

02 July 2021

Jon Castro
Town of Chesapeake Beach
8200 Bayside Rd
Chesapeake Beach, MD 20732-3305
RE: Chesapeake Beach WRTP

Enclosed are the results of analyses for samples received by the laboratory on 06/11/21 08:00.

Maryland Spectral Services, Inc. is a TNI 2009 Standard accredited laboratory and as such, all analyses performed at Maryland Spectral Services included in this report are 2009 TNI certified except as indicated at the end of this report. Please visit our website at www.mdspectral.com for a complete listing of our TNI 2009 Standard accreditations.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rabecka Koons
Quality Assurance Officer

Analytical Results

Project: Chesapeake Beach WRTP

Project Number: [none]
Project Manager: Jon Castro

Reported:
07/02/21 17:16

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WRTP Effluent		1061102-01	Nonpotable Water	06/10/21 09:05	06/11/21 08:00
Field Blank		1061102-02	Nonpotable Water	06/10/21 09:05	06/11/21 08:00



Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: Chesapeake Beach WRTP

Project Number: [none]
Project Manager: Jon Castro

Reported:
07/02/21 17:16

Rabecka Koons

Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

All analyses performed at Maryland Spectral Services included in the report are TNI certified except as indicated at the end of the report

Analytical Results

Project: Chesapeake Beach WRTP

Project Number: [none]
Project Manager: Jon Castro

Reported:
07/02/21 17:16

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
%-Solids	Percent Solids is a supportive test and as such does not require accreditation



Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Report Prepared for:

Cory Koons
Maryland Spectral Services
1500 Caton Center Drive
Halethorpe MD 21227

**REPORT OF
LABORATORY
ANALYSIS
FOR PFAAs**

Report Prepared Date:

June 29, 2021

Report Information:


Pace Project #: 10565045
Sample Receipt Date: 06/12/2021
Client Project #: 1061102
Client Sub PO #: N/A
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 Krista Carlson, your Pace Project Manager.

This report has been reviewed by:



June 29, 2021

Krista Carlson, Project Manager

(612) 607-1700 (fax)
krista.carlson@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 two samples and a matrix spike submitted by a representative of Maryland Spectral Services. The samples were analyzed for thirty-six perfluorinated compounds using DOD QSM 5.3 for PFAS. Reporting limits were set to the quantification limits.

A laboratory method blank was prepared and analyzed with the 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.

Laboratory spike samples were also prepared with the sample batch using clean reference matrix that had been fortified with native standards. The recovery results were within the method limits. The RPDs (relative percent differences) between one laboratory spike and its duplicate were within the method limits. These spikes indicate that extraction performed as expected.

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 or to reduce the impact of matrix effects. The affected values were flagged "D" on the results tables.

It should be noted that Pace Analytical has not yet completed the certification process for all analytes in this method. Therefore, the results have been marked "N2" as qualified. Concentrations below the calibration range were flagged "J" and should be regarded as estimates. Values were flagged "I" where incorrect isotope ratios were obtained.

Minnesota Laboratory Certifications

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

REPORT OF LABORATORY ANALYSIS

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Appendix A

Sample Management

SUBCONTRACT ORDER
Maryland Spectral Services
1061102

RECEIVING LABORATORY:

Pace Labs-Mn
1700 Elm Street SE
Minneapolis, MN 55414
Phone : (612) 607-1700
Fax:

SENDING LABORATORY:

Maryland Spectral Services
1500 Caton Center Dr. Suite G
Halethorpe, MD 21227
Phone: 410.247.7600
Project Manager: Cory Koons
Reports Email: Reporting@mdspectral.com

WO# : 10565045



10565045

Laboratory ID Comments

Due 4:00 PM 06/22/21

Sample ID: 1061102-01 WRTPEffluent Water Sampled:06/10/21 09:05

537 . 1 (PFAS-PFOA)

Containers Supplied:
Plastic, 0.25L Trizma (A) Plastic, 0.25L Trizma (B)

Sample ID: 1061102-02 Field Blank Water Sampled:06/10/21 09:05

537 . 1 (PFAS-PFOA)

Containers Supplied:
Plastic, 0.25L Trizma (A)

13:56
6-11-21
Jace 6-11-21 13:56
Received By: [Signature] Date: 6-11-21
Received By: [Signature] Date: 6-11-21 17:30
Received By: [Signature] Date: 6-11-21 09:30
Received By: [Signature] Date: 6-11-21 09:30
Tc, T=2.3 Page 1 of 1



Document Name:
Sample Condition Upon Receipt (SCUR) - MN

Document No.:
ENV-FRM-MIN4-0150 Rev.02

Document Revised: 14Apr2021
Page 1 of 1

Pace Analytical Services -
Minneapolis

Sample Condition Upon Receipt

Client Name: Maryland Spectral Services Project #: _____

WO# : 10565045

PM: KAC Due Date: 06/25/21
CLIENT: Maryland Spe

Courier: Fed Ex UPS USPS Client
 Pace SpeeDee Commercial

Tracking Number: 2802 9737 9816 See Exceptions
ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present? Yes No Seals Intact? Yes No Biological Tissue Frozen? Yes No N/A

Packing Material: Bubble Wrap Bubble Bags None Other: _____ Temp Blank? Yes No

Thermometer: T1(0461) T2(1336) T3(0459) OS418-LS Type of Ice: Wet Blue None Dry Melted
 T4(0254) T5(0489) 160285052

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: _____ °C Average Corrected Temp (no temp blank only): 2.3 °C See Exceptions ENV-FRM-MIN4-0142 1 Container

Correction Factor: True Cooler Temp Corrected w/temp blank: _____ °C

USDA Regulated Soil: (N/A, water sample/Other: _____) Date/Initials of Person Examining Contents: CS 6/14/21

Did samples originate in a quarantine zone within the United States: AL, AR, 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 (F-MN-Q-338) and include with SCUR/COC paperwork.

		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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	4.
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 Chrome <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 Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	11. If no, write ID/ Date/Time on Container Below: <input type="checkbox"/> See Exception ENV-FRM-MIN4-0142
Matrix: <input checked="" type="checkbox"/> Water <input type="checkbox"/> Soil <input type="checkbox"/> Oil <input type="checkbox"/> Other		
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 #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , <2pH, NaOH >9 Sulfide, NaOH >10 Cyanide)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> NaOH <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/ <u>EFAS</u>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Positive for Res. <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> See Exception ENV-FRM-MIN4-0142
		Chlorine? <input type="checkbox"/> No <input type="checkbox"/> pH Paper Lot#
		Res. Chlorine 0-6 Roll 0-6 Strip 0-14 Strip
Extra labels present on soil VOA or WIDRO containers?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. <input type="checkbox"/> See Exception ENV-FRM-MIN4-0140
Headspace in VOA Vials (greater than 6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
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: _____ Field Data Required? Yes No

Comments/Resolution: _____

Project Manager Review: KAC Date: 06/18/21

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).

