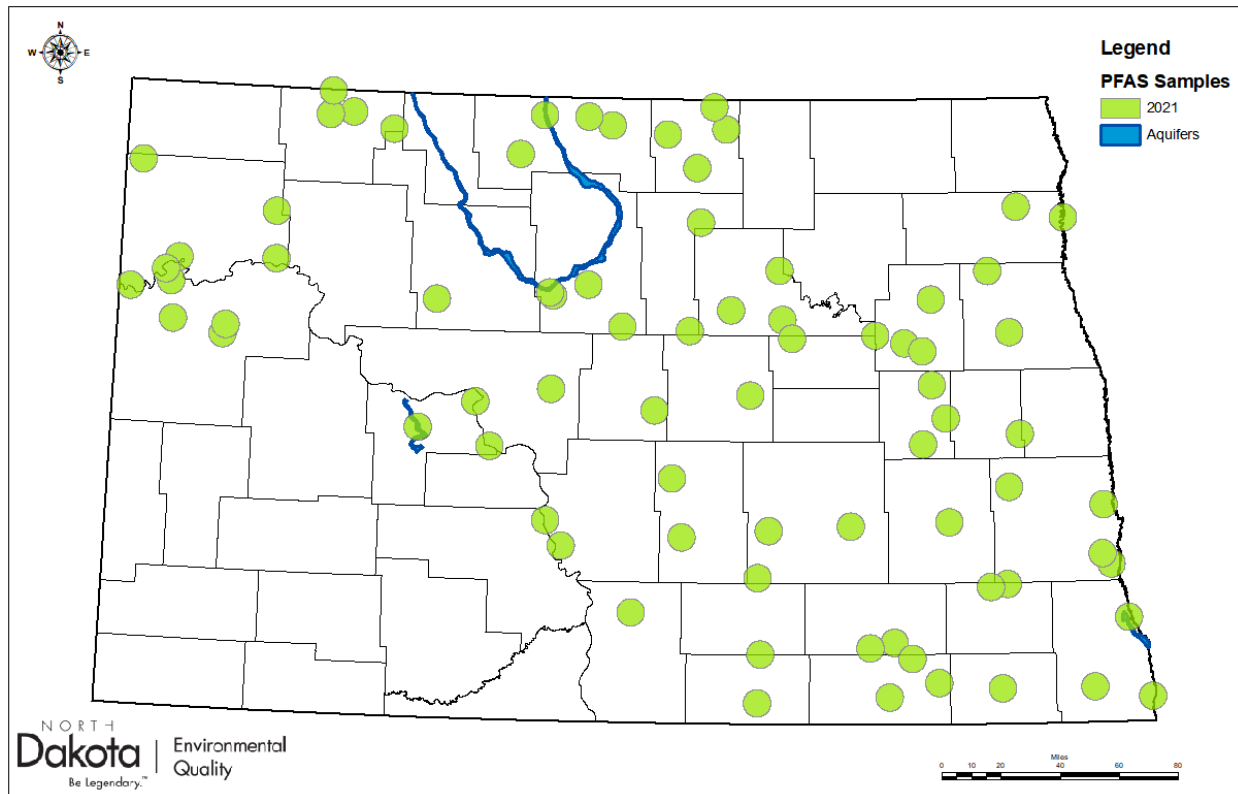


## North Dakota Department of Environmental Quality

### North Dakota Statewide 2021 Per- and Polyfluoroalkyl Substances (PFAS) Presence/Absence Survey



North Dakota Department of Environmental Quality  
4201 Normandy Street  
Bismarck, ND 58503

*[This page is intentionally blank.]*

## Table of Contents

Tables .....	ii
Charts.....	ii
Appendices.....	ii
Abbreviations and Acronyms.....	iii
Executive Summary .....	1
1.0 Introduction.....	2
1.1 Background.....	3
2.0 Study .....	3
2.1 Site Selection.....	4
2.2 Sample Procedures .....	5
2.3 Sample Analysis .....	7
3.0 Quality Assurance/Quality Control.....	7
4.0 Results.....	7
4.1 Landfills and Industrials Sites .....	14
4.2 Groundwater Monitoring Wells.....	16
4.3 Drinking Water Treatment Plants .....	18
4.4 Wastewater Treatment Plants .....	20
5.0 Quality Control Samples .....	23
6.0 Work Plan Deviations.....	23
7.0 Conclusions.....	23
8.0 Discussion and Recommendations .....	23
8.1 Updated EPA Drinking Water Health Advisories .....	24
9.0 References.....	24
Appendix A.....	26
Appendix B .....	29
Appendix C .....	30

## Tables

Table 1. PFAS sample identification

Table 2. Samples by type

Table 3. Samples by site

Table 4. PFAS analytes, acronyms, and analytical method

Table 5. Landfill leachate samples with PFAS analytical detections and exceedances

Table 6. Groundwater monitoring well samples with PFAS analytical detections

Table 7. Drinking water treatment plant samples with PFAS analytical detections

Table 8. Wastewater treatment plant analytical detections and exceedances

## Charts

Chart 1. Non-potable sample detects

Chart 2. Drinking water sample detects

Chart 3. The number of landfill leachate, landfill groundwater and industrial site samples with PFAS detections

Chart 4. The number of groundwater samples with PFAS detections

Chart 5. The number of drinking water samples with PFAS detections

Chart 6. The number of wastewater treatment plant samples with PFAS detections

## Appendices

Appendix A. Laboratory Analyte List

Appendix B. Laboratory Results

Appendix C. Sample ID Key



## Abbreviations and Acronyms

Aqueous Film Forming Foam	AFFF
Health Advisory Level	HAL
Interstate Technology Regulatory Council	ITRC
Nanograms per liter	ng/l
North Dakota Department of Environmental Quality	NDDEQ
Parts Per Trillion	ppt
Per -and Polyfluoroalkyl Substances	PFAS
Quality Assurance/Quality Control	QA/QC
Reverse Osmosis	RO
Reverse Osmosis Purified Laboratory Water	RO-Purified DW
Third Unregulated Contaminated Monitoring Rule	UCMR3
U.S Environmental Protection Agency	EPA

## Executive Summary

The North Dakota Department of Environmental Quality (NDDEQ) created a workgroup in 2018 tasked with conducting baseline assessments to determine the presence/absence of Per- and Polyfluoroalkyl Substances (PFAS) in North Dakota. This survey includes drinking water treatment plants, wastewater treatment plants, biosolids, landfills and ambient groundwater samples from industrial areas.

### **DRINKING WATER TREATMENT PLANT SAMPLES**

Sixty-five primary samples were collected from sixty-five drinking water treatment plants using EPA method 537.1. Fourteen drinking water treatment plants had detections. All detections in the drinking water samples were below the EPA's PFOA + PFOS Health Advisory Level (HAL) of 70 parts per trillion (ppt) and all detects were below 3 ppt.

### **WASTEWATER TREATMENT PLANT SAMPLES**

Eight primary samples were collected from two wastewater treatment plants. The samples included influent, effluent, landfill leachate, and biosolids. All samples had detections for PFAS analytes, but only the leachate and biosolid samples exceeded the EPA's PFOA + PFOS HAL.

### **LANDFILL AND INDUSTRIAL SAMPLES**

Six primary samples were collected from three oilfield special waste landfills, one sample from industrial pre-discharge wastewater and ten groundwater samples from a firefighting training area located on an industrial site. The industrial sampling sites, landfill groundwater wells, and leachate samples had detections for PFAS with some exceeding the EPA's PFOA + PFOS HAL.

### **AMBIENT GROUNDWATER SAMPLES**

Thirteen primary groundwater water samples were collected from four aquifers across the state. PFAS were detected in ten samples. PFBA was the most common analyte, detected in seven samples. No samples exceeded the EPA's PFOA+PFOS HAL.

## **MISCELLANEOUS SAMPLES**

Four samples were collected at the NDDEQ Chemistry Laboratory. The NDDEQ Chemistry Laboratory is working towards the capability of analyzing PFAS samples. These samples were collected to determine if the ultra-purified reverse osmosis water at the NDDEQ Chemistry Laboratory is PFAS free for use in future analysis. All samples came back as non-detects for PFAS analytes.

## **NON-POTABLE FIELD AND EQUIPMENT BLANK SAMPLES**

Seven blanks (three equipment and four field samples) were collected to ensure quality control for non-potable water samples. Laboratory analytical results show no detections, indicating that there were no field or equipment cross-contamination issues during the collection and transport processes.

## **1.0 Introduction**

Per- and Polyfluoroalkyl Substances (PFAS) are a group of chemicals that have been manufactured and used in a variety of industries in the United States since the 1940s. These chemicals have shown to be persistent in the environment and the human body. The North Dakota Department of Environmental Quality (NDDEQ) created a workgroup in 2018 tasked with conducting a baseline survey to determine the presence/absence of Per- and Polyfluoroalkyl Substances (PFAS) in North Dakota. The first survey was completed in 2018 and focused on landfills, drinking water treatment plants, wastewater treatment plants, and fire training areas. The North Dakota Statewide 2018 Per- and Polyfluoroalkyl Substances (PFAS) Presence/Absence Survey is publicly available on the NDDEQ website at [https://deq.nd.gov/Publications/MF/PFAS\\_Report.pdf](https://deq.nd.gov/Publications/MF/PFAS_Report.pdf). A second survey was completed in 2020 and focused solely on public water systems in North Dakota. North Dakota Statewide 2020 Per- and Polyfluoroalkyl Substances (PFAS) Presence/Absence Survey is publicly available on the NDDEQ website at [https://deq.nd.gov/Publications/MF/PFAS\\_Report\\_2020.pdf?v=1](https://deq.nd.gov/Publications/MF/PFAS_Report_2020.pdf?v=1). This report describes the efforts of a third survey regarding PFAS presence/absence in North Dakota. This survey includes drinking water treatment plants, wastewater treatment plants, biosolids, landfills and ambient groundwater samples from industrial areas.

## 1.1 Background

PFAS are a large, complex group of manufactured fluorinated organic compounds that were discovered in 1938 and have been mass produced since 1947 (Prevedouros et al, 2006; Griffith, 2017). More than 6,000 PFAS compounds are known to exist, although not all are in current use or production. PFAS are made when the hydrogen ions on a carbon chain are either completely or partially replaced with fluorine ions, resulting in a carbon-fluorine bond that makes these compounds resistant to most degradation processes including microorganisms, direct light, atmospheric photo-oxidation, and hydrolysis (Haley Aldrich, 2018).

PFAS compounds have become essential in a variety of industries due to their useful and unique properties. They are chemically stable, reduce surface tension to a much lower state than other surfactants, repel water and oil, possess friction-reducing properties, and function in environments where other products would degrade (3M, 1999). These properties have given rise to a variety of industrial and commercial products that are resistant to oil, grease, water, soil, and stains. The PFAS compounds are used in effective firefighting foams, metal plating and coating formulations, polyurethane production, inks, varnishes, and lubricants (3M, 1999; Prevedouros et al, 2006). Additionally, they are considered vital in the aviation, mining and gas, photographic imaging, semiconductor, automotive, construction, and electronics industries (ITRC, 2017).

## 2.0 Study

The NDDEQ assembled a workgroup with the purpose of determining whether or not PFAS are present in North Dakota, particularly in the groundwater. Research conducted by federal, state, and private entities has shown that PFAS contamination is likely found in landfills, drinking water treatment plants, wastewater treatment plants, industrial areas, military bases, and firefighting training areas.

Commercial and industrial products that contain PFAS or are the result of PFAS production often end up in landfills. As the products break down, the compounds will slowly work their way through the soil until they are dissolved in water and transported to a leachate pond or into the underlying groundwater.

Wastewater treatment plants tend to contain elevated levels of PFAS compounds that are the result of discharges from landfills, firefighting activities, and manufacturing/

industrial facilities. Current treatment methods are inefficient in removing PFAS and, in some cases, can result in changes to the types and concentrations found in the effluent (Schultz et al., 2006; Hamid and Li, 2016). Nearly half of the sludge produced by wastewater treatment plants is applied as a biosolid to agricultural land. If the effluent contains PFAS, the biosolid will potentially contain PFAS as well. Research has shown that land treated with PFAS-impacted biosolids for an extended time period can result in elevated concentrations in the adjacent groundwater and surface water (ITRC, 2017).

Aqueous film forming foam (AFFF) is a PFAS-based foam developed in the 1960s and used by both military and civilian firefighting departments to extinguish fires at military bases, airports, refineries, and firefighting training facilities. While the use of AFFF is transitioning out with alternative foams, many entities still have it on hand for emergency use and training purposes. However, best management practices for their use and evaluations for the use of alternative PFAS-free foams have become practice since 2001 (Antea Group, 2018; ITRC, 2017).

Between 2013-2015, thirteen public water systems in North Dakota were sampled for six of the most commonly detected PFAS compounds: PFOS, PFOA, perfluorobutanesulfonic acid (PFBS), perfluorohexanesulfonic acid (PFHxS), perfluoroheptanoic acid (PFHpA), and perfluorononanoic acid (PFNA) under the EPA's Third Unregulated Contaminant Monitoring Rule (UCMR3). Results from the UCMR3 samples indicated non-detects. The NDDEQ determined further sampling is necessary since methods for detection and quantitation for these compounds continues to improve.

## 2.1 Site Selection

Landfills were selected by the Division of Waste Management based on the type of landfill, waste accepted, and age. Leachate samples were collected from leachate ponds and groundwater samples were collected from wells located down gradient of the landfills. The industrial site was selected because of its processes and for the potential of those processes to utilize PFAS chemicals. The industrial facility firefighting area was selected to outline whether PFAS chemicals had impacted groundwater.

Wastewater treatment plants were selected by the Division of Water Quality. The sampled facilities were those that serve a large population (greater than 20,000), accept landfill leachate as part of the influent, and process biosolids.

Drinking water sites not evaluated in the first two surveys were selected for this PFAS sampling.

Ambient groundwater sampling sites were selected based on availability of monitoring wells located near industrial processes or areas with potential PFAS generating activities.

Table 1 lists the sample's identification, location, and type of sample collected.

## 2.2 Sample Procedures

The prevalence of PFAS chemicals in most everyday items coupled with the low method detection limits used by laboratories makes sampling protocols for PFAS necessarily stringent.

PFAS-free disposable equipment is used for sampling to mitigate cross-contamination between sampling sites. Sample bottles and coolers are provided by the contracted laboratories. Samplers wore field clothes that do not contain Tyvek, Gore-Tex, or similar material. Nitrile gloves are worn when sampling, and sampling procedures outlined in the *North Dakota PFAS Sampling Project 2021 Field Sampling Plan (NDDEQ, 2021)* are followed.

Monitoring wells were sampled using disposable bailers and 100% cotton twine. The well volume method was used, and water quality meters were used to collect pH, specific conductivity, and temperature measurements in between purges.

Samples from landfills were collected from leachate pond monitoring wells using a disposable bailer and 100% cotton twine.

Influent and effluent samples from wastewater treatment plants were collected at permitted compliance points. The associated leachate samples were collected at designated points at the respective landfills.

WWTP1 biosolids were liquified, and samples were collected from the designated compliance point. WWTP2 biosolids were collected using a hand spade.

Drinking water samples were collected at water treatment plant collection points for treated water only, source water was not included in this survey.

Sampling and standard operating procedures can be found in the *North Dakota PFAS Sampling Project 2021 Field Sampling Plan (NDDEQ, 2021)*.

Table 1. PFAS sample identification

Sample ID	Sample Type	Sample ID	Sample Type
Aquifer 1A	Aquifer Monitoring Well	DW 19	Treated, Drinking Water
Aquifer 1B	Aquifer Monitoring Well	DW 20	Treated, Drinking Water
Aquifer 2A	Aquifer Monitoring Well	DW 21	Treated, Drinking Water
Aquifer 2B	Aquifer Monitoring Well	DW 22	Treated, Drinking Water
Aquifer 2C	Aquifer Monitoring Well	DW 23	Treated, Drinking Water
Aquifer 2D	Aquifer Monitoring Well	DW 24	Treated, Drinking Water
Aquifer 2E	Aquifer Monitoring Well	DW 25	Treated, Drinking Water
Aquifer 3A	Aquifer Monitoring Well	DW 26	Treated, Drinking Water
Aquifer 3B	Aquifer Monitoring Well	DW 27	Treated, Drinking Water
Aquifer 4A	Aquifer Monitoring Well	DW 28	Treated, Drinking Water
Aquifer 4B	Aquifer Monitoring Well	DW 29	Treated, Drinking Water
Aquifer 4C	Aquifer Monitoring Well	DW 30	Treated, Drinking Water
Aquifer 4D	Aquifer Monitoring Well	DW 31	Treated, Drinking Water
DEQ postfilter	DEQ Postfilter	DW 32	Treated, Drinking Water
DEQ postfilter FRB	DEQ Postfilter FRB	DW 33	Treated, Drinking Water
DEQ prefilter tap FRB	DEQ Prefilter FRB	DW 34	Treated, Drinking Water
DEQ prefilter tap	DEQ Prefilter Tap	DW 35	Treated, Drinking Water
Industrial 1A	Industrial Monitoring Well	DW 36	Treated, Drinking Water
Industrial 1B	Industrial Monitoring Well	DW 37	Treated, Drinking Water
Industrial 1C	Industrial Monitoring Well	DW 38	Treated, Drinking Water
Industrial 1D	Industrial Monitoring Well	DW 39	Treated, Drinking Water
Industrial 1E	Industrial Monitoring Well	DW 40	Treated, Drinking Water
Industrial 1F	Industrial Monitoring Well	DW 41	Treated, Drinking Water
Industrial 1G	Industrial Monitoring Well	DW 42	Treated, Drinking Water
Industrial 1 AB	Industrial Monitoring Well	DW 43	Treated, Drinking Water
Industrial 1H	Industrial Monitoring Well	DW 44	Treated, Drinking Water
Industrial 1I	Industrial Monitoring Well	DW 45	Treated, Drinking Water
Industrial 2A	Treated, Industrial Water	DW 46	Treated, Drinking Water
Landfill 1A	Landfill Monitoring Well	DW 47	Treated, Drinking Water
Landfill 1B	Landfill Monitoring Well	DW 48	Treated, Drinking Water
Landfill 2A	Landfill Leachate	DW 49	Treated, Drinking Water
Landfill 2B	Landfill Monitoring Well	DW 50	Treated, Drinking Water
Landfill 2C	Landfill Monitoring Well	DW 51	Treated, Drinking Water
Landfill 3A	Landfill Leachate	DW 52	Treated, Drinking Water
Landfill 3B	Landfill Monitoring Well	DW 53	Treated, Drinking Water
DW 1	Treated, Drinking Water	DW 54	Treated, Drinking Water
DW 2	Treated, Drinking Water	DW 55	Treated, Drinking Water
DW 3	Treated, Drinking Water	DW 56	Treated, Drinking Water
DW 4	Treated, Drinking Water	DW 57	Treated, Drinking Water
DW 5	Treated, Drinking Water	DW 58	Treated, Drinking Water
DW 6	Treated, Drinking Water	DW 59	Treated, Drinking Water
DW 7	Treated, Drinking Water	DW 60	Treated, Drinking Water
DW 8	Treated, Drinking Water	DW 61	Treated, Drinking Water
DW 9	Treated, Drinking Water	DW 62	Treated, Drinking Water
DW 10	Treated, Drinking Water	DW 63	Treated, Drinking Water
DW 11	Treated, Drinking Water	WWTP 1A	Wastewater Treatment Plant Influent
DW 12	Treated, Drinking Water	WWTP 1B	Wastewater Treatment Plant Biosolids
DW 13	Treated, Drinking Water	WWTP 1C	Wastewater Treatment Plant Effluent
DW 14	Treated, Drinking Water	WWTP 1D	Wastewater Treatment Plant Leachate
DW 15	Treated, Drinking Water	WWTP 2A	Wastewater Treatment Plant Influent
DW 16	Treated, Drinking Water	WWTP 2B	Wastewater Treatment Plant Effluent
DW 17	Treated, Drinking Water	WWTP 2C	Wastewater Treatment Plant Biosolids
DW 18	Treated, Drinking Water	WWTP 2D	Wastewater Treatment Plant Leachate

## 2.3 Sample Analysis

SGS North America laboratory performed PFAS analysis on drinking water samples using method 537.1, a drinking water specific method that analyzes eighteen analytes. Non-potable water samples, including biosolids, were analyzed by Pace Analytical using method PFAS by ID 36. This method analyzes thirty-six PFAS analytes. PFAS samples are analyzed in ppt using liquid chromatography with tandem mass spectrometry. Table 4 shows the PFAS analyte list for each method used.

## 3.0 Quality Assurance/Quality Control

Quality assurance/quality control (QA/QC) procedures were established to ensure that project objectives were met for those who would use the data. The main purpose of a QA/QC plan is to maintain a high level of quality for field activities to ensure that the collected data is representative of current conditions. The QA/QC plan details procedures for field equipment calibration, data collection, record retention, sample collection, handling, custody, and the collection of duplicate and blank samples. These procedures were implemented to minimize the chance of cross-contamination and/or background contamination, and to ensure sample validity by documenting sample custody from the time of collection until arrival at the laboratory. Detailed procedures can be found in the *Quality Assurance Project Plan for the North Dakota PFAS Sampling Project 2021* (NDDEQ, 2021).

## 4.0 Results

One hundred and twenty-one samples, including primary, duplicate, and blank samples, were collected, and analyzed from sample sites including: drinking water treatment plants, landfills, wastewater treatment systems, industrial sites, groundwater aquifers and RO purified lab water samples. Table 2 lists the total number of primary, duplicate, and blank samples collected. Duplicate, field, and equipment blanks were collected for non-potable samples only. Table 3 breaks down the total number of samples (including primary, duplicate, and blank samples) collected at each type of sample site.

Non-potable samples ranged from ambient groundwater to biosolids at treatment plants. Chart 1 is a visual representation of the non-potable samples showing PFAS analytes and the sites where they were detected. Chart 2 is a visual representation of the drinking water samples showing PFAS analytes and the sites where they were detected.



Table 2. Samples by type

Sample Type	# of Samples
Primary	109
Duplicate	5
Field Blank	4
Equipment Blank	3

Table 3. Samples by site

Sample Site	# of Samples
Drinking Water Treatment Systems	65
Wastewater Treatment Systems	10
Landfills	9
Industrial	14
Groundwater from Aquifers	19
RO Purification Samples	4

Table 4. PFAS Analytes, Acronyms and Analytical Method

		Analytical Method	
Name	Acronym	537.1	PFAS by ID 36
10:2 fluorotelomersulfonate	10:2 FTS		x
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	11Cl-PF3OUdS	x	x
4:2 fluorotelomersulfonate	4:2 FTS		x
6:2 fluorotelomersulfonate	6:2 FTS		x
8:2 fluorotelomersulfonate	8:2 FTS		x
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid	9Cl-PF3ONS	x	x
N-Ethyl perfluorooctane sulfonamide	EtFOSAm		x
N-Ethyl perfluorooctane sulfonamide ethanol	ETFOSE		x
Hexafluoropropylene oxide-dimer acid	HFPO-DA	x	x
N-Methyl perfluorooctane sulfonamide	MeFOSA		x
N-Methyl perfluorooctane sulfonamide ethanol	MeFOSE		x
		Analytical Method	
Name	Acronym	537.1	PFAS by ID 36
4,8-dioxa-3H-perfluorononanoic acid	NaDONA or DONA	x	x

N-ethyl perfluorooctanesulfonamidoaceticacid	NEtFOSAA	x	x
N-methyl perfluorooctanesulfonamidoaceticacid	NMeFOSAA	x	x
Perfluoro-octanesulfonate	PFOS	x	x
Perfluorobutanesulfonate	PFBS	x	x
Perfluorobutanoic acid	PFBA		x
Perfluorodecanesulfonate	PFDS		x
Perfluorodecanoic acid	PFDA	x	x
Perfluorododecanesulfonate	PFDoS		x
Perfluorododecanoic acid	PFDoA	x	x
Perfluoroheptanesulfonate	PFHpS		x
Perfluoroheptanoic acid	PFHpA	x	x
Perfluorohexadecanoic acid	PFHxDA		x
Perfluorohexanesulfonate	PFHxS	x	x
Perfluorohexanoic acid	PFHxA	x	x
Perfluorononanesulfonate	PFNS		x
Perfluorononanoic acid	PFNA	x	x
Perfluorooctadecanoic acid	PFODA		x
Perfluorooctanesulfonamide	PFOSA (FOSA)		x
Perfluorooctanoic acid	PFOA	x	x
Perfluoropentanesulfonate	PFPeA		x
Perfluoropentanoic acid	PFPeS		x
Perfluorotetradecanoic acid	PFTreA or PFTDA	x	x
Perfluorotridecanoic acid	PFTTrDA or PFTriA	x	x
Perfluoroundecanoic acid	PFUnA or PfuNA	x	x

Chart 1. Non-potable sample detects

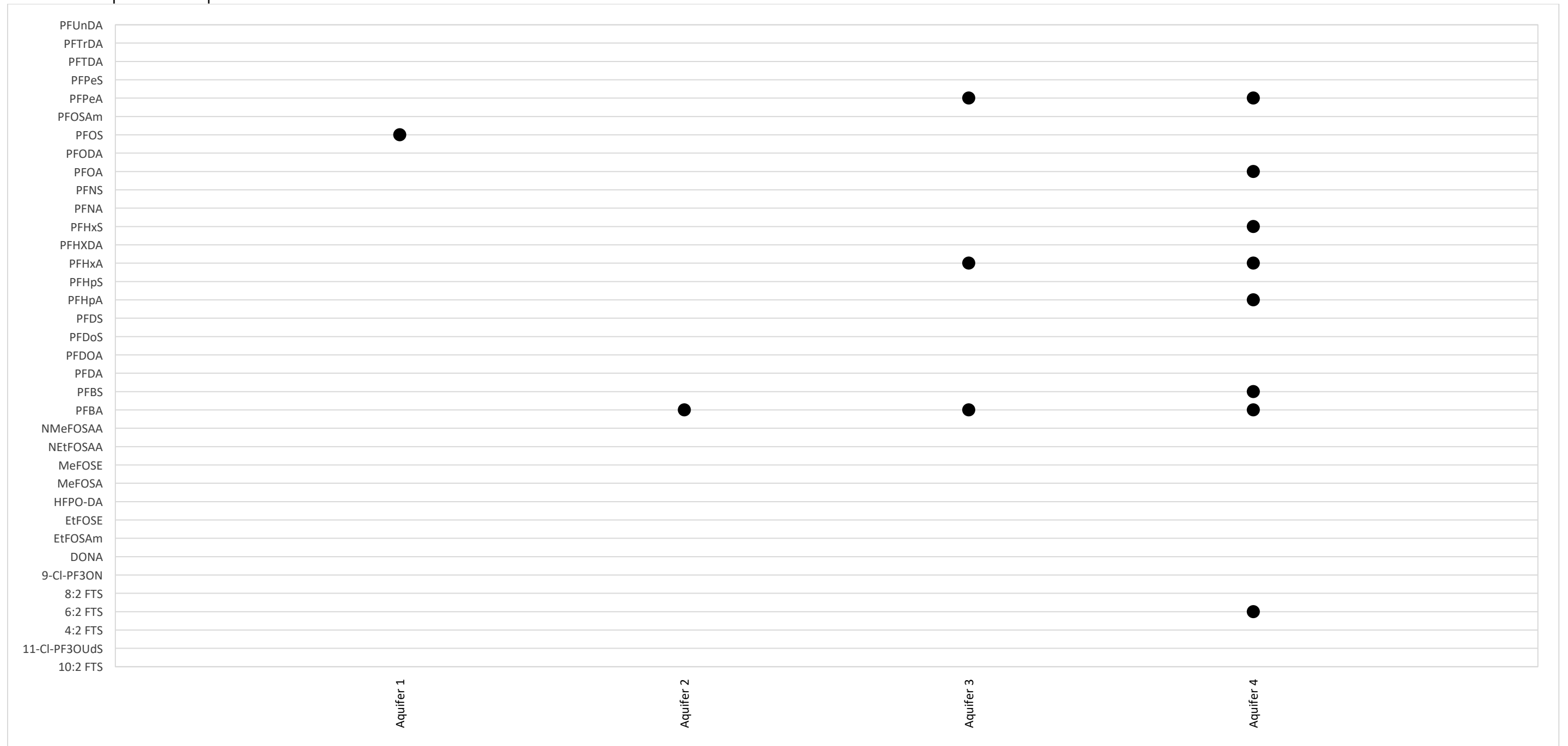


Chart 1. (cont'd). Non-potable sample detects

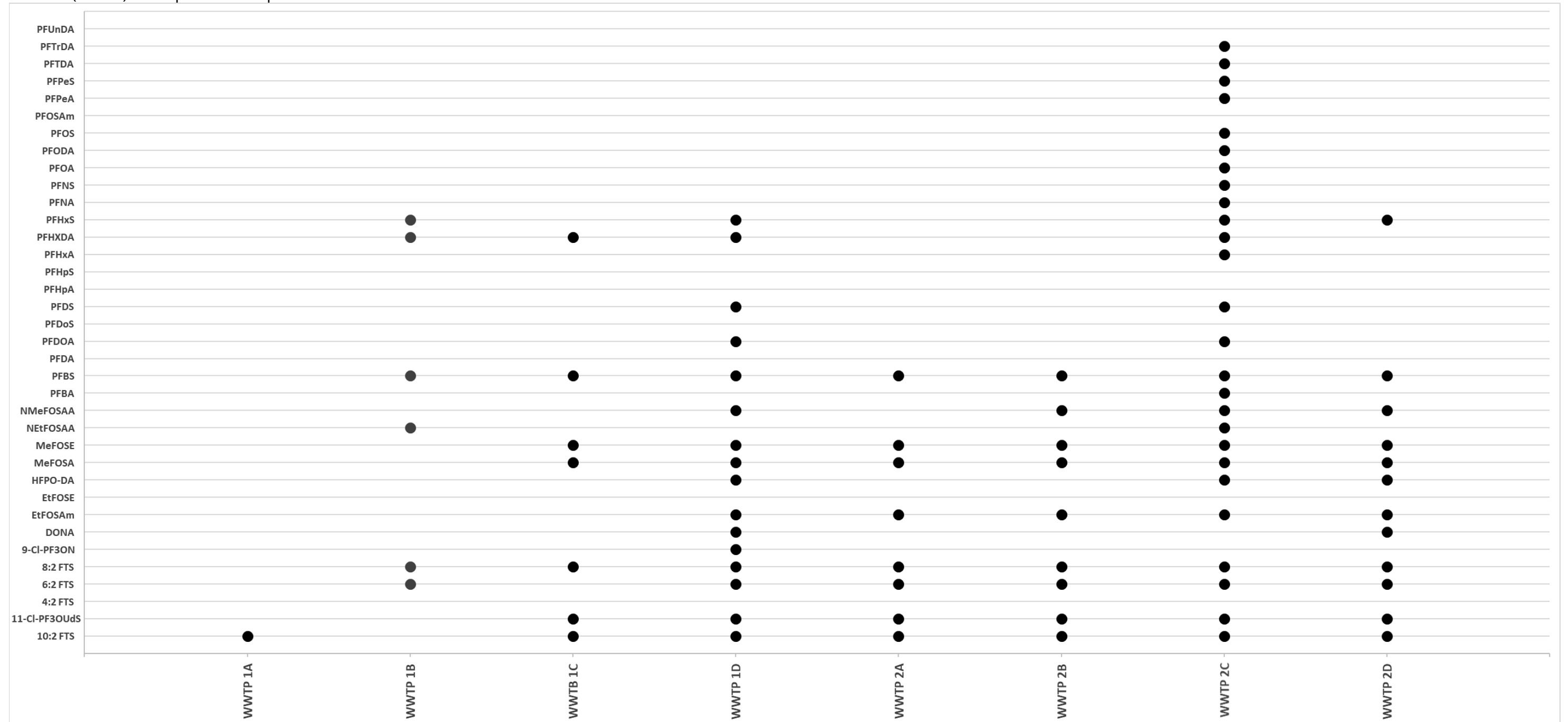


Chart 1. (cont'd). Non-potable sample detects

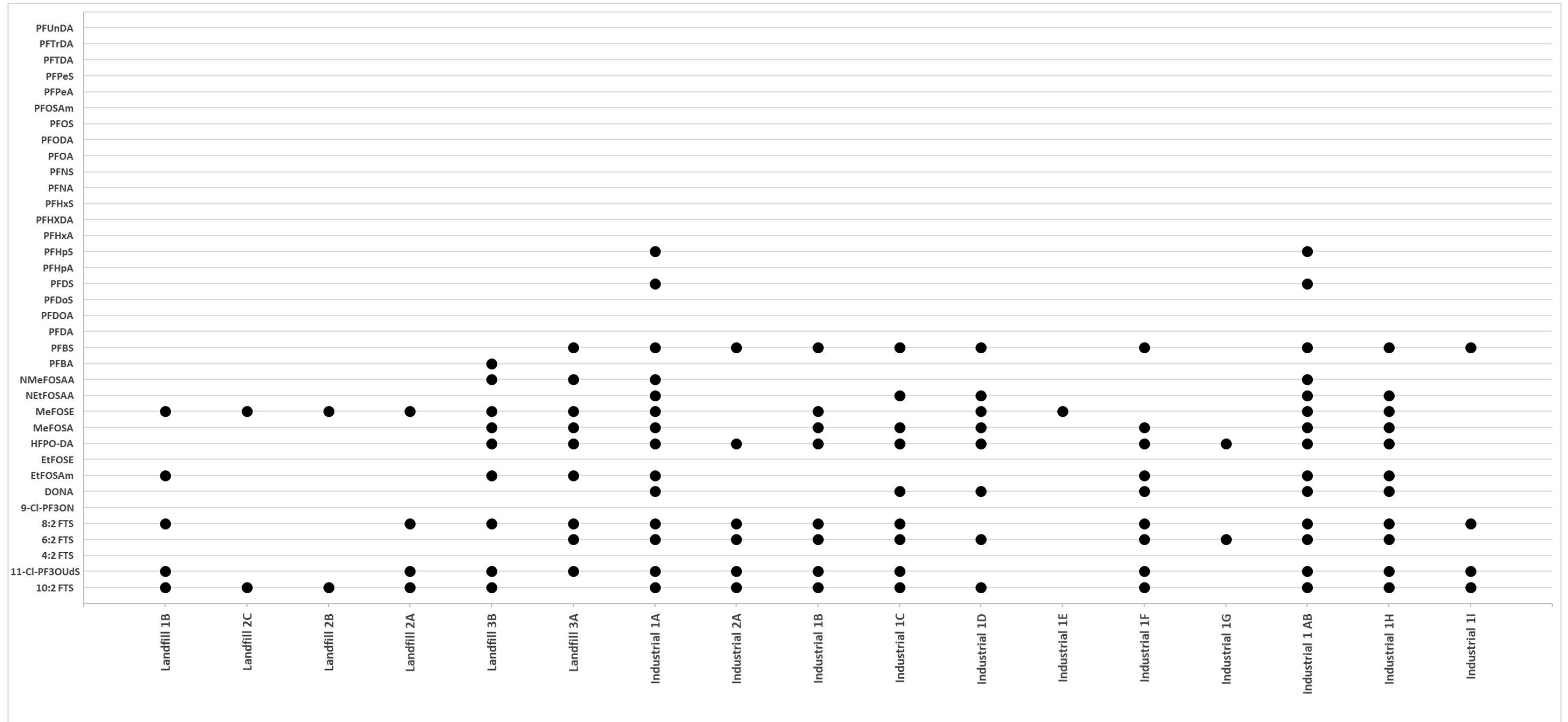
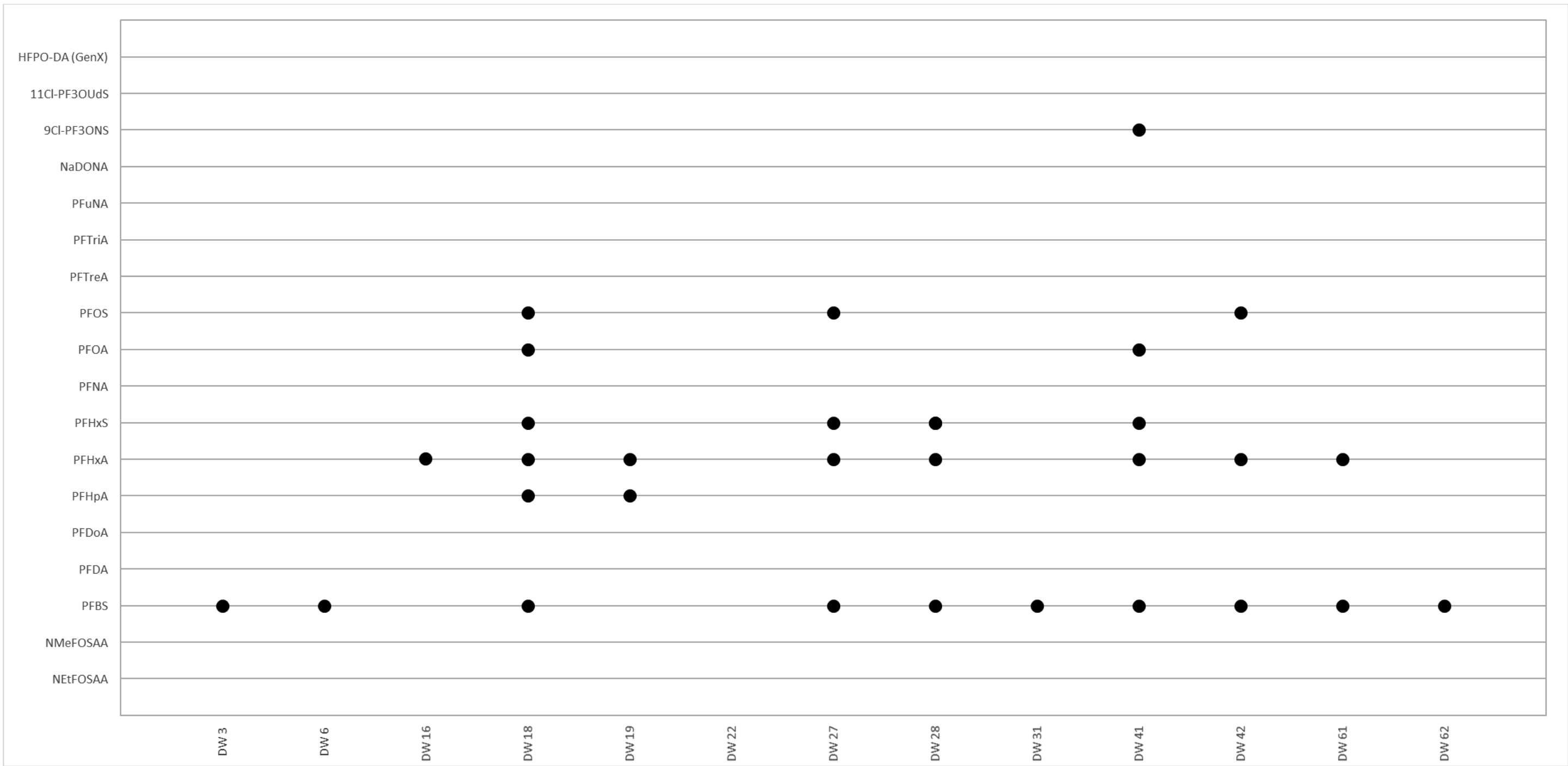


Chart 2. Drinking water sample detects



## 4.1 Landfills and Industrials Sites

Six primary leachate samples were collected from three oilfield special waste landfills located in the northwestern part of the state. The Oilfield Special Waste landfills selected were constructed in the 1980's when modern landfill liner construction had not yet been implemented. The landfills were selected to determine if PFAS were a constituent of the oil field waste accepted by these facilities. All but one of the samples analyzed contained at least two PFAS analytes. The most commonly detected analytes were: PFBA, PFPeA, PFBS, PFHxA, PFHpA, 6:2 FTS, and PFNA. Sample detects did not exceed the EPA's PFOA + PFOS HAL.

