43	9.37	341	
PFDA	0.17	0.15	8.99	8.93	113	
EtFOSAm	0.35	0.45	13.95	13.91	147028	
8:2 FTS	1.40	1.20	8.63	8.57	35	
9-Cl-PF3ON	0.03	0.04	9.92	9.84	496	
PFNS	0.20	0.26	10.10	10.03	392	
PFUnDA	0.13	0.16	9.65	9.59	181	
NMeFOSAA	0.78	0.72	8.89	8.83	1248482	
NEtFOSAA	0.54	0.46	9.19	9.13	156	
PFDS	0.31	0.32	10.75	10.68	355	
PFDOA	0.21	0.15	10.31	10.24	182	
11-Cl-PF3OUdS	0.04	0.02	11.22	11.13	384	I
PFTTrDA	0.18	0.18	10.97	10.89	150	
PFTDA	0.16	0.12	11.60	11.52	89	

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