Labeled by: CS



Document Name:
Sample Condition Upon Receipt (SCUR) Exception Form

Document Revised: 04Jun2020
Page 1 of 1

Document No.:
ENV-FRM-MIN4-0142 Rev.01

Pace Analytical Services -
Minneapolis

SCUR Exceptions:

Workorder #: 10565045

Out of Temp Sample IDs	Container Type	# of Containers	PM Notified? <input type="checkbox"/> Yes <input type="checkbox"/> No																	
			If yes, indicate who was contacted/date/time. If no, indicate reason why.																	
			Multiple Cooler Project? <input type="checkbox"/> Yes <input type="checkbox"/> No If you answered yes, fill out information to the left.																	
			<table border="1"> <thead> <tr> <th colspan="3">No Temp Blank</th> </tr> <tr> <th>Read Temp</th> <th>Corrected Temp</th> <th>Average Temp</th> </tr> </thead> <tbody> <tr> <td>2.0</td> <td>T</td> <td rowspan="5">2.3</td> </tr> <tr> <td>3.2</td> <td>r</td> </tr> <tr> <td>1.8</td> <td>u</td> </tr> <tr> <td></td> <td>e</td> </tr> <tr> <td></td> <td></td> </tr> </tbody> </table>	No Temp Blank			Read Temp	Corrected Temp	Average Temp	2.0	T	2.3	3.2	r	1.8	u		e		
No Temp Blank																				
Read Temp	Corrected Temp	Average Temp																		
2.0	T	2.3																		
3.2	r																			
1.8	u																			
	e																			

Tracking Number/Temperature

Issue Type:	Container Type	# of Containers
Sample ID		

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preserv.	pH Upon Receipt	Date Adjusted	Time Adjusted	Amount Added (mL)	Lot # Added	pH After	In Compliance after addition? <input type="checkbox"/> Yes <input type="checkbox"/> No	Initials
								<input type="checkbox"/> Yes <input type="checkbox"/> No	
								<input type="checkbox"/> Yes <input type="checkbox"/> No	
								<input type="checkbox"/> Yes <input type="checkbox"/> No	
								<input type="checkbox"/> Yes <input type="checkbox"/> No	

Comments:

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 = Interference present
- 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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Appendix B

Sample Analysis Summary



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

Sample Analysis Summary
 PFAS by Isotope Dilution

Page 1 of 4

Client Sample ID	1061102-01 WRTP Effluent	Extraction Date	06/18/2021 14:34
Lab Sample ID	10565045001	Total Amount Extracted	245mL
Lab File ID	A210619A_025	Ical ID	210618A03
Matrix	Industrial_Water	CCal File	A210619A_024
Collected	06/10/2021 09:05	Ending CCal File	
Received	06/12/2021 09:30	Blank File	A210619A_015

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	13	2.0	2.0	0.41	1	375-22-4	N2
PFPeA	350 D	10	10	1.2	5	2706-90-3	N2
HFPO-DA	ND I	2.0	2.0	0.67	1	13252-13-6	N2
PFBS	11	1.8	1.8	0.43	1	375-73-5	N2
PFHxA	110	2.0	2.0	0.33	1	307-24-4	N2
4:2 FTS	ND	1.9	1.9	0.54	1	757124-72-4	N2
PFPeS	ND	1.9	1.9	0.62	1	2706-91-4	N2
PFHpA	6.4	2.0	2.0	0.59	1	375-85-9	N2
DONA	ND	1.9	1.9	0.40	1	919005-14-4	N2
PFHxS	2.3	1.9	1.9	0.56	1	355-46-4	N2
PFOA	11	2.0	2.0	0.59	1	335-67-1	N2
6:2 FTS	ND	1.9	1.9	0.68	1	27619-97-2	N2
PFHpS	ND I	1.9	1.9	0.28	1	375-92-8	N2
PFNA	ND	2.0	2.0	0.43	1	375-95-1	N2
PFOSAm	ND	2.0	2.0	0.88	1	754-91-6	N2
PFOS	3.2	1.9	1.9	0.43	1	1763-23-1	N2
PFDA	ND	2.0	2.0	0.71	1	335-76-2	N2
8:2 FTS	ND	2.0	2.0	0.59	1	39108-34-4	N2
9-CI-PF3ON	ND	1.9	1.9	0.20	1	756426-58-1	N2
PFNS	ND	2.0	2.0	0.52	1	68259-12-1	N2
PFUnDA	ND	2.0	2.0	0.33	1	2058-94-8	N2
NMeFOSAA	ND	2.0	2.0	0.43	1	2355-31-9	N2
NEtFOSAA	ND	2.0	2.0	0.63	1	2991-50-6	N2
PFDS	ND	2.0	2.0	0.53	1	335-77-3	N2
PFDOA	ND	2.0	2.0	0.59	1	307-55-1	N2
11-CI-PF3OUdS	ND	1.9	1.9	0.47	1	763051-92-9	N2
PFTTrDA	ND	2.0	2.0	0.53	1	72629-94-8	N2
PFODA	ND	2.0	2.0	0.70	1	16517-11-6	N2

Injection Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	20	19	95	50-150	
13C4_PFOA	20	20	101	50-150	
13C2_PFDA	20	18	89	50-150	
13C4_PFOS	20	20	103	50-150	

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 PFAS by Isotope Dilution

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Matrix	Industrial_Water	CCal File	A210619A_024
Collected	06/10/2021 09:05	Ending CCal File	
Received	06/12/2021 09:30	Blank File	A210619A_015

Extracted Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBa	20	24	120	50-150	
13C5_PFPeA	20	22	107	50-150	
13C3_PFBs	19	20	105	50-150	
13C2_4:2FTS	19	21	111	50-150	
13C5_PFHxA	20	23	114	50-150	
13C4_PFHpA	20	22	109	50-150	
13C3_PFHxS	19	21	107	50-150	
13C2_6:2FTS	19	23	119	50-150	
13C8_PFOA	20	21	105	50-150	
13C9_PFNA	20	22	106	50-150	
13C8_PFOS	20	22	114	50-150	
13C2_8:2FTS	20	22	112	50-150	
13C6_PFDA	20	21	104	50-150	
d3-MeFOSAA	20	22	106	50-150	
13C8_PFOsA	20	17	83	50-150	
d5-EtFOSAA	20	20	98	50-150	
13C7_PFUdA	20	20	98	50-150	
13C2_PFDoA	20	19	93	50-150	
13C2_PFTeDA	20	17	84	50-150	
13C3_HFPO-DA	20	21	105	50-150	
13C2_PFHxDA	20	16	78	50-150	
d7-N-MeFOSE	20	16	77	10-150	
d9-N-EtFOSE	20	16	76	10-150	
d3-N-MeFOSA	20	10	50	10-150	
d5-N-EtFOSA	20	9.8	48	10-150	

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2_PFHxA	N/A	N/A	5.07	5.10	
13C4_PFOA	N/A	N/A	6.05	6.03	
13C2_PFDA	N/A	N/A	6.96	6.91	
13C4_PFOS	N/A	N/A	7.27	7.34	

REPORT OF LABORATORY ANALYSIS

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Matrix	Industrial_Water	CCal File	A210619A_024
Collected	06/10/2021 09:05	Ending CCal File	
Received	06/12/2021 09:30	Blank File	A210619A_015

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.60	3.72	
13C5 PFPeA	N/A	N/A	4.46	4.46	
13C3 PFBS	N/A	N/A	5.25	5.25	
13C2 4:2FTS	N/A	N/A	4.85	4.89	
13C5 PFHxA	N/A	N/A	5.07	5.11	
13C4 PFHpA	N/A	N/A	5.58	5.59	
13C3 PFHxS	N/A	N/A	6.34	6.42	
13C2 6:2FTS	N/A	N/A	5.82	5.80	
13C8 PFOA	N/A	N/A	6.05	6.03	
13C9 PFNA	N/A	N/A	6.51	6.47	
13C8 PFOS	N/A	N/A	7.28	7.35	
13C2 8:2FTS	N/A	N/A	6.71	6.65	
13C6 PFDA	N/A	N/A	6.96	6.91	
d3-MeFOSAA	N/A	N/A	6.90	6.90	
13C8 PFOSA	N/A	N/A	8.84	8.84	
d5-EtFOSAA	N/A	N/A	7.11	7.11	
13C7 PFUdA	N/A	N/A	7.41	7.36	
13C2 PFDoA	N/A	N/A	7.84	7.82	
13C2 PFTeDA	N/A	N/A	8.69	8.75	
13C3 HFPO-DA	N/A	N/A	5.28	5.30	
13C2 PFHxDA	N/A	N/A	9.46	9.46	
d7-N-MeFOSE	N/A	N/A	10.11	10.11	
d9-N-EtFOSE	N/A	N/A	10.73	10.73	
d3-N-MeFOSA	N/A	N/A	10.36	10.36	
d5-N-EtFOSA	N/A	N/A	11.05	11.05	

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Matrix	Industrial_Water	CCal File	A210619A_024
Collected	06/10/2021 09:05	Ending CCal File	
Received	06/12/2021 09:30	Blank File	A210619A_015