One industrial wastewater and ten industrial groundwater samples were collected. The industrial wastewater sample did not exceed the EPA's PFOA + PFOS HAL. The industrial groundwater samples had EPA's PFOA + PFOS HAL exceedances. An initial sample collection downgradient of the industrial firefighting training area indicated high PFAs detects. An additional sampling event of nine wells within the facility property was completed. PFAS analytes were detected in all nine samples. Chart 3 site samples with detected PFAS analytes. Analytical detections and exceedances are in Table 5. Complete laboratory results are found in Appendix B.

Chart 3. The number of landfill leachate, landfill groundwater and industrial site samples with PFAS detections

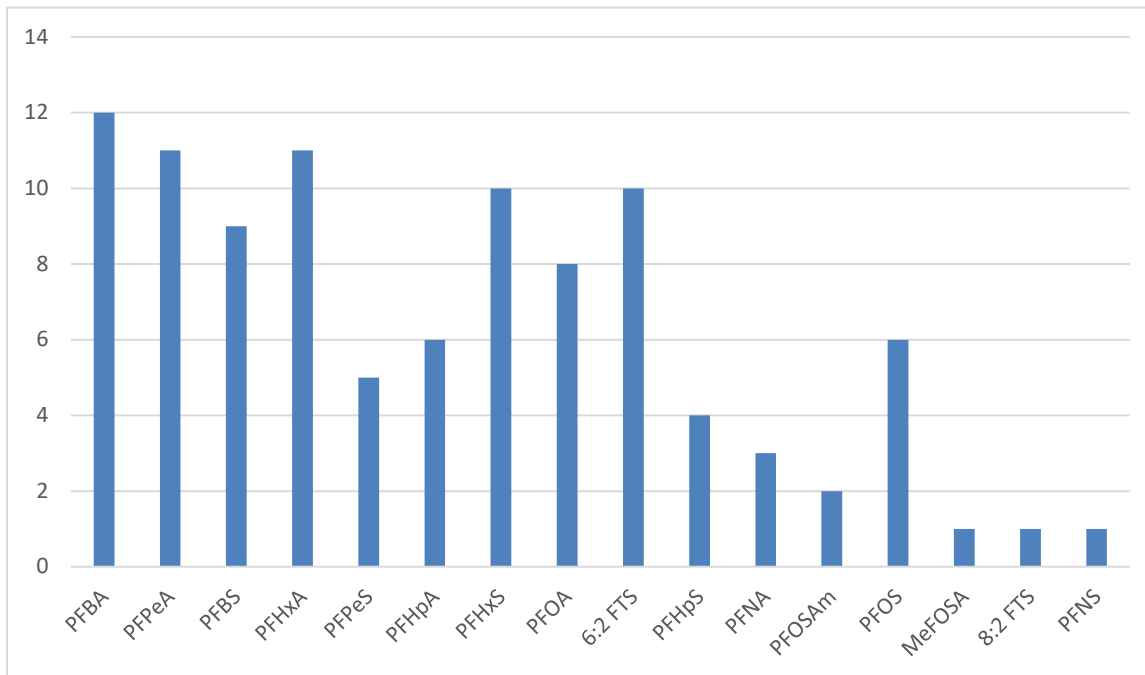


Table 5. Landfill/Industrial samples with PFAS analytical detections and exceedances

Site Identification			Landfill 1A	Landfill 1B	Landfill 2A	Landfill 2B	Landfill 3A	Landfill 3B	Industrial 1A	Industrial 1AB	Industrial 1B	Industrial 1C	Industrial 1D	Industrial 1E	Industrial 1F	Industrial 1G	Industrial 1H	Industrial 1I	Industrial 2A
Analyte	Health Advisory Levels	Unit	Results	Results	Results	Results	Results	Results	Results	Results	Results	Results	Results	Results	Results	Results	Results	Results	Results
PFBA	Not Established	ppt	20	ND	54	4	ND	22	2200 D	1800 D	7	15	12	ND	6	ND	510 D	6	2
PFPeA	Not Established	ppt	10	ND	30	ND	110	61	3800 D	3400 D	5	14	ND	ND	8	ND	830 D	5	2
HFPO-DA	Not Established	ppt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFBS	Not Established	ppt	ND	ND	ND	ND	6	ND	4100 D	4000 D	7	39	10	ND	12	2	1600 D	ND	2
PFHxA	Not Established	ppt	9	ND	40	ND	120	42	11000 D	9400 D	9	15	ND	ND	9	ND	2100 D	3	4
4:2 FTS	Not Established	ppt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFPeS	Not Established	ppt	ND	ND	ND	ND	ND	ND	5300 D	3200 D	ND	28	8	ND	6	ND	810 D	ND	ND
PFHpA	Not Established	ppt	2	ND	ND	ND	19	11	1600 D	1100 D	ND	ND	ND	ND	4	ND	110	ND	ND
DONA	Not Established	ppt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFHxS	Not Established	ppt	ND	ND	ND	ND	15	3	32000 D	34000 D	43	81	99	ND	48	4	1300 D	ND	2
PFOA	70	ppt	ND	ND	ND	ND	8	20	2400 D	2100 D	4	7	13	ND	3	ND	56	ND	ND
PFOS		ppt	ND	ND	ND	ND	ND	ND	56000 D	44000 D	18	1600 D	250 D	ND	ND	ND	120	9	ND
Th	Not Established	ppt	4	ND	9	5	430 D	7	1200 D	520 D	6	ND	11	10	ND	ND	207	ND	ND
PFHpS	Not Established	ppt	ND	ND	ND	ND	ND	ND	1400 D	1100 D	ND	6	11	ND	ND	ND	2 I	ND	ND
PFNA	Not Established	ppt	ND	ND	ND	ND	9	3	250 D	260 D	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFOSAm	Not Established	ppt	ND	ND	ND	ND	ND	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6
MeFOSA	Not Established	ppt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	13	ND	ND	ND	ND
PFDA	Not Established	ppt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
EtFOSAm	Not Established	ppt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
8:2 FTS	Not Established	ppt	ND	ND	ND	ND	ND	ND	9	11	ND	ND	ND	ND	ND	ND	ND	ND	ND
9-CI-PF3ON	Not Established	ppt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFNS	Not Established	ppt	ND	ND	ND	ND	ND	ND	3 I	3 I	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFUnDA	Not Established	ppt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NMeFOSAA	Not Established	ppt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NEtFOSAA	Not Established	ppt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFDS	Not Established	ppt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFDOA	Not Established	ppt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MeFOSE	Not Established	ppt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
10:2 FTS	Not Established	ppt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
EtFOSE	Not Established	ppt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
11-CI-PF3OUdS	Not Established	ppt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFTDA	Not Established	ppt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFDoS	Not Established	ppt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFTDA	Not Established	ppt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFHXDA	Not Established	ppt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFODA	Not Established	ppt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:  
 ND - Non-detect  
 D - Dilution  
 I - Interference Present  
 - HAL Exceedence



## 4.2 Groundwater Monitoring Wells

Thirteen primary groundwater samples were collected from monitoring wells across four aquifers with potential PFAS related activities nearby.

PFAS analytes were detected in nine of the samples and in all four aquifers sampled. The most commonly detected analyte was PFBA. None of the detections were above the EPA's PFOA + PFOS HAL

Chart 4 presents the number of monitoring wells with detected analytes. Analytical detections are in Table 6. Complete analytical laboratory results can be found in Appendix B.

Chart 4. The number of groundwater samples with PFAS detections

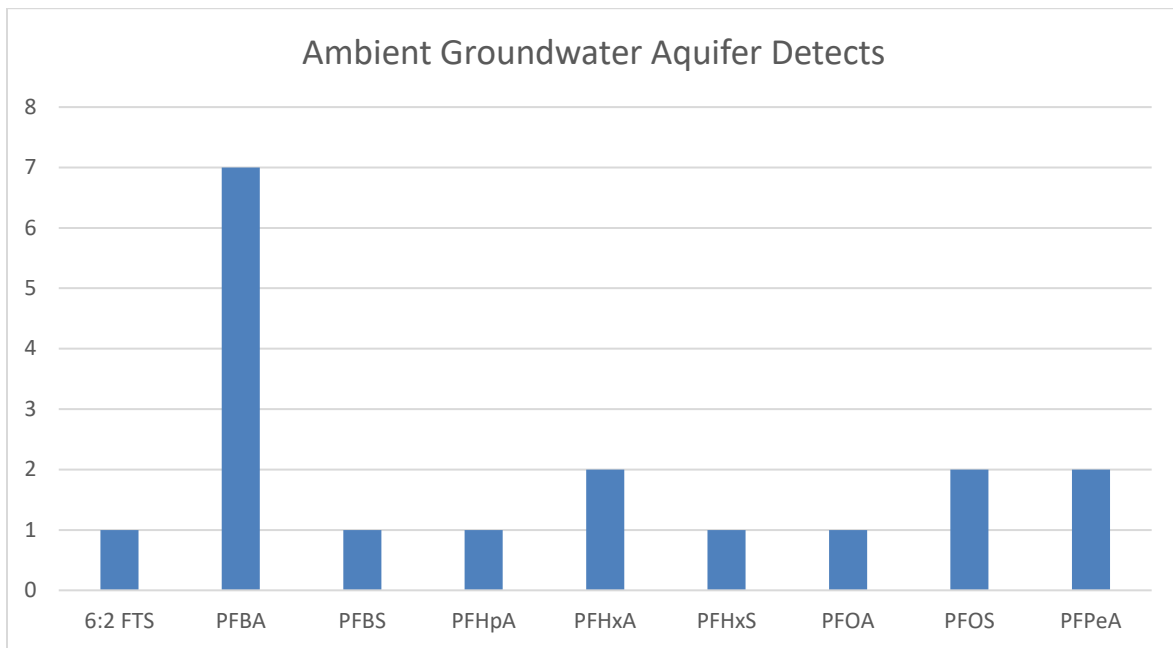


Table 6. Groundwater monitoring well samples with PFAS analytical detections

Site Identification			Aquifer 1A	Aquifer 1B	Aquifer 2A	Aquifer 2C	Aquifer 2D	Aquifer 2E	Aquifer 3A	Aquifer 3B	Aquifer 4B	Aquifer 4D
Analyte	Health Advisory Limit	Unit	Detect	Detect	Detect	Detect	Detect	Detect	Detect	Detect	Detect	Detect
PFOS	70	ppt	<b>5.9</b>	<b>5.7</b>	ND	ND	ND	ND	ND	ND	ND	ND
PFOA		ppt	ND	ND	ND	ND	ND	ND	ND	ND	<b>1.9</b>	ND
PFBA	Not Established	ppt	ND	ND	<b>3.7</b>	<b>2.3</b>	<b>10</b>	<b>16</b>	<b>10</b>	<b>12</b>	<b>23</b>	ND
PFPeA	Not Established	ppt	ND	ND	ND	ND	ND	ND	ND	<b>2.9</b>	<b>44</b>	ND
PFBS	Not Established	ppt	ND	ND	ND	ND	ND	ND	ND	ND	<b>3.1</b>	ND
PFHxA	Not Established	ppt	ND	ND	ND	ND	ND	ND	ND	ND	<b>26</b>	ND
PFHpA	Not Established	ppt	ND	ND	ND	ND	ND	ND	ND	ND	<b>2.2</b>	ND
PFHxS	Not Established	ppt	ND	ND	ND	ND	ND	ND	ND	ND	<b>10</b>	ND
PfHxa	Not Established	ppt	ND	ND	ND	ND	ND	ND	ND	<b>2.1</b>	ND	ND
6:2 FTS	Not Established	ppt	ND	ND	ND	ND	ND	ND	ND	ND	ND	<b>11</b>

Notes:  
 ND - Non-detect

### 4.3 Drinking Water Treatment Plants

At each drinking water treatment plant, a single sample was collected at the entry point to the Distribution system, which is the first tap after treatment has occurred. A total of sixty-five drinking water samples were collected. All samples collected in this round were from original source water systems, meaning they treat water for distribution rather than purchasing water from another system.

Of the drinking water treatment plants sampled, fourteen had detections, two of which were quantifiable; meaning that there was enough of that analyte in the sample for the instrument to accurately measure it. All detections in the drinking water samples were well below the EPA's PFOA + PFOS HAL at the time of the survey and all were below 3 ppt.

Chart 5 presents the number of samples with detected analytes. Analytical detections are in Table 7. Complete analytical laboratory results can be found in Appendix B.

Chart 5. The number of drinking water samples with PFAS detections

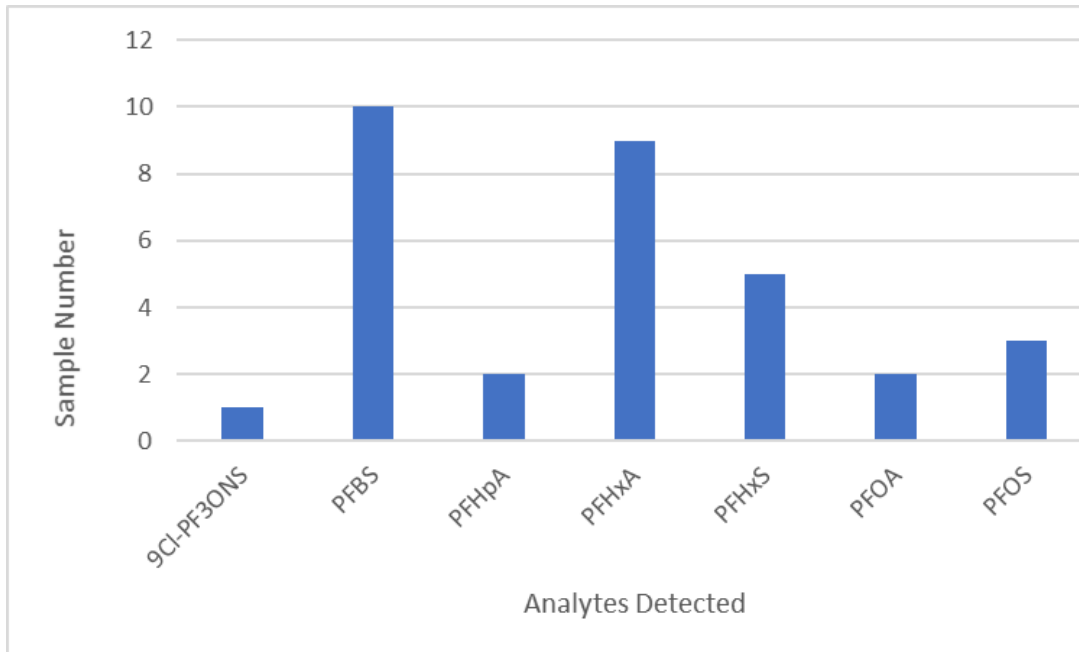


Table 7. Drinking water treatment plant samples with PFAS analytical detections

Site Identification			DW 3	DW 6	DW 16	DW 18	DW 19	DW 22	DW 27	DW 28	DW 31	DW 41	DW 42	DW 61	DW 62
Analyte	Health Advisory Limit	Unit	Detect	Detect	Detect	Detect	Detect	Detect	Detect	Detect	Detect	Detect	Detect	Detect	Detect
PFOS	70	ppt	ND	ND	ND	1.21 J	ND	1.47 J	0.805 J	ND	ND	ND	ND	ND	ND
PFOA		ppt	ND	ND	ND	1.2 J	ND	1.34 J	ND	ND	ND	ND	ND	ND	ND
PFBA	Not Established	ppt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFPeA	Not Established	ppt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFBS	Not Established	ppt	.637 J	.982 J	ND	1.52 J	ND	ND	1.51 J	0.681 J	0.801 J	1.44 J	0.499 J	0.522 J	0.501J
PFHxA	Not Established	ppt	ND	ND	.733 J	2.57 J	1.16 J	1.12 J	ND	0.697 J	ND	ND	0.777 J	0.98 J	ND
PFHpA	Not Established	ppt	ND	ND	ND	1.17	0.767 J	ND	ND	ND	ND	ND	ND	ND	ND
PFHxS	Not Established	ppt	ND	ND	ND	1.47 J	ND	0.751 J	1.17 J	0.843 J	ND	1.81 J	ND	ND	ND
PfHxa	Not Established	ppt	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.17	ND	ND	ND
9Cl- PF3ONS	Not Established	ppt	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.694 J	ND	ND	ND

Notes:

ND - Non-detect

J - an estimated concentration of a detection below the Limit of Quantitation

## 4.4 Wastewater Treatment Plants

A total of eight primary samples were collected from two wastewater treatment plants across the state. Influent, effluent, landfill leachate from landfills that discharge leachate to the treatment plant, and biosolids were sampled at each wastewater treatment plant, with at least two PFAS analytes detected in each sample. No single PFAS analyte was present in every sample, although PFBA, PFBS, PFHxA, and PFOS were present in seven of the eight samples and PFPeA, PFOA, and 6:2FTS were present in six of the eight samples. PFOS and PFOA were detected in seven of the eight collected samples, but only four of the samples, both leachate samples and both biosolid samples, exceeded the EPA's PFOA + PFOS HAL.

Chart 6 presents the number of wastewater plant samples with PFAS detections. Analytical detections and exceedances are in Table 8. Complete analytical laboratory results can be found in Appendix B.

Chart 6. The number of wastewater treatment plant samples with PFAS detections

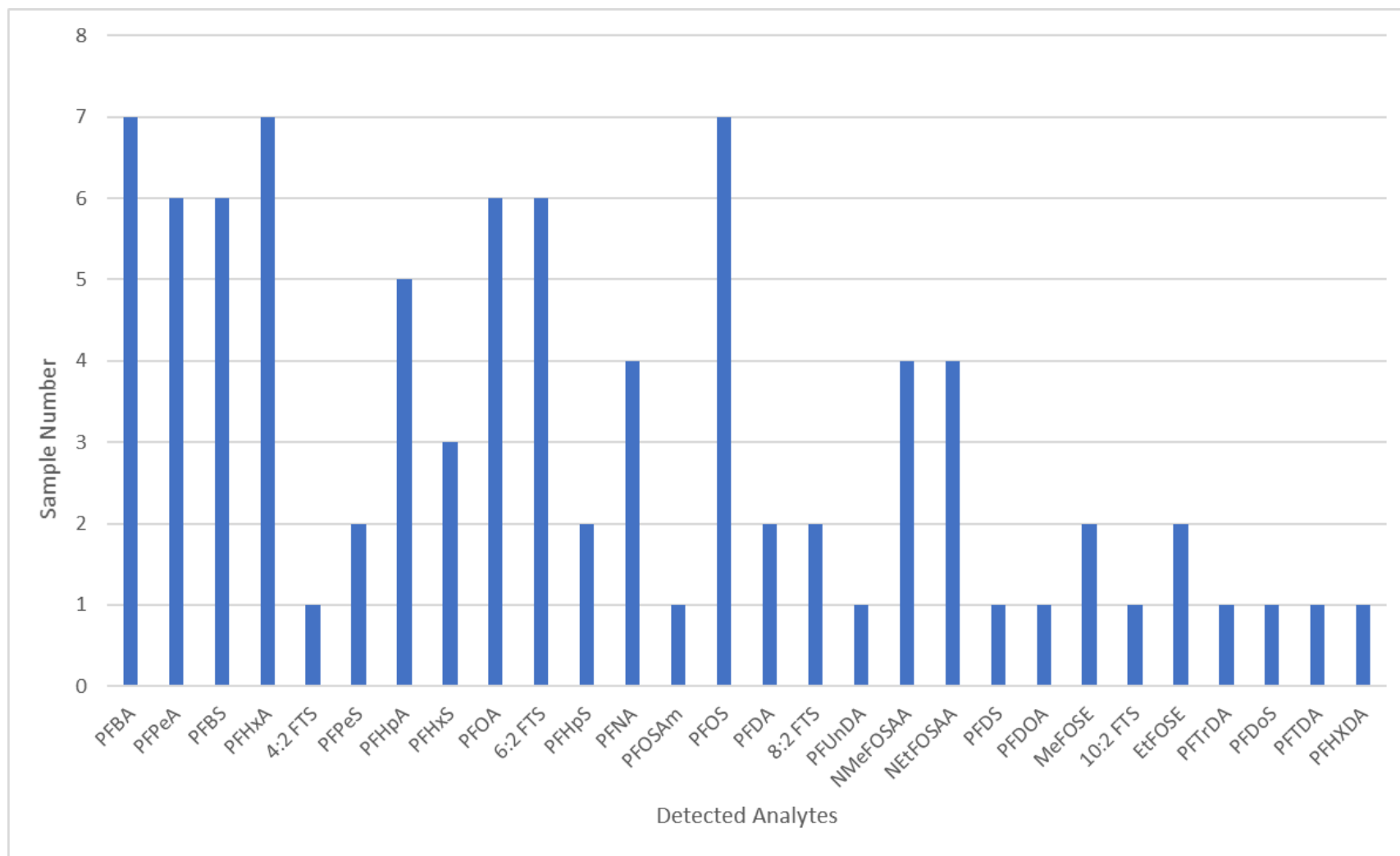


Table 8. Wastewater treatment plant analytical detections and exceedances

Site Identification:			WWTP 1A	WWTP 1B	WWTP 1C	WWTP 1D	WWTP 2A	WWTP 2B	WWTP 2C	WWTP 2D
Analyte	Health Advisory Levels	Unit	Results	Results	Results	Results	Results	Results	Results	Results
PFBA	Not Established	ppt	<b>71</b>	ND	<b>5.1</b>	<b>2700 D</b>	<b>69</b>	<b>26</b>	<b>2000</b>	<b>360</b>
PFPeA	Not Established	ppt	ND	ND	<b>5.6</b>	<b>2500 D</b>	<b>170</b>	<b>110</b>	<b>1400</b>	<b>390</b>
PFBS	Not Established	ppt	<b>5 I</b>	<b>340 I</b>	ND	<b>260</b>	<b>92</b>	<b>28</b>	<b>6100</b>	<b>62</b>
PFHxA	Not Established	ppt	ND	<b>330</b>	<b>18</b>	<b>4200 D</b>	<b>280</b>	<b>76</b>	<b>17000 D</b>	<b>620 D</b>
4:2 FTS	Not Established	ppt	ND	ND	ND	<b>12</b>	ND	ND	ND	ND
PFPeS	Not Established	ppt	ND	ND	ND	<b>22</b>	ND	ND	ND	<b>6.2</b>
PFHpA	Not Established	ppt	ND	ND	ND	<b>800 D</b>	<b>19</b>	<b>13</b>	<b>1400</b>	<b>130</b>
PFHxS	Not Established	ppt	ND	ND	ND	<b>520 D</b>	ND	ND	<b>320</b>	<b>67</b>
PFOA	70	ppt	ND	ND	<b>3</b>	<b>1200 D</b>	<b>24</b>	<b>9.4</b>	<b>13000 D</b>	<b>210</b>
PFOS		ppt	ND	<b>150</b>	<b>3.3 I</b>	<b>64</b>	<b>18 I</b>	<b>2.9</b>	<b>9800 D</b>	<b>13</b>
6:2 FTS	Not Established	ppt	ND	ND	<b>1.9</b>	<b>210</b>	<b>71</b>	<b>7.4</b>	<b>14000 D</b>	<b>74</b>
PFHpS	Not Established	ppt	ND	<b>140 I</b>	ND	ND	ND	ND	<b>150</b>	ND
PFNA	Not Established	ppt	ND	ND	ND	<b>43</b>	ND	<b>3.2</b>	<b>7900</b>	<b>8.3</b>
PFOSAm	Not Established	ppt	ND	ND	ND	ND	ND	ND	<b>980</b>	ND
PFDA	Not Established	ppt	ND	ND	ND	<b>10</b>	ND	ND	<b>12000 D</b>	ND
8:2 FTS	Not Established	ppt	ND	ND	ND	<b>11</b>	ND	ND	<b>2000</b>	ND
PFUnDA	Not Established	ppt	ND	ND	ND	ND	ND	ND	<b>3100</b>	ND
NMeFOSAA	Not Established	ppt	ND	<b>450</b>	<b>2.2</b>	<b>45</b>	ND	ND	<b>13000 D</b>	ND
NEtFOSAA	Not Established	ppt	ND	<b>300</b>	ND	<b>12</b>	ND	ND	<b>5700</b>	<b>6.9</b>
PFDS	Not Established	ppt	ND	ND	ND	ND	ND	ND	<b>1100</b>	ND
PFDOA	Not Established	ppt	ND	ND	ND	ND	ND	ND	<b>3400</b>	ND
MeFOSE	Not Established	ppt	ND	<b>1100</b>	ND	ND	ND	ND	<b>630</b>	ND
10:2 FTS	Not Established	ppt	ND	ND	ND	ND	ND	ND	<b>1400</b>	ND
EtFOSE	Not Established	ppt	ND	<b>230</b>	ND	ND	ND	ND	<b>330</b>	ND
PFTTrDA	Not Established	ppt	ND	ND	ND	ND	ND	ND	<b>940</b>	ND
PFDoS	Not Established	ppt	ND	ND	ND	ND	ND	ND	<b>150</b>	ND
PFTDA	Not Established	ppt	ND	ND	ND	ND	ND	ND	<b>580</b>	ND
PFHXDA	Not Established	ppt	ND	ND	ND	ND	ND	ND	<b>120</b>	ND

Notes:

ND – Non-detect

I – Interference present

D – Result obtained from analysis of diluted sample

– HAL Exceedance

## 5.0 Quality Control Samples

Five duplicates, four field blank and three equipment blank samples were collected from disposable bailers for non-potable water samples only. Laboratory results from the samples indicate that there were no detections of PFAS analytes. Complete analytical laboratory results can be found in Appendix B.

## 6.0 Work Plan Deviations

Deviations from the work plan did occur and are as follows.

Three planned ambient groundwater monitoring wells for aquifer monitoring were not sampled due to inaccessibility issues.

## 7.0 Conclusions

The goal of this survey was to determine the presence or absence of PFAS in the state of North Dakota. Based on the study results, PFAS was detected in landfill leachate ponds, wastewater treatment plants, industrial sites, and groundwater aquifers with potential PFAS generating surface activities nearby.

The industrial site groundwater firefighting training area and the wastewater treatment plant biosolids were found to contain more analytical detections and higher levels of PFAS than other sample collection sites. Detects were found in ambient groundwater sites but none measured higher than regulatory limits.

The chemistry laboratory RO-purified laboratory grade water was determined to be PFAS free.

## 8.0 Discussion and Recommendations

Sampling indicates that PFAS detections trend higher at landfills and wastewater treatment plants. States that have a greater industrial and manufacturing component have exhibited more widespread and higher levels of PFAS than North Dakota.

Data gaps include sampling in groundwater is restricted by locations of monitoring wells adjacent to identified areas of interest. A drill rig or Geoprobe could be used to drill temporary monitoring wells to expand to areas of interest that are currently inaccessible from lack of groundwater monitoring wells. Soil sampling and surface water sampling has not been included in this survey.



Future surveys should include soil sampling and surface water sampling. In addition, due to high occurrence of land application of biosolids, soil and groundwater sampling of land application sites should be considered.

### 8.1 Updated EPA Drinking Water Health Advisories

In June of 2022, the EPA published new health advisories for GenX and PFBS and lowered the HALs for PFOA and PFOS. This survey was completed in 2021 and results were compared to EPA's PFOA + PFOS HAL of 70 ppt established at that time.

## 9.0 References

3M. 1999. *Fluorochemical Use, Distribution and Release Overview*. U.S. Environmental Protection Agency. EPA-HQ-OPPT-2002-0051-003.

Antea Group. 2018. For the Oil and Gas Industry. [cited 12/6/2018]. Available from: <https://us.anteagroup.com/en-us/blog/pfas-and-petroleum-fires-quandary-oil-and-gas-industry>

Griffith, J. 2017. *PFAS in the Northeast: A Brief Overview*. [cited 11/26/2018]. Available from: [http://www.newmoa.org/events/docs/266\\_233/GriffithPFASOverviewJune2017.pdf](http://www.newmoa.org/events/docs/266_233/GriffithPFASOverviewJune2017.pdf)

Haley Aldrich. 2018. *A Primer on Perfluoroalkyl Substances (PFAS) - Emerging Contaminants in Drinking Water*. [cited 11/26/2018]. Available from: <https://pdfs.semanticscholar.org/e8a9/2b99f00fd1271e5d732545af4d8d9f258bc4.pdf>

Hamid, H., and L.Y. Li. 2016. "Role of Wastewater Treatment Plant in Environmental Cycling of Poly- and Prefluoroalkyl Substances." *Ecocycles* 2(2): 43-53

ITRC. 2017. Per- and Polyfluoroalkyl Substances (PFAS) Fact Sheets. [cited 11/26/2018]. Available from: <https://pfas-1.itrcweb.org/fact-sheets/>

NDDEQ. 2021. *North Dakota PFAS Sampling Project 2021 Field Sampling Plan*. North Dakota Department of Environmental Quality.

NDDEQ. 2021. *Quality Assurance Project Plan for the North Dakota PFAS Sampling Project 2021*. North Dakota Department of Environmental Quality.

Prevedouros, K., I.T. Cousins, R.C. Buck, and S.H. Korzeniowski 2006. "Sources, Fate and Transport of Perfluorocarboxylates." *American Chemical Society* 40 (1): 32-44

Schultz, M., C. P. Higgins, C. A. Huset, R. G. Luthy, D. F. Barofsky, and J. A. Field. 2006.  
"Fluorochemical Mass Flows in a Municipal Wastewater Treatment Facility."  
*Environmental Science and Technology* 40: 7350-7357.

Appendix A

Analyte List



Pace Minnesota																			
Target	Acronym	Method SOP Reference CAS RN	EPA 537.1 (AQ)		PFAS by ID (AQ)			PFAS by ID (Solid)			PFAS by ID (Tissue)			PFAS by ID (AQ)			PFAS by ID (Solids)		
			MIN4-0157		MIN4-0178			MIN4-0178 (5 g)			MIN4-0178 (2 g)			MIN4-0170 (MPCA)			MIN4-0170 (MPCA)		
			LOQ	DL	LOQ	LOD	DL	LOQ	LOD	DL	LOQ	LOD	DL	LOQ	LOD	DL	LOQ	LOD	DL
			ng/L		ng/L			µg/kg			µg/kg			ng/L			µg/kg		
Perfluorobutanoic acid	PFBA	375-22-4			2	1	0.407	0.100	0.050	0.021	0.250	0.125	0.046	0.5	0.25	0.15	0.05	0.025	0.014
Perfluoropentanoic acid	PFPeA	2706-90-3			2	1	0.227	0.100	0.050	0.023	0.250	0.125	0.049	0.5	0.25	0.10	0.05	0.025	0.009
Perfluorohexanoic acid	PFHxA	307-24-4	2	0.799	2	1	0.320	0.100	0.050	0.032	0.250	0.125	0.069	0.5	0.25	0.11	0.05	0.025	0.008
Perfluoroheptanoic acid	PFHpA	375-85-9	2	0.676	2	1	0.576	0.100	0.050	0.028	0.250	0.125	0.091	0.5	0.25	0.14	0.05	0.025	0.014
Perfluorooctanoic acid - br/lin	PFOA	335-67-1	2	0.596	2	1	0.576	0.100	0.050	0.019	0.250	0.125	0.058	0.5	0.25	0.09	0.05	0.025	0.010
Perfluorononanoic acid	PFNA	375-95-1	2	0.632	2	1	0.422	0.100	0.050	0.022	0.250	0.125	0.029	0.5	0.25	0.10	0.05	0.025	0.010
Perfluorodecanoic acid	PFDA	335-76-2	2	0.492	2	1	0.697	0.100	0.050	0.030	0.250	0.125	0.106	0.5	0.25	0.12	0.05	0.025	0.010
Perfluoroundecanoic acid	PFUnA (PFUnDA)	2058-94-8	2	0.602	2	1	0.320	0.100	0.050	0.019	0.250	0.125	0.064	0.5	0.25	0.17	0.05	0.025	0.011
Perfluorododecanoic acid	PFDoA	307-55-1	2	0.522	2	1	0.578	0.100	0.050	0.031	0.250	0.125	0.074	0.5	0.25	0.16	0.05	0.025	0.013
Perfluorotridecanoic acid	PFTDA	72629-94-8	2	0.449	2	1	0.525	0.100	0.050	0.020	0.250	0.125	0.050	0.5	0.25	0.16	0.05	0.025	0.008
Perfluorotetradecanoic acid	PFTA (PFTDA)	376-06-7	2	0.482	2	1	0.505	0.100	0.050	0.013	0.250	0.125	0.071	0.5	0.25	0.08	0.05	0.025	0.011
Perfluorohexadecanoic acid	PFHxDA	67905-19-5			2	1	0.393	0.100	0.050	0.021	0.250	0.125	0.032	0.5	0.25	0.13	0.05	0.025	0.012
Perfluorooctadecanoic acid	PFODA	16517-11-6			2	1	0.688	0.100	0.050	0.025	0.250	0.125	0.054	0.5	0.25	0.16	0.05	0.025	0.015
<b>Perfluoroalkane sulfonic acid (PFSA)</b>																			
Perfluorobutanesulfonic acid	PFBS	375-73-5	2	0.608	2	1	0.422	0.089	0.044	0.020	0.221	0.111	0.043	0.4	0.22	0.10	0.04	0.022	0.007
Perfluoropentanesulfonic acid	PFPeS	2706-91-4			2	1	0.609	0.094	0.047	0.023	0.235	0.118	0.058	0.5	0.24	0.12	0.05	0.024	0.009
Perfluorohexanesulfonic acid - br/lin	PFHxS	355-46-4	2	0.555	2	1	0.554	0.091	0.046	0.024	0.228	0.114	0.044	0.5	0.23	0.08	0.05	0.023	0.008
Perfluoroheptanesulfonic acid	PFHpS	375-92-8			2	1	0.278	0.095	0.048	0.018	0.238	0.119	0.034	0.5	0.24	0.12	0.05	0.024	0.007
Perfluorooctanesulfonic acid - br/lin	PFOS	1763-23-1	2	0.590	2	1	0.424	0.093	0.046	0.017	0.231	0.116	0.034	0.5	0.23	0.09	0.05	0.023	0.015
Perfluorononesulfonic acid	PFNS	68259-12-1			2	1	0.507	0.096	0.048	0.016	0.240	0.120	0.048	0.5	0.24	0.11	0.05	0.024	0.008
Perfluorodecanesulfonic acid	PFDS	335-77-3			2	1	0.518	0.097	0.048	0.018	0.241	0.121	0.040	0.5	0.24	0.12	0.05	0.024	0.007
Perfluorododecanesulfonic acid	PFDoS	79780-39-5			2	1	0.465	0.097	0.049	0.024	0.243	0.121	0.029	0.5	0.24	0.13	0.05	0.024	0.011
<b>Perfluoroalkane sulfonamides (FASA) and derivatives</b>																			
Perfluorooctanesulfonamide	PFOSA	754-91-6			2	1	0.865	0.100	0.050	0.028	0.250	0.125	0.034	0.5	0.25	0.11	0.05	0.025	0.009
N-ethyl perfluorooctane sulfonamide	NETFOSE	1691-99-2			2	1	0.349	0.100	0.050	0.019	0.250	0.125	0.048	0.5	0.25	0.14	0.05	0.025	0.011
N-methyl perfluorooctane sulfonamide	NMeFOSE	24448-09-7			2	1	0.453	0.100	0.050	0.024	0.250	0.125	0.050	0.5	0.25	0.11	0.05	0.025	0.007
N-ethyl perfluorooctane sulfonamide	NETFOSA	4151-50-2			2	1	0.374	0.100	0.050	0.014	0.250	0.125	0.034	0.5	0.25	0.15	0.05	0.025	0.009
N-methyl perfluorooctane sulfonamide	NMeFOSA	31506-32-8			2	1	0.297	0.100	0.050	0.025	0.250	0.125	0.038	0.5	0.25	0.16	0.05	0.025	0.009
N-ethyl perfluorooctanesulfonamideacetate - br/lin	NETFOSAA	2991-50-6	2	0.760	2	1	0.621	0.100	0.050	0.022	0.250	0.125	0.083	0.5	0.25	0.13	0.05	0.025	0.015
N-methyl perfluorooctanesulfonamideacetate - br/lin	NMeFOSAA	2355-31-9	2	0.904	2	1	0.422	0.100	0.050	0.012	0.250	0.125	0.025	0.5	0.25	0.14	0.05	0.025	0.013
<b>Fluorotelomer sulfonic acid (FTSA)</b>																			
4:2 Fluorotelomer sulfonic acid	4:2 FTS	757124-72-4			2	1	0.531	0.094	0.047	0.033	0.234	0.117	0.042	0.5	0.24	0.15	0.05	0.024	0.008
6:2 Fluorotelomer sulfonic acid	6:2 FTS	27619-97-2			2	1	0.669	0.095	0.048	0.031	0.238	0.119	0.113	0.5	0.24	0.16	0.05	0.024	0.014
8:2 Fluorotelomer sulfonic acid	8:2 FTS	39108-34-4			2	1	0.576	0.097	0.048	0.018	0.241	0.121	0.091	0.5	0.24	0.16	0.05	0.024	0.012
10:2 Fluorotelomer sulfonic acid	10:2 FTS	120226-60-0			2	1	0.619	0.097	0.048	0.031	0.241	0.121	0.041	0.5	0.24	0.13	0.05	0.024	0.016
<b>Perfluoroalkyl ether carboxylic acid (PFCEA)</b>																			
Perfluoro-3-methoxypropanoic acid	PFMPA	377-73-1																	
Perfluoro-4-methoxybutanoic acid	PFMBA	863090-89-5																	
Hexafluoropropylene oxide dimer acid	HFPO-DA	13252-13-6	2	0.672	2	1	0.660	0.100	0.050	0.026	NA	NA	NA	0.5	0.25	0.09	0.05	0.025	0.008
Nofluoro-3,6-dioxahexanoic acid	NFDHA	151772-58-6																	
4,8-dioxa-3H-perfluorononanoic acid	ADONA	919005-14-4	2	0.730	2	1	0.390	0.095	0.047	0.031	0.236	0.118	0.065	0.5	0.24	0.12	0.05	0.024	0.009
<b>Polyfluoroalkyl ether sulfonic acid (PFESA)</b>																			
Perfluoro(2-ethoxyethane)sulfonic acid	PFEESA	113507-82-7																	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	9Cl-PF3ONS	756426-58-1	2	0.634	2	1	0.192	0.093	0.047	0.015	0.233	0.116	0.031	0.5	0.24	0.14	0.05	0.024	0.009
11-chlorooctadecafluoro-3-oxaundecane-1-sulfonic acid	11Cl-PF3OUDS	763051-92-9	2	0.477	2	1	0.465	0.094	0.047	0.014	0.235	0.118	0.036	0.5	0.24	0.12	0.05	0.024	0.012

EPA Method 537.1

**SURROGATE**

<u>PARAMETER</u>	<u>CASNO</u>	<u>FULL NAME</u>
13C2-PFDA	13CPFDA	13C2-PerFluorodecanoic Acid
13C2-PFHxA	13CPFHXA	13C2-Perfluoro-n-hexanoic Acid
d5-NEtFOSAA	1265205-97-7	d5-N-ethyl-perfluoro-1-octanesulfonamidoacetic
13C3-HFPO-DA		<del>13C3-HFPO-DA</del>

**REGULAR**

<u>PARAMETER</u>	<u>CASNO</u>	<u>FULL NAME</u>
<del>NEtFOSAA</del>	2991-50-6	N-ethyl perfluorooctanesulfonamidoacetic acid
<del>NMeFOSAA</del>	2355-31-9	N-methyl perfluorooctanesulfonamidoacetic acid
PFBS	375-73-5	<del>Perfluorobutanesulfonic Acid</del>
PFDA	335-76-2	<del>Perfluorodecanoic acid</del>
<del>PFDoA</del>	307-55-1	<del>Perfluorododecanoic acid</del>
<del>PFHpA</del>	375-85-9	<del>Perfluorohentanoic acid</del>
PFHxA	307-24-4	<del>Perfluorohexanoic acid</del>
<del>PFHxS</del>	355-46-4	<del>Perfluorohexanesulfonic Acid</del>
PFNA	375-95-1	<del>Perfluorononanoic acid</del>
PFOA	335-67-1	<del>Perfluorooctanoic acid</del>
PFOS	1763-23-1	<del>Perfluorooctanesulfonic Acid</del>
<del>PFTreA</del>	376-06-7	<del>Perfluorotetradecanoic acid</del>
<del>PFTriA</del>	72629-94-8	<del>Perfluorotridecanoic acid</del>
<del>PFuNA</del>	2058-94-8	<del>Perfluoroundecanoic acid</del>
NaDQMA	919005-14-4	4,8-dioxa-3H-perfluorononanoic acid
9Cl-PF3ONS	756426-58-1	9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid
11Cl-PF3OUdS	763051-92-9	11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid
HFPO-DA (GenX)	13252-13-6	Hexafluoropropylene oxide dimer acid

## Appendix B

### Laboratory Results



# FINAL LAB REPORT

**5541 EQ3992-41**

32101399

16-Jul-2021

Prepared by

**SGS NORTH AMERICA**

Prepared for

**North Dakota DEQ**

Stacey Herreid

Div of Municipal Facilities  
Bismarck, ND 58501

Email: sherreid@nd.gov

*This report is approved by*

-----  
Amy Boehm

amy.boehm@sgs.com

Project Manager

This document is issued by the Company under its General Conditions of Service accessible at [https://www.sgs.com/en/terms\\_and\\_conditions](https://www.sgs.com/en/terms_and_conditions). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

SGS remains committed to serving you in the most effective manner. Should you have any questions or need additional information and technical support, please do not hesitate to contact us.