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	3.61	3.61	
PFPeA	N/A	N/A	4.46	4.47	D
HFPO-DA	0.000	0.450	5.29	5.31	I
PFBS	0.330	0.330	5.26	5.26	
PFHxA	0.063	0.0610	5.07	5.10	
4:2 FTS	0.000	0.550	0.00	4.89	
PFPeS	0.350	0.300	5.83	5.93	
PFHpA	0.280	0.300	5.59	5.59	
DONA	0.000	0.520	0.00	5.76	
PFHxS	0.240	0.270	6.34	6.34	
PFOA	0.350	0.370	6.06	6.07	
6:2 FTS	0.570	0.430	5.82	5.80	
PFHpS	0.520	0.250	6.83	6.88	I
PFNA	0.160	0.200	6.52	6.46	
PFOSAm	N/A	N/A	8.85	9.10	
PFOS	0.140	0.230	7.14	7.11	
PFDA	0.046	0.0870	6.96	6.91	
8:2 FTS	0.000	0.660	0.00	6.65	
9-CI-PF3ON	0.000	0.0200	0.00	7.68	
PFNS	0.000	0.240	0.00	7.79	
PFUnDA	0.000	0.110	0.00	7.36	
NMeFOSAA	0.000	0.420	0.00	6.83	
NEtFOSAA	0.000	0.770	0.00	7.04	
PFDS	0.000	0.230	0.00	8.24	
PFDOA	0.000	0.130	0.00	7.82	
11-CI-PF3OUdS	0.000	0.0120	0.00	8.58	
PFTrDA	0.000	0.140	0.00	8.28	
PFODA	0.000	0.0960	0.00	11.12	

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 PFAS by Isotope Dilution

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Client Sample ID	1061102-02 FIELD BLANK	Extraction Date	06/18/2021 14:34
Lab Sample ID	10565045002	Total Amount Extracted	251mL
Lab File ID	A210619A_026	Ical ID	210618A03
Matrix	Water	CCal File	A210619A_024
Collected	06/10/2021 09:05	Ending CCal File	A210619A_029
Received	06/12/2021 09:30	Blank File	A210619A_015

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	ND	2.0	2.0	0.41	1	375-22-4	N2
PFPeA	ND	2.0	2.0	0.23	1	2706-90-3	N2
HFPO-DA	ND	2.0	2.0	0.66	1	13252-13-6	N2
PFBS	ND	1.8	1.8	0.42	1	375-73-5	N2
PFHxA	ND	2.0	2.0	0.32	1	307-24-4	N2
4:2 FTS	ND	1.9	1.9	0.53	1	757124-72-4	N2
PFPeS	ND	1.9	1.9	0.61	1	2706-91-4	N2
PFHpA	ND	2.0	2.0	0.57	1	375-85-9	N2
DONA	ND	1.9	1.9	0.39	1	919005-14-4	N2
PFHxS	ND	1.8	1.8	0.55	1	355-46-4	N2
PFOA	ND	2.0	2.0	0.57	1	335-67-1	N2
6:2 FTS	ND	1.9	1.9	0.67	1	27619-97-2	N2
PFHpS	ND	1.9	1.9	0.28	1	375-92-8	N2
PFNA	ND	2.0	2.0	0.42	1	375-95-1	N2
PFOSAm	ND	2.0	2.0	0.86	1	754-91-6	N2
PFOS	ND	1.8	1.8	0.42	1	1763-23-1	N2
PFDA	ND	2.0	2.0	0.69	1	335-76-2	N2
8:2 FTS	ND	1.9	1.9	0.57	1	39108-34-4	N2
9-CI-PF3ON	ND	1.9	1.9	0.19	1	756426-58-1	N2
PFNS	ND	1.9	1.9	0.50	1	68259-12-1	N2
PFUnDA	ND	2.0	2.0	0.32	1	2058-94-8	N2
NMeFOSAA	ND	2.0	2.0	0.42	1	2355-31-9	N2
NEtFOSAA	ND	2.0	2.0	0.62	1	2991-50-6	N2
PFDS	ND	1.9	1.9	0.52	1	335-77-3	N2
PFDOA	ND	2.0	2.0	0.58	1	307-55-1	N2
11-CI-PF3OUdS	ND	1.9	1.9	0.46	1	763051-92-9	N2
PFTTrDA	ND	2.0	2.0	0.52	1	72629-94-8	N2
PFODA	ND	2.0	2.0	0.69	1	16517-11-6	N2

Injection Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2 PFHxA	20	19	95	50-150	
13C4 PFOA	20	19	96	50-150	
13C2 PFDA	20	18	88	50-150	
13C4 PFOS	19	18	96	50-150	

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	1061102-02 FIELD BLANK	Extraction Date	06/18/2021 14:34
Lab Sample ID	10565045002	Total Amount Extracted	251mL
Lab File ID	A210619A_026	Ical ID	210618A03
Matrix	Water	CCal File	A210619A_024
Collected	06/10/2021 09:05	Ending CCal File	A210619A_029
Received	06/12/2021 09:30	Blank File	A210619A_015

Extracted Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBa	20	21	106	50-150	
13C5_PFPeA	20	21	104	50-150	
13C3_PFBs	19	19	101	50-150	
13C2_4:2FTS	19	19	101	50-150	
13C5_PFHxA	20	21	104	50-150	
13C4_PFHpA	20	21	107	50-150	
13C3_PFHxS	19	20	105	50-150	
13C2_6:2FTS	19	21	114	50-150	
13C8_PFOA	20	20	102	50-150	
13C9_PFNA	20	21	107	50-150	
13C8_PFOS	19	20	103	50-150	
13C2_8:2FTS	19	20	105	50-150	
13C6_PFDA	20	19	93	50-150	
d3-MeFOSAA	20	19	97	50-150	
13C8_PFOsA	20	19	94	50-150	
d5-EtFOSAA	20	18	91	50-150	
13C7_PFUdA	20	20	99	50-150	
13C2_PFDoA	20	18	88	50-150	
13C2_PFTeDA	20	20	100	50-150	
13C3_HFPO-DA	20	20	100	50-150	
13C2_PFHxDA	20	18	93	50-150	
d7-N-MeFOSE	20	17	85	10-150	
d9-N-EtFOSE	20	17	86	10-150	
d3-N-MeFOSA	20	12	62	10-150	
d5-N-EtFOSA	20	13	64	10-150	

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2_PFHxA	N/A	N/A	5.07	5.10	
13C4_PFOA	N/A	N/A	6.06	6.03	
13C2_PFDA	N/A	N/A	6.96	6.91	
13C4_PFOS	N/A	N/A	7.28	7.34	

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	1061102-02 FIELD BLANK	Extraction Date	06/18/2021 14:34
Lab Sample ID	10565045002	Total Amount Extracted	251mL
Lab File ID	A210619A_026	Ical ID	210618A03
Matrix	Water	CCal File	A210619A_024
Collected	06/10/2021 09:05	Ending CCal File	A210619A_029
Received	06/12/2021 09:30	Blank File	A210619A_015

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.60	3.60	
13C5 PFPeA	N/A	N/A	4.47	4.47	
13C3 PFBS	N/A	N/A	5.25	5.25	
13C2 4:2FTS	N/A	N/A	4.85	4.89	
13C5 PFHxA	N/A	N/A	5.07	5.11	
13C4 PFHpA	N/A	N/A	5.59	5.59	
13C3 PFHxS	N/A	N/A	6.34	6.34	
13C2 6:2FTS	N/A	N/A	5.82	5.80	
13C8 PFOA	N/A	N/A	6.06	6.03	
13C9 PFNA	N/A	N/A	6.51	6.47	
13C8 PFOS	N/A	N/A	7.28	7.35	
13C2 8:2FTS	N/A	N/A	6.71	6.65	
13C6 PFDA	N/A	N/A	6.96	6.91	
d3-MeFOSAA	N/A	N/A	6.91	6.91	
13C8 PFOSA	N/A	N/A	8.84	8.84	
d5-EtFOSAA	N/A	N/A	7.12	7.12	
13C7 PFUdA	N/A	N/A	7.41	7.36	
13C2 PFDaA	N/A	N/A	7.85	7.82	
13C2 PFTeDA	N/A	N/A	8.69	8.75	
13C3 HFPO-DA	N/A	N/A	5.28	5.30	
13C2 PFHxDA	N/A	N/A	9.46	9.46	
d7-N-MeFOSE	N/A	N/A	10.11	10.11	
d9-N-EtFOSE	N/A	N/A	10.73	10.73	
d3-N-MeFOSA	N/A	N/A	10.36	10.36	
d5-N-EtFOSA	N/A	N/A	11.05	11.05	

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	1061102-02 FIELD BLANK	Extraction Date	06/18/2021 14:34
Lab Sample ID	10565045002	Total Amount Extracted	251mL
Lab File ID	A210619A_026	Ical ID	210618A03
Matrix	Water	CCal File	A210619A_024
Collected	06/10/2021 09:05	Ending CCal File	A210619A_029
Received	06/12/2021 09:30	Blank File	A210619A_015

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	3.61	3.72	
PFPeA	N/A	N/A	0.00	4.54	
HFPO-DA	0.000	0.450	0.00	5.31	
PFBS	0.000	0.330	5.26	5.38	I
PFHxA	0.000	0.0610	0.00	5.10	
4:2 FTS	0.000	0.550	0.00	4.89	
PFPeS	0.000	0.300	0.00	5.93	
PFHpA	0.000	0.300	0.00	5.59	
DONA	0.000	0.520	0.00	5.76	
PFHxS	0.000	0.270	0.00	6.42	
PFOA	0.000	0.370	0.00	6.07	
6:2 FTS	0.700	0.430	5.82	5.80	I
PFHpS	0.000	0.250	0.00	6.88	
PFNA	0.000	0.200	0.00	6.46	
PFOSAm	N/A	N/A	8.84	9.10	
PFOS	0.000	0.230	7.29	7.34	I
PFDA	0.000	0.0870	0.00	6.91	
8:2 FTS	0.000	0.660	0.00	6.65	
9-CI-PF3ON	0.000	0.0200	0.00	7.68	
PFNS	0.000	0.240	0.00	7.79	
PFUnDA	0.000	0.110	0.00	7.36	
NMeFOSAA	0.000	0.420	0.00	6.83	
NEtFOSAA	0.000	0.770	0.00	7.04	
PFDS	0.000	0.230	0.00	8.24	
PFDOA	0.000	0.130	0.00	7.82	
11-CI-PF3OUdS	0.000	0.0120	0.00	8.58	
PFTrDA	0.000	0.140	0.00	8.28	
PFODA	0.000	0.0960	0.00	11.12	

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Method Blank Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	BLKQM	Extraction Date	06/18/2021 14:34
Lab Sample ID	BLANK-90981	Total Amount Extracted	263mL
Lab File ID	A210619A_015	Ical ID	210618A03
Matrix	Water	CCal File	A210619A_005
Collected	06/18/2021 10:32	Ending CCal File	A210619A_024
Received	06/18/2021 10:32	Blank File	

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	ND	1.9	1.9	0.39	1	375-22-4	N2
PFPeA	ND	1.9	1.9	0.22	1	2706-90-3	N2
HFPO-DA	ND	1.9	1.9	0.63	1	13252-13-6	N2
PFBS	ND	1.7	1.7	0.40	1	375-73-5	N2
PFHxA	ND	1.9	1.9	0.30	1	307-24-4	N2
4:2 FTS	ND	1.8	1.8	0.50	1	757124-72-4	N2
PFPeS	ND	1.8	1.8	0.58	1	2706-91-4	N2
PFHpA	ND	1.9	1.9	0.55	1	375-85-9	N2
DONA	ND	1.8	1.8	0.37	1	919005-14-4	N2
PFHxS	ND	1.7	1.7	0.53	1	355-46-4	N2
PFOA	ND	1.9	1.9	0.55	1	335-67-1	N2
6:2 FTS	ND	1.8	1.8	0.64	1	27619-97-2	N2
PFHpS	ND	1.8	1.8	0.26	1	375-92-8	N2
PFNA	ND	1.9	1.9	0.40	1	375-95-1	N2
PFOSAm	ND	1.9	1.9	0.82	1	754-91-6	N2
PFOS	ND	1.8	1.8	0.40	1	1763-23-1	N2
PFDA	ND	1.9	1.9	0.66	1	335-76-2	N2
8:2 FTS	ND	1.8	1.8	0.55	1	39108-34-4	N2
9-CI-PF3ON	ND	1.8	1.8	0.18	1	756426-58-1	N2
PFNS	ND	1.8	1.8	0.48	1	68259-12-1	N2
PFUnDA	ND	1.9	1.9	0.30	1	2058-94-8	N2
NMeFOSAA	ND	1.9	1.9	0.40	1	2355-31-9	N2
NEtFOSAA	ND	1.9	1.9	0.59	1	2991-50-6	N2
PFDS	ND	1.8	1.8	0.49	1	335-77-3	N2
PFDOA	ND	1.9	1.9	0.55	1	307-55-1	N2
11-CI-PF3OUdS	ND	1.8	1.8	0.44	1	763051-92-9	N2
PFTTrDA	ND	1.9	1.9	0.50	1	72629-94-8	N2
PFODA	ND	1.9	1.9	0.65	1	16517-11-6	N2

Injection Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2 PFHxA	19	18	94	50-150	
13C4 PFOA	19	16	87	50-150	
13C2 PFDA	19	19	98	50-150	
13C4 PFOS	18	18	100	50-150	

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Method Blank Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	BLKQM	Extraction Date	06/18/2021 14:34
Lab Sample ID	BLANK-90981	Total Amount Extracted	263mL
Lab File ID	A210619A_015	Ical ID	210618A03
Matrix	Water	CCal File	A210619A_005
Collected	06/18/2021 10:32	Ending CCal File	A210619A_024
Received	06/18/2021 10:32	Blank File	

Extracted Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBFA	19	21	112	50-150	
13C5_PFPeA	19	20	108	50-150	
13C3_PFBFS	18	19	108	50-150	
13C2_4:2FTS	18	18	101	50-150	
13C5_PFHxA	19	20	106	50-150	
13C4_PFHpA	19	20	107	50-150	
13C3_PFHxS	18	19	107	50-150	
13C2_6:2FTS	18	19	108	50-150	
13C8_PFOA	19	20	106	50-150	
13C9_PFNA	19	20	103	50-150	
13C8_PFOS	18	18	100	50-150	
13C2_8:2FTS	18	18	101	50-150	
13C6_PFDA	19	19	100	50-150	
d3-MeFOSAA	19	19	98	50-150	
13C8_PFOSA	19	19	101	50-150	
d5-EtFOSAA	19	17	90	50-150	
13C7_PFUdA	19	19	99	50-150	
13C2_PFDoA	19	19	101	50-150	
13C2_PFTeDA	19	19	101	50-150	
13C3_HFPO-DA	19	20	104	50-150	
13C2_PFHxDA	19	20	104	50-150	
d7-N-MeFOSE	19	18	96	10-150	
d9-N-EtFOSE	19	19	100	10-150	
d3-N-MeFOSA	19	17	92	10-150	
d5-N-EtFOSA	19	17	89	10-150	

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2_PFHxA	N/A	N/A	5.07	5.10	
13C4_PFOA	N/A	N/A	6.05	6.03	
13C2_PFDA	N/A	N/A	6.96	6.91	
13C4_PFOS	N/A	N/A	7.28	7.28	

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 PFAS by Isotope Dilution

Client Sample ID	BLKQM	Extraction Date	06/18/2021 14:34
Lab Sample ID	BLANK-90981	Total Amount Extracted	263mL
Lab File ID	A210619A_015	Ical ID	210618A03
Matrix	Water	CCal File	A210619A_005
Collected	06/18/2021 10:32	Ending CCal File	A210619A_024
Received	06/18/2021 10:32	Blank File	