The management and staff of SGS welcomes customer feedback, both positive and negative, as we continually improve our services. Please visit our web site at [www.sgs.com/ultratrace](http://www.sgs.com/ultratrace) and click on the 'Email Us' link or go to our survey at [https://www.surveymonkey.com/r/SGSAP\\_VoiceOfCustomer?sm=1fj7v53XMdpUSBSUalhp2w%3d%3d](https://www.surveymonkey.com/r/SGSAP_VoiceOfCustomer?sm=1fj7v53XMdpUSBSUalhp2w%3d%3d). Thank you for choosing SGS.

Any holder of this document is advised that it is a final submission and supersedes and voids all prior reports with the same report or identification number. The information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility in conducting the work herein is to its Client and does not exonerate parties to a transaction from exercising all of their rights and obligations under such applicable transaction documents. This report may be reproduced in full only. The Company expressly disclaims any and all liability for the Client's use of or reliance upon the data contained herein. Any alteration, forgery or falsification of the content or appearance of this document which is not expressly authorized by the Company is unlawful and offenders may be prosecuted to the fullest extent of the law. Results reported relate only to the items tested.



## SGS CERTIFICATIONS

Alaska	17-012
Arkansas	88-0682
California (ELAP)	ELAP Cert #2914
CLIA	34D1013708
Connecticut	PH-0258
USDA Soil Permit	P330-20-00103
American Association for Laboratory Accreditation (A2LA)	2726.01 (ISO 17025:2005, 2009 TNI, DoD ELAP QSM 5.1)
Florida DOH	E87634
Louisiana DEQ	4115
Louisiana DOH	LA031
Maine	2018018
Massachusetts	M-NC919
Minnesota (Primary NELAP For Method 23)	037-999-459
Montana	0106
New Hampshire (Primary NELAP)	2085
New Hampshire (Secondary NELAP)	2083
New Jersey	NC100
New York	11685
North Carolina DEQ	481
North Dakota	R-197
Oregon	NC200002
Pennsylvania	68-03675
South Carolina	99029002
Texas	T104704260
US Coast Guard	16714/159.317/SGS
Vermont	VT-87634
Virginia	460214
Washington	C913

Rev. 13-Apr-2020



## Laboratory Qualifiers

### Report Definitions

DL	Method, Instrument, or Estimated Detection Limit per Analytical Method
CL	Control Limits for the recovery result of a parameter
LOQ	Reporting Limit
DF	Dilution Factor
RPD	Relative Percent Difference
LCS(D)	Laboratory Control Spike (Duplicate)
MS(D)	Matrix Spike (Duplicate)
MB	Method Blank

### Qualifier Definitions

*	Recovery or RPD outside of control limits
B	Analyte was detected in the Lab Method Blank at a level above the LOQ
U	Undetected (Reported as ND or < DL)
J	Estimated Concentration.
E	Amount detected is greater than the Upper Calibration Limit
TIC	Tentatively Identified Compound
ND	Not Detected
P	RPD > 40% between results of dual columns
D	Spike or surrogate was diluted out in order to achieve a parameter result within instrument calibration range

Samples requiring manual integrations for various congeners and/or standards are marked and dated by the analyst. A code definition is provided below:

M1	Mis-identified peak
M2	Software did not integrate peak
M3	Incorrect baseline construction (i.e. not all of peak included; two peaks integrated as one)
M4	Pattern integration required (i.e. DRO, GRO, PCB, Toxaphene and Technical Chlordane)
M5	Other - Explained in case narrative

**Note** Results pages that include a value for "Solids (%)" have been adjusted for moisture content.

### Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
Makoti DW	32101399001	06/28/2021 11:53	07/01/2021 09:38	Drinking Water
Maggie DW - DUP	32101399002	06/28/2021 11:54	07/01/2021 09:38	Drinking Water
Riverdale DW	32101399003	06/28/2021 10:11	07/01/2021 09:40	Drinking Water
McLean-Sheridan DW	32101399004	06/28/2021 09:03	07/01/2021 09:40	Drinking Water
Minnewaukan DW	32101399005	06/29/2021 10:45	07/01/2021 09:40	Drinking Water
Maddock DW	32101399006	06/29/2021 11:15	07/01/2021 09:41	Drinking Water
Michigan DW	32101399007	06/28/2021 14:30	07/01/2021 09:41	Drinking Water
Oberon DW	32101399008	06/29/2021 12:10	07/01/2021 09:42	Drinking Water
Sheyenne DW	32101399009	06/29/2021 12:45	07/01/2021 09:42	Drinking Water
Grafton DW	32101399010	06/29/2021 08:30	07/01/2021 09:43	Drinking Water
Greater Ramsey WD DW	32101399011	06/28/2021 12:30	07/01/2021 09:44	Drinking Water
Lakota DW	32101399012	06/28/2021 13:50	07/01/2021 09:45	Drinking Water
Dakota Rural WD North DW	32101399013	06/28/2021 10:30	07/01/2021 09:46	Drinking Water
Gregg DUP	32101399014	06/28/2021 09:00	07/01/2021 09:47	Drinking Water
Hannaford DW	32101399015	06/28/2021 09:00	07/01/2021 09:48	Drinking Water
Cooperstown DW	32101399016	06/28/2021 09:45	07/01/2021 09:48	Drinking Water
McVille DW	32101399017	06/28/2021 11:45	07/01/2021 09:48	Drinking Water
Grant Colony	32101399018	06/28/2021 10:02	07/01/2021 09:49	Drinking Water
Enderlin, City of	32101399019	06/28/2021 10:37	07/01/2021 09:50	Drinking Water
Gwinner, City of	32101399020	06/28/2021 11:45	07/01/2021 09:50	Drinking Water
LeeAnn DUP	32101399021	06/28/2021 11:41	07/01/2021 09:51	Drinking Water
Forman, City of	32101399022	06/28/2021 12:10	07/01/2021 09:51	Drinking Water
Abercrombie, City of	32101399023	06/28/2021 16:29	07/01/2021 09:51	Drinking Water
Southeast WUD (East)	32101399024	06/28/2021 15:40	07/01/2021 09:52	Drinking Water
Fairmount, City of	32101399025	06/28/2021 14:28	07/01/2021 09:52	Drinking Water
R&R Trailer Park DW	32101399026	06/28/2021 00:00	07/01/2021 09:53	Drinking Water
Portal DW	32101399027	06/28/2021 12:00	07/01/2021 09:53	Drinking Water
Grenora DW	32101399028	06/28/2021 16:00	07/01/2021 09:54	Drinking Water
Alexander DW	32101399029	06/29/2021 09:20	07/01/2021 09:54	Drinking Water
Upper Souris System 1 DW	32101399030	06/28/2021 09:40	07/01/2021 09:55	Drinking Water
Lignite DW	32101399031	06/28/2021 11:25	07/01/2021 09:55	Drinking Water
Badlands Dev Long x T DW	32101399032	06/29/2021 10:40	07/01/2021 09:56	Drinking Water
Minot DW	32101399033	06/28/2021 08:10	07/01/2021 09:57	Drinking Water
Duplicate DW Mike	32101399034	06/28/2021 09:45	07/01/2021 09:57	Drinking Water
Dunseith DW	32101399035	06/28/2021 13:03	07/01/2021 09:58	Drinking Water
Maxbass DW	32101399036	06/28/2021 15:16	07/01/2021 09:59	Drinking Water
Souris DW	32101399037	06/28/2021 14:27	07/01/2021 10:00	Drinking Water
All Seasons DW	32101399038	06/28/2021 13:52	07/01/2021 10:00	Drinking Water
St. John DW	32101399039	06/28/2021 11:27	07/01/2021 10:01	Drinking Water
Rolette DW	32101399040	06/28/2021 12:27	07/01/2021 10:01	Drinking Water
Karlsruhe DW	32101399041	06/28/2021 12:42	07/01/2021 10:02	Drinking Water
Selz DW	32101399042	06/29/2021 13:45	07/01/2021 10:02	Drinking Water
Shawn's DUP	32101399043	06/29/2021 11:55	07/01/2021 10:03	Drinking Water
Westhope DW	32101399044	06/29/2021 10:13	07/01/2021 10:04	Drinking Water
Velva DW	32101399045	06/29/2021 11:55	07/01/2021 10:04	Drinking Water
Cass Rural WD-Phase 1	32101399046	06/29/2021 08:48	07/01/2021 10:04	Drinking Water
Horace DW	32101399047	06/28/2021 15:10	07/01/2021 10:05	Drinking Water

### Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
Fargo DW	32101399048	06/28/2021 14:20	07/01/2021 10:06	Drinking Water
Valley City DW	32101399049	06/29/2021 11:00	07/01/2021 10:06	Drinking Water
Duplicate JS DW	32101399050	06/29/2021 11:00	07/01/2021 10:06	Drinking Water
East Central Reg WD DW	32101399051	06/28/2021 12:20	07/01/2021 10:07	Drinking Water
East Central Reg WD Trail	32101399052	06/28/2021 13:20	07/01/2021 10:08	Drinking Water
Grand Forks DW	32101399053	06/28/2021 11:10	07/01/2021 10:09	Drinking Water
Riverdale Subdivision DW	32101399054	06/28/2021 15:23	07/01/2021 10:10	Drinking Water
Cass Rural WD Phase III	32101399055	06/29/2021 09:50	07/01/2021 10:11	Drinking Water
South Central RWD DW	32101399056	06/28/2021 08:30	07/01/2021 10:12	Drinking Water
City of Steele DW	32101399057	06/28/2021 09:15	07/01/2021 10:12	Drinking Water
City of Harvey DW	32101399058	06/29/2021 11:15	07/01/2021 10:13	Drinking Water
Marlon DUP	32101399059	06/29/2021 11:15	07/01/2021 10:14	Drinking Water
Medina DW	32101399060	06/29/2021 08:30	07/01/2021 10:14	Drinking Water
Jamestown DW	32101399061	06/29/2021 09:15	07/01/2021 10:15	Drinking Water
City of Tuttle DW	32101399062	06/28/2021 10:00	07/01/2021 10:16	Drinking Water
Willowbank DW 1	32101399063	06/28/2021 08:50	07/01/2021 10:16	Drinking Water
Fairview Colony DW 1	32101399064	06/28/2021 09:50	07/01/2021 10:17	Drinking Water
Lehr DW 1	32101399065	06/28/2021 15:40	07/01/2021 10:17	Drinking Water
Southeast WUD (West) DW 1	32101399066	06/28/2021 11:00	07/01/2021 10:18	Drinking Water
Oakes DW 1	32101399067	06/28/2021 12:05	07/01/2021 10:19	Drinking Water
Ashley DW 1	32101399068	06/28/2021 14:30	07/01/2021 10:19	Drinking Water
Maple River	32101399069	06/28/2021 13:15	07/01/2021 10:20	Drinking Water
Jacob DUP 1	32101399070	06/28/2021 13:15	07/01/2021 10:20	Drinking Water
DEQ prefilter tap	32101399071	06/28/2021 13:15	07/01/2021 10:20	Drinking Water
DEQ prefilter tap FRB	32101399072	06/28/2021 13:15	07/01/2021 10:22	Drinking Water
DEQ postfilter	32101399073	06/28/2021 13:30	07/01/2021 10:23	Drinking Water
DEQ postfilter FRB	32101399074	06/28/2021 13:30	07/01/2021 10:24	Drinking Water
Washburn DW	32101399075	06/28/2021 08:12	07/02/2021 11:26	Drinking Water

### Detectable Results Summary

Client Sample ID: **Grafton DW**  
 Lab Sample ID: 32101399010-A  
**EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	
PFBS	1.52	ng/L	J
PFHpA	1.17	ng/L	J
PFHxA	2.57	ng/L	J
PFHxS	1.47	ng/L	J
PFOA	1.20	ng/L	J
PFOS	1.21	ng/L	J

Client Sample ID: **Grenora DW**  
 Lab Sample ID: 32101399028-A  
**EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	
PFHxA	1.12	ng/L	J
PFHxS	0.751	ng/L	J
PFOA	1.34	ng/L	J
PFOS	1.47	ng/L	J

Client Sample ID: **Lignite DW**  
 Lab Sample ID: 32101399031-A  
**EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	
PFBS	0.801	ng/L	J

Client Sample ID: **Minot DW**  
 Lab Sample ID: 32101399033-A  
**EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	
PFBS	1.44	ng/L	J
PFHxA	2.17	ng/L	J
PFHxS	1.81	ng/L	J
9Cl-PF3ONS	0.694	ng/L	J

Client Sample ID: **Duplicate DW Mike**  
 Lab Sample ID: 32101399034-A  
**EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	
PFHxA	0.770	ng/L	J

Client Sample ID: **All Seasons DW**  
 Lab Sample ID: 32101399038-A  
**EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	
PFBS	0.637	ng/L	J

Client Sample ID: **Karlsruhe DW**  
 Lab Sample ID: 32101399041-A  
**EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	
PFBS	0.681	ng/L	J
PFHxA	0.697	ng/L	J
PFHxS	0.843	ng/L	J

Client Sample ID: **Westhope DW**  
 Lab Sample ID: 32101399044-A  
**EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	
PFBS	0.501	ng/L	J

Client Sample ID: **Fargo DW**  
 Lab Sample ID: 32101399048-A  
**EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	
PFHxA	0.733	ng/L	J

Client Sample ID: **Grand Forks DW**  
 Lab Sample ID: 32101399053-A  
**EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	
PFHpA	0.767	ng/L	J
PFHxA	1.16	ng/L	J

Client Sample ID: **Cass Rural WD Phase III**  
 Lab Sample ID: 32101399055-A  
**EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	
PFBS	0.982	ng/L	J

### Detectable Results Summary

Client Sample ID: **Jamestown DW**

Lab Sample ID: 32101399061-A

**EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	
PFBS	1.51	ng/L	J
PFHxS	1.17	ng/L	J
PFOS	0.805	ng/L	J

Client Sample ID: **Oakes DW 1**

Lab Sample ID: 32101399067-A

**EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	
PFBS	0.499	ng/L	J
PFHxA	0.777	ng/L	J

Client Sample ID: **Washburn DW**

Lab Sample ID: 32101399075-A

**EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	
PFBS	0.522	ng/L	J
PFHxA	0.980	ng/L	J

## Parameter Cross Reference

### REGULAR

<u>PARAMETER</u>	<u>CASNO</u>	<u>FULL NAME</u>
NEtFOSAA	2991-50-6	N-ethyl perfluorooctanesulfonamidoacetic acid
NMeFOSAA	2355-31-9	N-methyl perfluorooctanesulfonamidoacetic acid
PFBS	375-73-5	Perfluorobutanesulfonic Acid
PFDA	335-76-2	Perfluorodecanoic acid
PFDoA	307-55-1	Perfluorododecanoic acid
PFHpA	375-85-9	Perfluoroheptanoic acid
PFHxA	307-24-4	Perfluorohexanoic acid
PFHxS	355-46-4	Perfluorohexanesulfonic Acid
PFNA	375-95-1	Perfluorononanoic acid
PFOA	335-67-1	Perfluorooctanoic acid
PFOS	1763-23-1	Perfluorooctanesulfonic Acid
PFTreA	376-06-7	Perfluorotetradecanoic acid
PFTriA	72629-94-8	Perfluorotridecanoic acid
PFuNA	2058-94-8	Perfluoroundecanoic acid
NaDONA	919005-14-4	4,8-dioxa-3H-perfluorononanoic acid
9Cl-PF3ONS	756426-58-1	9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid
11Cl-PF3OUdS	763051-92-9	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid
HFPO-DA (GenX)	13252-13-6	Hexafluoropropylene oxide dimer acid

### SURROGATE

<u>PARAMETER</u>	<u>CASNO</u>	<u>FULL NAME</u>
13C2-PFDA	13CPFDA	13C2-PerFluorodecanoic Acid
13C2-PFHxA	13CPFHXA	13C2-Perfluoro-n-hexanoic Acid
d5-NEtFOSAA	1265205-97-7	d5-N-ethyl-perfluoro-1-octanesulfonamidoacetic
13C3-HFPO-DA		13C3-HFPO-DA

### Results of Makoti DW

Client Sample ID: **Makoti DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399001-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 11:53  
 Received Date: 07/01/2021 09:38  
 Matrix: Drinking Water

### Results by EPA 537.1

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.707	1.71	ng/L	1	07/8/2021 21:59
NMeFOSAA	ND	U	0.725	3.42	ng/L	1	07/8/2021 21:59
PFBS	ND	U	0.473	1.71	ng/L	1	07/8/2021 21:59
PFDA	ND	U	0.813	1.71	ng/L	1	07/8/2021 21:59
PFDaA	ND	U	0.959	1.71	ng/L	1	07/8/2021 21:59
PFHpA	ND	U	0.664	1.71	ng/L	1	07/8/2021 21:59
PFHxA	ND	U	0.606	1.71	ng/L	1	07/8/2021 21:59
PFHxS	ND	U	0.400	1.71	ng/L	1	07/8/2021 21:59
PFNA	ND	U	0.678	1.71	ng/L	1	07/8/2021 21:59
PFOA	ND	U	0.494	1.71	ng/L	1	07/8/2021 21:59
PFOS	ND	U	0.487	1.71	ng/L	1	07/8/2021 21:59
PFTreA	ND	U	0.325	1.71	ng/L	1	07/8/2021 21:59
PFTriA	ND	U	0.345	1.71	ng/L	1	07/8/2021 21:59
PFuNA	ND	U	0.354	1.71	ng/L	1	07/8/2021 21:59
NaDONA	ND	U	0.468	1.71	ng/L	1	07/8/2021 21:59
9Cl-PF3ONS	ND	U	0.571	1.71	ng/L	1	07/8/2021 21:59
11Cl-PF3OUdS	ND	U	0.582	1.71	ng/L	1	07/8/2021 21:59
HFPO-DA (GenX)	ND	U	1.48	3.42	ng/L	1	07/8/2021 21:59
<b>Surrogates</b>							
13C2-PFDA	105			70.0-130	%	1	07/8/2021 21:59
13C2-PFHxA	98.8			70.0-130	%	1	07/8/2021 21:59
d5-NEtFOSAA	95.5			70.0-130	%	1	07/8/2021 21:59
13C3-HFPO-DA	99.7			70.0-130	%	1	07/8/2021 21:59

### Batch Information

Analytical Batch: **XLC1737**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/08/2021 21:59**

Prep Batch: **HXX2772**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/06/2021 08:10**  
 Prep Initial Wt./Vol.: **292 mL**  
 Prep Extract Vol: **1 mL**

### Results of Maggie DW - DUP

Client Sample ID: **Maggie DW - DUP**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399002-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 11:54  
 Received Date: 07/01/2021 09:38  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.751	1.82	ng/L	1	07/8/2021 22:56
NMeFOSAA	ND	U	0.770	3.64	ng/L	1	07/8/2021 22:56
PFBS	ND	U	0.503	1.82	ng/L	1	07/8/2021 22:56
PFDA	ND	U	0.864	1.82	ng/L	1	07/8/2021 22:56
PFDoA	ND	U	1.02	1.82	ng/L	1	07/8/2021 22:56
PFHpA	ND	U	0.705	1.82	ng/L	1	07/8/2021 22:56
PFHxA	ND	U	0.644	1.82	ng/L	1	07/8/2021 22:56
PFHxS	ND	U	0.425	1.82	ng/L	1	07/8/2021 22:56
PFNA	ND	U	0.720	1.82	ng/L	1	07/8/2021 22:56
PFOA	ND	U	0.525	1.82	ng/L	1	07/8/2021 22:56
PFOS	ND	U	0.517	1.82	ng/L	1	07/8/2021 22:56
PFTreA	ND	U	0.345	1.82	ng/L	1	07/8/2021 22:56
PFTriA	ND	U	0.366	1.82	ng/L	1	07/8/2021 22:56
PFuNA	ND	U	0.376	1.82	ng/L	1	07/8/2021 22:56
NaDONA	ND	U	0.497	1.82	ng/L	1	07/8/2021 22:56
9Cl-PF3ONS	ND	U	0.606	1.82	ng/L	1	07/8/2021 22:56
11Cl-PF3OUdS	ND	U	0.618	1.82	ng/L	1	07/8/2021 22:56
HFPO-DA (GenX)	ND	U	1.57	3.64	ng/L	1	07/8/2021 22:56
<b>Surrogates</b>							
13C2-PFDA	95.4			70.0-130	%	1	07/8/2021 22:56
13C2-PFHxA	91.2			70.0-130	%	1	07/8/2021 22:56
d5-NEtFOSAA	86.1			70.0-130	%	1	07/8/2021 22:56
13C3-HFPO-DA	92.9			70.0-130	%	1	07/8/2021 22:56

### Batch Information

Analytical Batch: **XLC1737**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/08/2021 22:56**

Prep Batch: **HXX2772**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/06/2021 08:10**  
 Prep Initial Wt./Vol.: **275 mL**  
 Prep Extract Vol: **1 mL**



### Results of Riverdale DW

Client Sample ID: **Riverdale DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399003-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 10:11  
 Received Date: 07/01/2021 09:40  
 Matrix: Drinking Water

### Results by EPA 537.1

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.771	1.87	ng/L	1	07/8/2021 23:14
NMeFOSAA	ND	U	0.790	3.73	ng/L	1	07/8/2021 23:14
PFBS	ND	U	0.516	1.87	ng/L	1	07/8/2021 23:14
PFDA	ND	U	0.886	1.87	ng/L	1	07/8/2021 23:14
PFDoA	ND	U	1.04	1.87	ng/L	1	07/8/2021 23:14
PFHpA	ND	U	0.723	1.87	ng/L	1	07/8/2021 23:14
PFHxA	ND	U	0.660	1.87	ng/L	1	07/8/2021 23:14
PFHxS	ND	U	0.436	1.87	ng/L	1	07/8/2021 23:14
PFNA	ND	U	0.739	1.87	ng/L	1	07/8/2021 23:14
PFOA	ND	U	0.538	1.87	ng/L	1	07/8/2021 23:14
PFOS	ND	U	0.531	1.87	ng/L	1	07/8/2021 23:14
PFTreA	ND	U	0.354	1.87	ng/L	1	07/8/2021 23:14
PFTriA	ND	U	0.376	1.87	ng/L	1	07/8/2021 23:14
PFuNA	ND	U	0.386	1.87	ng/L	1	07/8/2021 23:14
NaDONA	ND	U	0.510	1.87	ng/L	1	07/8/2021 23:14
9Cl-PF3ONS	ND	U	0.622	1.87	ng/L	1	07/8/2021 23:14
11Cl-PF3OUdS	ND	U	0.634	1.87	ng/L	1	07/8/2021 23:14
HFPO-DA (GenX)	ND	U	1.61	3.73	ng/L	1	07/8/2021 23:14
<b>Surrogates</b>							
13C2-PFDA	93.8			70.0-130	%	1	07/8/2021 23:14
13C2-PFHxA	87.2			70.0-130	%	1	07/8/2021 23:14
d5-NEtFOSAA	85.1			70.0-130	%	1	07/8/2021 23:14
13C3-HFPO-DA	89.1			70.0-130	%	1	07/8/2021 23:14

### Batch Information

Analytical Batch: **XLC1737**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/08/2021 23:14**

Prep Batch: **HXX2772**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/06/2021 08:10**  
 Prep Initial Wt./Vol.: **268 mL**  
 Prep Extract Vol: **1 mL**

**Results of McLean-Sheridan DW**

Client Sample ID: **McLean-Sheridan DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399004-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 09:03  
 Received Date: 07/01/2021 09:40  
 Matrix: Drinking Water

**Results by EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.843	2.04	ng/L	1	07/8/2021 23:33
NMeFOSAA	ND	U	0.864	4.08	ng/L	1	07/8/2021 23:33
PFBS	ND	U	0.564	2.04	ng/L	1	07/8/2021 23:33
PFDA	ND	U	0.969	2.04	ng/L	1	07/8/2021 23:33
PFDoA	ND	U	1.14	2.04	ng/L	1	07/8/2021 23:33
PFHpA	ND	U	0.791	2.04	ng/L	1	07/8/2021 23:33
PFHxA	ND	U	0.722	2.04	ng/L	1	07/8/2021 23:33
PFHxS	ND	U	0.477	2.04	ng/L	1	07/8/2021 23:33
PFNA	ND	U	0.808	2.04	ng/L	1	07/8/2021 23:33
PFOA	ND	U	0.589	2.04	ng/L	1	07/8/2021 23:33
PFOS	ND	U	0.581	2.04	ng/L	1	07/8/2021 23:33
PFTreA	ND	U	0.388	2.04	ng/L	1	07/8/2021 23:33
PFTriA	ND	U	0.411	2.04	ng/L	1	07/8/2021 23:33
PFuNA	ND	U	0.422	2.04	ng/L	1	07/8/2021 23:33
NaDONA	ND	U	0.558	2.04	ng/L	1	07/8/2021 23:33
9Cl-PF3ONS	ND	U	0.681	2.04	ng/L	1	07/8/2021 23:33
11Cl-PF3OUdS	ND	U	0.694	2.04	ng/L	1	07/8/2021 23:33
HFPO-DA (GenX)	ND	U	1.77	4.08	ng/L	1	07/8/2021 23:33
<b>Surrogates</b>							
13C2-PFDA	80.1			70.0-130	%	1	07/8/2021 23:33
13C2-PFHxA	76.3			70.0-130	%	1	07/8/2021 23:33
d5-NEtFOSAA	77.9			70.0-130	%	1	07/8/2021 23:33
13C3-HFPO-DA	76.2			70.0-130	%	1	07/8/2021 23:33

**Batch Information**

Analytical Batch: **XLC1737**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/08/2021 23:33**

Prep Batch: **HXX2772**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/06/2021 08:10**  
 Prep Initial Wt./Vol.: **245 mL**  
 Prep Extract Vol: **1 mL**

**Results of Minnewaukan DW**

Client Sample ID: **Minnewaukan DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399005-A  
 Lab Project ID: 32101399

Collection Date: 06/29/2021 10:45  
 Received Date: 07/01/2021 09:40  
 Matrix: Drinking Water

**Results by EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.771	1.87	ng/L	1	07/8/2021 23:52
NMeFOSAA	ND	U	0.790	3.73	ng/L	1	07/8/2021 23:52
PFBS	ND	U	0.516	1.87	ng/L	1	07/8/2021 23:52
PFDA	ND	U	0.886	1.87	ng/L	1	07/8/2021 23:52
PFDoA	ND	U	1.04	1.87	ng/L	1	07/8/2021 23:52
PFHpA	ND	U	0.723	1.87	ng/L	1	07/8/2021 23:52
PFHxA	ND	U	0.660	1.87	ng/L	1	07/8/2021 23:52
PFHxS	ND	U	0.436	1.87	ng/L	1	07/8/2021 23:52
PFNA	ND	U	0.739	1.87	ng/L	1	07/8/2021 23:52
PFOA	ND	U	0.538	1.87	ng/L	1	07/8/2021 23:52
PFOS	ND	U	0.531	1.87	ng/L	1	07/8/2021 23:52
PFTreA	ND	U	0.354	1.87	ng/L	1	07/8/2021 23:52
PFTriA	ND	U	0.376	1.87	ng/L	1	07/8/2021 23:52
PFuNA	ND	U	0.386	1.87	ng/L	1	07/8/2021 23:52
NaDONA	ND	U	0.510	1.87	ng/L	1	07/8/2021 23:52
9Cl-PF3ONS	ND	U	0.622	1.87	ng/L	1	07/8/2021 23:52
11Cl-PF3OUdS	ND	U	0.634	1.87	ng/L	1	07/8/2021 23:52
HFPO-DA (GenX)	ND	U	1.61	3.73	ng/L	1	07/8/2021 23:52
<b>Surrogates</b>							
13C2-PFDA	91.3			70.0-130	%	1	07/8/2021 23:52
13C2-PFHxA	86.7			70.0-130	%	1	07/8/2021 23:52
d5-NEtFOSAA	78.8			70.0-130	%	1	07/8/2021 23:52
13C3-HFPO-DA	87.1			70.0-130	%	1	07/8/2021 23:52

**Batch Information**

Analytical Batch: **XLC1737**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/08/2021 23:52**

Prep Batch: **HXX2772**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/06/2021 08:10**  
 Prep Initial Wt./Vol.: **268 mL**  
 Prep Extract Vol: **1 mL**

### Results of Maddock DW

Client Sample ID: **Maddock DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399006-A  
 Lab Project ID: 32101399

Collection Date: 06/29/2021 11:15  
 Received Date: 07/01/2021 09:41  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.754	1.82	ng/L	1	07/9/2021 0:11
NMeFOSAA	ND	U	0.773	3.65	ng/L	1	07/9/2021 0:11
PFBS	ND	U	0.505	1.82	ng/L	1	07/9/2021 0:11
PFDA	ND	U	0.867	1.82	ng/L	1	07/9/2021 0:11
PFDoA	ND	U	1.02	1.82	ng/L	1	07/9/2021 0:11
PFHpA	ND	U	0.707	1.82	ng/L	1	07/9/2021 0:11
PFHxA	ND	U	0.646	1.82	ng/L	1	07/9/2021 0:11
PFHxS	ND	U	0.426	1.82	ng/L	1	07/9/2021 0:11
PFNA	ND	U	0.723	1.82	ng/L	1	07/9/2021 0:11
PFOA	ND	U	0.526	1.82	ng/L	1	07/9/2021 0:11
PFOS	ND	U	0.519	1.82	ng/L	1	07/9/2021 0:11
PFTreA	ND	U	0.347	1.82	ng/L	1	07/9/2021 0:11
PFTriA	ND	U	0.368	1.82	ng/L	1	07/9/2021 0:11
PFuNA	ND	U	0.378	1.82	ng/L	1	07/9/2021 0:11
NaDONA	ND	U	0.499	1.82	ng/L	1	07/9/2021 0:11
9Cl-PF3ONS	ND	U	0.609	1.82	ng/L	1	07/9/2021 0:11
11Cl-PF3OUdS	ND	U	0.620	1.82	ng/L	1	07/9/2021 0:11
HFPO-DA (GenX)	ND	U	1.58	3.65	ng/L	1	07/9/2021 0:11
<b>Surrogates</b>							
13C2-PFDA	94.6			70.0-130	%	1	07/9/2021 0:11
13C2-PFHxA	82.6			70.0-130	%	1	07/9/2021 0:11
d5-NEtFOSAA	87.3			70.0-130	%	1	07/9/2021 0:11
13C3-HFPO-DA	87.1			70.0-130	%	1	07/9/2021 0:11

### Batch Information

Analytical Batch: **XLC1737**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/09/2021 00:11**

Prep Batch: **HXX2772**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/06/2021 08:10**  
 Prep Initial Wt./Vol.: **274 mL**  
 Prep Extract Vol: **1 mL**

### Results of Michigan DW

Client Sample ID: **Michigan DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399007-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 14:30  
 Received Date: 07/01/2021 09:41  
 Matrix: Drinking Water

### Results by EPA 537.1

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.745	1.81	ng/L	1	07/9/2021 0:30
NMeFOSAA	ND	U	0.764	3.61	ng/L	1	07/9/2021 0:30
PFBS	ND	U	0.499	1.81	ng/L	1	07/9/2021 0:30
PFDA	ND	U	0.857	1.81	ng/L	1	07/9/2021 0:30
PFDaA	ND	U	1.01	1.81	ng/L	1	07/9/2021 0:30
PFHpA	ND	U	0.699	1.81	ng/L	1	07/9/2021 0:30
PFHxA	ND	U	0.639	1.81	ng/L	1	07/9/2021 0:30
PFHxS	ND	U	0.421	1.81	ng/L	1	07/9/2021 0:30
PFNA	ND	U	0.715	1.81	ng/L	1	07/9/2021 0:30
PFOA	ND	U	0.521	1.81	ng/L	1	07/9/2021 0:30
PFOS	ND	U	0.514	1.81	ng/L	1	07/9/2021 0:30
PFTreA	ND	U	0.343	1.81	ng/L	1	07/9/2021 0:30
PFTriA	ND	U	0.364	1.81	ng/L	1	07/9/2021 0:30
PFuNA	ND	U	0.374	1.81	ng/L	1	07/9/2021 0:30
NaDONA	ND	U	0.494	1.81	ng/L	1	07/9/2021 0:30
9Cl-PF3ONS	ND	U	0.602	1.81	ng/L	1	07/9/2021 0:30
11Cl-PF3OUdS	ND	U	0.614	1.81	ng/L	1	07/9/2021 0:30
HFPO-DA (GenX)	ND	U	1.56	3.61	ng/L	1	07/9/2021 0:30
<b>Surrogates</b>							
13C2-PFDA	100			70.0-130	%	1	07/9/2021 0:30
13C2-PFHxA	93.1			70.0-130	%	1	07/9/2021 0:30
d5-NEtFOSAA	92.9			70.0-130	%	1	07/9/2021 0:30
13C3-HFPO-DA	95.0			70.0-130	%	1	07/9/2021 0:30

### Batch Information

Analytical Batch: **XLC1737**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/09/2021 00:30**

Prep Batch: **HXX2772**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/06/2021 08:10**  
 Prep Initial Wt./Vol.: **277 mL**  
 Prep Extract Vol: **1 mL**

**Results of Oberon DW**

Client Sample ID: **Oberon DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399008-A  
 Lab Project ID: 32101399

Collection Date: 06/29/2021 12:10  
 Received Date: 07/01/2021 09:42  
 Matrix: Drinking Water

**Results by EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	1.17	2.82	ng/L	1	07/9/2021 0:49
NMeFOSAA	ND	U	1.20	5.65	ng/L	1	07/9/2021 0:49
PFBS	ND	U	0.781	2.82	ng/L	1	07/9/2021 0:49
PFDA	ND	U	1.34	2.82	ng/L	1	07/9/2021 0:49
PFDoA	ND	U	1.58	2.82	ng/L	1	07/9/2021 0:49
PFHpA	ND	U	1.09	2.82	ng/L	1	07/9/2021 0:49
PFHxA	ND	U	1.00	2.82	ng/L	1	07/9/2021 0:49
PFHxS	ND	U	0.660	2.82	ng/L	1	07/9/2021 0:49
PFNA	ND	U	1.12	2.82	ng/L	1	07/9/2021 0:49
PFOA	ND	U	0.815	2.82	ng/L	1	07/9/2021 0:49
PFOS	ND	U	0.804	2.82	ng/L	1	07/9/2021 0:49
PFTreA	ND	U	0.537	2.82	ng/L	1	07/9/2021 0:49
PFTriA	ND	U	0.569	2.82	ng/L	1	07/9/2021 0:49
PFuNA	ND	U	0.585	2.82	ng/L	1	07/9/2021 0:49
NaDONA	ND	U	0.773	2.82	ng/L	1	07/9/2021 0:49
9Cl-PF3ONS	ND	U	0.942	2.82	ng/L	1	07/9/2021 0:49
11Cl-PF3OUdS	ND	U	0.960	2.82	ng/L	1	07/9/2021 0:49
HFPO-DA (GenX)	ND	U	2.44	5.65	ng/L	1	07/9/2021 0:49
<b>Surrogates</b>							
13C2-PFDA	81.9			70.0-130	%	1	07/9/2021 0:49
13C2-PFHxA	79.3			70.0-130	%	1	07/9/2021 0:49
d5-NEtFOSAA	78.9			70.0-130	%	1	07/9/2021 0:49
13C3-HFPO-DA	79.8			70.0-130	%	1	07/9/2021 0:49

**Batch Information**

Analytical Batch: **XLC1737**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/09/2021 00:49**

Prep Batch: **HXX2772**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/06/2021 08:10**  
 Prep Initial Wt./Vol.: **177 mL**  
 Prep Extract Vol: **1 mL**

### Results of Sheyenne DW

Client Sample ID: **Sheyenne DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399009-A  
 Lab Project ID: 32101399

Collection Date: 06/29/2021 12:45  
 Received Date: 07/01/2021 09:42  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.779	1.89	ng/L	1	07/9/2021 1:08
NMeFOSAA	ND	U	0.799	3.77	ng/L	1	07/9/2021 1:08
PFBS	ND	U	0.522	1.89	ng/L	1	07/9/2021 1:08
PFDA	ND	U	0.896	1.89	ng/L	1	07/9/2021 1:08
PFDoA	ND	U	1.06	1.89	ng/L	1	07/9/2021 1:08
PFHpA	ND	U	0.731	1.89	ng/L	1	07/9/2021 1:08
PFHxA	ND	U	0.668	1.89	ng/L	1	07/9/2021 1:08
PFHxS	ND	U	0.441	1.89	ng/L	1	07/9/2021 1:08
PFNA	ND	U	0.747	1.89	ng/L	1	07/9/2021 1:08
PFOA	ND	U	0.544	1.89	ng/L	1	07/9/2021 1:08
PFOS	ND	U	0.537	1.89	ng/L	1	07/9/2021 1:08
PFTreA	ND	U	0.358	1.89	ng/L	1	07/9/2021 1:08
PFTriA	ND	U	0.380	1.89	ng/L	1	07/9/2021 1:08
PFuNA	ND	U	0.391	1.89	ng/L	1	07/9/2021 1:08
NaDONA	ND	U	0.516	1.89	ng/L	1	07/9/2021 1:08
9Cl-PF3ONS	ND	U	0.629	1.89	ng/L	1	07/9/2021 1:08
11Cl-PF3OUdS	ND	U	0.642	1.89	ng/L	1	07/9/2021 1:08
HFPO-DA (GenX)	ND	U	1.63	3.77	ng/L	1	07/9/2021 1:08
<b>Surrogates</b>							
13C2-PFDA	90.1			70.0-130	%	1	07/9/2021 1:08
13C2-PFHxA	84.7			70.0-130	%	1	07/9/2021 1:08
d5-NEtFOSAA	77.8			70.0-130	%	1	07/9/2021 1:08
13C3-HFPO-DA	84.7			70.0-130	%	1	07/9/2021 1:08

### Batch Information

Analytical Batch: **XLC1737**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/09/2021 01:08**

Prep Batch: **HXX2772**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/06/2021 08:10**  
 Prep Initial Wt./Vol.: **265 mL**  
 Prep Extract Vol: **1 mL**

### Results of Grafton DW

Client Sample ID: **Grafton DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399010-A  
 Lab Project ID: 32101399