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.60	3.60	
13C5 PFPeA	N/A	N/A	4.46	4.46	
13C3 PFBS	N/A	N/A	5.25	5.25	
13C2 4:2FTS	N/A	N/A	4.84	4.89	
13C5 PFHxA	N/A	N/A	5.07	5.11	
13C4 PFHpA	N/A	N/A	5.58	5.59	
13C3 PFHxS	N/A	N/A	6.34	6.34	
13C2 6:2FTS	N/A	N/A	5.82	5.80	
13C8 PFOA	N/A	N/A	6.05	6.03	
13C9 PFNA	N/A	N/A	6.51	6.47	
13C8 PFOS	N/A	N/A	7.28	7.35	
13C2 8:2FTS	N/A	N/A	6.71	6.65	
13C6 PFDA	N/A	N/A	6.96	6.96	
d3-MeFOSAA	N/A	N/A	6.90	6.90	
13C8 PFOSA	N/A	N/A	8.84	8.84	
d5-EtFOSAA	N/A	N/A	7.12	7.12	
13C7 PFUdA	N/A	N/A	7.41	7.36	
13C2 PFDaA	N/A	N/A	7.84	7.82	
13C2 PFTeDA	N/A	N/A	8.69	8.75	
13C3 HFPO-DA	N/A	N/A	5.28	5.30	
13C2 PFHxDA	N/A	N/A	9.46	9.46	
d7-N-MeFOSE	N/A	N/A	10.10	10.10	
d9-N-EtFOSE	N/A	N/A	10.72	10.72	
d3-N-MeFOSA	N/A	N/A	10.35	10.35	
d5-N-EtFOSA	N/A	N/A	11.04	11.04	

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Method Blank Analysis Summary
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Client Sample ID	BLKQM	Extraction Date	06/18/2021 14:34
Lab Sample ID	BLANK-90981	Total Amount Extracted	263mL
Lab File ID	A210619A_015	Ical ID	210618A03
Matrix	Water	CCal File	A210619A_005
Collected	06/18/2021 10:32	Ending CCal File	A210619A_024
Received	06/18/2021 10:32	Blank File	

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	0.00	3.72	
PFPeA	N/A	N/A	0.00	4.54	
HFPO-DA	0.000	0.400	0.00	5.31	
PFBS	0.330	0.330	5.26	5.38	
PFHxA	0.000	0.0700	5.07	5.10	I
4:2 FTS	0.000	0.530	0.00	4.89	
PFPeS	0.000	0.310	0.00	5.93	
PFHpA	0.370	0.270	5.60	5.59	
DONA	0.000	0.530	0.00	5.76	
PFHxS	0.000	0.260	0.00	6.42	
PFOA	0.000	0.360	0.00	6.07	
6:2 FTS	0.000	0.460	0.00	5.80	
PFHpS	0.000	0.220	0.00	6.88	
PFNA	0.000	0.220	0.00	6.46	
PFOSAm	N/A	N/A	8.84	9.10	
PFOS	0.290	0.210	7.29	7.34	
PFDA	0.000	0.0880	0.00	6.91	
8:2 FTS	0.000	0.450	0.00	6.65	
9-CI-PF3ON	0.000	0.0260	0.00	7.68	
PFNS	0.000	0.280	0.00	7.79	
PFUnDA	0.000	0.110	0.00	7.36	
NMeFOSAA	0.000	0.460	0.00	6.83	
NEtFOSAA	0.000	0.570	0.00	7.04	
PFDS	0.000	0.250	0.00	8.24	
PFDOA	0.000	0.130	0.00	7.82	
11-CI-PF3OUdS	0.000	0.0150	0.00	8.58	
PFTrDA	0.000	0.170	0.00	8.28	
PFODA	0.000	0.110	0.00	11.12	

REPORT OF LABORATORY ANALYSIS

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LCS Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID	LCS-90982	Instrument ID	10LCMS03
Run File Name	A210619A_016	Column ID	118AB10133
Analyzed	06/19/2021 23:34	Ical ID	210618A03
Injected By	QL	Level	L

Injection Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	20	21	106	50-150	
13C4_PFOA	20	19	100	50-150	
13C2_PFDA	20	23	117	50-150	
13C4_PFOS	19	22	119	50-150	

Extracted Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBFA	20	22	112	50-150	
13C5_PFPeA	20	21	106	50-150	
13C3_PFBFS	18	19	105	50-150	
13C2_4:2FTS	18	18	99	50-150	
13C5_PFHxA	20	20	105	50-150	
13C4_PFHpA	20	21	107	50-150	
13C3_PFHxS	18	19	104	50-150	
13C2_6:2FTS	19	21	112	50-150	
13C8_PFOA	20	21	106	50-150	
13C9_PFNA	20	21	105	50-150	
13C8_PFOS	19	20	105	50-150	
13C2_8:2FTS	19	20	109	50-150	
13C6_PFDA	20	20	104	50-150	
d3-MeFOSAA	20	19	97	50-150	
13C8_PFOA	20	19	99	50-150	
d5-EtFOSAA	20	18	93	50-150	
13C7_PFUdA	20	22	113	50-150	
13C2_PFDaA	20	21	108	50-150	
13C2_PFTeDA	20	20	100	50-150	
13C3_HFPO-DA	20	21	107	50-150	
13C2_PFHxDA	20	21	105	50-150	
d7-N-MeFOSE	20	19	98	10-150	
d9-N-EtFOSE	20	19	97	10-150	
d3-N-MeFOSA	20	18	93	10-150	
d5-N-EtFOSA	20	18	91	10-150	

REPORT OF LABORATORY ANALYSIS

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LCS Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID LCS-90982
 Run File Name A210619A_016
 Analyzed 06/19/2021 23:34
 Injected By QL

Instrument ID 10LCMS03
 Column ID 118AB10133
 Ical ID 210618A03
 Level L

Native Analytes

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	CAS No.
PFBA	3.9	3.9	100	73-129		375-22-4
PFPeA	3.9	3.8	97	72-129		2706-90-3
HFPO-DA	3.9	3.6	93	70-140		13252-13-6
PFBS	3.5	3.3	97	72-130		375-73-5
PFHxA	3.9	3.9	101	72-129		307-24-4
4:2 FTS	3.7	3.6	100	63-143		757124-72-4
PFPeS	3.7	3.7	100	71-127		2706-91-4
PFHpA	3.9	4.1	104	72-130		375-85-9
DONA	3.7	3.8	102	70-140		919005-14-4
PFHxS	3.6	3.5	98	68-131		355-46-4
PFOA	3.9	4.0	103	71-133		335-67-1
6:2 FTS	3.7	3.8	101	64-140		27619-97-2
PFHpS	3.7	3.7	100	69-134		375-92-8
PFNA	3.9	3.7	95	69-130		375-95-1
PFOSAm	3.9	3.9	99	67-137		754-91-6
PFOS	3.6	3.3	92	65-140		1763-23-1
PFDA	3.9	4.2	108	71-129		335-76-2
8:2 FTS	3.7	3.7	98	67-138		39108-34-4
9-CI-PF3ON	3.6	3.3	91	70-130		756426-58-1
PFNS	3.7	3.5	92	69-127		68259-12-1
PFUnDA	3.9	3.6	93	69-133		2058-94-8
NMeFOSAA	3.9	3.0	77	65-136		2355-31-9
NEtFOSAA	3.9	3.8	96	61-135		2991-50-6
PFDS	3.8	3.3	87	53-142		335-77-3
PFDOA	3.9	3.7	96	72-134		307-55-1
11-CI-PF3OUdS	3.7	3.3	90	70-140		763051-92-9
PFTTrDA	3.9	3.9	100	65-144		72629-94-8
PFODA	3.9	3.8	97	70-140		16517-11-6

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.07	5.10	
13C4 PFOA	N/A	N/A	6.06	6.03	
13C2 PFDA	N/A	N/A	6.97	6.91	
13C4 PFOS	N/A	N/A	7.28	7.34	