Collection Date: 06/29/2021 08:30  
 Received Date: 07/01/2021 09:43  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.759	1.84	ng/L	1	07/9/2021 1:27
NMeFOSAA	ND	U	0.778	3.68	ng/L	1	07/9/2021 1:27
PFBS	<b>1.52</b>	J	0.508	1.84	ng/L	1	07/9/2021 1:27
PFDA	ND	U	0.873	1.84	ng/L	1	07/9/2021 1:27
PFDoA	ND	U	1.03	1.84	ng/L	1	07/9/2021 1:27
PFHpA	<b>1.17</b>	J	0.712	1.84	ng/L	1	07/9/2021 1:27
PFHxA	<b>2.57</b>		0.651	1.84	ng/L	1	07/9/2021 1:27
PFHxS	<b>1.47</b>	J	0.429	1.84	ng/L	1	07/9/2021 1:27
PFNA	ND	U	0.728	1.84	ng/L	1	07/9/2021 1:27
PFOA	<b>1.20</b>	J	0.530	1.84	ng/L	1	07/9/2021 1:27
PFOS	<b>1.21</b>	J	0.523	1.84	ng/L	1	07/9/2021 1:27
PFTreA	ND	U	0.349	1.84	ng/L	1	07/9/2021 1:27
PFTriA	ND	U	0.370	1.84	ng/L	1	07/9/2021 1:27
PFuNA	ND	U	0.381	1.84	ng/L	1	07/9/2021 1:27
NaDONA	ND	U	0.503	1.84	ng/L	1	07/9/2021 1:27
9Cl-PF3ONS	ND	U	0.613	1.84	ng/L	1	07/9/2021 1:27
11Cl-PF3OUdS	ND	U	0.625	1.84	ng/L	1	07/9/2021 1:27
HFPO-DA (GenX)	ND	U	1.59	3.68	ng/L	1	07/9/2021 1:27
<b>Surrogates</b>							
13C2-PFDA	96.1			70.0-130	%	1	07/9/2021 1:27
13C2-PFHxA	87.3			70.0-130	%	1	07/9/2021 1:27
d5-NEtFOSAA	88.6			70.0-130	%	1	07/9/2021 1:27
13C3-HFPO-DA	90.2			70.0-130	%	1	07/9/2021 1:27

### Batch Information

Analytical Batch: **XLC1737**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/09/2021 01:27**

Prep Batch: **HXX2772**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/06/2021 08:10**  
 Prep Initial Wt./Vol.: **272 mL**  
 Prep Extract Vol: **1 mL**



### Results of Greater Ramsey WD DW

Client Sample ID: **Greater Ramsey WD DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399011-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 12:30  
 Received Date: 07/01/2021 09:44  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.776	1.88	ng/L	1	07/9/2021 1:45
NMeFOSAA	ND	U	0.796	3.76	ng/L	1	07/9/2021 1:45
PFBS	ND	U	0.520	1.88	ng/L	1	07/9/2021 1:45
PFDA	ND	U	0.893	1.88	ng/L	1	07/9/2021 1:45
PFDoA	ND	U	1.05	1.88	ng/L	1	07/9/2021 1:45
PFHpA	ND	U	0.728	1.88	ng/L	1	07/9/2021 1:45
PFHxA	ND	U	0.665	1.88	ng/L	1	07/9/2021 1:45
PFHxS	ND	U	0.439	1.88	ng/L	1	07/9/2021 1:45
PFNA	ND	U	0.744	1.88	ng/L	1	07/9/2021 1:45
PFOA	ND	U	0.542	1.88	ng/L	1	07/9/2021 1:45
PFOS	ND	U	0.535	1.88	ng/L	1	07/9/2021 1:45
PFTreA	ND	U	0.357	1.88	ng/L	1	07/9/2021 1:45
PFTriA	ND	U	0.379	1.88	ng/L	1	07/9/2021 1:45
PFuNA	ND	U	0.389	1.88	ng/L	1	07/9/2021 1:45
NaDONA	ND	U	0.514	1.88	ng/L	1	07/9/2021 1:45
9Cl-PF3ONS	ND	U	0.627	1.88	ng/L	1	07/9/2021 1:45
11Cl-PF3OUdS	ND	U	0.639	1.88	ng/L	1	07/9/2021 1:45
HFPO-DA (GenX)	ND	U	1.63	3.76	ng/L	1	07/9/2021 1:45
<b>Surrogates</b>							
13C2-PFDA	91.4			70.0-130	%	1	07/9/2021 1:45
13C2-PFHxA	82.0			70.0-130	%	1	07/9/2021 1:45
d5-NEtFOSAA	83.0			70.0-130	%	1	07/9/2021 1:45
13C3-HFPO-DA	86.0			70.0-130	%	1	07/9/2021 1:45

### Batch Information

Analytical Batch: **XLC1737**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/09/2021 01:45**

Prep Batch: **HXX2772**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/06/2021 08:10**  
 Prep Initial Wt./Vol.: **266 mL**  
 Prep Extract Vol: **1 mL**

### Results of Lakota DW

Client Sample ID: **Lakota DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399012-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 13:50  
 Received Date: 07/01/2021 09:45  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.740	1.79	ng/L	1	07/9/2021 10:37
NMeFOSAA	ND	U	0.759	3.58	ng/L	1	07/9/2021 10:37
PFBS	ND	U	0.496	1.79	ng/L	1	07/9/2021 10:37
PFDA	ND	U	0.851	1.79	ng/L	1	07/9/2021 10:37
PFDoA	ND	U	1.00	1.79	ng/L	1	07/9/2021 10:37
PFHpA	ND	U	0.694	1.79	ng/L	1	07/9/2021 10:37
PFHxA	ND	U	0.634	1.79	ng/L	1	07/9/2021 10:37
PFHxS	ND	U	0.418	1.79	ng/L	1	07/9/2021 10:37
PFNA	ND	U	0.710	1.79	ng/L	1	07/9/2021 10:37
PFOA	ND	U	0.517	1.79	ng/L	1	07/9/2021 10:37
PFOS	ND	U	0.510	1.79	ng/L	1	07/9/2021 10:37
PFTreA	ND	U	0.341	1.79	ng/L	1	07/9/2021 10:37
PFTriA	ND	U	0.361	1.79	ng/L	1	07/9/2021 10:37
PFuNA	ND	U	0.371	1.79	ng/L	1	07/9/2021 10:37
NaDONA	ND	U	0.490	1.79	ng/L	1	07/9/2021 10:37
9Cl-PF3ONS	ND	U	0.598	1.79	ng/L	1	07/9/2021 10:37
11Cl-PF3OUdS	ND	U	0.609	1.79	ng/L	1	07/9/2021 10:37
HFPO-DA (GenX)	ND	U	1.55	3.58	ng/L	1	07/9/2021 10:37
<b>Surrogates</b>							
13C2-PFDA	82.2			70.0-130	%	1	07/9/2021 10:37
13C2-PFHxA	85.1			70.0-130	%	1	07/9/2021 10:37
d5-NEtFOSAA	73.0			70.0-130	%	1	07/9/2021 10:37
13C3-HFPO-DA	84.6			70.0-130	%	1	07/9/2021 10:37

### Batch Information

Analytical Batch: **XLC1738**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/09/2021 10:37**

Prep Batch: **HXX2773**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/06/2021 16:05**  
 Prep Initial Wt./Vol.: **279 mL**  
 Prep Extract Vol: **1 mL**

**Results of Dakota Rural WD North DW**

Client Sample ID: **Dakota Rural WD North DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399013-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 10:30  
 Received Date: 07/01/2021 09:46  
 Matrix: Drinking Water

**Results by EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.732	1.77	ng/L	1	07/9/2021 11:15
NMeFOSAA	ND	U	0.751	3.55	ng/L	1	07/9/2021 11:15
PFBS	ND	U	0.490	1.77	ng/L	1	07/9/2021 11:15
PFDA	ND	U	0.842	1.77	ng/L	1	07/9/2021 11:15
PFDoA	ND	U	0.993	1.77	ng/L	1	07/9/2021 11:15
PFHpA	ND	U	0.687	1.77	ng/L	1	07/9/2021 11:15
PFHxA	ND	U	0.628	1.77	ng/L	1	07/9/2021 11:15
PFHxS	ND	U	0.414	1.77	ng/L	1	07/9/2021 11:15
PFNA	ND	U	0.702	1.77	ng/L	1	07/9/2021 11:15
PFOA	ND	U	0.512	1.77	ng/L	1	07/9/2021 11:15
PFOS	ND	U	0.504	1.77	ng/L	1	07/9/2021 11:15
PFTreA	ND	U	0.337	1.77	ng/L	1	07/9/2021 11:15
PFTriA	ND	U	0.357	1.77	ng/L	1	07/9/2021 11:15
PFuNA	ND	U	0.367	1.77	ng/L	1	07/9/2021 11:15
NaDONA	ND	U	0.485	1.77	ng/L	1	07/9/2021 11:15
9Cl-PF3ONS	ND	U	0.591	1.77	ng/L	1	07/9/2021 11:15
11Cl-PF3OUdS	ND	U	0.603	1.77	ng/L	1	07/9/2021 11:15
HFPO-DA (GenX)	ND	U	1.53	3.55	ng/L	1	07/9/2021 11:15
<b>Surrogates</b>							
13C2-PFDA	89.8			70.0-130	%	1	07/9/2021 11:15
13C2-PFHxA	84.9			70.0-130	%	1	07/9/2021 11:15
d5-NEtFOSAA	85.5			70.0-130	%	1	07/9/2021 11:15
13C3-HFPO-DA	84.6			70.0-130	%	1	07/9/2021 11:15

**Batch Information**

Analytical Batch: **XLC1738**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/09/2021 11:15**

Prep Batch: **HXX2773**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/06/2021 16:05**  
 Prep Initial Wt./Vol.: **282 mL**  
 Prep Extract Vol: **1 mL**

### Results of Gregg DUP

Client Sample ID: **Gregg DUP**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399014-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 09:00  
 Received Date: 07/01/2021 09:47  
 Matrix: Drinking Water

### Results by EPA 537.1

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.771	1.87	ng/L	1	07/9/2021 11:34
NMeFOSAA	ND	U	0.790	3.73	ng/L	1	07/9/2021 11:34
PFBS	ND	U	0.516	1.87	ng/L	1	07/9/2021 11:34
PFDA	ND	U	0.886	1.87	ng/L	1	07/9/2021 11:34
PFDaA	ND	U	1.04	1.87	ng/L	1	07/9/2021 11:34
PFHpA	ND	U	0.723	1.87	ng/L	1	07/9/2021 11:34
PFHxA	ND	U	0.660	1.87	ng/L	1	07/9/2021 11:34
PFHxS	ND	U	0.436	1.87	ng/L	1	07/9/2021 11:34
PFNA	ND	U	0.739	1.87	ng/L	1	07/9/2021 11:34
PFOA	ND	U	0.538	1.87	ng/L	1	07/9/2021 11:34
PFOS	ND	U	0.531	1.87	ng/L	1	07/9/2021 11:34
PFTreA	ND	U	0.354	1.87	ng/L	1	07/9/2021 11:34
PFTriA	ND	U	0.376	1.87	ng/L	1	07/9/2021 11:34
PFuNA	ND	U	0.386	1.87	ng/L	1	07/9/2021 11:34
NaDONA	ND	U	0.510	1.87	ng/L	1	07/9/2021 11:34
9Cl-PF3ONS	ND	U	0.622	1.87	ng/L	1	07/9/2021 11:34
11Cl-PF3OUdS	ND	U	0.634	1.87	ng/L	1	07/9/2021 11:34
HFPO-DA (GenX)	ND	U	1.61	3.73	ng/L	1	07/9/2021 11:34
<b>Surrogates</b>							
13C2-PFDA	80.0			70.0-130	%	1	07/9/2021 11:34
13C2-PFHxA	74.4			70.0-130	%	1	07/9/2021 11:34
d5-NEtFOSAA	75.6			70.0-130	%	1	07/9/2021 11:34
13C3-HFPO-DA	74.8			70.0-130	%	1	07/9/2021 11:34

### Batch Information

Analytical Batch: **XLC1738**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/09/2021 11:34**

Prep Batch: **HXX2773**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/06/2021 16:05**  
 Prep Initial Wt./Vol.: **268 mL**  
 Prep Extract Vol: **1 mL**

### Results of Hannaford DW

Client Sample ID: **Hannaford DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399015-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 09:00  
 Received Date: 07/01/2021 09:48  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.782	1.89	ng/L	1	07/9/2021 11:52
NMeFOSAA	ND	U	0.802	3.79	ng/L	1	07/9/2021 11:52
PFBS	ND	U	0.524	1.89	ng/L	1	07/9/2021 11:52
PFDA	ND	U	0.900	1.89	ng/L	1	07/9/2021 11:52
PFDaA	ND	U	1.06	1.89	ng/L	1	07/9/2021 11:52
PFHpA	ND	U	0.734	1.89	ng/L	1	07/9/2021 11:52
PFHxA	ND	U	0.670	1.89	ng/L	1	07/9/2021 11:52
PFHxS	ND	U	0.442	1.89	ng/L	1	07/9/2021 11:52
PFNA	ND	U	0.750	1.89	ng/L	1	07/9/2021 11:52
PFOA	ND	U	0.546	1.89	ng/L	1	07/9/2021 11:52
PFOS	ND	U	0.539	1.89	ng/L	1	07/9/2021 11:52
PFTreA	ND	U	0.360	1.89	ng/L	1	07/9/2021 11:52
PFTriA	ND	U	0.382	1.89	ng/L	1	07/9/2021 11:52
PFuNA	ND	U	0.392	1.89	ng/L	1	07/9/2021 11:52
NaDONA	ND	U	0.518	1.89	ng/L	1	07/9/2021 11:52
9Cl-PF3ONS	ND	U	0.632	1.89	ng/L	1	07/9/2021 11:52
11Cl-PF3OUdS	ND	U	0.644	1.89	ng/L	1	07/9/2021 11:52
HFPO-DA (GenX)	ND	U	1.64	3.79	ng/L	1	07/9/2021 11:52
<b>Surrogates</b>							
13C2-PFDA	89.2			70.0-130	%	1	07/9/2021 11:52
13C2-PFHxA	86.6			70.0-130	%	1	07/9/2021 11:52
d5-NEtFOSAA	86.6			70.0-130	%	1	07/9/2021 11:52
13C3-HFPO-DA	87.8			70.0-130	%	1	07/9/2021 11:52

### Batch Information

Analytical Batch: **XLC1738**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/09/2021 11:52**

Prep Batch: **HXX2773**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/06/2021 16:05**  
 Prep Initial Wt./Vol.: **264 mL**  
 Prep Extract Vol: **1 mL**

### Results of Cooperstown DW

Client Sample ID: **Cooperstown DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399016-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 09:45  
 Received Date: 07/01/2021 09:48  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.743	1.80	ng/L	1	07/9/2021 12:11
NMeFOSAA	ND	U	0.762	3.60	ng/L	1	07/9/2021 12:11
PFBS	ND	U	0.497	1.80	ng/L	1	07/9/2021 12:11
PFDA	ND	U	0.854	1.80	ng/L	1	07/9/2021 12:11
PFDoA	ND	U	1.01	1.80	ng/L	1	07/9/2021 12:11
PFHpA	ND	U	0.697	1.80	ng/L	1	07/9/2021 12:11
PFHxA	ND	U	0.637	1.80	ng/L	1	07/9/2021 12:11
PFHxS	ND	U	0.420	1.80	ng/L	1	07/9/2021 12:11
PFNA	ND	U	0.712	1.80	ng/L	1	07/9/2021 12:11
PFOA	ND	U	0.519	1.80	ng/L	1	07/9/2021 12:11
PFOS	ND	U	0.512	1.80	ng/L	1	07/9/2021 12:11
PFTreA	ND	U	0.342	1.80	ng/L	1	07/9/2021 12:11
PFTriA	ND	U	0.362	1.80	ng/L	1	07/9/2021 12:11
PFuNA	ND	U	0.372	1.80	ng/L	1	07/9/2021 12:11
NaDONA	ND	U	0.492	1.80	ng/L	1	07/9/2021 12:11
9Cl-PF3ONS	ND	U	0.600	1.80	ng/L	1	07/9/2021 12:11
11Cl-PF3OUdS	ND	U	0.612	1.80	ng/L	1	07/9/2021 12:11
HFPO-DA (GenX)	ND	U	1.56	3.60	ng/L	1	07/9/2021 12:11
<b>Surrogates</b>							
13C2-PFDA	87.0			70.0-130	%	1	07/9/2021 12:11
13C2-PFHxA	85.7			70.0-130	%	1	07/9/2021 12:11
d5-NEtFOSAA	87.4			70.0-130	%	1	07/9/2021 12:11
13C3-HFPO-DA	87.2			70.0-130	%	1	07/9/2021 12:11

### Batch Information

Analytical Batch: **XLC1738**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/09/2021 12:11**

Prep Batch: **HXX2773**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/06/2021 16:05**  
 Prep Initial Wt./Vol.: **278 mL**  
 Prep Extract Vol: **1 mL**

**Results of McVile DW**

Client Sample ID: **McVile DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399017-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 11:45  
 Received Date: 07/01/2021 09:48  
 Matrix: Drinking Water

**Results by EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.759	1.84	ng/L	1	07/9/2021 12:30
NMeFOSAA	ND	U	0.778	3.68	ng/L	1	07/9/2021 12:30
PFBS	ND	U	0.508	1.84	ng/L	1	07/9/2021 12:30
PFDA	ND	U	0.873	1.84	ng/L	1	07/9/2021 12:30
PFDoA	ND	U	1.03	1.84	ng/L	1	07/9/2021 12:30
PFHpA	ND	U	0.712	1.84	ng/L	1	07/9/2021 12:30
PFHxA	ND	U	0.651	1.84	ng/L	1	07/9/2021 12:30
PFHxS	ND	U	0.429	1.84	ng/L	1	07/9/2021 12:30
PFNA	ND	U	0.728	1.84	ng/L	1	07/9/2021 12:30
PFOA	ND	U	0.530	1.84	ng/L	1	07/9/2021 12:30
PFOS	ND	U	0.523	1.84	ng/L	1	07/9/2021 12:30
PFTreA	ND	U	0.349	1.84	ng/L	1	07/9/2021 12:30
PFTriA	ND	U	0.370	1.84	ng/L	1	07/9/2021 12:30
PFuNA	ND	U	0.381	1.84	ng/L	1	07/9/2021 12:30
NaDONA	ND	U	0.503	1.84	ng/L	1	07/9/2021 12:30
9Cl-PF3ONS	ND	U	0.613	1.84	ng/L	1	07/9/2021 12:30
11Cl-PF3OUdS	ND	U	0.625	1.84	ng/L	1	07/9/2021 12:30
HFPO-DA (GenX)	ND	U	1.59	3.68	ng/L	1	07/9/2021 12:30
<b>Surrogates</b>							
13C2-PFDA	81.2			70.0-130	%	1	07/9/2021 12:30
13C2-PFHxA	81.7			70.0-130	%	1	07/9/2021 12:30
d5-NEtFOSAA	76.3			70.0-130	%	1	07/9/2021 12:30
13C3-HFPO-DA	80.9			70.0-130	%	1	07/9/2021 12:30

**Batch Information**

Analytical Batch: **XLC1738**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/09/2021 12:30**

Prep Batch: **HXX2773**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/06/2021 16:05**  
 Prep Initial Wt./Vol.: **272 mL**  
 Prep Extract Vol: **1 mL**

### Results of Grant Colony

Client Sample ID: **Grant Colony**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399018-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 10:02  
 Received Date: 07/01/2021 09:49  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.745	1.81	ng/L	1	07/9/2021 12:49
NMeFOSAA	ND	U	0.764	3.61	ng/L	1	07/9/2021 12:49
PFBS	ND	U	0.499	1.81	ng/L	1	07/9/2021 12:49
PFDA	ND	U	0.857	1.81	ng/L	1	07/9/2021 12:49
PFDaA	ND	U	1.01	1.81	ng/L	1	07/9/2021 12:49
PFHpA	ND	U	0.699	1.81	ng/L	1	07/9/2021 12:49
PFHxA	ND	U	0.639	1.81	ng/L	1	07/9/2021 12:49
PFHxS	ND	U	0.421	1.81	ng/L	1	07/9/2021 12:49
PFNA	ND	U	0.715	1.81	ng/L	1	07/9/2021 12:49
PFOA	ND	U	0.521	1.81	ng/L	1	07/9/2021 12:49
PFOS	ND	U	0.514	1.81	ng/L	1	07/9/2021 12:49
PFTreA	ND	U	0.343	1.81	ng/L	1	07/9/2021 12:49
PFTriA	ND	U	0.364	1.81	ng/L	1	07/9/2021 12:49
PFuNA	ND	U	0.374	1.81	ng/L	1	07/9/2021 12:49
NaDONA	ND	U	0.494	1.81	ng/L	1	07/9/2021 12:49
9Cl-PF3ONS	ND	U	0.602	1.81	ng/L	1	07/9/2021 12:49
11Cl-PF3OUdS	ND	U	0.614	1.81	ng/L	1	07/9/2021 12:49
HFPO-DA (GenX)	ND	U	1.56	3.61	ng/L	1	07/9/2021 12:49
<b>Surrogates</b>							
13C2-PFDA	83.8			70.0-130	%	1	07/9/2021 12:49
13C2-PFHxA	83.9			70.0-130	%	1	07/9/2021 12:49
d5-NEtFOSAA	76.3			70.0-130	%	1	07/9/2021 12:49
13C3-HFPO-DA	81.1			70.0-130	%	1	07/9/2021 12:49

### Batch Information

Analytical Batch: **XLC1738**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/09/2021 12:49**

Prep Batch: **HXX2773**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/06/2021 16:05**  
 Prep Initial Wt./Vol.: **277 mL**  
 Prep Extract Vol: **1 mL**



### Results of Enderlin, City of

Client Sample ID: **Enderlin, City of**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399019-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 10:37  
 Received Date: 07/01/2021 09:50  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.759	1.84	ng/L	1	07/9/2021 13:27
NMeFOSAA	ND	U	0.778	3.68	ng/L	1	07/9/2021 13:27
PFBS	ND	U	0.508	1.84	ng/L	1	07/9/2021 13:27
PFDA	ND	U	0.873	1.84	ng/L	1	07/9/2021 13:27
PFDoA	ND	U	1.03	1.84	ng/L	1	07/9/2021 13:27
PFHpA	ND	U	0.712	1.84	ng/L	1	07/9/2021 13:27
PFHxA	ND	U	0.651	1.84	ng/L	1	07/9/2021 13:27
PFHxS	ND	U	0.429	1.84	ng/L	1	07/9/2021 13:27
PFNA	ND	U	0.728	1.84	ng/L	1	07/9/2021 13:27
PFOA	ND	U	0.530	1.84	ng/L	1	07/9/2021 13:27
PFOS	ND	U	0.523	1.84	ng/L	1	07/9/2021 13:27
PFTreA	ND	U	0.349	1.84	ng/L	1	07/9/2021 13:27
PFTriA	ND	U	0.370	1.84	ng/L	1	07/9/2021 13:27
PFuNA	ND	U	0.381	1.84	ng/L	1	07/9/2021 13:27
NaDONA	ND	U	0.503	1.84	ng/L	1	07/9/2021 13:27
9Cl-PF3ONS	ND	U	0.613	1.84	ng/L	1	07/9/2021 13:27
11Cl-PF3OUdS	ND	U	0.625	1.84	ng/L	1	07/9/2021 13:27
HFPO-DA (GenX)	ND	U	1.59	3.68	ng/L	1	07/9/2021 13:27
<b>Surrogates</b>							
13C2-PFDA	79.0			70.0-130	%	1	07/9/2021 13:27
13C2-PFHxA	74.9			70.0-130	%	1	07/9/2021 13:27
d5-NEtFOSAA	72.4			70.0-130	%	1	07/9/2021 13:27
13C3-HFPO-DA	75.4			70.0-130	%	1	07/9/2021 13:27

### Batch Information

Analytical Batch: **XLC1738**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/09/2021 13:27**

Prep Batch: **HXX2773**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/06/2021 16:05**  
 Prep Initial Wt./Vol.: **272 mL**  
 Prep Extract Vol: **1 mL**

**Results of Gwinner, City of**

Client Sample ID: **Gwinner, City of**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399020-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 11:45  
 Received Date: 07/01/2021 09:50  
 Matrix: Drinking Water

**Results by EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.730	1.77	ng/L	1	07/9/2021 13:46
NMeFOSAA	ND	U	0.748	3.53	ng/L	1	07/9/2021 13:46
PFBS	ND	U	0.489	1.77	ng/L	1	07/9/2021 13:46
PFDA	ND	U	0.839	1.77	ng/L	1	07/9/2021 13:46
PFDoA	ND	U	0.989	1.77	ng/L	1	07/9/2021 13:46
PFHpA	ND	U	0.685	1.77	ng/L	1	07/9/2021 13:46
PFHxA	ND	U	0.625	1.77	ng/L	1	07/9/2021 13:46
PFHxS	ND	U	0.413	1.77	ng/L	1	07/9/2021 13:46
PFNA	ND	U	0.700	1.77	ng/L	1	07/9/2021 13:46
PFOA	ND	U	0.510	1.77	ng/L	1	07/9/2021 13:46
PFOS	ND	U	0.503	1.77	ng/L	1	07/9/2021 13:46
PFTreA	ND	U	0.336	1.77	ng/L	1	07/9/2021 13:46
PFTriA	ND	U	0.356	1.77	ng/L	1	07/9/2021 13:46
PFuNA	ND	U	0.366	1.77	ng/L	1	07/9/2021 13:46
NaDONA	ND	U	0.483	1.77	ng/L	1	07/9/2021 13:46
9Cl-PF3ONS	ND	U	0.589	1.77	ng/L	1	07/9/2021 13:46
11Cl-PF3OUdS	ND	U	0.601	1.77	ng/L	1	07/9/2021 13:46
HFPO-DA (GenX)	ND	U	1.53	3.53	ng/L	1	07/9/2021 13:46
<b>Surrogates</b>							
13C2-PFDA	84.5			70.0-130	%	1	07/9/2021 13:46
13C2-PFHxA	85.1			70.0-130	%	1	07/9/2021 13:46
d5-NEtFOSAA	81.3			70.0-130	%	1	07/9/2021 13:46
13C3-HFPO-DA	83.2			70.0-130	%	1	07/9/2021 13:46

**Batch Information**

Analytical Batch: **XLC1738**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/09/2021 13:46**

Prep Batch: **HXX2773**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/06/2021 16:05**  
 Prep Initial Wt./Vol.: **283 mL**  
 Prep Extract Vol: **1 mL**

**Results of LeeAnn DUP**

Client Sample ID: **LeeAnn DUP**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399021-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 11:41  
 Received Date: 07/01/2021 09:51  
 Matrix: Drinking Water

**Results by EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.759	1.84	ng/L	1	07/9/2021 14:42
NMeFOSAA	ND	U	0.778	3.68	ng/L	1	07/9/2021 14:42
PFBS	ND	U	0.508	1.84	ng/L	1	07/9/2021 14:42
PFDA	ND	U	0.873	1.84	ng/L	1	07/9/2021 14:42
PFDaA	ND	U	1.03	1.84	ng/L	1	07/9/2021 14:42
PFHpA	ND	U	0.712	1.84	ng/L	1	07/9/2021 14:42
PFHxA	ND	U	0.651	1.84	ng/L	1	07/9/2021 14:42
PFHxS	ND	U	0.429	1.84	ng/L	1	07/9/2021 14:42
PFNA	ND	U	0.728	1.84	ng/L	1	07/9/2021 14:42
PFOA	ND	U	0.530	1.84	ng/L	1	07/9/2021 14:42
PFOS	ND	U	0.523	1.84	ng/L	1	07/9/2021 14:42
PFTreA	ND	U	0.349	1.84	ng/L	1	07/9/2021 14:42
PFTriA	ND	U	0.370	1.84	ng/L	1	07/9/2021 14:42
PFuNA	ND	U	0.381	1.84	ng/L	1	07/9/2021 14:42
NaDONA	ND	U	0.503	1.84	ng/L	1	07/9/2021 14:42
9Cl-PF3ONS	ND	U	0.613	1.84	ng/L	1	07/9/2021 14:42
11Cl-PF3OUdS	ND	U	0.625	1.84	ng/L	1	07/9/2021 14:42
HFPO-DA (GenX)	ND	U	1.59	3.68	ng/L	1	07/9/2021 14:42
<b>Surrogates</b>							
13C2-PFDA	85.1			70.0-130	%	1	07/9/2021 14:42
13C2-PFHxA	83.1			70.0-130	%	1	07/9/2021 14:42
d5-NEtFOSAA	80.1			70.0-130	%	1	07/9/2021 14:42
13C3-HFPO-DA	82.1			70.0-130	%	1	07/9/2021 14:42

**Batch Information**

Analytical Batch: **XLC1738**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/09/2021 14:42**

Prep Batch: **HXX2773**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/06/2021 16:05**  
 Prep Initial Wt./Vol.: **272 mL**  
 Prep Extract Vol: **1 mL**

**Results of Forman, City of**

Client Sample ID: **Forman, City of**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399022-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 12:10  
 Received Date: 07/01/2021 09:51  
 Matrix: Drinking Water

**Results by EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.765	1.85	ng/L	1	07/9/2021 15:01
NMeFOSAA	ND	U	0.784	3.70	ng/L	1	07/9/2021 15:01
PFBS	ND	U	0.512	1.85	ng/L	1	07/9/2021 15:01
PFDA	ND	U	0.880	1.85	ng/L	1	07/9/2021 15:01
PFDoA	ND	U	1.04	1.85	ng/L	1	07/9/2021 15:01
PFHpA	ND	U	0.718	1.85	ng/L	1	07/9/2021 15:01
PFHxA	ND	U	0.656	1.85	ng/L	1	07/9/2021 15:01
PFHxS	ND	U	0.432	1.85	ng/L	1	07/9/2021 15:01
PFNA	ND	U	0.733	1.85	ng/L	1	07/9/2021 15:01
PFOA	ND	U	0.534	1.85	ng/L	1	07/9/2021 15:01
PFOS	ND	U	0.527	1.85	ng/L	1	07/9/2021 15:01
PFTreA	ND	U	0.352	1.85	ng/L	1	07/9/2021 15:01
PFTriA	ND	U	0.373	1.85	ng/L	1	07/9/2021 15:01
PFuNA	ND	U	0.383	1.85	ng/L	1	07/9/2021 15:01
NaDONA	ND	U	0.506	1.85	ng/L	1	07/9/2021 15:01
9Cl-PF3ONS	ND	U	0.618	1.85	ng/L	1	07/9/2021 15:01
11Cl-PF3OUdS	ND	U	0.630	1.85	ng/L	1	07/9/2021 15:01
HFPO-DA (GenX)	ND	U	1.60	3.70	ng/L	1	07/9/2021 15:01
<b>Surrogates</b>							
13C2-PFDA	80.4			70.0-130	%	1	07/9/2021 15:01
13C2-PFHxA	76.4			70.0-130	%	1	07/9/2021 15:01
d5-NEtFOSAA	73.9			70.0-130	%	1	07/9/2021 15:01
13C3-HFPO-DA	75.4			70.0-130	%	1	07/9/2021 15:01

**Batch Information**

Analytical Batch: **XLC1738**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/09/2021 15:01**

Prep Batch: **HXX2773**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/06/2021 16:05**  
 Prep Initial Wt./Vol.: **270 mL**  
 Prep Extract Vol: **1 mL**

**Results of Abercrombie, City of**

Client Sample ID: **Abercrombie, City of**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399023-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 16:29  
 Received Date: 07/01/2021 09:51  
 Matrix: Drinking Water

**Results by EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.776	1.88	ng/L	1	07/9/2021 15:20
NMeFOSAA	ND	U	0.796	3.76	ng/L	1	07/9/2021 15:20
PFBS	ND	U	0.520	1.88	ng/L	1	07/9/2021 15:20
PFDA	ND	U	0.893	1.88	ng/L	1	07/9/2021 15:20
PFDaA	ND	U	1.05	1.88	ng/L	1	07/9/2021 15:20
PFHpA	ND	U	0.728	1.88	ng/L	1	07/9/2021 15:20
PFHxA	ND	U	0.665	1.88	ng/L	1	07/9/2021 15:20
PFHxS	ND	U	0.439	1.88	ng/L	1	07/9/2021 15:20
PFNA	ND	U	0.744	1.88	ng/L	1	07/9/2021 15:20
PFOA	ND	U	0.542	1.88	ng/L	1	07/9/2021 15:20
PFOS	ND	U	0.535	1.88	ng/L	1	07/9/2021 15:20
PFTreA	ND	U	0.357	1.88	ng/L	1	07/9/2021 15:20
PFTriA	ND	U	0.379	1.88	ng/L	1	07/9/2021 15:20
PFuNA	ND	U	0.389	1.88	ng/L	1	07/9/2021 15:20
NaDONA	ND	U	0.514	1.88	ng/L	1	07/9/2021 15:20
9Cl-PF3ONS	ND	U	0.627	1.88	ng/L	1	07/9/2021 15:20
11Cl-PF3OUdS	ND	U	0.639	1.88	ng/L	1	07/9/2021 15:20
HFPO-DA (GenX)	ND	U	1.63	3.76	ng/L	1	07/9/2021 15:20
<b>Surrogates</b>							
13C2-PFDA	84.9			70.0-130	%	1	07/9/2021 15:20
13C2-PFHxA	83.5			70.0-130	%	1	07/9/2021 15:20
d5-NEtFOSAA	84.8			70.0-130	%	1	07/9/2021 15:20
13C3-HFPO-DA	83.3			70.0-130	%	1	07/9/2021 15:20

**Batch Information**

Analytical Batch: **XLC1738**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/09/2021 15:20**

Prep Batch: **HXX2773**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/06/2021 16:05**  
 Prep Initial Wt./Vol.: **266 mL**  
 Prep Extract Vol: **1 mL**

**Results of Southeast WUD (East)**

Client Sample ID: **Southeast WUD (East)**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399024-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 15:40  
 Received Date: 07/01/2021 09:52  
 Matrix: Drinking Water

**Results by EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.717	1.74	ng/L	1	07/9/2021 15:39
NMeFOSAA	ND	U	0.735	3.47	ng/L	1	07/9/2021 15:39
PFBS	ND	U	0.480	1.74	ng/L	1	07/9/2021 15:39
PFDA	ND	U	0.825	1.74	ng/L	1	07/9/2021 15:39
PFDoA	ND	U	0.972	1.74	ng/L	1	07/9/2021 15:39
PFHpA	ND	U	0.673	1.74	ng/L	1	07/9/2021 15:39
PFHxA	ND	U	0.615	1.74	ng/L	1	07/9/2021 15:39
PFHxS	ND	U	0.405	1.74	ng/L	1	07/9/2021 15:39
PFNA	ND	U	0.688	1.74	ng/L	1	07/9/2021 15:39
PFOA	ND	U	0.501	1.74	ng/L	1	07/9/2021 15:39
PFOS	ND	U	0.494	1.74	ng/L	1	07/9/2021 15:39
PFTreA	ND	U	0.330	1.74	ng/L	1	07/9/2021 15:39
PFTriA	ND	U	0.350	1.74	ng/L	1	07/9/2021 15:39
PFuNA	ND	U	0.359	1.74	ng/L	1	07/9/2021 15:39
NaDONA	ND	U	0.475	1.74	ng/L	1	07/9/2021 15:39
9Cl-PF3ONS	ND	U	0.579	1.74	ng/L	1	07/9/2021 15:39
11Cl-PF3OUdS	ND	U	0.590	1.74	ng/L	1	07/9/2021 15:39
HFPO-DA (GenX)	ND	U	1.50	3.47	ng/L	1	07/9/2021 15:39
<b>Surrogates</b>							
13C2-PFDA	86.2			70.0-130	%	1	07/9/2021 15:39
13C2-PFHxA	81.3			70.0-130	%	1	07/9/2021 15:39
d5-NEtFOSAA	78.9			70.0-130	%	1	07/9/2021 15:39
13C3-HFPO-DA	81.2			70.0-130	%	1	07/9/2021 15:39

**Batch Information**

Analytical Batch: **XLC1738**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/09/2021 15:39**

Prep Batch: **HXX2773**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/06/2021 16:05**  
 Prep Initial Wt./Vol.: **288 mL**  
 Prep Extract Vol: **1 mL**

### Results of Fairmount, City of

Client Sample ID: **Fairmount, City of**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399025-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 14:28  
 Received Date: 07/01/2021 09:52  
 Matrix: Drinking Water

### Results by EPA 537.1

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.751	1.82	ng/L	1	07/9/2021 15:58
NMeFOSAA	ND	U	0.770	3.64	ng/L	1	07/9/2021 15:58
PFBS	ND	U	0.503	1.82	ng/L	1	07/9/2021 15:58
PFDA	ND	U	0.864	1.82	ng/L	1	07/9/2021 15:58
PFDaA	ND	U	1.02	1.82	ng/L	1	07/9/2021 15:58
PFHpA	ND	U	0.705	1.82	ng/L	1	07/9/2021 15:58
PFHxA	ND	U	0.644	1.82	ng/L	1	07/9/2021 15:58
PFHxS	ND	U	0.425	1.82	ng/L	1	07/9/2021 15:58
PFNA	ND	U	0.720	1.82	ng/L	1	07/9/2021 15:58
PFOA	ND	U	0.525	1.82	ng/L	1	07/9/2021 15:58
PFOS	ND	U	0.517	1.82	ng/L	1	07/9/2021 15:58
PFTreA	ND	U	0.345	1.82	ng/L	1	07/9/2021 15:58
PFTriA	ND	U	0.366	1.82	ng/L	1	07/9/2021 15:58
PFuNA	ND	U	0.376	1.82	ng/L	1	07/9/2021 15:58
NaDONA	ND	U	0.497	1.82	ng/L	1	07/9/2021 15:58
9Cl-PF3ONS	ND	U	0.606	1.82	ng/L	1	07/9/2021 15:58
11Cl-PF3OUdS	ND	U	0.618	1.82	ng/L	1	07/9/2021 15:58
HFPO-DA (GenX)	ND	U	1.57	3.64	ng/L	1	07/9/2021 15:58
<b>Surrogates</b>							
13C2-PFDA	90.8			70.0-130	%	1	07/9/2021 15:58
13C2-PFHxA	76.6			70.0-130	%	1	07/9/2021 15:58
d5-NEtFOSAA	85.5			70.0-130	%	1	07/9/2021 15:58
13C3-HFPO-DA	80.1			70.0-130	%	1	07/9/2021 15:58

### Batch Information

Analytical Batch: **XLC1738**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/09/2021 15:58**

Prep Batch: **HXX2773**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/06/2021 16:05**  
 Prep Initial Wt./Vol.: **275 mL**  
 Prep Extract Vol: **1 mL**

**Results of R&R Trailer Park DW**

Client Sample ID: **R&R Trailer Park DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399026-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 00:00  
 Received Date: 07/01/2021 09:53  
 Matrix: Drinking Water

**Results by EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.748	1.81	ng/L	1	07/9/2021 16:17
NMeFOSAA	ND	U	0.767	3.62	ng/L	1	07/9/2021 16:17
PFBS	ND	U	0.501	1.81	ng/L	1	07/9/2021 16:17
PFDA	ND	U	0.861	1.81	ng/L	1	07/9/2021 16:17
PFDaA	ND	U	1.01	1.81	ng/L	1	07/9/2021 16:17
PFHpA	ND	U	0.702	1.81	ng/L	1	07/9/2021 16:17
PFHxA	ND	U	0.641	1.81	ng/L	1	07/9/2021 16:17
PFHxS	ND	U	0.423	1.81	ng/L	1	07/9/2021 16:17
PFNA	ND	U	0.717	1.81	ng/L	1	07/9/2021 16:17
PFOA	ND	U	0.523	1.81	ng/L	1	07/9/2021 16:17
PFOS	ND	U	0.515	1.81	ng/L	1	07/9/2021 16:17
PFTreA	ND	U	0.344	1.81	ng/L	1	07/9/2021 16:17
PFTriA	ND	U	0.365	1.81	ng/L	1	07/9/2021 16:17
PFuNA	ND	U	0.375	1.81	ng/L	1	07/9/2021 16:17
NaDONA	ND	U	0.495	1.81	ng/L	1	07/9/2021 16:17
9Cl-PF3ONS	ND	U	0.604	1.81	ng/L	1	07/9/2021 16:17
11Cl-PF3OUdS	ND	U	0.616	1.81	ng/L	1	07/9/2021 16:17
HFPO-DA (GenX)	ND	U	1.57	3.62	ng/L	1	07/9/2021 16:17
<b>Surrogates</b>							
13C2-PFDA	95.6			70.0-130	%	1	07/9/2021 16:17
13C2-PFHxA	89.1			70.0-130	%	1	07/9/2021 16:17
d5-NEtFOSAA	89.3			70.0-130	%	1	07/9/2021 16:17
13C3-HFPO-DA	90.0			70.0-130	%	1	07/9/2021 16:17

**Batch Information**

Analytical Batch: **XLC1738**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/09/2021 16:17**

Prep Batch: **HXX2773**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/06/2021 16:05**  
 Prep Initial Wt./Vol.: **276 mL**  
 Prep Extract Vol: **1 mL**



### Results of Portal DW

Client Sample ID: **Portal DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399027-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 12:00  
 Received Date: 07/01/2021 09:53  
 Matrix: Drinking Water

### Results by EPA 537.1

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.727	1.76	ng/L	1	07/9/2021 16:55
NMeFOSAA	ND	U	0.746	3.52	ng/L	1	07/9/2021 16:55
PFBS	ND	U	0.487	1.76	ng/L	1	07/9/2021 16:55
PFDA	ND	U	0.836	1.76	ng/L	1	07/9/2021 16:55
PFDoA	ND	U	0.986	1.76	ng/L	1	07/9/2021 16:55
PFHpA	ND	U	0.682	1.76	ng/L	1	07/9/2021 16:55
PFHxA	ND	U	0.623	1.76	ng/L	1	07/9/2021 16:55
PFHxS	ND	U	0.411	1.76	ng/L	1	07/9/2021 16:55
PFNA	ND	U	0.697	1.76	ng/L	1	07/9/2021 16:55
PFOA	ND	U	0.508	1.76	ng/L	1	07/9/2021 16:55
PFOS	ND	U	0.501	1.76	ng/L	1	07/9/2021 16:55
PFTreA	ND	U	0.335	1.76	ng/L	1	07/9/2021 16:55
PFTriA	ND	U	0.355	1.76	ng/L	1	07/9/2021 16:55
PFuNA	ND	U	0.364	1.76	ng/L	1	07/9/2021 16:55
NaDONA	ND	U	0.482	1.76	ng/L	1	07/9/2021 16:55
9Cl-PF3ONS	ND	U	0.587	1.76	ng/L	1	07/9/2021 16:55
11Cl-PF3OUdS	ND	U	0.599	1.76	ng/L	1	07/9/2021 16:55
HFPO-DA (GenX)	ND	U	1.52	3.52	ng/L	1	07/9/2021 16:55
<b>Surrogates</b>							
13C2-PFDA	90.5			70.0-130	%	1	07/9/2021 16:55
13C2-PFHxA	79.4			70.0-130	%	1	07/9/2021 16:55
d5-NEtFOSAA	86.5			70.0-130	%	1	07/9/2021 16:55
13C3-HFPO-DA	81.4			70.0-130	%	1	07/9/2021 16:55

### Batch Information

Analytical Batch: **XLC1738**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/09/2021 16:55**

Prep Batch: **HXX2773**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/06/2021 16:05**  
 Prep Initial Wt./Vol.: **284 mL**  
 Prep Extract Vol: **1 mL**

### Results of Grenora DW

Client Sample ID: **Grenora DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399028-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 16:00  
 Received Date: 07/01/2021 09:54  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.879	2.13	ng/L	1	07/13/2021 16:43
NMeFOSAA	ND	U	0.901	4.26	ng/L	1	07/13/2021 16:43
PFBS	ND	U	0.588	2.13	ng/L	1	07/13/2021 16:43
PFDA	ND	U	1.01	2.13	ng/L	1	07/13/2021 16:43
PFDoA	ND	U	1.19	2.13	ng/L	1	07/13/2021 16:43
PFHpA	ND	U	0.824	2.13	ng/L	1	07/13/2021 16:43
PFHxA	<b>1.12</b>	J	0.753	2.13	ng/L	1	07/13/2021 16:43
PFHxS	<b>0.751</b>	J	0.497	2.13	ng/L	1	07/13/2021 16:43
PFNA	ND	U	0.843	2.13	ng/L	1	07/13/2021 16:43
PFOA	<b>1.34</b>	J	0.614	2.13	ng/L	1	07/13/2021 16:43
PFOS	<b>1.47</b>	J	0.605	2.13	ng/L	1	07/13/2021 16:43
PFTreA	ND	U	0.404	2.13	ng/L	1	07/13/2021 16:43
PFTriA	ND	U	0.429	2.13	ng/L	1	07/13/2021 16:43
PFuNA	ND	U	0.440	2.13	ng/L	1	07/13/2021 16:43
NaDONA	ND	U	0.582	2.13	ng/L	1	07/13/2021 16:43
9Cl-PF3ONS	ND	U	0.710	2.13	ng/L	1	07/13/2021 16:43
11Cl-PF3OUdS	ND	U	0.723	2.13	ng/L	1	07/13/2021 16:43
HFPO-DA (GenX)	ND	U	1.84	4.26	ng/L	1	07/13/2021 16:43
<b>Surrogates</b>							
13C2-PFDA	106			70.0-130	%	1	07/13/2021 16:43
13C2-PFHxA	109			70.0-130	%	1	07/13/2021 16:43
d5-NEtFOSAA	105			70.0-130	%	1	07/13/2021 16:43
13C3-HFPO-DA	111			70.0-130	%	1	07/13/2021 16:43

### Batch Information

Analytical Batch: **XLC1742**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/13/2021 16:43**

Prep Batch: **HXX2776**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 08:08**  
 Prep Initial Wt./Vol.: **235 mL**  
 Prep Extract Vol: **1 mL**

### Results of Alexander DW

Client Sample ID: **Alexander DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399029-A  
 Lab Project ID: 32101399

Collection Date: 06/29/2021 09:20  
 Received Date: 07/01/2021 09:54  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.756	1.83	ng/L	1	07/14/2021 23:49
NMeFOSAA	ND	U	0.776	3.66	ng/L	1	07/14/2021 23:49
PFBS	ND	U	0.506	1.83	ng/L	1	07/14/2021 23:49
PFDA	ND	U	0.870	1.83	ng/L	1	07/14/2021 23:49
PFDoA	ND	U	1.03	1.83	ng/L	1	07/14/2021 23:49
PFHpA	ND	U	0.710	1.83	ng/L	1	07/14/2021 23:49
PFHxA	ND	U	0.648	1.83	ng/L	1	07/14/2021 23:49
PFHxS	ND	U	0.428	1.83	ng/L	1	07/14/2021 23:49
PFNA	ND	U	0.725	1.83	ng/L	1	07/14/2021 23:49
PFOA	ND	U	0.528	1.83	ng/L	1	07/14/2021 23:49
PFOS	ND	U	0.521	1.83	ng/L	1	07/14/2021 23:49
PFTreA	ND	U	0.348	1.83	ng/L	1	07/14/2021 23:49
PFTriA	ND	U	0.369	1.83	ng/L	1	07/14/2021 23:49
PFuNA	ND	U	0.379	1.83	ng/L	1	07/14/2021 23:49
NaDONA	ND	U	0.501	1.83	ng/L	1	07/14/2021 23:49
9Cl-PF3ONS	ND	U	0.611	1.83	ng/L	1	07/14/2021 23:49
11Cl-PF3OUdS	ND	U	0.623	1.83	ng/L	1	07/14/2021 23:49
HFPO-DA (GenX)	ND	U	1.58	3.66	ng/L	1	07/14/2021 23:49
<b>Surrogates</b>							
13C2-PFDA	104			70.0-130	%	1	07/14/2021 23:49
13C2-PFHxA	101			70.0-130	%	1	07/14/2021 23:49
d5-NEtFOSAA	98.9			70.0-130	%	1	07/14/2021 23:49
13C3-HFPO-DA	104			70.0-130	%	1	07/14/2021 23:49

### Batch Information

Analytical Batch: **XLC1748**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/14/2021 23:49**

Prep Batch: **HXX2784**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/13/2021 10:03**  
 Prep Initial Wt./Vol.: **273 mL**  
 Prep Extract Vol: **1 mL**

**Results of Upper Souris System 1 DW**

Client Sample ID: **Upper Souris System 1 DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399030-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 09:40  
 Received Date: 07/01/2021 09:55  
 Matrix: Drinking Water

**Results by EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.759	1.84	ng/L	1	07/13/2021 17:02
NMeFOSAA	ND	U	0.778	3.68	ng/L	1	07/13/2021 17:02
PFBS	ND	U	0.508	1.84	ng/L	1	07/13/2021 17:02
PFDA	ND	U	0.873	1.84	ng/L	1	07/13/2021 17:02
PFDoA	ND	U	1.03	1.84	ng/L	1	07/13/2021 17:02
PFHpA	ND	U	0.712	1.84	ng/L	1	07/13/2021 17:02
PFHxA	ND	U	0.651	1.84	ng/L	1	07/13/2021 17:02
PFHxS	ND	U	0.429	1.84	ng/L	1	07/13/2021 17:02
PFNA	ND	U	0.728	1.84	ng/L	1	07/13/2021 17:02
PFOA	ND	U	0.530	1.84	ng/L	1	07/13/2021 17:02
PFOS	ND	U	0.523	1.84	ng/L	1	07/13/2021 17:02
PFTreA	ND	U	0.349	1.84	ng/L	1	07/13/2021 17:02
PFTriA	ND	U	0.370	1.84	ng/L	1	07/13/2021 17:02
PFuNA	ND	U	0.381	1.84	ng/L	1	07/13/2021 17:02
NaDONA	ND	U	0.503	1.84	ng/L	1	07/13/2021 17:02
9Cl-PF3ONS	ND	U	0.613	1.84	ng/L	1	07/13/2021 17:02
11Cl-PF3OUdS	ND	U	0.625	1.84	ng/L	1	07/13/2021 17:02
HFPO-DA (GenX)	ND	U	1.59	3.68	ng/L	1	07/13/2021 17:02
<b>Surrogates</b>							
13C2-PFDA	103			70.0-130	%	1	07/13/2021 17:02
13C2-PFHxA	91.0			70.0-130	%	1	07/13/2021 17:02
d5-NEtFOSAA	103			70.0-130	%	1	07/13/2021 17:02
13C3-HFPO-DA	96.5			70.0-130	%	1	07/13/2021 17:02

**Batch Information**

Analytical Batch: **XLC1742**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/13/2021 17:02**

Prep Batch: **HXX2776**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 08:08**  
 Prep Initial Wt./Vol.: **272 mL**  
 Prep Extract Vol: **1 mL**

### Results of Lignite DW

Client Sample ID: **Lignite DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399031-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 11:25  
 Received Date: 07/01/2021 09:55  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.727	1.76	ng/L	1	07/13/2021 17:21
NMeFOSAA	ND	U	0.746	3.52	ng/L	1	07/13/2021 17:21
PFBS	<b>0.801</b>	J	0.487	1.76	ng/L	1	07/13/2021 17:21
PFDA	ND	U	0.836	1.76	ng/L	1	07/13/2021 17:21
PFDoA	ND	U	0.986	1.76	ng/L	1	07/13/2021 17:21
PFHpA	ND	U	0.682	1.76	ng/L	1	07/13/2021 17:21
PFHxA	ND	U	0.623	1.76	ng/L	1	07/13/2021 17:21
PFHxS	ND	U	0.411	1.76	ng/L	1	07/13/2021 17:21
PFNA	ND	U	0.697	1.76	ng/L	1	07/13/2021 17:21
PFOA	ND	U	0.508	1.76	ng/L	1	07/13/2021 17:21
PFOS	ND	U	0.501	1.76	ng/L	1	07/13/2021 17:21
PFTreA	ND	U	0.335	1.76	ng/L	1	07/13/2021 17:21
PFTriA	ND	U	0.355	1.76	ng/L	1	07/13/2021 17:21
PFuNA	ND	U	0.364	1.76	ng/L	1	07/13/2021 17:21
NaDONA	ND	U	0.482	1.76	ng/L	1	07/13/2021 17:21
9Cl-PF3ONS	ND	U	0.587	1.76	ng/L	1	07/13/2021 17:21
11Cl-PF3OUdS	ND	U	0.599	1.76	ng/L	1	07/13/2021 17:21
HFPO-DA (GenX)	ND	U	1.52	3.52	ng/L	1	07/13/2021 17:21
<b>Surrogates</b>							
13C2-PFDA	103			70.0-130	%	1	07/13/2021 17:21
13C2-PFHxA	88.8			70.0-130	%	1	07/13/2021 17:21
d5-NEtFOSAA	92.8			70.0-130	%	1	07/13/2021 17:21
13C3-HFPO-DA	96.9			70.0-130	%	1	07/13/2021 17:21

### Batch Information

Analytical Batch: **XLC1742**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/13/2021 17:21**

Prep Batch: **HXX2776**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 08:08**  
 Prep Initial Wt./Vol.: **284 mL**  
 Prep Extract Vol: **1 mL**

### Results of Badlands Dev Long x T DW

Client Sample ID: **Badlands Dev Long x T DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399032-A  
 Lab Project ID: 32101399

Collection Date: 06/29/2021 10:40  
 Received Date: 07/01/2021 09:56  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.807	1.95	ng/L	1	07/15/2021 0:27
NMeFOSAA	ND	U	0.827	3.91	ng/L	1	07/15/2021 0:27
PFBS	ND	U	0.540	1.95	ng/L	1	07/15/2021 0:27
PFDA	ND	U	0.928	1.95	ng/L	1	07/15/2021 0:27
PFDoA	ND	U	1.09	1.95	ng/L	1	07/15/2021 0:27
PFHpA	ND	U	0.757	1.95	ng/L	1	07/15/2021 0:27
PFHxA	ND	U	0.691	1.95	ng/L	1	07/15/2021 0:27
PFHxS	ND	U	0.456	1.95	ng/L	1	07/15/2021 0:27
PFNA	ND	U	0.773	1.95	ng/L	1	07/15/2021 0:27
PFOA	ND	U	0.563	1.95	ng/L	1	07/15/2021 0:27
PFOS	ND	U	0.556	1.95	ng/L	1	07/15/2021 0:27
PFTreA	ND	U	0.371	1.95	ng/L	1	07/15/2021 0:27
PFTriA	ND	U	0.394	1.95	ng/L	1	07/15/2021 0:27
PFuNA	ND	U	0.404	1.95	ng/L	1	07/15/2021 0:27
NaDONA	ND	U	0.534	1.95	ng/L	1	07/15/2021 0:27
9Cl-PF3ONS	ND	U	0.651	1.95	ng/L	1	07/15/2021 0:27
11Cl-PF3OUdS	ND	U	0.664	1.95	ng/L	1	07/15/2021 0:27
HFPO-DA (GenX)	ND	U	1.69	3.91	ng/L	1	07/15/2021 0:27
<b>Surrogates</b>							
13C2-PFDA	114			70.0-130	%	1	07/15/2021 0:27
13C2-PFHxA	107			70.0-130	%	1	07/15/2021 0:27
d5-NEtFOSAA	114			70.0-130	%	1	07/15/2021 0:27
13C3-HFPO-DA	112			70.0-130	%	1	07/15/2021 0:27

### Batch Information

Analytical Batch: **XLC1748**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/15/2021 00:27**

Prep Batch: **HXX2784**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/13/2021 10:03**  
 Prep Initial Wt./Vol.: **256 mL**  
 Prep Extract Vol: **1 mL**

### Results of Minot DW

Client Sample ID: **Minot DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399033-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 08:10  
 Received Date: 07/01/2021 09:57  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.857	2.07	ng/L	1	07/13/2021 17:39
NMeFOSAA	ND	U	0.879	4.15	ng/L	1	07/13/2021 17:39
PFBS	<b>1.44</b>	J	0.574	2.07	ng/L	1	07/13/2021 17:39
PFDA	ND	U	0.985	2.07	ng/L	1	07/13/2021 17:39
PFDoA	ND	U	1.16	2.07	ng/L	1	07/13/2021 17:39
PFHpA	ND	U	0.804	2.07	ng/L	1	07/13/2021 17:39
PFHxA	<b>2.17</b>		0.734	2.07	ng/L	1	07/13/2021 17:39
PFHxS	<b>1.81</b>	J	0.484	2.07	ng/L	1	07/13/2021 17:39
PFNA	ND	U	0.822	2.07	ng/L	1	07/13/2021 17:39
PFOA	ND	U	0.599	2.07	ng/L	1	07/13/2021 17:39
PFOS	ND	U	0.590	2.07	ng/L	1	07/13/2021 17:39
PFTreA	ND	U	0.394	2.07	ng/L	1	07/13/2021 17:39
PFTriA	ND	U	0.418	2.07	ng/L	1	07/13/2021 17:39
PFuNA	ND	U	0.429	2.07	ng/L	1	07/13/2021 17:39
NaDONA	ND	U	0.567	2.07	ng/L	1	07/13/2021 17:39
9Cl-PF3ONS	<b>0.694</b>	J	0.692	2.07	ng/L	1	07/13/2021 17:39
11Cl-PF3OUdS	ND	U	0.705	2.07	ng/L	1	07/13/2021 17:39
HFPO-DA (GenX)	ND	U	1.79	4.15	ng/L	1	07/13/2021 17:39
<b>Surrogates</b>							
13C2-PFDA	111			70.0-130	%	1	07/13/2021 17:39
13C2-PFHxA	109			70.0-130	%	1	07/13/2021 17:39
d5-NEtFOSAA	109			70.0-130	%	1	07/13/2021 17:39
13C3-HFPO-DA	112			70.0-130	%	1	07/13/2021 17:39

### Batch Information

Analytical Batch: **XLC1742**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/13/2021 17:39**

Prep Batch: **HXX2776**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 08:08**  
 Prep Initial Wt./Vol.: **241 mL**  
 Prep Extract Vol: **1 mL**

### Results of Duplicate DW Mike

Client Sample ID: **Duplicate DW Mike**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399034-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 09:45  
 Received Date: 07/01/2021 09:57  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.850	2.06	ng/L	1	07/13/2021 17:58
NMeFOSAA	ND	U	0.871	4.12	ng/L	1	07/13/2021 17:58
PFBS	ND	U	0.569	2.06	ng/L	1	07/13/2021 17:58
PFDA	ND	U	0.977	2.06	ng/L	1	07/13/2021 17:58
PFDaA	ND	U	1.15	2.06	ng/L	1	07/13/2021 17:58
PFHpA	ND	U	0.797	2.06	ng/L	1	07/13/2021 17:58
PFHxA	<b>0.770</b>	J	0.728	2.06	ng/L	1	07/13/2021 17:58
PFHxS	ND	U	0.480	2.06	ng/L	1	07/13/2021 17:58
PFNA	ND	U	0.815	2.06	ng/L	1	07/13/2021 17:58
PFOA	ND	U	0.594	2.06	ng/L	1	07/13/2021 17:58
PFOS	ND	U	0.585	2.06	ng/L	1	07/13/2021 17:58
PFTreA	ND	U	0.391	2.06	ng/L	1	07/13/2021 17:58
PFTriA	ND	U	0.415	2.06	ng/L	1	07/13/2021 17:58
PFuNA	ND	U	0.426	2.06	ng/L	1	07/13/2021 17:58
NaDONA	ND	U	0.563	2.06	ng/L	1	07/13/2021 17:58
9Cl-PF3ONS	ND	U	0.686	2.06	ng/L	1	07/13/2021 17:58
11Cl-PF3OUdS	ND	U	0.700	2.06	ng/L	1	07/13/2021 17:58
HFPO-DA (GenX)	ND	U	1.78	4.12	ng/L	1	07/13/2021 17:58
<b>Surrogates</b>							
13C2-PFDA	103			70.0-130	%	1	07/13/2021 17:58
13C2-PFHxA	92.6			70.0-130	%	1	07/13/2021 17:58
d5-NEtFOSAA	100			70.0-130	%	1	07/13/2021 17:58
13C3-HFPO-DA	97.3			70.0-130	%	1	07/13/2021 17:58

### Batch Information

Analytical Batch: **XLC1742**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/13/2021 17:58**

Prep Batch: **HXX2776**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 08:08**  
 Prep Initial Wt./Vol.: **243 mL**  
 Prep Extract Vol: **1 mL**



### Results of Dunseith DW

Client Sample ID: **Dunseith DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399035-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 13:03  
 Received Date: 07/01/2021 09:58  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.797	1.93	ng/L	1	07/13/2021 18:17
NMeFOSAA	ND	U	0.818	3.86	ng/L	1	07/13/2021 18:17
PFBS	ND	U	0.534	1.93	ng/L	1	07/13/2021 18:17
PFDA	ND	U	0.917	1.93	ng/L	1	07/13/2021 18:17
PFDoA	ND	U	1.08	1.93	ng/L	1	07/13/2021 18:17
PFHpA	ND	U	0.748	1.93	ng/L	1	07/13/2021 18:17
PFHxA	ND	U	0.683	1.93	ng/L	1	07/13/2021 18:17
PFHxS	ND	U	0.451	1.93	ng/L	1	07/13/2021 18:17
PFNA	ND	U	0.764	1.93	ng/L	1	07/13/2021 18:17
PFOA	ND	U	0.557	1.93	ng/L	1	07/13/2021 18:17
PFOS	ND	U	0.549	1.93	ng/L	1	07/13/2021 18:17
PFTreA	ND	U	0.367	1.93	ng/L	1	07/13/2021 18:17
PFTriA	ND	U	0.389	1.93	ng/L	1	07/13/2021 18:17
PFuNA	ND	U	0.400	1.93	ng/L	1	07/13/2021 18:17
NaDONA	ND	U	0.528	1.93	ng/L	1	07/13/2021 18:17
9Cl-PF3ONS	ND	U	0.644	1.93	ng/L	1	07/13/2021 18:17
11Cl-PF3OUdS	ND	U	0.656	1.93	ng/L	1	07/13/2021 18:17
HFPO-DA (GenX)	ND	U	1.67	3.86	ng/L	1	07/13/2021 18:17
<b>Surrogates</b>							
13C2-PFDA	106			70.0-130	%	1	07/13/2021 18:17
13C2-PFHxA	95.6			70.0-130	%	1	07/13/2021 18:17
d5-NEtFOSAA	105			70.0-130	%	1	07/13/2021 18:17
13C3-HFPO-DA	101			70.0-130	%	1	07/13/2021 18:17

### Batch Information

Analytical Batch: **XLC1742**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/13/2021 18:17**

Prep Batch: **HXX2776**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 08:08**  
 Prep Initial Wt./Vol.: **259 mL**  
 Prep Extract Vol: **1 mL**

### Results of Maxbass DW

Client Sample ID: **Maxbass DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399036-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 15:16  
 Received Date: 07/01/2021 09:59  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.722	1.75	ng/L	1	07/15/2021 11:14
NMeFOSAA	ND	U	0.740	3.50	ng/L	1	07/15/2021 11:14
PFBS	ND	U	0.483	1.75	ng/L	1	07/15/2021 11:14
PFDA	ND	U	0.830	1.75	ng/L	1	07/15/2021 11:14
PFDoA	ND	U	0.979	1.75	ng/L	1	07/15/2021 11:14
PFHpA	ND	U	0.677	1.75	ng/L	1	07/15/2021 11:14
PFHxA	ND	U	0.619	1.75	ng/L	1	07/15/2021 11:14
PFHxS	ND	U	0.408	1.75	ng/L	1	07/15/2021 11:14
PFNA	ND	U	0.692	1.75	ng/L	1	07/15/2021 11:14
PFOA	ND	U	0.504	1.75	ng/L	1	07/15/2021 11:14
PFOS	ND	U	0.497	1.75	ng/L	1	07/15/2021 11:14
PFTreA	ND	U	0.332	1.75	ng/L	1	07/15/2021 11:14
PFTriA	ND	U	0.352	1.75	ng/L	1	07/15/2021 11:14
PFuNA	ND	U	0.362	1.75	ng/L	1	07/15/2021 11:14
NaDONA	ND	U	0.478	1.75	ng/L	1	07/15/2021 11:14
9Cl-PF3ONS	ND	U	0.583	1.75	ng/L	1	07/15/2021 11:14
11Cl-PF3OUdS	ND	U	0.594	1.75	ng/L	1	07/15/2021 11:14
HFPO-DA (GenX)	ND	U	1.51	3.50	ng/L	1	07/15/2021 11:14
<b>Surrogates</b>							
13C2-PFDA	165*			70.0-130	%	1	07/15/2021 11:14
13C2-PFHxA	157*			70.0-130	%	1	07/15/2021 11:14
d5-NEtFOSAA	163*			70.0-130	%	1	07/15/2021 11:14
13C3-HFPO-DA	165*			70.0-130	%	1	07/15/2021 11:14

### Batch Information

Analytical Batch: **XLC1746**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/15/2021 11:14**

Prep Batch: **HXX2776**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 08:08**  
 Prep Initial Wt./Vol.: **286 mL**  
 Prep Extract Vol: **1 mL**

### Results of Souris DW

Client Sample ID: **Souris DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399037-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 14:27  
 Received Date: 07/01/2021 10:00  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.756	1.83	ng/L	1	07/14/2021 12:27
NMeFOSAA	ND	U	0.776	3.66	ng/L	1	07/14/2021 12:27
PFBS	ND	U	0.506	1.83	ng/L	1	07/14/2021 12:27
PFDA	ND	U	0.870	1.83	ng/L	1	07/14/2021 12:27
PFDoA	ND	U	1.03	1.83	ng/L	1	07/14/2021 12:27
PFHpA	ND	U	0.710	1.83	ng/L	1	07/14/2021 12:27
PFHxA	ND	U	0.648	1.83	ng/L	1	07/14/2021 12:27
PFHxS	ND	U	0.428	1.83	ng/L	1	07/14/2021 12:27
PFNA	ND	U	0.725	1.83	ng/L	1	07/14/2021 12:27
PFOA	ND	U	0.528	1.83	ng/L	1	07/14/2021 12:27
PFOS	ND	U	0.521	1.83	ng/L	1	07/14/2021 12:27
PFTreA	ND	U	0.348	1.83	ng/L	1	07/14/2021 12:27
PFTriA	ND	U	0.369	1.83	ng/L	1	07/14/2021 12:27
PFuNA	ND	U	0.379	1.83	ng/L	1	07/14/2021 12:27
NaDONA	ND	U	0.501	1.83	ng/L	1	07/14/2021 12:27
9Cl-PF3ONS	ND	U	0.611	1.83	ng/L	1	07/14/2021 12:27
11Cl-PF3OUdS	ND	U	0.623	1.83	ng/L	1	07/14/2021 12:27
HFPO-DA (GenX)	ND	U	1.58	3.66	ng/L	1	07/14/2021 12:27
<b>Surrogates</b>							
13C2-PFDA	112			70.0-130	%	1	07/14/2021 12:27
13C2-PFHxA	107			70.0-130	%	1	07/14/2021 12:27
d5-NEtFOSAA	105			70.0-130	%	1	07/14/2021 12:27
13C3-HFPO-DA	111			70.0-130	%	1	07/14/2021 12:27

### Batch Information

Analytical Batch: **XLC1746**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/14/2021 12:27**

Prep Batch: **HXX2776**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 08:08**  
 Prep Initial Wt./Vol.: **273 mL**  
 Prep Extract Vol: **1 mL**

**Results of All Seasons DW**

Client Sample ID: **All Seasons DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399038-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 13:52  
 Received Date: 07/01/2021 10:00  
 Matrix: Drinking Water

**Results by EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.732	1.77	ng/L	1	07/14/2021 12:46
NMeFOSAA	ND	U	0.751	3.55	ng/L	1	07/14/2021 12:46
PFBS	<b>0.637</b>	J	0.490	1.77	ng/L	1	07/14/2021 12:46
PFDA	ND	U	0.842	1.77	ng/L	1	07/14/2021 12:46
PFDaA	ND	U	0.993	1.77	ng/L	1	07/14/2021 12:46
PFHpA	ND	U	0.687	1.77	ng/L	1	07/14/2021 12:46
PFHxA	ND	U	0.628	1.77	ng/L	1	07/14/2021 12:46
PFHxS	ND	U	0.414	1.77	ng/L	1	07/14/2021 12:46
PFNA	ND	U	0.702	1.77	ng/L	1	07/14/2021 12:46
PFOA	ND	U	0.512	1.77	ng/L	1	07/14/2021 12:46
PFOS	ND	U	0.504	1.77	ng/L	1	07/14/2021 12:46
PFTreA	ND	U	0.337	1.77	ng/L	1	07/14/2021 12:46
PFTriA	ND	U	0.357	1.77	ng/L	1	07/14/2021 12:46
PFuNA	ND	U	0.367	1.77	ng/L	1	07/14/2021 12:46
NaDONA	ND	U	0.485	1.77	ng/L	1	07/14/2021 12:46
9Cl-PF3ONS	ND	U	0.591	1.77	ng/L	1	07/14/2021 12:46
11Cl-PF3OUdS	ND	U	0.603	1.77	ng/L	1	07/14/2021 12:46
HFPO-DA (GenX)	ND	U	1.53	3.55	ng/L	1	07/14/2021 12:46
<b>Surrogates</b>							
13C2-PFDA	160*			70.0-130	%	1	07/14/2021 12:46
13C2-PFHxA	150*			70.0-130	%	1	07/14/2021 12:46
d5-NEtFOSAA	143*			70.0-130	%	1	07/14/2021 12:46
13C3-HFPO-DA	156*			70.0-130	%	1	07/14/2021 12:46

**Batch Information**

Analytical Batch: **XLC1746**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/14/2021 12:46**

Prep Batch: **HXX2776**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 08:08**  
 Prep Initial Wt./Vol.: **282 mL**  
 Prep Extract Vol: **1 mL**

**Results of St. John DW**

Client Sample ID: **St. John DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399039-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 11:27  
 Received Date: 07/01/2021 10:01  
 Matrix: Drinking Water

**Results by EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.779	1.89	ng/L	1	07/13/2021 19:51
NMeFOSAA	ND	U	0.799	3.77	ng/L	1	07/13/2021 19:51
PFBS	ND	U	0.522	1.89	ng/L	1	07/13/2021 19:51
PFDA	ND	U	0.896	1.89	ng/L	1	07/13/2021 19:51
PFDoA	ND	U	1.06	1.89	ng/L	1	07/13/2021 19:51
PFHpA	ND	U	0.731	1.89	ng/L	1	07/13/2021 19:51
PFHxA	ND	U	0.668	1.89	ng/L	1	07/13/2021 19:51
PFHxS	ND	U	0.441	1.89	ng/L	1	07/13/2021 19:51
PFNA	ND	U	0.747	1.89	ng/L	1	07/13/2021 19:51
PFOA	ND	U	0.544	1.89	ng/L	1	07/13/2021 19:51
PFOS	ND	U	0.537	1.89	ng/L	1	07/13/2021 19:51
PFTreA	ND	U	0.358	1.89	ng/L	1	07/13/2021 19:51
PFTriA	ND	U	0.380	1.89	ng/L	1	07/13/2021 19:51
PFuNA	ND	U	0.391	1.89	ng/L	1	07/13/2021 19:51
NaDONA	ND	U	0.516	1.89	ng/L	1	07/13/2021 19:51
9Cl-PF3ONS	ND	U	0.629	1.89	ng/L	1	07/13/2021 19:51
11Cl-PF3OUdS	ND	U	0.642	1.89	ng/L	1	07/13/2021 19:51
HFPO-DA (GenX)	ND	U	1.63	3.77	ng/L	1	07/13/2021 19:51
<b>Surrogates</b>							
13C2-PFDA	114			70.0-130	%	1	07/13/2021 19:51
13C2-PFHxA	109			70.0-130	%	1	07/13/2021 19:51
d5-NEtFOSAA	96.6			70.0-130	%	1	07/13/2021 19:51
13C3-HFPO-DA	114			70.0-130	%	1	07/13/2021 19:51

**Batch Information**

Analytical Batch: **XLC1742**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/13/2021 19:51**

Prep Batch: **HXX2776**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 08:08**  
 Prep Initial Wt./Vol.: **265 mL**  
 Prep Extract Vol: **1 mL**

### Results of Rolette DW

Client Sample ID: **Rolette DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399040-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 12:27  
 Received Date: 07/01/2021 10:01  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.720	1.74	ng/L	1	07/13/2021 20:10
NMeFOSAA	ND	U	0.738	3.48	ng/L	1	07/13/2021 20:10
PFBS	ND	U	0.482	1.74	ng/L	1	07/13/2021 20:10
PFDA	ND	U	0.828	1.74	ng/L	1	07/13/2021 20:10
PFDaA	ND	U	0.976	1.74	ng/L	1	07/13/2021 20:10
PFHpA	ND	U	0.675	1.74	ng/L	1	07/13/2021 20:10
PFHxA	ND	U	0.617	1.74	ng/L	1	07/13/2021 20:10
PFHxS	ND	U	0.407	1.74	ng/L	1	07/13/2021 20:10
PFNA	ND	U	0.690	1.74	ng/L	1	07/13/2021 20:10
PFOA	ND	U	0.503	1.74	ng/L	1	07/13/2021 20:10
PFOS	ND	U	0.496	1.74	ng/L	1	07/13/2021 20:10
PFTreA	ND	U	0.331	1.74	ng/L	1	07/13/2021 20:10
PFTriA	ND	U	0.351	1.74	ng/L	1	07/13/2021 20:10
PFuNA	ND	U	0.361	1.74	ng/L	1	07/13/2021 20:10
NaDONA	ND	U	0.476	1.74	ng/L	1	07/13/2021 20:10
9Cl-PF3ONS	ND	U	0.581	1.74	ng/L	1	07/13/2021 20:10
11Cl-PF3OUdS	ND	U	0.592	1.74	ng/L	1	07/13/2021 20:10
HFPO-DA (GenX)	ND	U	1.51	3.48	ng/L	1	07/13/2021 20:10
<b>Surrogates</b>							
13C2-PFDA	111			70.0-130	%	1	07/13/2021 20:10
13C2-PFHxA	118			70.0-130	%	1	07/13/2021 20:10
d5-NEtFOSAA	94.1			70.0-130	%	1	07/13/2021 20:10
13C3-HFPO-DA	123			70.0-130	%	1	07/13/2021 20:10

### Batch Information

Analytical Batch: **XLC1742**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/13/2021 20:10**

Prep Batch: **HXX2776**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 08:08**  
 Prep Initial Wt./Vol.: **287 mL**  
 Prep Extract Vol: **1 mL**

### Results of Karlsruhe DW

Client Sample ID: **Karlsruhe DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399041-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 12:42  
 Received Date: 07/01/2021 10:02  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.797	1.93	ng/L	1	07/14/2021 14:28
NMeFOSAA	ND	U	0.818	3.86	ng/L	1	07/14/2021 14:28
PFBS	<b>0.681</b>	J	0.534	1.93	ng/L	1	07/14/2021 14:28
PFDA	ND	U	0.917	1.93	ng/L	1	07/14/2021 14:28
PFDaA	ND	U	1.08	1.93	ng/L	1	07/14/2021 14:28
PFHpA	ND	U	0.748	1.93	ng/L	1	07/14/2021 14:28
PFHxA	<b>0.697</b>	J	0.683	1.93	ng/L	1	07/14/2021 14:28
PFHxS	<b>0.843</b>	J	0.451	1.93	ng/L	1	07/14/2021 14:28
PFNA	ND	U	0.764	1.93	ng/L	1	07/14/2021 14:28
PFOA	ND	U	0.557	1.93	ng/L	1	07/14/2021 14:28
PFOS	ND	U	0.549	1.93	ng/L	1	07/14/2021 14:28
PFTreA	ND	U	0.367	1.93	ng/L	1	07/14/2021 14:28
PFTriA	ND	U	0.389	1.93	ng/L	1	07/14/2021 14:28
PFuNA	ND	U	0.400	1.93	ng/L	1	07/14/2021 14:28
NaDONA	ND	U	0.528	1.93	ng/L	1	07/14/2021 14:28
9Cl-PF3ONS	ND	U	0.644	1.93	ng/L	1	07/14/2021 14:28
11Cl-PF3OUdS	ND	U	0.656	1.93	ng/L	1	07/14/2021 14:28
HFPO-DA (GenX)	ND	U	1.67	3.86	ng/L	1	07/14/2021 14:28
<b>Surrogates</b>							
13C2-PFDA	109			70.0-130	%	1	07/14/2021 14:28
13C2-PFHxA	109			70.0-130	%	1	07/14/2021 14:28
d5-NEtFOSAA	102			70.0-130	%	1	07/14/2021 14:28
13C3-HFPO-DA	115			70.0-130	%	1	07/14/2021 14:28

### Batch Information

Analytical Batch: **XLC1746**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/14/2021 14:28**

Prep Batch: **HXX2776**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 08:08**  
 Prep Initial Wt./Vol.: **259 mL**  
 Prep Extract Vol: **1 mL**

### Results of Selz DW

Client Sample ID: **Selz DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399042-A  
 Lab Project ID: 32101399

Collection Date: 06/29/2021 13:45  
 Received Date: 07/01/2021 10:02  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.743	1.80	ng/L	1	07/15/2021 0:45
NMeFOSAA	ND	U	0.762	3.60	ng/L	1	07/15/2021 0:45
PFBS	ND	U	0.497	1.80	ng/L	1	07/15/2021 0:45
PFDA	ND	U	0.854	1.80	ng/L	1	07/15/2021 0:45
PFDoA	ND	U	1.01	1.80	ng/L	1	07/15/2021 0:45
PFHpA	ND	U	0.697	1.80	ng/L	1	07/15/2021 0:45
PFHxA	ND	U	0.637	1.80	ng/L	1	07/15/2021 0:45
PFHxS	ND	U	0.420	1.80	ng/L	1	07/15/2021 0:45
PFNA	ND	U	0.712	1.80	ng/L	1	07/15/2021 0:45
PFOA	ND	U	0.519	1.80	ng/L	1	07/15/2021 0:45
PFOS	ND	U	0.512	1.80	ng/L	1	07/15/2021 0:45
PFTreA	ND	U	0.342	1.80	ng/L	1	07/15/2021 0:45
PFTriA	ND	U	0.362	1.80	ng/L	1	07/15/2021 0:45
PFuNA	ND	U	0.372	1.80	ng/L	1	07/15/2021 0:45
NaDONA	ND	U	0.492	1.80	ng/L	1	07/15/2021 0:45
9Cl-PF3ONS	ND	U	0.600	1.80	ng/L	1	07/15/2021 0:45
11Cl-PF3OUdS	ND	U	0.612	1.80	ng/L	1	07/15/2021 0:45
HFPO-DA (GenX)	ND	U	1.56	3.60	ng/L	1	07/15/2021 0:45
<b>Surrogates</b>							
13C2-PFDA	103			70.0-130	%	1	07/15/2021 0:45
13C2-PFHxA	92.6			70.0-130	%	1	07/15/2021 0:45
d5-NEtFOSAA	96.4			70.0-130	%	1	07/15/2021 0:45
13C3-HFPO-DA	98.1			70.0-130	%	1	07/15/2021 0:45

### Batch Information

Analytical Batch: **XLC1748**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/15/2021 00:45**

Prep Batch: **HXX2784**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/13/2021 10:03**  
 Prep Initial Wt./Vol.: **278 mL**  
 Prep Extract Vol: **1 mL**



### Results of Shawn's DUP

Client Sample ID: **Shawn's DUP**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399043-A  
 Lab Project ID: 32101399