REPORT OF LABORATORY ANALYSIS

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LCS Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID LCS-90982
 Run File Name A210619A_016
 Analyzed 06/19/2021 23:34
 Injected By QL

Instrument ID 10LCMS03
 Column ID 118AB10133
 Ical ID 210618A03
 Level L

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.60	3.60	
13C5 PFPeA	N/A	N/A	4.47	4.47	
13C3 PFBS	N/A	N/A	5.26	5.26	
13C2 4:2FTS	N/A	N/A	4.85	4.89	
13C5 PFHxA	N/A	N/A	5.08	5.11	
13C4 PFHpA	N/A	N/A	5.59	5.59	
13C3 PFHxS	N/A	N/A	6.35	6.35	
13C2 6:2FTS	N/A	N/A	5.83	5.80	
13C8 PFOA	N/A	N/A	6.06	6.03	
13C9 PFNA	N/A	N/A	6.52	6.47	
13C8 PFOS	N/A	N/A	7.29	7.35	
13C2 8:2FTS	N/A	N/A	6.72	6.65	
13C6 PFDA	N/A	N/A	6.97	6.91	
d3-MeFOSAA	N/A	N/A	6.91	6.91	
13C8 PFOSA	N/A	N/A	8.84	8.84	
d5-EtFOSAA	N/A	N/A	7.12	7.03	
13C7 PFUdA	N/A	N/A	7.41	7.36	
13C2 PFDoA	N/A	N/A	7.85	7.82	
13C2 PFTeDA	N/A	N/A	8.70	8.75	
13C3 HFPO-DA	N/A	N/A	5.29	5.30	
13C2 PFHxDA	N/A	N/A	9.47	9.47	
d7-N-MeFOSE	N/A	N/A	10.11	10.11	
d9-N-EtFOSE	N/A	N/A	10.73	10.73	
d3-N-MeFOSA	N/A	N/A	10.37	10.37	
d5-N-EtFOSA	N/A	N/A	11.05	11.05	

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LCS Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID LCS-90982
 Run File Name A210619A_016
 Analyzed 06/19/2021 23:34
 Injected By QL

Instrument ID 10LCMS03
 Column ID 118AB10133
 Ical ID 210618A03
 Level L

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	3.61	3.61	
PFPeA	N/A	N/A	4.47	4.47	
HFPO-DA	0.45	0.40	5.30	5.31	
PFBS	0.34	0.33	5.27	5.27	
PFHxA	0.05	0.07	5.08	5.10	
4:2 FTS	0.57	0.53	4.86	4.89	
PFPeS	0.31	0.31	5.84	5.84	
PFHpA	0.29	0.27	5.60	5.59	
DONA	0.46	0.53	5.77	5.76	
PFHxS	0.26	0.23	6.35	6.35	
PFOA	0.39	0.36	6.07	6.07	
6:2 FTS	0.46	0.46	5.83	5.80	
PFHpS	0.23	0.22	6.83	6.88	
PFNA	0.20	0.22	6.52	6.46	
PFOSAm	N/A	N/A	8.85	8.85	
PFOS	0.25	0.21	7.29	7.34	
PFDA	0.09	0.08	6.97	6.91	
8:2 FTS	0.56	0.45	6.72	6.65	
9-CI-PF3ON	0.02	0.02	7.61	7.61	
PFNS	0.23	0.28	7.73	7.73	
PFUnDA	0.09	0.11	7.42	7.36	
NMeFOSAA	0.60	0.46	6.91	6.91	
NEtFOSAA	0.70	0.50	7.13	7.04	
PFDS	0.23	0.25	8.16	8.16	
PFDOA	0.12	0.13	7.86	7.82	
11-CI-PF3OUdS	0.01	0.01	8.47	8.47	
PFTTrDA	0.14	0.17	8.29	8.28	
PFODA	0.10	0.11	10.55	10.55	

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LCSD Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID LCSD-90983
 Run File Name A210619A_017
 Analyzed 06/19/2021 23:50
 Injected By QL

Instrument ID 10LCMS03
 Column ID 118AB10133
 Ical ID 210618A03
 Level L

Injection Internal Standards

Compound	Known Conc.	LCS Conc. Found	LCS Rec. %	LCSD Conc. Found	LCSD Rec. %	RPD %	Recovery Limits	Qualifiers
13C2_PFHxA	19	21	106	20	107	1.1	50-150	
13C4_PFOA	19	19	100	20	105	5.6	50-150	
13C2_PFDA	19	23	117	23	119	2.0	50-150	
13C4_PFOS	18	22	119	21	113	5.1	50-150	

Extracted Internal Standards

Compound	Known Conc.	LCS Conc. Found	LCS Rec. %	LCSD Conc. Found	LCSD Rec. %	RPD %	Recovery Limits	Qualifiers
13C4_PFBA	19	22	112	21	111	0.6	50-150	
13C5_PFPeA	19	21	106	21	110	4.0	50-150	
13C3_PFBS	18	19	105	19	107	1.9	50-150	
13C2_4:2FTS	18	18	99	17	97	1.9	50-150	
13C5_PFHxA	19	20	105	22	113	7.1	50-150	
13C4_PFHpA	19	21	107	20	106	1.2	50-150	
13C3_PFHxS	18	19	104	21	115	9.7	50-150	
13C2_6:2FTS	18	21	112	21	118	4.9	50-150	
13C8_PFOA	19	21	106	21	111	4.3	50-150	
13C9_PFNA	19	21	105	21	110	4.7	50-150	
13C8_PFOS	18	20	105	19	102	2.6	50-150	
13C2_8:2FTS	18	20	109	21	115	5.3	50-150	
13C6_PFDA	19	20	104	21	109	3.9	50-150	
d3-MeFOSAA	19	19	97	18	92	4.8	50-150	
13C8_PFOA	19	19	99	20	105	5.5	50-150	
d5-EtFOSAA	19	18	93	21	108	14.7	50-150	
13C7_PFUdA	19	22	113	22	114	0.7	50-150	
13C2_PFDoA	19	21	108	20	106	1.3	50-150	
13C2_PFTeDA	19	20	100	20	107	6.3	50-150	
13C3_HFPO-DA	19	21	107	21	108	1.2	50-150	
13C2_PFHxDA	19	21	105	22	113	6.7	50-150	
d7-N-MeFOSE	19	19	98	20	102	4.2	10-150	
d9-N-EtFOSE	19	19	97	19	101	3.8	10-150	
d3-N-MeFOSA	19	18	93	19	98	5.1	10-150	
d5-N-EtFOSA	19	18	91	18	93	1.4	10-150	

REPORT OF LABORATORY ANALYSIS

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LCS D Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID LCS D-90983
 Run File Name A210619A_017
 Analyzed 06/19/2021 23:50
 Injected By QL

Instrument ID 10LCMS03
 Column ID 118AB10133
 Ical ID 210618A03
 Level L

Native Analytes

Compound	Known Conc.	LCS Conc. Found	LCS Rec. %	LCS D Conc. Found	LCS D Rec. %	RPD %	Recovery Limits	Qualifiers
PFBA	3.8	3.9	100	3.7	97	2.8	73-129	
PFPeA	3.8	3.8	97	3.7	98	0.9	72-129	
HFPO-DA	3.8	3.6	93	3.5	93	0.4	70-140	
PFBS	3.4	3.3	97	3.4	102	5.1	72-130	
PFHxA	3.8	3.9	101	3.7	96	5.6	72-129	
4:2 FTS	3.6	3.6	100	4.0	113	12.3	63-143	
PFPeS	3.6	3.7	100	3.3	92	8.1	71-127	
PFHpA	3.8	4.1	104	3.8	99	5.0	72-130	
DONA	3.6	3.8	102	3.4	93	9.2	70-140	
PFHxS	3.5	3.5	98	3.2	91	7.3	68-131	
PFOA	3.8	4.0	103	3.9	102	0.5	71-133	
6:2 FTS	3.6	3.8	101	3.6	98	2.9	64-140	
PFHpS	3.6	3.7	100	3.5	97	3.0	69-134	
PFNA	3.8	3.7	95	3.5	92	2.5	69-130	
PFOSAm	3.8	3.9	99	3.8	99	0.2	67-137	
PFOS	3.5	3.3	92	3.5	100	8.0	65-140	
PFDA	3.8	4.2	108	3.9	103	4.5	71-129	
8:2 FTS	3.7	3.7	98	3.6	98	0.4	67-138	
9-CI-PF3ON	3.6	3.3	91	3.5	98	6.7	70-130	
PFNS	3.7	3.5	92	3.5	96	3.7	69-127	
PFUnDA	3.8	3.6	93	3.3	86	8.4	69-133	
NMeFOSAA	3.8	3.0	77	4.0	106	31.4	65-136	
NEtFOSAA	3.8	3.8	96	3.7	98	1.5	61-135	
PFDS	3.7	3.3	87	3.4	91	4.8	53-142	
PFDOA	3.8	3.7	96	4.0	105	9.6	72-134	
11-CI-PF3OUdS	3.6	3.3	90	3.4	96	6.0	70-140	
PFT rDA	3.8	3.9	100	3.7	98	2.1	65-144	
PFODA	3.8	3.8	97	3.4	90	7.8	70-140	

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.07	5.10	
13C4 PFOA	N/A	N/A	6.06	6.03	
13C2 PFDA	N/A	N/A	6.96	6.91	
13C4 PFOS	N/A	N/A	7.28	7.34	

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LCSD Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID LCSD-90983
 Run File Name A210619A_017
 Analyzed 06/19/2021 23:50
 Injected By QL

Instrument ID 10LCMS03
 Column ID 118AB10133
 Ical ID 210618A03
 Level L

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.60	3.60	
13C5 PFPeA	N/A	N/A	4.46	4.46	
13C3 PFBS	N/A	N/A	5.25	5.25	
13C2 4:2FTS	N/A	N/A	4.85	4.89	
13C5 PFHxA	N/A	N/A	5.07	5.11	
13C4 PFHpA	N/A	N/A	5.59	5.59	
13C3 PFHxS	N/A	N/A	6.34	6.42	
13C2 6:2FTS	N/A	N/A	5.82	5.80	
13C8 PFOA	N/A	N/A	6.06	6.03	
13C9 PFNA	N/A	N/A	6.51	6.47	
13C8 PFOS	N/A	N/A	7.28	7.28	
13C2 8:2FTS	N/A	N/A	6.71	6.71	
13C6 PFDA	N/A	N/A	6.96	6.91	
d3-MeFOSAA	N/A	N/A	6.90	6.82	
13C8 PFOSA	N/A	N/A	8.84	8.84	
d5-EtFOSAA	N/A	N/A	7.12	7.12	
13C7 PFUdA	N/A	N/A	7.41	7.36	
13C2 PFDoA	N/A	N/A	7.85	7.82	
13C2 PFTeDA	N/A	N/A	8.69	8.75	
13C3 HFPO-DA	N/A	N/A	5.28	5.30	
13C2 PFHxDA	N/A	N/A	9.46	9.46	
d7-N-MeFOSE	N/A	N/A	10.11	10.11	
d9-N-EtFOSE	N/A	N/A	10.73	10.73	
d3-N-MeFOSA	N/A	N/A	10.36	10.36	
d5-N-EtFOSA	N/A	N/A	11.04	11.04	

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LCSD Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID LCSD-90983
 Run File Name A210619A_017
 Analyzed 06/19/2021 23:50
 Injected By QL

Instrument ID 10LCMS03
 Column ID 118AB10133
 Ical ID 210618A03
 Level L

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	3.61	3.61	
PFPeA	N/A	N/A	4.47	4.47	
HFPO-DA	0.43	0.40	5.29	5.31	
PFBS	0.35	0.33	5.26	5.26	
PFHxA	0.06	0.07	5.08	5.10	
4:2 FTS	0.53	0.53	4.85	4.89	
PFPeS	0.31	0.31	5.84	5.84	
PFHpA	0.27	0.27	5.59	5.59	
DONA	0.49	0.53	5.77	5.76	
PFHxS	0.26	0.26	6.35	6.35	
PFOA	0.35	0.36	6.06	6.07	
6:2 FTS	0.51	0.46	5.82	5.80	
PFHpS	0.26	0.22	6.83	6.88	
PFNA	0.20	0.22	6.52	6.46	
PFOSAm	N/A	N/A	8.84	8.84	
PFOS	0.21	0.21	7.29	7.34	
PFDA	0.09	0.08	6.97	6.91	
8:2 FTS	0.66	0.45	6.72	6.65	
9-CI-PF3ON	0.02	0.02	7.61	7.68	
PFNS	0.24	0.28	7.73	7.79	
PFUnDA	0.12	0.11	7.41	7.36	
NMeFOSAA	0.47	0.46	6.91	6.91	
NEtFOSAA	0.54	0.57	7.13	7.13	
PFDS	0.23	0.25	8.16	8.16	
PFDOA	0.13	0.13	7.85	7.82	
11-CI-PF3OUdS	0.01	0.01	8.46	8.46	
PFTTrDA	0.15	0.17	8.28	8.28	
PFODA	0.09	0.11	10.54	10.54	

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MS Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID 10565045001-MS
 Run File Name A210619A_027
 Analyzed 06/20/2021 02:24
 Injected By QL

Instrument ID 10LCMS03
 Column ID 118AB10133
 Ical ID 210618A03
 Level

Injection Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	20	21	102	50-150	
13C4_PFOA	20	20	98	50-150	
13C2_PFDA	20	19	91	50-150	
13C4_PFOS	19	19	100	50-150	

Extracted Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	20	22	109	50-150	
13C5_PFPeA	20	21	104	50-150	
13C3_PFBFS	19	19	101	50-150	
13C2_4:2FTS	19	21	112	50-150	
13C5_PFHxA	20	22	110	50-150	
13C4_PFHpA	20	22	110	50-150	
13C3_PFHxS	19	21	110	50-150	
13C2_6:2FTS	19	22	113	50-150	
13C8_PFOA	20	21	102	50-150	
13C9_PFNA	20	21	101	50-150	
13C8_PFOS	19	20	103	50-150	
13C2_8:2FTS	19	22	112	50-150	
13C6_PFDA	20	19	95	50-150	
d3-MeFOSAA	20	19	92	50-150	
13C8_PFOA	20	16	79	25-150	
d5-EtFOSAA	20	18	88	50-150	
13C7_PFUdA	20	20	97	50-150	
13C2_PFDoA	20	16	81	50-150	
13C2_PFTeDA	20	16	81	50-150	
13C3_HFPO-DA	20	20	98	50-150	
13C2_PFHxDA	20	15	75	50-150	
d7-N-MeFOSE	20	15	74	10-150	
d9-N-EtFOSE	20	14	71	10-150	
d3-N-MeFOSA	20	11	53	10-150	
d5-N-EtFOSA	20	11	53	10-150	

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
 1700 Elm Street, Suite 200
 Minneapolis, MN 55414
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 www.pacelabs.com

MS Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID 10565045001-MS
 Run File Name A210619A_027
 Analyzed 06/20/2021 02:24
 Injected By QL