Collection Date: 06/29/2021 11:55  
 Received Date: 07/01/2021 10:03  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.748	1.81	ng/L	1	07/15/2021 1:04
NMeFOSAA	ND	U	0.767	3.62	ng/L	1	07/15/2021 1:04
PFBS	ND	U	0.501	1.81	ng/L	1	07/15/2021 1:04
PFDA	ND	U	0.861	1.81	ng/L	1	07/15/2021 1:04
PFDaA	ND	U	1.01	1.81	ng/L	1	07/15/2021 1:04
PFHpA	ND	U	0.702	1.81	ng/L	1	07/15/2021 1:04
PFHxA	ND	U	0.641	1.81	ng/L	1	07/15/2021 1:04
PFHxS	ND	U	0.423	1.81	ng/L	1	07/15/2021 1:04
PFNA	ND	U	0.717	1.81	ng/L	1	07/15/2021 1:04
PFOA	ND	U	0.523	1.81	ng/L	1	07/15/2021 1:04
PFOS	ND	U	0.515	1.81	ng/L	1	07/15/2021 1:04
PFTreA	ND	U	0.344	1.81	ng/L	1	07/15/2021 1:04
PFTriA	ND	U	0.365	1.81	ng/L	1	07/15/2021 1:04
PFuNA	ND	U	0.375	1.81	ng/L	1	07/15/2021 1:04
NaDONA	ND	U	0.495	1.81	ng/L	1	07/15/2021 1:04
9Cl-PF3ONS	ND	U	0.604	1.81	ng/L	1	07/15/2021 1:04
11Cl-PF3OUdS	ND	U	0.616	1.81	ng/L	1	07/15/2021 1:04
HFPO-DA (GenX)	ND	U	1.57	3.62	ng/L	1	07/15/2021 1:04

### Surrogates

13C2-PFDA	119			70.0-130	%	1	07/15/2021 1:04
13C2-PFHxA	113			70.0-130	%	1	07/15/2021 1:04
d5-NEtFOSAA	113			70.0-130	%	1	07/15/2021 1:04
13C3-HFPO-DA	119			70.0-130	%	1	07/15/2021 1:04

### Batch Information

Analytical Batch: **XLC1748**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/15/2021 01:04**

Prep Batch: **HXX2784**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/13/2021 10:03**  
 Prep Initial Wt./Vol.: **276 mL**  
 Prep Extract Vol: **1 mL**

### Results of Westhope DW

Client Sample ID: **Westhope DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399044-A  
 Lab Project ID: 32101399

Collection Date: 06/29/2021 10:13  
 Received Date: 07/01/2021 10:04  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.748	1.81	ng/L	1	07/14/2021 0:14
NMeFOSAA	ND	U	0.767	3.62	ng/L	1	07/14/2021 0:14
PFBS	<b>0.501</b>	J	0.501	1.81	ng/L	1	07/14/2021 0:14
PFDA	ND	U	0.861	1.81	ng/L	1	07/14/2021 0:14
PFDaA	ND	U	1.01	1.81	ng/L	1	07/14/2021 0:14
PFHpA	ND	U	0.702	1.81	ng/L	1	07/14/2021 0:14
PFHxA	ND	U	0.641	1.81	ng/L	1	07/14/2021 0:14
PFHxS	ND	U	0.423	1.81	ng/L	1	07/14/2021 0:14
PFNA	ND	U	0.717	1.81	ng/L	1	07/14/2021 0:14
PFOA	ND	U	0.523	1.81	ng/L	1	07/14/2021 0:14
PFOS	ND	U	0.515	1.81	ng/L	1	07/14/2021 0:14
PFTreA	ND	U	0.344	1.81	ng/L	1	07/14/2021 0:14
PFTriA	ND	U	0.365	1.81	ng/L	1	07/14/2021 0:14
PFuNA	ND	U	0.375	1.81	ng/L	1	07/14/2021 0:14
NaDONA	ND	U	0.495	1.81	ng/L	1	07/14/2021 0:14
9Cl-PF3ONS	ND	U	0.604	1.81	ng/L	1	07/14/2021 0:14
11Cl-PF3OUdS	ND	U	0.616	1.81	ng/L	1	07/14/2021 0:14
HFPO-DA (GenX)	ND	U	1.57	3.62	ng/L	1	07/14/2021 0:14
<b>Surrogates</b>							
13C2-PFDA	103			70.0-130	%	1	07/14/2021 0:14
13C2-PFHxA	94.2			70.0-130	%	1	07/14/2021 0:14
d5-NEtFOSAA	103			70.0-130	%	1	07/14/2021 0:14
13C3-HFPO-DA	100			70.0-130	%	1	07/14/2021 0:14

### Batch Information

Analytical Batch: **XLC1743**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/14/2021 00:14**

Prep Batch: **HXX2781**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 15:16**  
 Prep Initial Wt./Vol.: **276 mL**  
 Prep Extract Vol: **1 mL**

### Results of Velva DW

Client Sample ID: **Velva DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399045-A  
 Lab Project ID: 32101399

Collection Date: 06/29/2021 11:55  
 Received Date: 07/01/2021 10:04  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.813	1.97	ng/L	1	07/14/2021 0:33
NMeFOSAA	ND	U	0.834	3.94	ng/L	1	07/14/2021 0:33
PFBS	ND	U	0.544	1.97	ng/L	1	07/14/2021 0:33
PFDA	ND	U	0.935	1.97	ng/L	1	07/14/2021 0:33
PFDaA	ND	U	1.10	1.97	ng/L	1	07/14/2021 0:33
PFHpA	ND	U	0.763	1.97	ng/L	1	07/14/2021 0:33
PFHxA	ND	U	0.697	1.97	ng/L	1	07/14/2021 0:33
PFHxS	ND	U	0.460	1.97	ng/L	1	07/14/2021 0:33
PFNA	ND	U	0.780	1.97	ng/L	1	07/14/2021 0:33
PFOA	ND	U	0.568	1.97	ng/L	1	07/14/2021 0:33
PFOS	ND	U	0.560	1.97	ng/L	1	07/14/2021 0:33
PFTreA	ND	U	0.374	1.97	ng/L	1	07/14/2021 0:33
PFTriA	ND	U	0.397	1.97	ng/L	1	07/14/2021 0:33
PFuNA	ND	U	0.407	1.97	ng/L	1	07/14/2021 0:33
NaDONA	ND	U	0.538	1.97	ng/L	1	07/14/2021 0:33
9Cl-PF3ONS	ND	U	0.656	1.97	ng/L	1	07/14/2021 0:33
11Cl-PF3OUdS	ND	U	0.669	1.97	ng/L	1	07/14/2021 0:33
HFPO-DA (GenX)	ND	U	1.70	3.94	ng/L	1	07/14/2021 0:33
<b>Surrogates</b>							
13C2-PFDA	101			70.0-130	%	1	07/14/2021 0:33
13C2-PFHxA	102			70.0-130	%	1	07/14/2021 0:33
d5-NEtFOSAA	105			70.0-130	%	1	07/14/2021 0:33
13C3-HFPO-DA	106			70.0-130	%	1	07/14/2021 0:33

### Batch Information

Analytical Batch: **XLC1743**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/14/2021 00:33**

Prep Batch: **HXX2781**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 15:16**  
 Prep Initial Wt./Vol.: **254 mL**  
 Prep Extract Vol: **1 mL**

### Results of Cass Rural WD-Phase 1

Client Sample ID: **Cass Rural WD-Phase 1**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399046-A  
 Lab Project ID: 32101399

Collection Date: 06/29/2021 08:48  
 Received Date: 07/01/2021 10:04  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.725	1.75	ng/L	1	07/14/2021 0:52
NMeFOSAA	ND	U	0.743	3.51	ng/L	1	07/14/2021 0:52
PFBS	ND	U	0.485	1.75	ng/L	1	07/14/2021 0:52
PFDA	ND	U	0.833	1.75	ng/L	1	07/14/2021 0:52
PFDoA	ND	U	0.982	1.75	ng/L	1	07/14/2021 0:52
PFHpA	ND	U	0.680	1.75	ng/L	1	07/14/2021 0:52
PFHxA	ND	U	0.621	1.75	ng/L	1	07/14/2021 0:52
PFHxS	ND	U	0.410	1.75	ng/L	1	07/14/2021 0:52
PFNA	ND	U	0.695	1.75	ng/L	1	07/14/2021 0:52
PFOA	ND	U	0.506	1.75	ng/L	1	07/14/2021 0:52
PFOS	ND	U	0.499	1.75	ng/L	1	07/14/2021 0:52
PFTreA	ND	U	0.333	1.75	ng/L	1	07/14/2021 0:52
PFTriA	ND	U	0.354	1.75	ng/L	1	07/14/2021 0:52
PFuNA	ND	U	0.363	1.75	ng/L	1	07/14/2021 0:52
NaDONA	ND	U	0.480	1.75	ng/L	1	07/14/2021 0:52
9Cl-PF3ONS	ND	U	0.585	1.75	ng/L	1	07/14/2021 0:52
11Cl-PF3OUdS	ND	U	0.596	1.75	ng/L	1	07/14/2021 0:52
HFPO-DA (GenX)	ND	U	1.52	3.51	ng/L	1	07/14/2021 0:52
<b>Surrogates</b>							
13C2-PFDA	120			70.0-130	%	1	07/14/2021 0:52
13C2-PFHxA	110			70.0-130	%	1	07/14/2021 0:52
d5-NEtFOSAA	112			70.0-130	%	1	07/14/2021 0:52
13C3-HFPO-DA	115			70.0-130	%	1	07/14/2021 0:52

### Batch Information

Analytical Batch: **XLC1743**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/14/2021 00:52**

Prep Batch: **HXX2781**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 15:16**  
 Prep Initial Wt./Vol.: **285 mL**  
 Prep Extract Vol: **1 mL**

### Results of Horace DW

Client Sample ID: **Horace DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399047-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 15:10  
 Received Date: 07/01/2021 10:05  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.717	1.74	ng/L	1	07/14/2021 15:05
NMeFOSAA	ND	U	0.735	3.47	ng/L	1	07/14/2021 15:05
PFBS	ND	U	0.480	1.74	ng/L	1	07/14/2021 15:05
PFDA	ND	U	0.825	1.74	ng/L	1	07/14/2021 15:05
PFDoA	ND	U	0.972	1.74	ng/L	1	07/14/2021 15:05
PFHpA	ND	U	0.673	1.74	ng/L	1	07/14/2021 15:05
PFHxA	ND	U	0.615	1.74	ng/L	1	07/14/2021 15:05
PFHxS	ND	U	0.405	1.74	ng/L	1	07/14/2021 15:05
PFNA	ND	U	0.688	1.74	ng/L	1	07/14/2021 15:05
PFOA	ND	U	0.501	1.74	ng/L	1	07/14/2021 15:05
PFOS	ND	U	0.494	1.74	ng/L	1	07/14/2021 15:05
PFTreA	ND	U	0.330	1.74	ng/L	1	07/14/2021 15:05
PFTriA	ND	U	0.350	1.74	ng/L	1	07/14/2021 15:05
PFuNA	ND	U	0.359	1.74	ng/L	1	07/14/2021 15:05
NaDONA	ND	U	0.475	1.74	ng/L	1	07/14/2021 15:05
9Cl-PF3ONS	ND	U	0.579	1.74	ng/L	1	07/14/2021 15:05
11Cl-PF3OUdS	ND	U	0.590	1.74	ng/L	1	07/14/2021 15:05
HFPO-DA (GenX)	ND	U	1.50	3.47	ng/L	1	07/14/2021 15:05
<b>Surrogates</b>							
13C2-PFDA	114			70.0-130	%	1	07/14/2021 15:05
13C2-PFHxA	114			70.0-130	%	1	07/14/2021 15:05
d5-NEtFOSAA	117			70.0-130	%	1	07/14/2021 15:05
13C3-HFPO-DA	118			70.0-130	%	1	07/14/2021 15:05

### Batch Information

Analytical Batch: **XLC1746**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/14/2021 15:05**

Prep Batch: **HXX2776**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 08:08**  
 Prep Initial Wt./Vol.: **288 mL**  
 Prep Extract Vol: **1 mL**

### Results of Fargo DW

Client Sample ID: **Fargo DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399048-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 14:20  
 Received Date: 07/01/2021 10:06  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.732	1.77	ng/L	1	07/9/2021 20:47
NMeFOSAA	ND	U	0.751	3.55	ng/L	1	07/9/2021 20:47
PFBS	ND	U	0.490	1.77	ng/L	1	07/9/2021 20:47
PFDA	ND	U	0.842	1.77	ng/L	1	07/9/2021 20:47
PFDaA	ND	U	0.993	1.77	ng/L	1	07/9/2021 20:47
PFHpA	ND	U	0.687	1.77	ng/L	1	07/9/2021 20:47
PFHxA	<b>0.733</b>	J	0.628	1.77	ng/L	1	07/9/2021 20:47
PFHxS	ND	U	0.414	1.77	ng/L	1	07/9/2021 20:47
PFNA	ND	U	0.702	1.77	ng/L	1	07/9/2021 20:47
PFOA	ND	U	0.512	1.77	ng/L	1	07/9/2021 20:47
PFOS	ND	U	0.504	1.77	ng/L	1	07/9/2021 20:47
PFTreA	ND	U	0.337	1.77	ng/L	1	07/9/2021 20:47
PFTriA	ND	U	0.357	1.77	ng/L	1	07/9/2021 20:47
PFuNA	ND	U	0.367	1.77	ng/L	1	07/9/2021 20:47
NaDONA	ND	U	0.485	1.77	ng/L	1	07/9/2021 20:47
9Cl-PF3ONS	ND	U	0.591	1.77	ng/L	1	07/9/2021 20:47
11Cl-PF3OUdS	ND	U	0.603	1.77	ng/L	1	07/9/2021 20:47
HFPO-DA (GenX)	ND	U	1.53	3.55	ng/L	1	07/9/2021 20:47
<b>Surrogates</b>							
13C2-PFDA	86.5			70.0-130	%	1	07/9/2021 20:47
13C2-PFHxA	82.5			70.0-130	%	1	07/9/2021 20:47
d5-NEtFOSAA	83.7			70.0-130	%	1	07/9/2021 20:47
13C3-HFPO-DA	82.4			70.0-130	%	1	07/9/2021 20:47

### Batch Information

Analytical Batch: **XLC1741**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/09/2021 20:47**

Prep Batch: **HXX2774**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/07/2021 15:24**  
 Prep Initial Wt./Vol.: **282 mL**  
 Prep Extract Vol: **1 mL**

### Results of Valley City DW

Client Sample ID: **Valley City DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399049-A  
 Lab Project ID: 32101399

Collection Date: 06/29/2021 11:00  
 Received Date: 07/01/2021 10:06  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.727	1.76	ng/L	1	07/14/2021 1:29
NMeFOSAA	ND	U	0.746	3.52	ng/L	1	07/14/2021 1:29
PFBS	ND	U	0.487	1.76	ng/L	1	07/14/2021 1:29
PFDA	ND	U	0.836	1.76	ng/L	1	07/14/2021 1:29
PFDoA	ND	U	0.986	1.76	ng/L	1	07/14/2021 1:29
PFHpA	ND	U	0.682	1.76	ng/L	1	07/14/2021 1:29
PFHxA	ND	U	0.623	1.76	ng/L	1	07/14/2021 1:29
PFHxS	ND	U	0.411	1.76	ng/L	1	07/14/2021 1:29
PFNA	ND	U	0.697	1.76	ng/L	1	07/14/2021 1:29
PFOA	ND	U	0.508	1.76	ng/L	1	07/14/2021 1:29
PFOS	ND	U	0.501	1.76	ng/L	1	07/14/2021 1:29
PFTreA	ND	U	0.335	1.76	ng/L	1	07/14/2021 1:29
PFTriA	ND	U	0.355	1.76	ng/L	1	07/14/2021 1:29
PFuNA	ND	U	0.364	1.76	ng/L	1	07/14/2021 1:29
NaDONA	ND	U	0.482	1.76	ng/L	1	07/14/2021 1:29
9Cl-PF3ONS	ND	U	0.587	1.76	ng/L	1	07/14/2021 1:29
11Cl-PF3OUdS	ND	U	0.599	1.76	ng/L	1	07/14/2021 1:29
HFPO-DA (GenX)	ND	U	1.52	3.52	ng/L	1	07/14/2021 1:29
<b>Surrogates</b>							
13C2-PFDA	103			70.0-130	%	1	07/14/2021 1:29
13C2-PFHxA	104			70.0-130	%	1	07/14/2021 1:29
d5-NEtFOSAA	101			70.0-130	%	1	07/14/2021 1:29
13C3-HFPO-DA	107			70.0-130	%	1	07/14/2021 1:29

### Batch Information

Analytical Batch: **XLC1743**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/14/2021 01:29**

Prep Batch: **HXX2781**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 15:16**  
 Prep Initial Wt./Vol.: **284 mL**  
 Prep Extract Vol: **1 mL**

**Results of Duplicate JS DW**

Client Sample ID: **Duplicate JS DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399050-A  
 Lab Project ID: 32101399

Collection Date: 06/29/2021 11:00  
 Received Date: 07/01/2021 10:06  
 Matrix: Drinking Water

**Results by EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.756	1.83	ng/L	1	07/14/2021 1:48
NMeFOSAA	ND	U	0.776	3.66	ng/L	1	07/14/2021 1:48
PFBS	ND	U	0.506	1.83	ng/L	1	07/14/2021 1:48
PFDA	ND	U	0.870	1.83	ng/L	1	07/14/2021 1:48
PFDoA	ND	U	1.03	1.83	ng/L	1	07/14/2021 1:48
PFHpA	ND	U	0.710	1.83	ng/L	1	07/14/2021 1:48
PFHxA	ND	U	0.648	1.83	ng/L	1	07/14/2021 1:48
PFHxS	ND	U	0.428	1.83	ng/L	1	07/14/2021 1:48
PFNA	ND	U	0.725	1.83	ng/L	1	07/14/2021 1:48
PFOA	ND	U	0.528	1.83	ng/L	1	07/14/2021 1:48
PFOS	ND	U	0.521	1.83	ng/L	1	07/14/2021 1:48
PFTreA	ND	U	0.348	1.83	ng/L	1	07/14/2021 1:48
PFTriA	ND	U	0.369	1.83	ng/L	1	07/14/2021 1:48
PFuNA	ND	U	0.379	1.83	ng/L	1	07/14/2021 1:48
NaDONA	ND	U	0.501	1.83	ng/L	1	07/14/2021 1:48
9Cl-PF3ONS	ND	U	0.611	1.83	ng/L	1	07/14/2021 1:48
11Cl-PF3OUdS	ND	U	0.623	1.83	ng/L	1	07/14/2021 1:48
HFPO-DA (GenX)	ND	U	1.58	3.66	ng/L	1	07/14/2021 1:48
<b>Surrogates</b>							
13C2-PFDA	99.5			70.0-130	%	1	07/14/2021 1:48
13C2-PFHxA	99.0			70.0-130	%	1	07/14/2021 1:48
d5-NEtFOSAA	95.5			70.0-130	%	1	07/14/2021 1:48
13C3-HFPO-DA	101			70.0-130	%	1	07/14/2021 1:48

**Batch Information**

Analytical Batch: **XLC1743**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/14/2021 01:48**

Prep Batch: **HXX2781**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 15:16**  
 Prep Initial Wt./Vol.: **273 mL**  
 Prep Extract Vol: **1 mL**



**Results of East Central Reg WD DW**

Client Sample ID: **East Central Reg WD DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399051-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 12:20  
 Received Date: 07/01/2021 10:07  
 Matrix: Drinking Water

**Results by EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.740	1.79	ng/L	1	07/9/2021 21:25
NMeFOSAA	ND	U	0.759	3.58	ng/L	1	07/9/2021 21:25
PFBS	ND	U	0.496	1.79	ng/L	1	07/9/2021 21:25
PFDA	ND	U	0.851	1.79	ng/L	1	07/9/2021 21:25
PFDoA	ND	U	1.00	1.79	ng/L	1	07/9/2021 21:25
PFHpA	ND	U	0.694	1.79	ng/L	1	07/9/2021 21:25
PFHxA	ND	U	0.634	1.79	ng/L	1	07/9/2021 21:25
PFHxS	ND	U	0.418	1.79	ng/L	1	07/9/2021 21:25
PFNA	ND	U	0.710	1.79	ng/L	1	07/9/2021 21:25
PFOA	ND	U	0.517	1.79	ng/L	1	07/9/2021 21:25
PFOS	ND	U	0.510	1.79	ng/L	1	07/9/2021 21:25
PFTreA	ND	U	0.341	1.79	ng/L	1	07/9/2021 21:25
PFTriA	ND	U	0.361	1.79	ng/L	1	07/9/2021 21:25
PFuNA	ND	U	0.371	1.79	ng/L	1	07/9/2021 21:25
NaDONA	ND	U	0.490	1.79	ng/L	1	07/9/2021 21:25
9Cl-PF3ONS	ND	U	0.598	1.79	ng/L	1	07/9/2021 21:25
11Cl-PF3OUdS	ND	U	0.609	1.79	ng/L	1	07/9/2021 21:25
HFPO-DA (GenX)	ND	U	1.55	3.58	ng/L	1	07/9/2021 21:25
<b>Surrogates</b>							
13C2-PFDA	100			70.0-130	%	1	07/9/2021 21:25
13C2-PFHxA	98.9			70.0-130	%	1	07/9/2021 21:25
d5-NEtFOSAA	95.4			70.0-130	%	1	07/9/2021 21:25
13C3-HFPO-DA	95.4			70.0-130	%	1	07/9/2021 21:25

**Batch Information**

Analytical Batch: **XLC1741**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/09/2021 21:25**

Prep Batch: **HXX2774**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/07/2021 15:24**  
 Prep Initial Wt./Vol.: **279 mL**  
 Prep Extract Vol: **1 mL**

**Results of East Central Reg WD Trail**

Client Sample ID: **East Central Reg WD Trail**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399052-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 13:20  
 Received Date: 07/01/2021 10:08  
 Matrix: Drinking Water

**Results by EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.738	1.79	ng/L	1	07/9/2021 22:03
NMeFOSAA	ND	U	0.756	3.57	ng/L	1	07/9/2021 22:03
PFBS	ND	U	0.494	1.79	ng/L	1	07/9/2021 22:03
PFDA	ND	U	0.848	1.79	ng/L	1	07/9/2021 22:03
PFDoA	ND	U	1.00	1.79	ng/L	1	07/9/2021 22:03
PFHpA	ND	U	0.692	1.79	ng/L	1	07/9/2021 22:03
PFHxA	ND	U	0.632	1.79	ng/L	1	07/9/2021 22:03
PFHxS	ND	U	0.417	1.79	ng/L	1	07/9/2021 22:03
PFNA	ND	U	0.707	1.79	ng/L	1	07/9/2021 22:03
PFOA	ND	U	0.515	1.79	ng/L	1	07/9/2021 22:03
PFOS	ND	U	0.508	1.79	ng/L	1	07/9/2021 22:03
PFTreA	ND	U	0.339	1.79	ng/L	1	07/9/2021 22:03
PFTriA	ND	U	0.360	1.79	ng/L	1	07/9/2021 22:03
PFuNA	ND	U	0.370	1.79	ng/L	1	07/9/2021 22:03
NaDONA	ND	U	0.488	1.79	ng/L	1	07/9/2021 22:03
9Cl-PF3ONS	ND	U	0.596	1.79	ng/L	1	07/9/2021 22:03
11Cl-PF3OUdS	ND	U	0.607	1.79	ng/L	1	07/9/2021 22:03
HFPO-DA (GenX)	ND	U	1.54	3.57	ng/L	1	07/9/2021 22:03
<b>Surrogates</b>							
13C2-PFDA	90.3			70.0-130	%	1	07/9/2021 22:03
13C2-PFHxA	92.6			70.0-130	%	1	07/9/2021 22:03
d5-NEtFOSAA	82.5			70.0-130	%	1	07/9/2021 22:03
13C3-HFPO-DA	89.6			70.0-130	%	1	07/9/2021 22:03

**Batch Information**

Analytical Batch: **XLC1741**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/09/2021 22:03**

Prep Batch: **HXX2774**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/07/2021 15:24**  
 Prep Initial Wt./Vol.: **280 mL**  
 Prep Extract Vol: **1 mL**

### Results of Grand Forks DW

Client Sample ID: **Grand Forks DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399053-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 11:10  
 Received Date: 07/01/2021 10:09  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.765	1.85	ng/L	1	07/9/2021 22:22
NMeFOSAA	ND	U	0.784	3.70	ng/L	1	07/9/2021 22:22
PFBS	ND	U	0.512	1.85	ng/L	1	07/9/2021 22:22
PFDA	ND	U	0.880	1.85	ng/L	1	07/9/2021 22:22
PFDaA	ND	U	1.04	1.85	ng/L	1	07/9/2021 22:22
PFHpA	<b>0.767</b>	J	0.718	1.85	ng/L	1	07/9/2021 22:22
PFHxA	<b>1.16</b>	J	0.656	1.85	ng/L	1	07/9/2021 22:22
PFHxS	ND	U	0.432	1.85	ng/L	1	07/9/2021 22:22
PFNA	ND	U	0.733	1.85	ng/L	1	07/9/2021 22:22
PFOA	ND	U	0.534	1.85	ng/L	1	07/9/2021 22:22
PFOS	ND	U	0.527	1.85	ng/L	1	07/9/2021 22:22
PFTreA	ND	U	0.352	1.85	ng/L	1	07/9/2021 22:22
PFTriA	ND	U	0.373	1.85	ng/L	1	07/9/2021 22:22
PFuNA	ND	U	0.383	1.85	ng/L	1	07/9/2021 22:22
NaDONA	ND	U	0.506	1.85	ng/L	1	07/9/2021 22:22
9Cl-PF3ONS	ND	U	0.618	1.85	ng/L	1	07/9/2021 22:22
11Cl-PF3OUdS	ND	U	0.630	1.85	ng/L	1	07/9/2021 22:22
HFPO-DA (GenX)	ND	U	1.60	3.70	ng/L	1	07/9/2021 22:22
<b>Surrogates</b>							
13C2-PFDA	107			70.0-130	%	1	07/9/2021 22:22
13C2-PFHxA	108			70.0-130	%	1	07/9/2021 22:22
d5-NEtFOSAA	94.2			70.0-130	%	1	07/9/2021 22:22
13C3-HFPO-DA	109			70.0-130	%	1	07/9/2021 22:22

### Batch Information

Analytical Batch: **XLC1741**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/09/2021 22:22**

Prep Batch: **HXX2774**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/07/2021 15:24**  
 Prep Initial Wt./Vol.: **270 mL**  
 Prep Extract Vol: **1 mL**

### Results of Riverdale Subdivision DW

Client Sample ID: **Riverdale Subdivision DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399054-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 15:23  
 Received Date: 07/01/2021 10:10  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.730	1.77	ng/L	1	07/9/2021 22:41
NMeFOSAA	ND	U	0.748	3.53	ng/L	1	07/9/2021 22:41
PFBS	ND	U	0.489	1.77	ng/L	1	07/9/2021 22:41
PFDA	ND	U	0.839	1.77	ng/L	1	07/9/2021 22:41
PFDoA	ND	U	0.989	1.77	ng/L	1	07/9/2021 22:41
PFHpA	ND	U	0.685	1.77	ng/L	1	07/9/2021 22:41
PFHxA	ND	U	0.625	1.77	ng/L	1	07/9/2021 22:41
PFHxS	ND	U	0.413	1.77	ng/L	1	07/9/2021 22:41
PFNA	ND	U	0.700	1.77	ng/L	1	07/9/2021 22:41
PFOA	ND	U	0.510	1.77	ng/L	1	07/9/2021 22:41
PFOS	ND	U	0.503	1.77	ng/L	1	07/9/2021 22:41
PFTreA	ND	U	0.336	1.77	ng/L	1	07/9/2021 22:41
PFTriA	ND	U	0.356	1.77	ng/L	1	07/9/2021 22:41
PFuNA	ND	U	0.366	1.77	ng/L	1	07/9/2021 22:41
NaDONA	ND	U	0.483	1.77	ng/L	1	07/9/2021 22:41
9Cl-PF3ONS	ND	U	0.589	1.77	ng/L	1	07/9/2021 22:41
11Cl-PF3OUdS	ND	U	0.601	1.77	ng/L	1	07/9/2021 22:41
HFPO-DA (GenX)	ND	U	1.53	3.53	ng/L	1	07/9/2021 22:41
<b>Surrogates</b>							
13C2-PFDA	95.2			70.0-130	%	1	07/9/2021 22:41
13C2-PFHxA	90.3			70.0-130	%	1	07/9/2021 22:41
d5-NEtFOSAA	85.6			70.0-130	%	1	07/9/2021 22:41
13C3-HFPO-DA	91.0			70.0-130	%	1	07/9/2021 22:41

### Batch Information

Analytical Batch: **XLC1741**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/09/2021 22:41**

Prep Batch: **HXX2774**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/07/2021 15:24**  
 Prep Initial Wt./Vol.: **283 mL**  
 Prep Extract Vol: **1 mL**

**Results of Cass Rural WD Phase III**

Client Sample ID: **Cass Rural WD Phase III**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399055-A  
 Lab Project ID: 32101399

Collection Date: 06/29/2021 09:50  
 Received Date: 07/01/2021 10:11  
 Matrix: Drinking Water

**Results by EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.720	1.74	ng/L	1	07/14/2021 2:07
NMeFOSAA	ND	U	0.738	3.48	ng/L	1	07/14/2021 2:07
PFBS	<b>0.982</b>	J	0.482	1.74	ng/L	1	07/14/2021 2:07
PFDA	ND	U	0.828	1.74	ng/L	1	07/14/2021 2:07
PFDoA	ND	U	0.976	1.74	ng/L	1	07/14/2021 2:07
PFHpA	ND	U	0.675	1.74	ng/L	1	07/14/2021 2:07
PFHxA	ND	U	0.617	1.74	ng/L	1	07/14/2021 2:07
PFHxS	ND	U	0.407	1.74	ng/L	1	07/14/2021 2:07
PFNA	ND	U	0.690	1.74	ng/L	1	07/14/2021 2:07
PFOA	ND	U	0.503	1.74	ng/L	1	07/14/2021 2:07
PFOS	ND	U	0.496	1.74	ng/L	1	07/14/2021 2:07
PFTreA	ND	U	0.331	1.74	ng/L	1	07/14/2021 2:07
PFTriA	ND	U	0.351	1.74	ng/L	1	07/14/2021 2:07
PFuNA	ND	U	0.361	1.74	ng/L	1	07/14/2021 2:07
NaDONA	ND	U	0.476	1.74	ng/L	1	07/14/2021 2:07
9Cl-PF3ONS	ND	U	0.581	1.74	ng/L	1	07/14/2021 2:07
11Cl-PF3OUdS	ND	U	0.592	1.74	ng/L	1	07/14/2021 2:07
HFPO-DA (GenX)	ND	U	1.51	3.48	ng/L	1	07/14/2021 2:07
<b>Surrogates</b>							
13C2-PFDA	90.8			70.0-130	%	1	07/14/2021 2:07
13C2-PFHxA	88.7			70.0-130	%	1	07/14/2021 2:07
d5-NEtFOSAA	84.6			70.0-130	%	1	07/14/2021 2:07
13C3-HFPO-DA	92.7			70.0-130	%	1	07/14/2021 2:07

**Batch Information**

Analytical Batch: **XLC1743**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/14/2021 02:07**

Prep Batch: **HXX2781**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 15:16**  
 Prep Initial Wt./Vol.: **287 mL**  
 Prep Extract Vol: **1 mL**

**Results of South Central RWD DW**

Client Sample ID: **South Central RWD DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399056-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 08:30  
 Received Date: 07/01/2021 10:12  
 Matrix: Drinking Water

**Results by EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.745	1.81	ng/L	1	07/9/2021 23:00
NMeFOSAA	ND	U	0.764	3.61	ng/L	1	07/9/2021 23:00
PFBS	ND	U	0.499	1.81	ng/L	1	07/9/2021 23:00
PFDA	ND	U	0.857	1.81	ng/L	1	07/9/2021 23:00
PFDoA	ND	U	1.01	1.81	ng/L	1	07/9/2021 23:00
PFHpA	ND	U	0.699	1.81	ng/L	1	07/9/2021 23:00
PFHxA	ND	U	0.639	1.81	ng/L	1	07/9/2021 23:00
PFHxS	ND	U	0.421	1.81	ng/L	1	07/9/2021 23:00
PFNA	ND	U	0.715	1.81	ng/L	1	07/9/2021 23:00
PFOA	ND	U	0.521	1.81	ng/L	1	07/9/2021 23:00
PFOS	ND	U	0.514	1.81	ng/L	1	07/9/2021 23:00
PFTreA	ND	U	0.343	1.81	ng/L	1	07/9/2021 23:00
PFTriA	ND	U	0.364	1.81	ng/L	1	07/9/2021 23:00
PFuNA	ND	U	0.374	1.81	ng/L	1	07/9/2021 23:00
NaDONA	ND	U	0.494	1.81	ng/L	1	07/9/2021 23:00
9Cl-PF3ONS	ND	U	0.602	1.81	ng/L	1	07/9/2021 23:00
11Cl-PF3OUdS	ND	U	0.614	1.81	ng/L	1	07/9/2021 23:00
HFPO-DA (GenX)	ND	U	1.56	3.61	ng/L	1	07/9/2021 23:00
<b>Surrogates</b>							
13C2-PFDA	90.7			70.0-130	%	1	07/9/2021 23:00
13C2-PFHxA	93.8			70.0-130	%	1	07/9/2021 23:00
d5-NEtFOSAA	84.4			70.0-130	%	1	07/9/2021 23:00
13C3-HFPO-DA	92.5			70.0-130	%	1	07/9/2021 23:00

**Batch Information**

Analytical Batch: **XLC1741**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/09/2021 23:00**

Prep Batch: **HXX2774**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/07/2021 15:24**  
 Prep Initial Wt./Vol.: **277 mL**  
 Prep Extract Vol: **1 mL**

### Results of City of Steele DW

Client Sample ID: **City of Steele DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399057-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 09:15  
 Received Date: 07/01/2021 10:12  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.771	1.87	ng/L	1	07/9/2021 23:18
NMeFOSAA	ND	U	0.790	3.73	ng/L	1	07/9/2021 23:18
PFBS	ND	U	0.516	1.87	ng/L	1	07/9/2021 23:18
PFDA	ND	U	0.886	1.87	ng/L	1	07/9/2021 23:18
PFDoA	ND	U	1.04	1.87	ng/L	1	07/9/2021 23:18
PFHpA	ND	U	0.723	1.87	ng/L	1	07/9/2021 23:18
PFHxA	ND	U	0.660	1.87	ng/L	1	07/9/2021 23:18
PFHxS	ND	U	0.436	1.87	ng/L	1	07/9/2021 23:18
PFNA	ND	U	0.739	1.87	ng/L	1	07/9/2021 23:18
PFOA	ND	U	0.538	1.87	ng/L	1	07/9/2021 23:18
PFOS	ND	U	0.531	1.87	ng/L	1	07/9/2021 23:18
PFTreA	ND	U	0.354	1.87	ng/L	1	07/9/2021 23:18
PFTriA	ND	U	0.376	1.87	ng/L	1	07/9/2021 23:18
PFuNA	ND	U	0.386	1.87	ng/L	1	07/9/2021 23:18
NaDONA	ND	U	0.510	1.87	ng/L	1	07/9/2021 23:18
9Cl-PF3ONS	ND	U	0.622	1.87	ng/L	1	07/9/2021 23:18
11Cl-PF3OUdS	ND	U	0.634	1.87	ng/L	1	07/9/2021 23:18
HFPO-DA (GenX)	ND	U	1.61	3.73	ng/L	1	07/9/2021 23:18
<b>Surrogates</b>							
13C2-PFDA	89.9			70.0-130	%	1	07/9/2021 23:18
13C2-PFHxA	89.8			70.0-130	%	1	07/9/2021 23:18
d5-NEtFOSAA	88.3			70.0-130	%	1	07/9/2021 23:18
13C3-HFPO-DA	87.6			70.0-130	%	1	07/9/2021 23:18

### Batch Information

Analytical Batch: **XLC1741**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/09/2021 23:18**

Prep Batch: **HXX2774**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/07/2021 15:24**  
 Prep Initial Wt./Vol.: **268 mL**  
 Prep Extract Vol: **1 mL**

### Results of City of Harvey DW

Client Sample ID: **City of Harvey DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399058-A  
 Lab Project ID: 32101399

Collection Date: 06/29/2021 11:15  
 Received Date: 07/01/2021 10:13  
 Matrix: Drinking Water

### Results by EPA 537.1

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.771	1.87	ng/L	1	07/14/2021 2:26
NMeFOSAA	ND	U	0.790	3.73	ng/L	1	07/14/2021 2:26
PFBS	ND	U	0.516	1.87	ng/L	1	07/14/2021 2:26
PFDA	ND	U	0.886	1.87	ng/L	1	07/14/2021 2:26
PFDoA	ND	U	1.04	1.87	ng/L	1	07/14/2021 2:26
PFHpA	ND	U	0.723	1.87	ng/L	1	07/14/2021 2:26
PFHxA	ND	U	0.660	1.87	ng/L	1	07/14/2021 2:26
PFHxS	ND	U	0.436	1.87	ng/L	1	07/14/2021 2:26
PFNA	ND	U	0.739	1.87	ng/L	1	07/14/2021 2:26
PFOA	ND	U	0.538	1.87	ng/L	1	07/14/2021 2:26
PFOS	ND	U	0.531	1.87	ng/L	1	07/14/2021 2:26
PFTreA	ND	U	0.354	1.87	ng/L	1	07/14/2021 2:26
PFTriA	ND	U	0.376	1.87	ng/L	1	07/14/2021 2:26
PFuNA	ND	U	0.386	1.87	ng/L	1	07/14/2021 2:26
NaDONA	ND	U	0.510	1.87	ng/L	1	07/14/2021 2:26
9Cl-PF3ONS	ND	U	0.622	1.87	ng/L	1	07/14/2021 2:26
11Cl-PF3OUdS	ND	U	0.634	1.87	ng/L	1	07/14/2021 2:26
HFPO-DA (GenX)	ND	U	1.61	3.73	ng/L	1	07/14/2021 2:26
<b>Surrogates</b>							
13C2-PFDA	103			70.0-130	%	1	07/14/2021 2:26
13C2-PFHxA	104			70.0-130	%	1	07/14/2021 2:26
d5-NEtFOSAA	109			70.0-130	%	1	07/14/2021 2:26
13C3-HFPO-DA	108			70.0-130	%	1	07/14/2021 2:26

### Batch Information

Analytical Batch: **XLC1743**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/14/2021 02:26**

Prep Batch: **HXX2781**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 15:16**  
 Prep Initial Wt./Vol.: **268 mL**  
 Prep Extract Vol: **1 mL**



**Results of Marlon DUP**

Client Sample ID: **Marlon DUP**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399059-A  
 Lab Project ID: 32101399

Collection Date: 06/29/2021 11:15  
 Received Date: 07/01/2021 10:14  
 Matrix: Drinking Water