Instrument ID 10LCMS03
 Column ID 118AB10133
 Ical ID 210618A03
 Level

Native Analytes

Compound	Sample Conc.	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	CAS No.
PFBA	13	4.1	17	95	70-140		375-22-4
PFPeA	0.00	4.1	360	8840	70-140	RD	2706-90-3
HFPO-DA	0.00	4.1	3.8	94	70-140		13252-13-6
PFBS	11	3.6	15	105	70-140		375-73-5
PFHxA	110	4.1	110	82	70-140		307-24-4
4:2 FTS	0.00	3.8	3.3	86	70-140		757124-72-4
PFPeS	0.00	3.8	3.7	89	70-140		2706-91-4
PFHpA	6.4	4.1	9.5	79	70-140		375-85-9
DONA	0.00	3.8	3.5	93	70-140		919005-14-4
PFHxS	2.3	3.6	5.0	73	70-140		355-46-4
PFOA	11	4.1	13	49	70-140	R	335-67-1
6:2 FTS	0.00	3.8	4.2	101	70-140		27619-97-2
PFHpS	0.00	3.8	3.9	98	70-140		375-92-8
PFNA	0.00	4.1	4.2	87	70-140		375-95-1
PFOSAm	0.00	4.1	3.8	92	70-140		754-91-6
PFOS	3.2	3.7	7.1	105	70-140		1763-23-1
PFDA	0.00	4.1	4.0	88	70-140		335-76-2
8:2 FTS	0.00	3.9	3.5	90	70-140		39108-34-4
9-CI-PF3ON	0.00	3.8	3.3	88	70-140		756426-58-1
PFNS	0.00	3.9	3.2	82	70-140		68259-12-1
PFUnDA	0.00	4.1	3.4	85	70-140		2058-94-8
NMeFOSAA	0.00	4.1	3.2	79	70-140		2355-31-9
NEtFOSAA	0.00	4.1	3.9	96	70-140		2991-50-6
PFDS	0.00	3.9	3.0	78	70-140		335-77-3
PFDOA	0.00	4.1	3.9	95	70-140		307-55-1
11-CI-PF3OUdS	0.00	3.8	2.8	74	70-140		763051-92-9
PFTTrDA	0.00	4.1	3.7	91	70-140		72629-94-8
PFODA	0.00	4.1	3.9	96	70-140		16517-11-6

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.07	5.10	
13C4 PFOA	N/A	N/A	6.06	6.03	
13C2 PFDA	N/A	N/A	6.96	6.91	
13C4 PFOS	N/A	N/A	7.28	7.34	

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 Ical ID 210618A03
 Level

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.60	3.60	
13C5 PFPeA	N/A	N/A	4.47	4.47	
13C3 PFBS	N/A	N/A	5.26	5.26	
13C2 4:2FTS	N/A	N/A	4.85	4.89	
13C5 PFHxA	N/A	N/A	5.07	5.11	
13C4 PFHpA	N/A	N/A	5.59	5.59	
13C3 PFHxS	N/A	N/A	6.34	6.42	
13C2 6:2FTS	N/A	N/A	5.82	5.80	
13C8 PFOA	N/A	N/A	6.06	6.03	
13C9 PFNA	N/A	N/A	6.51	6.47	
13C8 PFOS	N/A	N/A	7.28	7.28	
13C2 8:2FTS	N/A	N/A	6.71	6.71	
13C6 PFDA	N/A	N/A	6.96	6.91	
d3-MeFOSAA	N/A	N/A	6.91	6.82	
13C8 PFOSA	N/A	N/A	8.84	8.84	
d5-EtFOSAA	N/A	N/A	7.12	7.03	
13C7 PFUdA	N/A	N/A	7.41	7.36	
13C2 PFDoA	N/A	N/A	7.85	7.82	
13C2 PFTeDA	N/A	N/A	8.69	8.75	
13C3 HFPO-DA	N/A	N/A	5.28	5.30	
13C2 PFHxDA	N/A	N/A	9.46	9.46	
d7-N-MeFOSE	N/A	N/A	10.11	10.11	
d9-N-EtFOSE	N/A	N/A	10.73	10.73	
d3-N-MeFOSA	N/A	N/A	10.37	10.37	
d5-N-EtFOSA	N/A	N/A	11.05	11.05	

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MS Analysis Summary
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 Run File Name A210619A_027
 Analyzed 06/20/2021 02:24
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Instrument ID 10LCMS03
 Column ID 118AB10133
 Ical ID 210618A03
 Level

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	3.61	3.61	
PFPeA	N/A	N/A	4.45	4.47	RD
HFPO-DA	0.43	0.45	5.30	5.31	
PFBS	0.32	0.33	5.26	5.38	
PFHxA	0.06	0.06	5.08	5.10	
4:2 FTS	0.63	0.55	4.85	4.89	
PFPeS	0.30	0.30	5.84	5.84	
PFHpA	0.28	0.30	5.59	5.59	
DONA	0.48	0.52	5.77	5.76	
PFHxS	0.25	0.27	6.35	6.35	
PFOA	0.38	0.37	6.06	6.07	R
6:2 FTS	0.46	0.43	5.83	5.80	
PFHpS	0.23	0.25	6.83	6.83	
PFNA	0.19	0.20	6.52	6.46	
PFOSAm	N/A	N/A	8.85	8.85	
PFOS	0.19	0.23	7.27	7.34	
PFDA	0.08	0.08	6.97	6.91	
8:2 FTS	0.64	0.66	6.71	6.65	
9-CI-PF3ON	0.02	0.02	7.61	7.61	
PFNS	0.26	0.24	7.73	7.73	
PFUnDA	0.09	0.11	7.42	7.36	
NMeFOSAA	0.62	0.42	6.91	6.83	
NEtFOSAA	0.67	0.77	7.13	7.04	
PFDS	0.24	0.23	8.16	8.16	
PFDOA	0.13	0.13	7.85	7.82	
11-CI-PF3OUdS	0.01	0.01	8.46	8.46	
PFTTrDA	0.15	0.14	8.28	8.28	
PFODA	0.08	0.09	10.54	10.54	

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY RECORD

Maryland Spectral Services, Inc.
 1500 Caton Center Drive, Suite G
 Baltimore, MD 21227
 410-247-7600 • Fax 410-247-7602
 reporting@mdspectral.com

Matrix Codes: NW (non-potable water), DW (drinking water)

Company Name:	Project Manager:		Analysis Requested				MSS Lab ID
	Town of Chesapeake Beach		No. of Containers				
Project Name:	Date	Time	DW	Water	Soil	Other	Field Notes
Chesapeake Beach W RTP	6-10-2021	9:05 AM		<input checked="" type="checkbox"/>		3	
Sampler(s): R. Wilkerson							MSS Lab ID 1061102-01
Field Sample ID							-02
W RTP Effluent							
Field Blank							

Relinquished by: (Signature)
Jon Castro
(Printed)

Relinquished by: (Signature)
Jon Castro
(Printed)

Date/Time
6/10/21

Date/Time
6/10/21

Received by: (Signature)
Laura Lucas
(Printed)

Received by Lab: (Signature)
Laura Lucas
(Printed)

Lab Use:
 Temp: 11.3 °C
 Received on Ice
 Received same day

Turn Around Time:
 Normal (7 day)
 5 day
 4 day
 3 day
 Rush (2 day)
 Next Day
 Other: _____
 Specific Due Date: _____

Sample Disposal:
 Return to Client
 Disposal by lab
 Archive for _____ days

Special Instructions/QC Requirements & Comments:

SUBCONTRACT ORDER
Maryland Spectral Services
1061102

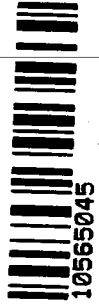
SENDING LABORATORY:

Maryland Spectral Services
1500 Caton Center Dr. Suite G
Halethorpe, MD 21227
Phone: 410.247.7600
Project Manager: Cory Koons
Reports Email: Reporting@mdspectral.com

RECEIVING LABORATORY:

Pace Labs-Mn
1700 Elm Street SE
Minneapolis, MN 55414
Phone : (612) 607-1700
Fax:

NO# : 10565045



Due 4:00 PM 06/22/21

Laboratory ID Comments

Sample ID: 1061102-01 WRTP Effluent
537 . 1 (PFAS-PFOA)

Water Sampled: 06/10/21 09:05

001

Containers Supplied:

Plastic, 0.25L Trizma (A) Plastic, 0.25L Trizma (B)

Sample ID: 1061102-02 Field Blank
537 . 1 (PFAS-PFOA)

Water Sampled: 06/10/21 09:05

002

Containers Supplied:

Plastic, 0.25L Trizma (A)

13:56

6-11-21

Jace 6-11-21

13:56

Released By

Date

Received By

Date

Jace 6-11-21 17:30

6-11-21 17:30

Connor Albrecht Pace 6/12/21 09:30

6-11-21 09:30