**Results by EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.735	1.78	ng/L	1	07/14/2021 3:04
NMeFOSAA	ND	U	0.754	3.56	ng/L	1	07/14/2021 3:04
PFBS	ND	U	0.492	1.78	ng/L	1	07/14/2021 3:04
PFDA	ND	U	0.845	1.78	ng/L	1	07/14/2021 3:04
PFDoA	ND	U	0.996	1.78	ng/L	1	07/14/2021 3:04
PFHpA	ND	U	0.690	1.78	ng/L	1	07/14/2021 3:04
PFHxA	ND	U	0.630	1.78	ng/L	1	07/14/2021 3:04
PFHxS	ND	U	0.415	1.78	ng/L	1	07/14/2021 3:04
PFNA	ND	U	0.705	1.78	ng/L	1	07/14/2021 3:04
PFOA	ND	U	0.513	1.78	ng/L	1	07/14/2021 3:04
PFOS	ND	U	0.506	1.78	ng/L	1	07/14/2021 3:04
PFTreA	ND	U	0.338	1.78	ng/L	1	07/14/2021 3:04
PFTriA	ND	U	0.359	1.78	ng/L	1	07/14/2021 3:04
PFuNA	ND	U	0.368	1.78	ng/L	1	07/14/2021 3:04
NaDONA	ND	U	0.487	1.78	ng/L	1	07/14/2021 3:04
9Cl-PF3ONS	ND	U	0.593	1.78	ng/L	1	07/14/2021 3:04
11Cl-PF3OUdS	ND	U	0.605	1.78	ng/L	1	07/14/2021 3:04
HFPO-DA (GenX)	ND	U	1.54	3.56	ng/L	1	07/14/2021 3:04
<b>Surrogates</b>							
13C2-PFDA	104			70.0-130	%	1	07/14/2021 3:04
13C2-PFHxA	103			70.0-130	%	1	07/14/2021 3:04
d5-NEtFOSAA	100			70.0-130	%	1	07/14/2021 3:04
13C3-HFPO-DA	104			70.0-130	%	1	07/14/2021 3:04

**Batch Information**

Analytical Batch: **XLC1743**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/14/2021 03:04**

Prep Batch: **HXX2781**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 15:16**  
 Prep Initial Wt./Vol.: **281 mL**  
 Prep Extract Vol: **1 mL**

### Results of Medina DW

Client Sample ID: **Medina DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399060-A  
 Lab Project ID: 32101399

Collection Date: 06/29/2021 08:30  
 Received Date: 07/01/2021 10:14  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.756	1.83	ng/L	1	07/14/2021 3:23
NMeFOSAA	ND	U	0.776	3.66	ng/L	1	07/14/2021 3:23
PFBS	ND	U	0.506	1.83	ng/L	1	07/14/2021 3:23
PFDA	ND	U	0.870	1.83	ng/L	1	07/14/2021 3:23
PFDoA	ND	U	1.03	1.83	ng/L	1	07/14/2021 3:23
PFHpA	ND	U	0.710	1.83	ng/L	1	07/14/2021 3:23
PFHxA	ND	U	0.648	1.83	ng/L	1	07/14/2021 3:23
PFHxS	ND	U	0.428	1.83	ng/L	1	07/14/2021 3:23
PFNA	ND	U	0.725	1.83	ng/L	1	07/14/2021 3:23
PFOA	ND	U	0.528	1.83	ng/L	1	07/14/2021 3:23
PFOS	ND	U	0.521	1.83	ng/L	1	07/14/2021 3:23
PFTreA	ND	U	0.348	1.83	ng/L	1	07/14/2021 3:23
PFTriA	ND	U	0.369	1.83	ng/L	1	07/14/2021 3:23
PFuNA	ND	U	0.379	1.83	ng/L	1	07/14/2021 3:23
NaDONA	ND	U	0.501	1.83	ng/L	1	07/14/2021 3:23
9Cl-PF3ONS	ND	U	0.611	1.83	ng/L	1	07/14/2021 3:23
11Cl-PF3OUdS	ND	U	0.623	1.83	ng/L	1	07/14/2021 3:23
HFPO-DA (GenX)	ND	U	1.58	3.66	ng/L	1	07/14/2021 3:23
<b>Surrogates</b>							
13C2-PFDA	104			70.0-130	%	1	07/14/2021 3:23
13C2-PFHxA	106			70.0-130	%	1	07/14/2021 3:23
d5-NEtFOSAA	97.5			70.0-130	%	1	07/14/2021 3:23
13C3-HFPO-DA	109			70.0-130	%	1	07/14/2021 3:23

### Batch Information

Analytical Batch: **XLC1743**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/14/2021 03:23**

Prep Batch: **HXX2781**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 15:16**  
 Prep Initial Wt./Vol.: **273 mL**  
 Prep Extract Vol: **1 mL**

### Results of Jamestown DW

Client Sample ID: **Jamestown DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399061-A  
 Lab Project ID: 32101399

Collection Date: 06/29/2021 09:15  
 Received Date: 07/01/2021 10:15  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.871	2.11	ng/L	1	07/14/2021 3:41
NMeFOSAA	ND	U	0.893	4.22	ng/L	1	07/14/2021 3:41
PFBS	<b>1.51</b>	J	0.583	2.11	ng/L	1	07/14/2021 3:41
PFDA	ND	U	1.00	2.11	ng/L	1	07/14/2021 3:41
PFDoA	ND	U	1.18	2.11	ng/L	1	07/14/2021 3:41
PFHpA	ND	U	0.818	2.11	ng/L	1	07/14/2021 3:41
PFHxA	ND	U	0.747	2.11	ng/L	1	07/14/2021 3:41
PFHxS	<b>1.17</b>	J	0.493	2.11	ng/L	1	07/14/2021 3:41
PFNA	ND	U	0.835	2.11	ng/L	1	07/14/2021 3:41
PFOA	ND	U	0.609	2.11	ng/L	1	07/14/2021 3:41
PFOS	<b>0.805</b>	J	0.600	2.11	ng/L	1	07/14/2021 3:41
PFTreA	ND	U	0.401	2.11	ng/L	1	07/14/2021 3:41
PFTriA	ND	U	0.425	2.11	ng/L	1	07/14/2021 3:41
PFuNA	ND	U	0.437	2.11	ng/L	1	07/14/2021 3:41
NaDONA	ND	U	0.577	2.11	ng/L	1	07/14/2021 3:41
9Cl-PF3ONS	ND	U	0.704	2.11	ng/L	1	07/14/2021 3:41
11Cl-PF3OUdS	ND	U	0.717	2.11	ng/L	1	07/14/2021 3:41
HFPO-DA (GenX)	ND	U	1.82	4.22	ng/L	1	07/14/2021 3:41
<b>Surrogates</b>							
13C2-PFDA	103			70.0-130	%	1	07/14/2021 3:41
13C2-PFHxA	99.6			70.0-130	%	1	07/14/2021 3:41
d5-NEtFOSAA	100			70.0-130	%	1	07/14/2021 3:41
13C3-HFPO-DA	105			70.0-130	%	1	07/14/2021 3:41

### Batch Information

Analytical Batch: **XLC1743**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/14/2021 03:41**

Prep Batch: **HXX2781**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 15:16**  
 Prep Initial Wt./Vol.: **237 mL**  
 Prep Extract Vol: **1 mL**

### Results of City of Tuttle DW

Client Sample ID: **City of Tuttle DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399062-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 10:00  
 Received Date: 07/01/2021 10:16  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.765	1.85	ng/L	1	07/14/2021 4:00
NMeFOSAA	ND	U	0.784	3.70	ng/L	1	07/14/2021 4:00
PFBS	ND	U	0.512	1.85	ng/L	1	07/14/2021 4:00
PFDA	ND	U	0.880	1.85	ng/L	1	07/14/2021 4:00
PFDoA	ND	U	1.04	1.85	ng/L	1	07/14/2021 4:00
PFHpA	ND	U	0.718	1.85	ng/L	1	07/14/2021 4:00
PFHxA	ND	U	0.656	1.85	ng/L	1	07/14/2021 4:00
PFHxS	ND	U	0.432	1.85	ng/L	1	07/14/2021 4:00
PFNA	ND	U	0.733	1.85	ng/L	1	07/14/2021 4:00
PFOA	ND	U	0.534	1.85	ng/L	1	07/14/2021 4:00
PFOS	ND	U	0.527	1.85	ng/L	1	07/14/2021 4:00
PFTreA	ND	U	0.352	1.85	ng/L	1	07/14/2021 4:00
PFTriA	ND	U	0.373	1.85	ng/L	1	07/14/2021 4:00
PFuNA	ND	U	0.383	1.85	ng/L	1	07/14/2021 4:00
NaDONA	ND	U	0.506	1.85	ng/L	1	07/14/2021 4:00
9Cl-PF3ONS	ND	U	0.618	1.85	ng/L	1	07/14/2021 4:00
11Cl-PF3OUdS	ND	U	0.630	1.85	ng/L	1	07/14/2021 4:00
HFPO-DA (GenX)	ND	U	1.60	3.70	ng/L	1	07/14/2021 4:00
<b>Surrogates</b>							
13C2-PFDA	98.0			70.0-130	%	1	07/14/2021 4:00
13C2-PFHxA	91.0			70.0-130	%	1	07/14/2021 4:00
d5-NEtFOSAA	97.9			70.0-130	%	1	07/14/2021 4:00
13C3-HFPO-DA	95.5			70.0-130	%	1	07/14/2021 4:00

### Batch Information

Analytical Batch: **XLC1743**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/14/2021 04:00**

Prep Batch: **HXX2781**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 15:16**  
 Prep Initial Wt./Vol.: **270 mL**  
 Prep Extract Vol: **1 mL**

**Results of Willowbank DW 1**

Client Sample ID: **Willowbank DW 1**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399063-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 08:50  
 Received Date: 07/01/2021 10:16  
 Matrix: Drinking Water

**Results by EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.776	1.88	ng/L	1	07/14/2021 13:24
NMeFOSAA	ND	U	0.796	3.76	ng/L	1	07/14/2021 13:24
PFBS	ND	U	0.520	1.88	ng/L	1	07/14/2021 13:24
PFDA	ND	U	0.893	1.88	ng/L	1	07/14/2021 13:24
PFDoA	ND	U	1.05	1.88	ng/L	1	07/14/2021 13:24
PFHpA	ND	U	0.728	1.88	ng/L	1	07/14/2021 13:24
PFHxA	ND	U	0.665	1.88	ng/L	1	07/14/2021 13:24
PFHxS	ND	U	0.439	1.88	ng/L	1	07/14/2021 13:24
PFNA	ND	U	0.744	1.88	ng/L	1	07/14/2021 13:24
PFOA	ND	U	0.542	1.88	ng/L	1	07/14/2021 13:24
PFOS	ND	U	0.535	1.88	ng/L	1	07/14/2021 13:24
PFTreA	ND	U	0.357	1.88	ng/L	1	07/14/2021 13:24
PFTriA	ND	U	0.379	1.88	ng/L	1	07/14/2021 13:24
PFuNA	ND	U	0.389	1.88	ng/L	1	07/14/2021 13:24
NaDONA	ND	U	0.514	1.88	ng/L	1	07/14/2021 13:24
9Cl-PF3ONS	ND	U	0.627	1.88	ng/L	1	07/14/2021 13:24
11Cl-PF3OUdS	ND	U	0.639	1.88	ng/L	1	07/14/2021 13:24
HFPO-DA (GenX)	ND	U	1.63	3.76	ng/L	1	07/14/2021 13:24
<b>Surrogates</b>							
13C2-PFDA	107			70.0-130	%	1	07/14/2021 13:24
13C2-PFHxA	104			70.0-130	%	1	07/14/2021 13:24
d5-NEtFOSAA	95.0			70.0-130	%	1	07/14/2021 13:24
13C3-HFPO-DA	102			70.0-130	%	1	07/14/2021 13:24

**Batch Information**

Analytical Batch: **XLC1746**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/14/2021 13:24**

Prep Batch: **HXX2781**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 15:16**  
 Prep Initial Wt./Vol.: **266 mL**  
 Prep Extract Vol: **1 mL**

### Results of Fairview Colony DW 1

Client Sample ID: **Fairview Colony DW 1**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399064-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 09:50  
 Received Date: 07/01/2021 10:17  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.743	1.80	ng/L	1	07/14/2021 13:43
NMeFOSAA	ND	U	0.762	3.60	ng/L	1	07/14/2021 13:43
PFBS	ND	U	0.497	1.80	ng/L	1	07/14/2021 13:43
PFDA	ND	U	0.854	1.80	ng/L	1	07/14/2021 13:43
PFDoA	ND	U	1.01	1.80	ng/L	1	07/14/2021 13:43
PFHpA	ND	U	0.697	1.80	ng/L	1	07/14/2021 13:43
PFHxA	ND	U	0.637	1.80	ng/L	1	07/14/2021 13:43
PFHxS	ND	U	0.420	1.80	ng/L	1	07/14/2021 13:43
PFNA	ND	U	0.712	1.80	ng/L	1	07/14/2021 13:43
PFOA	ND	U	0.519	1.80	ng/L	1	07/14/2021 13:43
PFOS	ND	U	0.512	1.80	ng/L	1	07/14/2021 13:43
PFTreA	ND	U	0.342	1.80	ng/L	1	07/14/2021 13:43
PFTriA	ND	U	0.362	1.80	ng/L	1	07/14/2021 13:43
PFuNA	ND	U	0.372	1.80	ng/L	1	07/14/2021 13:43
NaDONA	ND	U	0.492	1.80	ng/L	1	07/14/2021 13:43
9Cl-PF3ONS	ND	U	0.600	1.80	ng/L	1	07/14/2021 13:43
11Cl-PF3OUdS	ND	U	0.612	1.80	ng/L	1	07/14/2021 13:43
HFPO-DA (GenX)	ND	U	1.56	3.60	ng/L	1	07/14/2021 13:43
<b>Surrogates</b>							
13C2-PFDA	108			70.0-130	%	1	07/14/2021 13:43
13C2-PFHxA	111			70.0-130	%	1	07/14/2021 13:43
d5-NEtFOSAA	102			70.0-130	%	1	07/14/2021 13:43
13C3-HFPO-DA	107			70.0-130	%	1	07/14/2021 13:43

### Batch Information

Analytical Batch: **XLC1746**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/14/2021 13:43**

Prep Batch: **HXX2781**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 15:16**  
 Prep Initial Wt./Vol.: **278 mL**  
 Prep Extract Vol: **1 mL**

**Results of Lehr DW 1**

Client Sample ID: **Lehr DW 1**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399065-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 15:40  
 Received Date: 07/01/2021 10:17  
 Matrix: Drinking Water

**Results by EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.717	1.74	ng/L	1	07/14/2021 14:02
NMeFOSAA	ND	U	0.735	3.47	ng/L	1	07/14/2021 14:02
PFBS	ND	U	0.480	1.74	ng/L	1	07/14/2021 14:02
PFDA	ND	U	0.825	1.74	ng/L	1	07/14/2021 14:02
PFDaA	ND	U	0.972	1.74	ng/L	1	07/14/2021 14:02
PFHpA	ND	U	0.673	1.74	ng/L	1	07/14/2021 14:02
PFHxA	ND	U	0.615	1.74	ng/L	1	07/14/2021 14:02
PFHxS	ND	U	0.405	1.74	ng/L	1	07/14/2021 14:02
PFNA	ND	U	0.688	1.74	ng/L	1	07/14/2021 14:02
PFOA	ND	U	0.501	1.74	ng/L	1	07/14/2021 14:02
PFOS	ND	U	0.494	1.74	ng/L	1	07/14/2021 14:02
PFTreA	ND	U	0.330	1.74	ng/L	1	07/14/2021 14:02
PFTriA	ND	U	0.350	1.74	ng/L	1	07/14/2021 14:02
PFuNA	ND	U	0.359	1.74	ng/L	1	07/14/2021 14:02
NaDONA	ND	U	0.475	1.74	ng/L	1	07/14/2021 14:02
9Cl-PF3ONS	ND	U	0.579	1.74	ng/L	1	07/14/2021 14:02
11Cl-PF3OUdS	ND	U	0.590	1.74	ng/L	1	07/14/2021 14:02
HFPO-DA (GenX)	ND	U	1.50	3.47	ng/L	1	07/14/2021 14:02
<b>Surrogates</b>							
13C2-PFDA	106			70.0-130	%	1	07/14/2021 14:02
13C2-PFHxA	102			70.0-130	%	1	07/14/2021 14:02
d5-NEtFOSAA	104			70.0-130	%	1	07/14/2021 14:02
13C3-HFPO-DA	106			70.0-130	%	1	07/14/2021 14:02

**Batch Information**

Analytical Batch: **XLC1746**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/14/2021 14:02**

Prep Batch: **HXX2781**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 15:16**  
 Prep Initial Wt./Vol.: **288 mL**  
 Prep Extract Vol: **1 mL**

**Results of Southeast WUD (West) DW 1**

Client Sample ID: **Southeast WUD (West) DW 1**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399066-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 11:00  
 Received Date: 07/01/2021 10:18  
 Matrix: Drinking Water

**Results by EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.751	1.82	ng/L	1	07/14/2021 15:43
NMeFOSAA	ND	U	0.770	3.64	ng/L	1	07/14/2021 15:43
PFBS	ND	U	0.503	1.82	ng/L	1	07/14/2021 15:43
PFDA	ND	U	0.864	1.82	ng/L	1	07/14/2021 15:43
PFDoA	ND	U	1.02	1.82	ng/L	1	07/14/2021 15:43
PFHpA	ND	U	0.705	1.82	ng/L	1	07/14/2021 15:43
PFHxA	ND	U	0.644	1.82	ng/L	1	07/14/2021 15:43
PFHxS	ND	U	0.425	1.82	ng/L	1	07/14/2021 15:43
PFNA	ND	U	0.720	1.82	ng/L	1	07/14/2021 15:43
PFOA	ND	U	0.525	1.82	ng/L	1	07/14/2021 15:43
PFOS	ND	U	0.517	1.82	ng/L	1	07/14/2021 15:43
PFTreA	ND	U	0.345	1.82	ng/L	1	07/14/2021 15:43
PFTriA	ND	U	0.366	1.82	ng/L	1	07/14/2021 15:43
PFuNA	ND	U	0.376	1.82	ng/L	1	07/14/2021 15:43
NaDONA	ND	U	0.497	1.82	ng/L	1	07/14/2021 15:43
9Cl-PF3ONS	ND	U	0.606	1.82	ng/L	1	07/14/2021 15:43
11Cl-PF3OUdS	ND	U	0.618	1.82	ng/L	1	07/14/2021 15:43
HFPO-DA (GenX)	ND	U	1.57	3.64	ng/L	1	07/14/2021 15:43
<b>Surrogates</b>							
13C2-PFDA	104			70.0-130	%	1	07/14/2021 15:43
13C2-PFHxA	101			70.0-130	%	1	07/14/2021 15:43
d5-NEtFOSAA	94.6			70.0-130	%	1	07/14/2021 15:43
13C3-HFPO-DA	104			70.0-130	%	1	07/14/2021 15:43

**Batch Information**

Analytical Batch: **XLC1746**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/14/2021 15:43**

Prep Batch: **HXX2781**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 15:16**  
 Prep Initial Wt./Vol.: **275 mL**  
 Prep Extract Vol: **1 mL**



**Results of Oakes DW 1**

Client Sample ID: **Oakes DW 1**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399067-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 12:05  
 Received Date: 07/01/2021 10:19  
 Matrix: Drinking Water

**Results by EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.727	1.76	ng/L	1	07/14/2021 16:21
NMeFOSAA	ND	U	0.746	3.52	ng/L	1	07/14/2021 16:21
PFBS	<b>0.499</b>	J	0.487	1.76	ng/L	1	07/14/2021 16:21
PFDA	ND	U	0.836	1.76	ng/L	1	07/14/2021 16:21
PFDoA	ND	U	0.986	1.76	ng/L	1	07/14/2021 16:21
PFHpA	ND	U	0.682	1.76	ng/L	1	07/14/2021 16:21
PFHxA	<b>0.777</b>	J	0.623	1.76	ng/L	1	07/14/2021 16:21
PFHxS	ND	U	0.411	1.76	ng/L	1	07/14/2021 16:21
PFNA	ND	U	0.697	1.76	ng/L	1	07/14/2021 16:21
PFOA	ND	U	0.508	1.76	ng/L	1	07/14/2021 16:21
PFOS	ND	U	0.501	1.76	ng/L	1	07/14/2021 16:21
PFTreA	ND	U	0.335	1.76	ng/L	1	07/14/2021 16:21
PFTriA	ND	U	0.355	1.76	ng/L	1	07/14/2021 16:21
PFuNA	ND	U	0.364	1.76	ng/L	1	07/14/2021 16:21
NaDONA	ND	U	0.482	1.76	ng/L	1	07/14/2021 16:21
9Cl-PF3ONS	ND	U	0.587	1.76	ng/L	1	07/14/2021 16:21
11Cl-PF3OUdS	ND	U	0.599	1.76	ng/L	1	07/14/2021 16:21
HFPO-DA (GenX)	ND	U	1.52	3.52	ng/L	1	07/14/2021 16:21

**Surrogates**

13C2-PFDA	106			70.0-130	%	1	07/14/2021 16:21
13C2-PFHxA	106			70.0-130	%	1	07/14/2021 16:21
d5-NEtFOSAA	99.0			70.0-130	%	1	07/14/2021 16:21
13C3-HFPO-DA	109			70.0-130	%	1	07/14/2021 16:21

**Batch Information**

Analytical Batch: **XLC1746**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/14/2021 16:21**

Prep Batch: **HXX2781**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 15:16**  
 Prep Initial Wt./Vol.: **284 mL**  
 Prep Extract Vol: **1 mL**

### Results of Ashley DW 1

Client Sample ID: **Ashley DW 1**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399068-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 14:30  
 Received Date: 07/01/2021 10:19  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.735	1.78	ng/L	1	07/15/2021 11:33
NMeFOSAA	ND	U	0.754	3.56	ng/L	1	07/15/2021 11:33
PFBS	ND	U	0.492	1.78	ng/L	1	07/15/2021 11:33
PFDA	ND	U	0.845	1.78	ng/L	1	07/15/2021 11:33
PFDaA	ND	U	0.996	1.78	ng/L	1	07/15/2021 11:33
PFHpA	ND	U	0.690	1.78	ng/L	1	07/15/2021 11:33
PFHxA	ND	U	0.630	1.78	ng/L	1	07/15/2021 11:33
PFHxS	ND	U	0.415	1.78	ng/L	1	07/15/2021 11:33
PFNA	ND	U	0.705	1.78	ng/L	1	07/15/2021 11:33
PFOA	ND	U	0.513	1.78	ng/L	1	07/15/2021 11:33
PFOS	ND	U	0.506	1.78	ng/L	1	07/15/2021 11:33
PFTreA	ND	U	0.338	1.78	ng/L	1	07/15/2021 11:33
PFTriA	ND	U	0.359	1.78	ng/L	1	07/15/2021 11:33
PFuNA	ND	U	0.368	1.78	ng/L	1	07/15/2021 11:33
NaDONA	ND	U	0.487	1.78	ng/L	1	07/15/2021 11:33
9Cl-PF3ONS	ND	U	0.593	1.78	ng/L	1	07/15/2021 11:33
11Cl-PF3OUdS	ND	U	0.605	1.78	ng/L	1	07/15/2021 11:33
HFPO-DA (GenX)	ND	U	1.54	3.56	ng/L	1	07/15/2021 11:33
<b>Surrogates</b>							
13C2-PFDA	145*			70.0-130	%	1	07/15/2021 11:33
13C2-PFHxA	140*			70.0-130	%	1	07/15/2021 11:33
d5-NEtFOSAA	140*			70.0-130	%	1	07/15/2021 11:33
13C3-HFPO-DA	145*			70.0-130	%	1	07/15/2021 11:33

### Batch Information

Analytical Batch: **XLC1746**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/15/2021 11:33**

Prep Batch: **HXX2776**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 08:08**  
 Prep Initial Wt./Vol.: **281 mL**  
 Prep Extract Vol: **1 mL**

**Results of Maple River**

Client Sample ID: **Maple River**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399069-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 13:15  
 Received Date: 07/01/2021 10:20  
 Matrix: Drinking Water

**Results by EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.715	1.73	ng/L	1	07/13/2021 16:05
NMeFOSAA	ND	U	0.733	3.46	ng/L	1	07/13/2021 16:05
PFBS	ND	U	0.478	1.73	ng/L	1	07/13/2021 16:05
PFDA	ND	U	0.822	1.73	ng/L	1	07/13/2021 16:05
PFDoA	ND	U	0.969	1.73	ng/L	1	07/13/2021 16:05
PFHpA	ND	U	0.670	1.73	ng/L	1	07/13/2021 16:05
PFHxA	ND	U	0.612	1.73	ng/L	1	07/13/2021 16:05
PFHxS	ND	U	0.404	1.73	ng/L	1	07/13/2021 16:05
PFNA	ND	U	0.685	1.73	ng/L	1	07/13/2021 16:05
PFOA	ND	U	0.499	1.73	ng/L	1	07/13/2021 16:05
PFOS	ND	U	0.492	1.73	ng/L	1	07/13/2021 16:05
PFTreA	ND	U	0.329	1.73	ng/L	1	07/13/2021 16:05
PFTriA	ND	U	0.349	1.73	ng/L	1	07/13/2021 16:05
PFuNA	ND	U	0.358	1.73	ng/L	1	07/13/2021 16:05
NaDONA	ND	U	0.473	1.73	ng/L	1	07/13/2021 16:05
9Cl-PF3ONS	ND	U	0.577	1.73	ng/L	1	07/13/2021 16:05
11Cl-PF3OUdS	ND	U	0.588	1.73	ng/L	1	07/13/2021 16:05
HFPO-DA (GenX)	ND	U	1.50	3.46	ng/L	1	07/13/2021 16:05
<b>Surrogates</b>							
13C2-PFDA	101			70.0-130	%	1	07/13/2021 16:05
13C2-PFHxA	107			70.0-130	%	1	07/13/2021 16:05
d5-NEtFOSAA	100			70.0-130	%	1	07/13/2021 16:05
13C3-HFPO-DA	103			70.0-130	%	1	07/13/2021 16:05

**Batch Information**

Analytical Batch: **XLC1742**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/13/2021 16:05**

Prep Batch: **HXX2776**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 08:08**  
 Prep Initial Wt./Vol.: **289 mL**  
 Prep Extract Vol: **1 mL**

### Results of Jacob DUP 1

Client Sample ID: **Jacob DUP 1**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399070-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 13:15  
 Received Date: 07/01/2021 10:20  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.712	1.72	ng/L	1	07/9/2021 23:37
NMeFOSAA	ND	U	0.730	3.45	ng/L	1	07/9/2021 23:37
PFBS	ND	U	0.477	1.72	ng/L	1	07/9/2021 23:37
PFDA	ND	U	0.819	1.72	ng/L	1	07/9/2021 23:37
PFDaA	ND	U	0.966	1.72	ng/L	1	07/9/2021 23:37
PFHpA	ND	U	0.668	1.72	ng/L	1	07/9/2021 23:37
PFHxA	ND	U	0.610	1.72	ng/L	1	07/9/2021 23:37
PFHxS	ND	U	0.403	1.72	ng/L	1	07/9/2021 23:37
PFNA	ND	U	0.683	1.72	ng/L	1	07/9/2021 23:37
PFOA	ND	U	0.497	1.72	ng/L	1	07/9/2021 23:37
PFOS	ND	U	0.491	1.72	ng/L	1	07/9/2021 23:37
PFTreA	ND	U	0.328	1.72	ng/L	1	07/9/2021 23:37
PFTriA	ND	U	0.347	1.72	ng/L	1	07/9/2021 23:37
PFuNA	ND	U	0.357	1.72	ng/L	1	07/9/2021 23:37
NaDONA	ND	U	0.472	1.72	ng/L	1	07/9/2021 23:37
9Cl-PF3ONS	ND	U	0.575	1.72	ng/L	1	07/9/2021 23:37
11Cl-PF3OUdS	ND	U	0.586	1.72	ng/L	1	07/9/2021 23:37
HFPO-DA (GenX)	ND	U	1.49	3.45	ng/L	1	07/9/2021 23:37
<b>Surrogates</b>							
13C2-PFDA	103			70.0-130	%	1	07/9/2021 23:37
13C2-PFHxA	102			70.0-130	%	1	07/9/2021 23:37
d5-NEtFOSAA	88.0			70.0-130	%	1	07/9/2021 23:37
13C3-HFPO-DA	96.0			70.0-130	%	1	07/9/2021 23:37

### Batch Information

Analytical Batch: **XLC1741**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/09/2021 23:37**

Prep Batch: **HXX2774**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/07/2021 15:24**  
 Prep Initial Wt./Vol.: **290 mL**  
 Prep Extract Vol: **1 mL**

**Results of DEQ prefilter tap**

Client Sample ID: **DEQ prefilter tap**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399071-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 13:15  
 Received Date: 07/01/2021 10:20  
 Matrix: Drinking Water

**Results by EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.939	2.27	ng/L	1	07/9/2021 23:56
NMeFOSAA	ND	U	0.963	4.55	ng/L	1	07/9/2021 23:56
PFBS	ND	U	0.628	2.27	ng/L	1	07/9/2021 23:56
PFDA	ND	U	1.08	2.27	ng/L	1	07/9/2021 23:56
PFDoA	ND	U	1.27	2.27	ng/L	1	07/9/2021 23:56
PFHpA	ND	U	0.881	2.27	ng/L	1	07/9/2021 23:56
PFHxA	ND	U	0.805	2.27	ng/L	1	07/9/2021 23:56
PFHxS	ND	U	0.531	2.27	ng/L	1	07/9/2021 23:56
PFNA	ND	U	0.900	2.27	ng/L	1	07/9/2021 23:56
PFOA	ND	U	0.656	2.27	ng/L	1	07/9/2021 23:56
PFOS	ND	U	0.647	2.27	ng/L	1	07/9/2021 23:56
PFTreA	ND	U	0.432	2.27	ng/L	1	07/9/2021 23:56
PFTriA	ND	U	0.458	2.27	ng/L	1	07/9/2021 23:56
PFuNA	ND	U	0.470	2.27	ng/L	1	07/9/2021 23:56
NaDONA	ND	U	0.622	2.27	ng/L	1	07/9/2021 23:56
9Cl-PF3ONS	ND	U	0.758	2.27	ng/L	1	07/9/2021 23:56
11Cl-PF3OUdS	ND	U	0.773	2.27	ng/L	1	07/9/2021 23:56
HFPO-DA (GenX)	ND	U	1.97	4.55	ng/L	1	07/9/2021 23:56
<b>Surrogates</b>							
13C2-PFDA	102			70.0-130	%	1	07/9/2021 23:56
13C2-PFHxA	96.7			70.0-130	%	1	07/9/2021 23:56
d5-NEtFOSAA	92.7			70.0-130	%	1	07/9/2021 23:56
13C3-HFPO-DA	92.9			70.0-130	%	1	07/9/2021 23:56

**Batch Information**

Analytical Batch: **XLC1741**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/09/2021 23:56**

Prep Batch: **HXX2774**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/07/2021 15:24**  
 Prep Initial Wt./Vol.: **220 mL**  
 Prep Extract Vol: **1 mL**

### Results of DEQ prefilter tap FRB

Client Sample ID: **DEQ prefilter tap FRB**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399072-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 13:15  
 Received Date: 07/01/2021 10:22  
 Matrix: Drinking Water

### Results by EPA 537.1

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.813	1.97	ng/L	1	07/10/2021 0:15
NMeFOSAA	ND	U	0.834	3.94	ng/L	1	07/10/2021 0:15
PFBS	ND	U	0.544	1.97	ng/L	1	07/10/2021 0:15
PFDA	ND	U	0.935	1.97	ng/L	1	07/10/2021 0:15
PFDoA	ND	U	1.10	1.97	ng/L	1	07/10/2021 0:15
PFHpA	ND	U	0.763	1.97	ng/L	1	07/10/2021 0:15
PFHxA	ND	U	0.697	1.97	ng/L	1	07/10/2021 0:15
PFHxS	ND	U	0.460	1.97	ng/L	1	07/10/2021 0:15
PFNA	ND	U	0.780	1.97	ng/L	1	07/10/2021 0:15
PFOA	ND	U	0.568	1.97	ng/L	1	07/10/2021 0:15
PFOS	ND	U	0.560	1.97	ng/L	1	07/10/2021 0:15
PFTreA	ND	U	0.374	1.97	ng/L	1	07/10/2021 0:15
PFTriA	ND	U	0.397	1.97	ng/L	1	07/10/2021 0:15
PFuNA	ND	U	0.407	1.97	ng/L	1	07/10/2021 0:15
NaDONA	ND	U	0.538	1.97	ng/L	1	07/10/2021 0:15
9Cl-PF3ONS	ND	U	0.656	1.97	ng/L	1	07/10/2021 0:15
11Cl-PF3OUdS	ND	U	0.669	1.97	ng/L	1	07/10/2021 0:15
HFPO-DA (GenX)	ND	U	1.70	3.94	ng/L	1	07/10/2021 0:15
<b>Surrogates</b>							
13C2-PFDA	96.5			70.0-130	%	1	07/10/2021 0:15
13C2-PFHxA	91.8			70.0-130	%	1	07/10/2021 0:15
d5-NEtFOSAA	90.9			70.0-130	%	1	07/10/2021 0:15
13C3-HFPO-DA	88.8			70.0-130	%	1	07/10/2021 0:15

### Batch Information

Analytical Batch: **XLC1741**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/10/2021 00:15**

Prep Batch: **HXX2774**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/07/2021 15:24**  
 Prep Initial Wt./Vol.: **254 mL**  
 Prep Extract Vol: **1 mL**

### Results of DEQ postfilter

Client Sample ID: **DEQ postfilter**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399073-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 13:30  
 Received Date: 07/01/2021 10:23  
 Matrix: Drinking Water

### Results by EPA 537.1

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.871	2.11	ng/L	1	07/10/2021 0:34
NMeFOSAA	ND	U	0.893	4.22	ng/L	1	07/10/2021 0:34
PFBS	ND	U	0.583	2.11	ng/L	1	07/10/2021 0:34
PFDA	ND	U	1.00	2.11	ng/L	1	07/10/2021 0:34
PFDoA	ND	U	1.18	2.11	ng/L	1	07/10/2021 0:34
PFHpA	ND	U	0.818	2.11	ng/L	1	07/10/2021 0:34
PFHxA	ND	U	0.747	2.11	ng/L	1	07/10/2021 0:34
PFHxS	ND	U	0.493	2.11	ng/L	1	07/10/2021 0:34
PFNA	ND	U	0.835	2.11	ng/L	1	07/10/2021 0:34
PFOA	ND	U	0.609	2.11	ng/L	1	07/10/2021 0:34
PFOS	ND	U	0.600	2.11	ng/L	1	07/10/2021 0:34
PFTreA	ND	U	0.401	2.11	ng/L	1	07/10/2021 0:34
PFTriA	ND	U	0.425	2.11	ng/L	1	07/10/2021 0:34
PFuNA	ND	U	0.437	2.11	ng/L	1	07/10/2021 0:34
NaDONA	ND	U	0.577	2.11	ng/L	1	07/10/2021 0:34
9Cl-PF3ONS	ND	U	0.704	2.11	ng/L	1	07/10/2021 0:34
11Cl-PF3OUdS	ND	U	0.717	2.11	ng/L	1	07/10/2021 0:34
HFPO-DA (GenX)	ND	U	1.82	4.22	ng/L	1	07/10/2021 0:34
<b>Surrogates</b>							
13C2-PFDA	91.0			70.0-130	%	1	07/10/2021 0:34
13C2-PFHxA	85.6			70.0-130	%	1	07/10/2021 0:34
d5-NEtFOSAA	82.2			70.0-130	%	1	07/10/2021 0:34
13C3-HFPO-DA	81.6			70.0-130	%	1	07/10/2021 0:34

### Batch Information

Analytical Batch: **XLC1741**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/10/2021 00:34**

Prep Batch: **HXX2774**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/07/2021 15:24**  
 Prep Initial Wt./Vol.: **237 mL**  
 Prep Extract Vol: **1 mL**

**Results of DEQ postfilter FRB**

Client Sample ID: **DEQ postfilter FRB**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399074-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 13:30  
 Received Date: 07/01/2021 10:24  
 Matrix: Drinking Water

**Results by EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>	<u>Date Analyzed</u>
NEtFOSAA	ND	U	0.843	2.04	ng/L	1	07/13/2021 22:04
NMeFOSAA	ND	U	0.864	4.08	ng/L	1	07/13/2021 22:04
PFBS	ND	U	0.564	2.04	ng/L	1	07/13/2021 22:04
PFDA	ND	U	0.969	2.04	ng/L	1	07/13/2021 22:04
PFDaA	ND	U	1.14	2.04	ng/L	1	07/13/2021 22:04
PFHpA	ND	U	0.791	2.04	ng/L	1	07/13/2021 22:04
PFHxA	ND	U	0.722	2.04	ng/L	1	07/13/2021 22:04
PFHxS	ND	U	0.477	2.04	ng/L	1	07/13/2021 22:04
PFNA	ND	U	0.808	2.04	ng/L	1	07/13/2021 22:04
PFOA	ND	U	0.589	2.04	ng/L	1	07/13/2021 22:04
PFOS	ND	U	0.581	2.04	ng/L	1	07/13/2021 22:04
PFTreA	ND	U	0.388	2.04	ng/L	1	07/13/2021 22:04
PFTriA	ND	U	0.411	2.04	ng/L	1	07/13/2021 22:04
PFuNA	ND	U	0.422	2.04	ng/L	1	07/13/2021 22:04
NaDONA	ND	U	0.558	2.04	ng/L	1	07/13/2021 22:04
9Cl-PF3ONS	ND	U	0.681	2.04	ng/L	1	07/13/2021 22:04
11Cl-PF3OUdS	ND	U	0.694	2.04	ng/L	1	07/13/2021 22:04
HFPO-DA (GenX)	ND	U	1.77	4.08	ng/L	1	07/13/2021 22:04
<b>Surrogates</b>							
13C2-PFDA	76.9			70.0-130	%	1	07/13/2021 22:04
13C2-PFHxA	80.8			70.0-130	%	1	07/13/2021 22:04
d5-NEtFOSAA	75.0			70.0-130	%	1	07/13/2021 22:04
13C3-HFPO-DA	81.0			70.0-130	%	1	07/13/2021 22:04

**Batch Information**

Analytical Batch: **XLC1742**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/13/2021 22:04**

Prep Batch: **HXX2774**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/07/2021 15:24**  
 Prep Initial Wt./Vol.: **245 mL**  
 Prep Extract Vol: **1 mL**



### Results of Washburn DW

Client Sample ID: **Washburn DW**  
 Client Project ID: **5541 EQ3992-41**  
 Lab Sample ID: 32101399075-A  
 Lab Project ID: 32101399

Collection Date: 06/28/2021 08:12  
 Received Date: 07/02/2021 11:26  
 Matrix: Drinking Water

### Results by EPA 537.1

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
NEtFOSAA	ND	U	0.754	1.82	ng/L	1	07/14/2021 14:46
NMeFOSAA	ND	U	0.773	3.65	ng/L	1	07/14/2021 14:46
PFBS	<b>0.522</b>	J	0.505	1.82	ng/L	1	07/14/2021 14:46
PFDA	ND	U	0.867	1.82	ng/L	1	07/14/2021 14:46
PFDaA	ND	U	1.02	1.82	ng/L	1	07/14/2021 14:46
PFHpA	ND	U	0.707	1.82	ng/L	1	07/14/2021 14:46
PFHxA	<b>0.980</b>	J	0.646	1.82	ng/L	1	07/14/2021 14:46
PFHxS	ND	U	0.426	1.82	ng/L	1	07/14/2021 14:46
PFNA	ND	U	0.723	1.82	ng/L	1	07/14/2021 14:46
PFOA	ND	U	0.526	1.82	ng/L	1	07/14/2021 14:46
PFOS	ND	U	0.519	1.82	ng/L	1	07/14/2021 14:46
PFTreA	ND	U	0.347	1.82	ng/L	1	07/14/2021 14:46
PFTriA	ND	U	0.368	1.82	ng/L	1	07/14/2021 14:46
PFuNA	ND	U	0.378	1.82	ng/L	1	07/14/2021 14:46
NaDONA	ND	U	0.499	1.82	ng/L	1	07/14/2021 14:46
9Cl-PF3ONS	ND	U	0.609	1.82	ng/L	1	07/14/2021 14:46
11Cl-PF3OUdS	ND	U	0.620	1.82	ng/L	1	07/14/2021 14:46
HFPO-DA (GenX)	ND	U	1.58	3.65	ng/L	1	07/14/2021 14:46
<b>Surrogates</b>							
13C2-PFDA	145*			70.0-130	%	1	07/14/2021 14:46
13C2-PFHxA	142*			70.0-130	%	1	07/14/2021 14:46
d5-NEtFOSAA	137*			70.0-130	%	1	07/14/2021 14:46
13C3-HFPO-DA	146*			70.0-130	%	1	07/14/2021 14:46

### Batch Information

Analytical Batch: **XLC1746**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**  
 Analytical Date/Time: **07/14/2021 14:46**

Prep Batch: **HXX2776**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 08:08**  
 Prep Initial Wt./Vol.: **274 mL**  
 Prep Extract Vol: **1 mL**

### Batch Summary

Analytical Method: EPA 537.1

Prep Method: EPA 537.1 Prep

Prep Batch: HXX2773

Prep Date: 07/06/2021 16:05

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Analysis Date</u>	<u>Analytical Batch</u>	<u>Instrument</u>	<u>Analyst</u>
MB for HBN 155479 [HXX/2773]	246917	07/09/2021 09:59	XLC1738	TQS2	FNS
LCS1 for HBN 155479 [HXX/2773]	246918	07/09/2021 16:36	XLC1738	TQS2	FNS
Lakota DW(246783MS1)	246919	07/09/2021 10:56	XLC1738	TQS2	FNS
Gwinner, City of(246791DUP)	246920	07/09/2021 14:05	XLC1738	TQS2	FNS
Lakota DW	32101399012	07/09/2021 10:37	XLC1738	TQS2	FNS
Dakota Rural WD North DW	32101399013	07/09/2021 11:15	XLC1738	TQS2	FNS
Gregg DUP	32101399014	07/09/2021 11:34	XLC1738	TQS2	FNS
Hannaford DW	32101399015	07/09/2021 11:52	XLC1738	TQS2	FNS
Cooperstown DW	32101399016	07/09/2021 12:11	XLC1738	TQS2	FNS
McVile DW	32101399017	07/09/2021 12:30	XLC1738	TQS2	FNS
Grant Colony	32101399018	07/09/2021 12:49	XLC1738	TQS2	FNS
Enderlin, City of	32101399019	07/09/2021 13:27	XLC1738	TQS2	FNS
Gwinner, City of	32101399020	07/09/2021 13:46	XLC1738	TQS2	FNS
LeeAnn DUP	32101399021	07/09/2021 14:42	XLC1738	TQS2	FNS
Forman, City of	32101399022	07/09/2021 15:01	XLC1738	TQS2	FNS
Abercrombie, City of	32101399023	07/09/2021 15:20	XLC1738	TQS2	FNS
Southeast WUD (East)	32101399024	07/09/2021 15:39	XLC1738	TQS2	FNS
Fairmount, City of	32101399025	07/09/2021 15:58	XLC1738	TQS2	FNS
R&R Trailer Park DW	32101399026	07/09/2021 16:17	XLC1738	TQS2	FNS
Portal DW	32101399027	07/09/2021 16:55	XLC1738	TQS2	FNS

### Method Blank

Blank ID: MB for HBN 155479 [HXX/2773]

Matrix: Water

Blank Lab ID: 246917

QC for Samples:

32101399012, 32101399013, 32101399014, 32101399015, 32101399016, 32101399017, 32101399018, 32101399019, 32101399020, 32101399021, 32101399022, 32101399023, 32101399024, 32101399025, 32101399026, 32101399027

### Results by EPA 537.1

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>
NEtFOSAA	ND	U	0.826	2.00	ng/L	1
NMeFOSAA	ND	U	0.847	4.00	ng/L	1
PFBS	ND	U	0.553	2.00	ng/L	1
PFDA	ND	U	0.950	2.00	ng/L	1
PFDoA	ND	U	1.12	2.00	ng/L	1
PFHpA	ND	U	0.775	2.00	ng/L	1
PFHxA	ND	U	0.708	2.00	ng/L	1
PFHxS	ND	U	0.467	2.00	ng/L	1
PFNA	ND	U	0.792	2.00	ng/L	1
PFOA	ND	U	0.577	2.00	ng/L	1
PFOS	ND	U	0.569	2.00	ng/L	1
PFTreA	ND	U	0.380	2.00	ng/L	1
PFTriA	ND	U	0.403	2.00	ng/L	1
PFuNA	ND	U	0.414	2.00	ng/L	1
NaDONA	ND	U	0.547	2.00	ng/L	1
9Cl-PF3ONS	ND	U	0.667	2.00	ng/L	1
11Cl-PF3OUdS	ND	U	0.680	2.00	ng/L	1
HFPO-DA (GenX)	ND	U	1.73	4.00	ng/L	1

### Surrogates

13C2-PFDA	80.2			70.0-130	%	1
13C2-PFHxA	79.4			70.0-130	%	1
d5-NEtFOSAA	77.0			70.0-130	%	1
13C3-HFPO-DA	76.3			70.0-130	%	1

### Batch Information

Analytical Batch: **XLC1738**

Analytical Method: **EPA 537.1**

Instrument: **TQS2**

Analyst: **FNS**

Analytical Date/Time: **07/09/2021 09:59**

Dilution: **1**

Prep Batch: **HXX2773**

Prep Method: **EPA 537.1 Prep**

Prep Date/Time: **07/06/2021 16:05**

Prep Initial Wt./Vol.: **250 mL**

Prep Extract Vol: **1 mL**

**QC CheckCode: TQS2-210709A004.d**

### Blank Spike Summary

Blank Spike ID: LCS1 for HBN 155479 [HXX/2773]

Blank Spike Lab ID: 246918

Date Analyzed: 07/09/2021 16:36

Matrix: Water

QC for Samples: 32101399012, 32101399013, 32101399014, 32101399015, 32101399016, 32101399017, 32101399018, 32101399019, 32101399020, 32101399021, 32101399022, 32101399023, 32101399024, 32101399025, 32101399026, 32101399027

### Results by EPA 537.1

#### Blank Spike (ng/L)

Parameter	Spike	Result	Rec (%)	CL
NEtFOSAA	2.00	1.19	59.5	50.0-150
NMeFOSAA	2.00	1.35	67.3	50.0-150
PFBS	1.78	1.36	76.6	50.0-150
PFDA	2.00	1.44	71.9	50.0-150
PFDoA	2.00	ND	51	50.0-150
PFHpA	2.00	1.44	71.8	50.0-150
PFHxA	2.00	1.48	73.9	50.0-150
PFHxS	1.82	1.46	80	50.0-150
PFNA	2.00	1.45	72.6	50.0-150
PFOA	2.00	1.50	75.1	50.0-150
PFOS	1.86	1.41	75.9	50.0-150
PFTreA	2.00	1.02	51.1	50.0-150
PFTriA	2.00	1.32	66.2	50.0-150
PFuNA	2.00	1.24	61.9	50.0-150
NaDONA	1.90	1.34	70.5	50.0-150
9Cl-PF3ONS	1.86	1.29	69.3	50.0-150
11Cl-PF3OUdS	1.88	1.28	68.2	50.0-150
HFPO-DA (GenX)	2.00	ND	72.1	50.0-150

#### Surrogates

13C2-PFDA			83.3	70.0-130
13C2-PFHxA			83.7	70.0-130
d5-NEtFOSAA			<b>69.9*</b>	70.0-130
13C3-HFPO-DA			82.7	70.0-130

### Batch Information

Analytical Batch: **XLC1738**

Analytical Method: **EPA 537.1**

Instrument: **TQS2**

Analyst: **FNS**

Prep Batch: **HXX2773**

Prep Method: **EPA 537.1 Prep**

Prep Date/Time: **07/06/2021 16:05**

Spike Init Wt./Vol.: **250 mL** Extract Vol: **1 mL**

Dupe Init Wt./Vol.: Extract Vol:

### Matrix Spike Summary

Original Sample ID: 32101399012 (Lakota DW)  
 MS Sample ID: 246919  
 MSD Sample ID:

Analysis Date: 07/09/2021 10:37  
 Analysis Date: 07/09/2021 10:56  
 Analysis Date:  
 Matrix: Drinking Water

QC for Samples: 32101399012, 32101399013, 32101399014, 32101399015, 32101399016, 32101399017,  
 32101399018, 32101399019, 32101399020, 32101399021, 32101399022, 32101399023,  
 32101399024, 32101399025, 32101399026, 32101399027

### Results by EPA 537.1

#### Matrix Spike (ng/L)

Parameter	Sample	Spike	Result	Rec (%)	CL
NEtFOSAA	ND	1.78	1.26	70.6	50.0-150
NMeFOSAA	ND	1.78	1.23	69.3	50.0-150
PFBS	ND	1.58	1.22	77	50.0-150
PFDA	ND	1.78	1.24	69.5	50.0-150
PFDoA	ND	1.78	1.04	58.4	50.0-150
PFHpA	ND	1.78	1.20	67.3	50.0-150
PFHxA	ND	1.78	1.28	72	50.0-150
PFHxS	ND	1.62	1.21	75	50.0-150
PFNA	ND	1.78	1.24	69.7	50.0-150
PFOA	ND	1.78	1.29	72.6	50.0-150
PFOS	ND	1.65	1.19	72.1	50.0-150
PFTreA	ND	1.78	1.01	57	50.0-150
PFTriA	ND	1.78	1.18	66.3	50.0-150
PFuNA	ND	1.78	1.12	62.9	50.0-150
NaDONA	ND	1.69	1.16	68.7	50.0-150
9Cl-PF3ONS	ND	1.65	1.06	63.9	50.0-150
11Cl-PF3OUdS	ND	1.67	1.22	73	50.0-150
HFPO-DA (GenX)	ND	1.78	ND	70.5	50.0-150

### Surrogates

13C2-PFDA				82.5	50.0-150
13C2-PFHxA				79.5	50.0-150
d5-NEtFOSAA				79	50.0-150
13C3-HFPO-DA				79.4	50.0-150

### Batch Information

Analytical Batch: **XLC1738**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**

Prep Batch: **HXX2773**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/06/2021 16:05**  
 MS Init Wt./Vol.: **281 mL** Extract Vol.: **1 mL**  
 MSD Init Wt./Vol.: Extract Vol.:

### Duplicate Sample Summary

Original Sample ID: 32101399020  
 Duplicate Sample ID: 246920

Analysis Date: 07/09/2021 13:46  
 Analysis Date: 07/09/2021 14:05  
 Matrix: Drinking Water

QC for Samples: 32101399012, 32101399013, 32101399014, 32101399015, 32101399016, 32101399017, 32101399018, 32101399019, 32101399020, 32101399021, 32101399022, 32101399023, 32101399024, 32101399025, 32101399026, 32101399027

### Results by EPA 537.1

<u>PARAMETER</u>	<u>Original (ng/L)</u>	<u>Qual</u>	<u>Duplicate (ng/L)</u>	<u>Qual</u>	<u>RPD (%)</u>	<u>RPD CL</u>
NEtFOSAA	ND	U	ND	U		30.00
NMeFOSAA	ND	U	ND	U		30.00
PFBS	ND	U	ND	U		30.00
PFDA	ND	U	ND	U		30.00
PFDoA	ND	U	ND	U		30.00
PFHpA	ND	U	ND	U		30.00
PFHxA	ND	U	ND	U		30.00
PFHxS	ND	U	ND	U		30.00
PFNA	ND	U	ND	U		30.00
PFOA	ND	U	ND	U		30.00
PFOS	ND	U	ND	U		30.00
PFTreA	ND	U	ND	U		30.00
PFTriA	ND	U	ND	U		30.00
PFuNA	ND	U	ND	U		30.00
NaDONA	ND	U	ND	U		30.00
9Cl-PF3ONS	ND	U	ND	U		30.00
11Cl-PF3OUdS	ND	U	ND	U		30.00
HFPO-DA (GenX)	ND	U	ND	U		30.00
<b>Surrogates</b>						
13C2-PFDA	84.5		87.1		3.0	30.00
13C2-PFHxA	85.1		86.0		0.99	30.00
d5-NEtFOSAA	81.3		83.3		2.6	30.00
13C3-HFPO-DA	83.2		83.0		0.34	30.00

### Batch Information

Analytical Batch: XLC1738  
 Analytical Method: EPA 537.1  
 Instrument: TQS2  
 Analyst: FNS

Prep Batch: HXX2773  
 Prep Method: EPA 537.1 Prep  
 Prep Date/Time: 07/06/2021 16:05

### Batch Summary

Analytical Method: EPA 537.1

Prep Method: EPA 537.1 Prep

Prep Batch: HXX2781

Prep Date: 07/09/2021 15:16

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Analysis Date</u>	<u>Analytical Batch</u>	<u>Instrument</u>	<u>Analyst</u>
MB for HBN 155498 [HXX/2781]	247116	07/13/2021 23:36	XLC1743	TQS2	FNS
LCS1 for HBN 155498 [HXX/2781]	247117	07/13/2021 23:55	XLC1743	TQS2	FNS
Oakes DW 1(246838MS1)	247118	07/14/2021 16:40	XLC1746	TQS2	FNS
Valley City DW(246820DUP)	247119	07/14/2021 01:11	XLC1743	TQS2	FNS
Westhope DW	32101399044	07/14/2021 00:14	XLC1743	TQS2	FNS
Velva DW	32101399045	07/14/2021 00:33	XLC1743	TQS2	FNS
Cass Rural WD-Phase 1	32101399046	07/14/2021 00:52	XLC1743	TQS2	FNS
Valley City DW	32101399049	07/14/2021 01:29	XLC1743	TQS2	FNS
Duplicate JS DW	32101399050	07/14/2021 01:48	XLC1743	TQS2	FNS
Cass Rural WD Phase III	32101399055	07/14/2021 02:07	XLC1743	TQS2	FNS
City of Harvey DW	32101399058	07/14/2021 02:26	XLC1743	TQS2	FNS
Marlon DUP	32101399059	07/14/2021 03:04	XLC1743	TQS2	FNS
Medina DW	32101399060	07/14/2021 03:23	XLC1743	TQS2	FNS
Jamestown DW	32101399061	07/14/2021 03:41	XLC1743	TQS2	FNS
City of Tuttle DW	32101399062	07/14/2021 04:00	XLC1743	TQS2	FNS
Willowbank DW 1	32101399063	07/14/2021 13:24	XLC1746	TQS2	FNS
Fairview Colony DW 1	32101399064	07/14/2021 13:43	XLC1746	TQS2	FNS
Lehr DW 1	32101399065	07/14/2021 14:02	XLC1746	TQS2	FNS
Southeast WUD (West) DW 1	32101399066	07/14/2021 15:43	XLC1746	TQS2	FNS
Oakes DW 1	32101399067	07/14/2021 16:21	XLC1746	TQS2	FNS

### Method Blank

Blank ID: MB for HBN 155498 [HXX/2781]

Matrix: Water

Blank Lab ID: 247116

QC for Samples:

32101399044, 32101399045, 32101399046, 32101399049, 32101399050, 32101399055, 32101399058, 32101399059, 32101399060, 32101399061, 32101399062, 32101399063, 32101399064, 32101399065, 32101399066, 32101399067

### Results by EPA 537.1

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>
NEtFOSAA	ND	U	0.826	2.00	ng/L	1
NMeFOSAA	ND	U	0.847	4.00	ng/L	1
PFBS	ND	U	0.553	2.00	ng/L	1
PFDA	ND	U	0.950	2.00	ng/L	1
PFDoA	ND	U	1.12	2.00	ng/L	1
PFHpA	ND	U	0.775	2.00	ng/L	1
PFHxA	ND	U	0.708	2.00	ng/L	1
PFHxS	ND	U	0.467	2.00	ng/L	1
PFNA	ND	U	0.792	2.00	ng/L	1
PFOA	ND	U	0.577	2.00	ng/L	1
PFOS	ND	U	0.569	2.00	ng/L	1
PFTreA	ND	U	0.380	2.00	ng/L	1
PFTriA	ND	U	0.403	2.00	ng/L	1
PFuNA	ND	U	0.414	2.00	ng/L	1
NaDONA	ND	U	0.547	2.00	ng/L	1
9Cl-PF3ONS	ND	U	0.667	2.00	ng/L	1
11Cl-PF3OUdS	ND	U	0.680	2.00	ng/L	1
HFPO-DA (GenX)	ND	U	1.73	4.00	ng/L	1

### Surrogates

13C2-PFDA	96.3			70.0-130	%	1
13C2-PFHxA	97.6			70.0-130	%	1
d5-NEtFOSAA	97.5			70.0-130	%	1
13C3-HFPO-DA	97.5			70.0-130	%	1

### Batch Information

Analytical Batch: **XLC1743**

Analytical Method: **EPA 537.1**

Instrument: **TQS2**

Analyst: **FNS**

Analytical Date/Time: **07/13/2021 23:36**

Dilution: **1**

Prep Batch: **HXX2781**

Prep Method: **EPA 537.1 Prep**

Prep Date/Time: **07/09/2021 15:16**

Prep Initial Wt./Vol.: **250 mL**

Prep Extract Vol: **1 mL**

**QC CheckCode: TQS2-210713A004.d**



### Blank Spike Summary

Blank Spike ID: LCS1 for HBN 155498 [HXX/2781]

Blank Spike Lab ID: 247117

Date Analyzed: 07/13/2021 23:55

Matrix: Water

QC for Samples: 32101399044, 32101399045, 32101399046, 32101399049, 32101399050, 32101399055, 32101399058, 32101399059, 32101399060, 32101399061, 32101399062, 32101399063, 32101399064, 32101399065, 32101399066, 32101399067

### Results by EPA 537.1

#### Blank Spike (ng/L)

Parameter	Spike	Result	Rec (%)	CL
NEtFOSAA	2.00	1.88	94	50.0-150
NMeFOSAA	2.00	1.96	97.9	50.0-150
PFBS	1.78	1.78	99.9	50.0-150
PFDA	2.00	1.98	99.1	50.0-150
PFDoA	2.00	1.74	86.8	50.0-150
PFHpA	2.00	2.01	101	50.0-150
PFHxA	2.00	2.11	105	50.0-150
PFHxS	1.82	2.14	118	50.0-150
PFNA	2.00	1.94	96.8	50.0-150
PFOA	2.00	2.10	105	50.0-150
PFOS	1.86	2.03	109	50.0-150
PFTreA	2.00	2.07	104	50.0-150
PFTriA	2.00	2.49	125	50.0-150
PFuNA	2.00	1.91	95.3	50.0-150
NaDONA	1.90	1.91	101	50.0-150
9Cl-PF3ONS	1.86	1.94	105	50.0-150
11Cl-PF3OUdS	1.88	1.98	105	50.0-150
HFPO-DA (GenX)	2.00	2.10	105	50.0-150

#### Surrogates

13C2-PFDA			108	70.0-130
13C2-PFHxA			109	70.0-130
d5-NEtFOSAA			99.5	70.0-130
13C3-HFPO-DA			108	70.0-130

### Batch Information

Analytical Batch: **XLC1743**

Analytical Method: **EPA 537.1**

Instrument: **TQS2**

Analyst: **FNS**

Prep Batch: **HXX2781**

Prep Method: **EPA 537.1 Prep**

Prep Date/Time: **07/09/2021 15:16**

Spike Init Wt./Vol.: **250 mL** Extract Vol: **1 mL**

Dupe Init Wt./Vol.: Extract Vol:

### Matrix Spike Summary

Original Sample ID: 32101399067 (Oakes DW 1)  
 MS Sample ID: 247118  
 MSD Sample ID:

Analysis Date: 07/14/2021 16:21  
 Analysis Date: 07/14/2021 16:40  
 Analysis Date:  
 Matrix: Drinking Water

QC for Samples: 32101399044, 32101399045, 32101399046, 32101399049, 32101399050, 32101399055,  
 32101399058, 32101399059, 32101399060, 32101399061, 32101399062, 32101399063,  
 32101399064, 32101399065, 32101399066, 32101399067

### Results by EPA 537.1

#### Matrix Spike (ng/L)

Parameter	Sample	Spike	Result	Rec (%)	CL
NEtFOSAA	ND	1.77	1.72	96.9	50.0-150
NMeFOSAA	ND	1.77	1.81	102	50.0-150
PFBS	0.499	1.58	2.01	127	50.0-150
PFDA	ND	1.77	1.85	104	50.0-150
PFDoA	ND	1.77	1.55	87.6	50.0-150
PFHpA	ND	1.77	1.86	105	50.0-150
PFHxA	0.777	1.77	2.94	166 *	50.0-150
PFHxS	ND	1.61	1.89	117	50.0-150
PFNA	ND	1.77	1.74	98.2	50.0-150
PFOA	ND	1.77	1.85	104	50.0-150
PFOS	ND	1.65	1.87	114	50.0-150
PFTreA	ND	1.77	1.53	86.5	50.0-150
PFTriA	ND	1.77	2.23	126	50.0-150
PFuNA	ND	1.77	1.66	93.7	50.0-150
NaDONA	ND	1.68	1.69	100	50.0-150
9Cl-PF3ONS	ND	1.65	1.70	103	50.0-150
11Cl-PF3OUdS	ND	1.67	1.84	110	50.0-150
HFPO-DA (GenX)	ND	1.77	1.84	104	50.0-150

### Surrogates

13C2-PFDA				105	50.0-150
13C2-PFHxA				104	50.0-150
d5-NEtFOSAA				98.6	50.0-150
13C3-HFPO-DA				106	50.0-150

### Batch Information

Analytical Batch: **XLC1746**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**

Prep Batch: **HXX2781**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 15:16**  
 MS Init Wt./Vol.: **282 mL** Extract Vol.: **1 mL**  
 MSD Init Wt./Vol.: Extract Vol.:



### Duplicate Sample Summary

Original Sample ID: 32101399049

Duplicate Sample ID: 247119

Analysis Date: 07/14/2021 01:29

Analysis Date: 07/14/2021 01:11

Matrix: Drinking Water

QC for Samples: 32101399044, 32101399045, 32101399046, 32101399049, 32101399050, 32101399055, 32101399058, 32101399059, 32101399060, 32101399061, 32101399062, 32101399063, 32101399064, 32101399065, 32101399066, 32101399067

### Results by EPA 537.1

<u>PARAMETER</u>	<u>Original (ng/L)</u>	<u>Qual</u>	<u>Duplicate (ng/L)</u>	<u>Qual</u>	<u>RPD (%)</u>	<u>RPD CL</u>
NEtFOSAA	ND	U	ND	U		30.00
NMeFOSAA	ND	U	ND	U		30.00
PFBS	ND	U	ND	U		30.00
PFDA	ND	U	ND	U		30.00
PFDoA	ND	U	ND	U		30.00
PFHpA	ND	U	ND	U		30.00
PFHxA	ND	U	ND	U		30.00
PFHxS	ND	U	ND	U		30.00
PFNA	ND	U	ND	U		30.00
PFOA	ND	U	ND	U		30.00
PFOS	ND	U	ND	U		30.00
PFTreA	ND	U	ND	U		30.00
PFTriA	ND	U	ND	U		30.00
PFuNA	ND	U	ND	U		30.00
NaDONA	ND	U	ND	U		30.00
9Cl-PF3ONS	ND	U	ND	U		30.00
11Cl-PF3OUdS	ND	U	ND	U		30.00
HFPO-DA (GenX)	ND	U	ND	U		30.00
<b>Surrogates</b>						
13C2-PFDA	103		111		5.6	30.00
13C2-PFHxA	104		107		0.81	30.00
d5-NEtFOSAA	101		109		5.5	30.00
13C3-HFPO-DA	107		109		0.27	30.00

### Batch Information

Analytical Batch: XLC1743  
Analytical Method: EPA 537.1  
Instrument: TQS2  
Analyst: FNS

Prep Batch: HXX2781  
Prep Method: EPA 537.1 Prep  
Prep Date/Time: 07/09/2021 15:16

### Batch Summary

Analytical Method: EPA 537.1

Prep Method: EPA 537.1 Prep

Prep Batch: HXX2774

Prep Date: 07/07/2021 15:24

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Analysis Date</u>	<u>Analytical Batch</u>	<u>Instrument</u>	<u>Analyst</u>
MB for HBN 155480 [HXX/2774]	246999	07/09/2021 18:35	XLC1741	TQS2	FNS
LCS2 for HBN 155480 [HXX/2774]	247000	07/09/2021 18:54	XLC1741	TQS2	FNS
173 Wyman (Eff)(246638MS2)	247001	07/09/2021 20:29	XLC1741	TQS2	FNS
Fargo DW(246819DUP)	247002	07/09/2021 21:06	XLC1741	TQS2	FNS
Fargo DW	32101399048	07/09/2021 20:47	XLC1741	TQS2	FNS
East Central Reg WD DW	32101399051	07/09/2021 21:25	XLC1741	TQS2	FNS
East Central Reg WD Trail	32101399052	07/09/2021 22:03	XLC1741	TQS2	FNS
Grand Forks DW	32101399053	07/09/2021 22:22	XLC1741	TQS2	FNS
Riverdale Subdivision DW	32101399054	07/09/2021 22:41	XLC1741	TQS2	FNS
South Central RWD DW	32101399056	07/09/2021 23:00	XLC1741	TQS2	FNS
City of Steele DW	32101399057	07/09/2021 23:18	XLC1741	TQS2	FNS
Jacob DUP 1	32101399070	07/09/2021 23:37	XLC1741	TQS2	FNS
DEQ prefilter tap	32101399071	07/09/2021 23:56	XLC1741	TQS2	FNS
DEQ prefilter tap FRB	32101399072	07/10/2021 00:15	XLC1741	TQS2	FNS
DEQ postfilter	32101399073	07/10/2021 00:34	XLC1741	TQS2	FNS
DEQ postfilter FRB	32101399074	07/13/2021 22:04	XLC1742	TQS2	FNS

### Method Blank

Blank ID: MB for HBN 155480 [HXX/2774]

Matrix: Water

Blank Lab ID: 246999

QC for Samples:

32101399048, 32101399051, 32101399052, 32101399053, 32101399054, 32101399056, 32101399057, 32101399070, 32101399071, 32101399072, 32101399073, 32101399074

### Results by EPA 537.1

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>
NEtFOSAA	ND	U	0.826	2.00	ng/L	1
NMeFOSAA	ND	U	0.847	4.00	ng/L	1
PFBS	ND	U	0.553	2.00	ng/L	1
PFDA	ND	U	0.950	2.00	ng/L	1
PFDoA	ND	U	1.12	2.00	ng/L	1
PFHpA	ND	U	0.775	2.00	ng/L	1
PFHxA	ND	U	0.708	2.00	ng/L	1
PFHxS	ND	U	0.467	2.00	ng/L	1
PFNA	ND	U	0.792	2.00	ng/L	1
PFOA	ND	U	0.577	2.00	ng/L	1
PFOS	ND	U	0.569	2.00	ng/L	1
PFTreA	ND	U	0.380	2.00	ng/L	1
PFTriA	ND	U	0.403	2.00	ng/L	1
PFuNA	ND	U	0.414	2.00	ng/L	1
NaDONA	ND	U	0.547	2.00	ng/L	1
9Cl-PF3ONS	ND	U	0.667	2.00	ng/L	1
11Cl-PF3OUdS	ND	U	0.680	2.00	ng/L	1
HFPO-DA (GenX)	ND	U	1.73	4.00	ng/L	1

### Surrogates

13C2-PFDA	87.4			70.0-130	%	1
13C2-PFHxA	87.8			70.0-130	%	1
d5-NEtFOSAA	87.5			70.0-130	%	1
13C3-HFPO-DA	85.7			70.0-130	%	1

### Batch Information

Analytical Batch: **XLC1741**

Analytical Method: **EPA 537.1**

Instrument: **TQS2**

Analyst: **FNS**

Analytical Date/Time: **07/09/2021 18:35**

Dilution: **1**

Prep Batch: **HXX2774**

Prep Method: **EPA 537.1 Prep**

Prep Date/Time: **07/07/2021 15:24**

Prep Initial Wt./Vol.: **250 mL**

Prep Extract Vol: **1 mL**

**QC CheckCode: TQS2-210709A004.d**

### Blank Spike Summary

Blank Spike ID: LCS2 for HBN 155480 [HXX/2774]

Blank Spike Lab ID: 247000

Date Analyzed: 07/09/2021 18:54

Matrix: Water

QC for Samples: 32101399048, 32101399051, 32101399052, 32101399053, 32101399054, 32101399056, 32101399057, 32101399070, 32101399071, 32101399072, 32101399073, 32101399074

### Results by EPA 537.1

#### Blank Spike (ng/L)

Parameter	Spike	Result	Rec (%)	CL
NEtFOSAA	80.0	72.6	90.7	70.0-130
NMeFOSAA	80.0	73.6	92	70.0-130
PFBS	70.9	66.6	94	70.0-130
PFDA	80.0	74.9	93.6	70.0-130
PFDoA	80.0	65.0	81.3	70.0-130
PFHpA	80.0	72.5	90.7	70.0-130
PFHxA	80.0	73.6	91.9	70.0-130
PFHxS	73.0	69.5	95.3	70.0-130
PFNA	80.0	75.9	94.8	70.0-130
PFOA	80.0	75.3	94.2	70.0-130
PFOS	74.1	70.1	94.7	70.0-130
PFTreA	80.0	56.5	70.6	70.0-130
PFTriA	80.0	106	132*	70.0-130
PFuNA	80.0	72.9	91.1	70.0-130
NaDONA	75.7	69.4	91.7	70.0-130
9Cl-PF3ONS	74.6	69.9	93.8	70.0-130
11Cl-PF3OUdS	75.4	90.1	120	70.0-130
HFPO-DA (GenX)	80.0	71.9	89.8	70.0-130

#### Surrogates

13C2-PFDA			98	70.0-130
13C2-PFHxA			95.1	70.0-130
d5-NEtFOSAA			94.4	70.0-130
13C3-HFPO-DA			93.4	70.0-130

### Batch Information

Analytical Batch: **XLC1741**

Analytical Method: **EPA 537.1**

Instrument: **TQS2**

Analyst: **FNS**

Prep Batch: **HXX2774**

Prep Method: **EPA 537.1 Prep**

Prep Date/Time: **07/07/2021 15:24**

Spike Init Wt./Vol.: **250 mL** Extract Vol: **1 mL**

Dupe Init Wt./Vol.: Extract Vol:



### Duplicate Sample Summary

Original Sample ID: 32101399048

Duplicate Sample ID: 247002

Analysis Date: 07/09/2021 20:47

Analysis Date: 07/09/2021 21:06

Matrix: Drinking Water

QC for Samples: 32101399048, 32101399051, 32101399052, 32101399053, 32101399054, 32101399056, 32101399057, 32101399070, 32101399071, 32101399072, 32101399073, 32101399074

### Results by EPA 537.1

PARAMETER	Original (ng/L)	Qual	Duplicate (ng/L)	Qual	RPD (%)	RPD CL
NEtFOSAA	ND	U	ND	U		30.00
NMeFOSAA	ND	U	ND	U		30.00
PFBS	ND	U	ND	U		30.00
PFDA	ND	U	ND	U		30.00
PFDoA	ND	U	ND	U		30.00
PFHpA	ND	U	ND	U		30.00
PFHxA	0.733	J	0.746	J	1.8	30.00
PFHxS	ND	U	ND	U		30.00
PFNA	ND	U	ND	U		30.00
PFOA	ND	U	ND	U		30.00
PFOS	ND	U	ND	U		30.00
PFTreA	ND	U	ND	U		30.00
PFTriA	ND	U	ND	U		30.00
PFuNA	ND	U	ND	U		30.00
NaDONA	ND	U	ND	U		30.00
9Cl-PF3ONS	ND	U	ND	U		30.00
11Cl-PF3OUdS	ND	U	ND	U		30.00
HFPO-DA (GenX)	ND	U	ND	U		30.00
<b>Surrogates</b>						
13C2-PFDA	86.5		100		15	30.00
13C2-PFHxA	82.5		97.2		16	30.00
d5-NEtFOSAA	83.7		96.8		14	30.00
13C3-HFPO-DA	82.4		100		20	30.00

### Batch Information

Analytical Batch: XLC1741  
Analytical Method: EPA 537.1  
Instrument: TQS2  
Analyst: FNS

Prep Batch: HXX2774  
Prep Method: EPA 537.1 Prep  
Prep Date/Time: 07/07/2021 15:24

### Batch Summary

Analytical Method: EPA 537.1

Prep Method: EPA 537.1 Prep

Prep Batch: HXX2784

Prep Date: 07/13/2021 10:03

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Analysis Date</u>	<u>Analytical Batch</u>	<u>Instrument</u>	<u>Analyst</u>
MB for HBN 155504 [HXX/2784]	247207	07/14/2021 23:11	XLC1748	TQS2	FNS
LCS2 for HBN 155504 [HXX/2784]	247208	07/14/2021 23:30	XLC1748	TQS2	FNS
Alexander DW(246800MS2)	247209	07/15/2021 00:08	XLC1748	TQS2	FNS
Kitchen(247053DUP)	247210	07/15/2021 02:01	XLC1748	TQS2	FNS
Alexander DW	32101399029	07/14/2021 23:49	XLC1748	TQS2	FNS
Badlands Dev Long x T DW	32101399032	07/15/2021 00:27	XLC1748	TQS2	FNS
Selz DW	32101399042	07/15/2021 00:45	XLC1748	TQS2	FNS
Shawn's DUP	32101399043	07/15/2021 01:04	XLC1748	TQS2	FNS



**Method Blank**

Blank ID: MB for HBN 155504 [HXX/2784]

Matrix: Water

Blank Lab ID: 247207

QC for Samples:

32101399029, 32101399032, 32101399042, 32101399043

**Results by EPA 537.1**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>
NEtFOSAA	ND	U	0.826	2.00	ng/L	1
NMeFOSAA	ND	U	0.847	4.00	ng/L	1
PFBS	ND	U	0.553	2.00	ng/L	1
PFDA	ND	U	0.950	2.00	ng/L	1
PFDoA	ND	U	1.12	2.00	ng/L	1
PFHpA	ND	U	0.775	2.00	ng/L	1
PFHxA	ND	U	0.708	2.00	ng/L	1
PFHxS	ND	U	0.467	2.00	ng/L	1
PFNA	ND	U	0.792	2.00	ng/L	1
PFOA	ND	U	0.577	2.00	ng/L	1
PFOS	ND	U	0.569	2.00	ng/L	1
PFTreA	ND	U	0.380	2.00	ng/L	1
PFTriA	ND	U	0.403	2.00	ng/L	1
PFuNA	ND	U	0.414	2.00	ng/L	1
NaDONA	ND	U	0.547	2.00	ng/L	1
9Cl-PF3ONS	ND	U	0.667	2.00	ng/L	1
11Cl-PF3OUdS	ND	U	0.680	2.00	ng/L	1
HFPO-DA (GenX)	ND	U	1.73	4.00	ng/L	1

**Surrogates**

13C2-PFDA	107			70.0-130	%	1
13C2-PFHxA	109			70.0-130	%	1
d5-NEtFOSAA	104			70.0-130	%	1
13C3-HFPO-DA	109			70.0-130	%	1

**Batch Information**

Analytical Batch: **XLC1748**

Analytical Method: **EPA 537.1**

Instrument: **TQS2**

Analyst: **FNS**

Analytical Date/Time: **07/14/2021 23:11**

Dilution: **1**

Prep Batch: **HXX2784**

Prep Method: **EPA 537.1 Prep**

Prep Date/Time: **07/13/2021 10:03**

Prep Initial Wt./Vol.: **250 mL**

Prep Extract Vol: **1 mL**

**QC CheckCode: TQS2-210714A004.d**

### Blank Spike Summary

Blank Spike ID: LCS2 for HBN 155504 [HXX/2784]  
 Blank Spike Lab ID: 247208  
 Date Analyzed: 07/14/2021 23:30  
 Matrix: Water  
 QC for Samples: 32101399029, 32101399032, 32101399042, 32101399043

### Results by EPA 537.1

#### Blank Spike (ng/L)

Parameter	Spike	Result	Rec (%)	CL
NEtFOSAA	80.0	81.5	102	70.0-130
NMeFOSAA	80.0	84.2	105	70.0-130
PFBS	70.9	80.1	113	70.0-130
PFDA	80.0	88.1	110	70.0-130
PFDoA	80.0	75.0	93.7	70.0-130
PFHpA	80.0	89.1	111	70.0-130
PFHxA	80.0	87.4	109	70.0-130
PFHxS	73.0	83.3	114	70.0-130
PFNA	80.0	91.2	114	70.0-130
PFOA	80.0	89.3	112	70.0-130
PFOS	74.1	83.0	112	70.0-130
PFTreA	80.0	61.9	77.4	70.0-130
PFTriA	80.0	117	146*	70.0-130
PFuNA	80.0	82.9	104	70.0-130
NaDONA	75.7	84.9	112	70.0-130
9Cl-PF3ONS	74.6	81.1	109	70.0-130
11Cl-PF3OUdS	75.4	89.6	119	70.0-130
HFPO-DA (GenX)	80.0	88.1	110	70.0-130

#### Surrogates

13C2-PFDA			110	70.0-130
13C2-PFHxA			106	70.0-130
d5-NEtFOSAA			100	70.0-130
13C3-HFPO-DA			109	70.0-130

### Batch Information

Analytical Batch: <b>XLC1748</b>	Prep Batch: <b>HXX2784</b>
Analytical Method: <b>EPA 537.1</b>	Prep Method: <b>EPA 537.1 Prep</b>
Instrument: <b>TQS2</b>	Prep Date/Time: <b>07/13/2021 10:03</b>
Analyst: <b>FNS</b>	Spike Init Wt./Vol.: <b>250 mL</b> Extract Vol: <b>1 mL</b>
	Dupe Init Wt./Vol.: Extract Vol:

### Matrix Spike Summary

Original Sample ID: 32101399029 (Alexander DW)  
 MS Sample ID: 247209  
 MSD Sample ID:

Analysis Date: 07/14/2021 23:49  
 Analysis Date: 07/15/2021 00:08  
 Analysis Date:  
 Matrix: Drinking Water

QC for Samples: 32101399029, 32101399032, 32101399042, 32101399043

### Results by EPA 537.1

#### Matrix Spike (ng/L)

Parameter	Sample	Spike	Result	Rec (%)	CL
NEtFOSAA	ND	71.4	85.1	119	70.0-130
NMeFOSAA	ND	71.4	85.2	119	70.0-130
PFBS	ND	63.3	77.2	122	70.0-130
PFDA	ND	71.4	86.5	121	70.0-130
PFDoA	ND	71.4	77.1	108	70.0-130
PFHpA	ND	71.4	86.9	122	70.0-130
PFHxA	ND	71.4	84.4	118	70.0-130
PFHxS	ND	65.1	80.3	123	70.0-130
PFNA	ND	71.4	87.0	122	70.0-130
PFOA	ND	71.4	87.9	123	70.0-130
PFOS	ND	66.1	81.0	123	70.0-130
PFTreA	ND	71.4	62.5	87.4	70.0-130
PFTriA	ND	71.4	115	160 *	70.0-130
PFuNA	ND	71.4	84.9	119	70.0-130
NaDONA	ND	67.6	83.5	124	70.0-130
9Cl-PF3ONS	ND	66.6	81.2	122	70.0-130
11Cl-PF3OUdS	ND	67.3	91.2	136 *	70.0-130
HFPO-DA (GenX)	ND	71.4	86.2	121	70.0-130

### Surrogates

13C2-PFDA				121	70.0-130
13C2-PFHxA				114	70.0-130
d5-NEtFOSAA				117	70.0-130
13C3-HFPO-DA				119	70.0-130

### Batch Information

Analytical Batch: **XLC1748**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**

Prep Batch: **HXX2784**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/13/2021 10:03**  
 MS Init Wt./Vol.: **280 mL** Extract Vol.: **1 mL**  
 MSD Init Wt./Vol.: Extract Vol.:

### Batch Summary

Analytical Method: EPA 537.1

Prep Method: EPA 537.1 Prep

Prep Batch: HXX2772

Prep Date: 07/06/2021 08:10

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Analysis Date</u>	<u>Analytical Batch</u>	<u>Instrument</u>	<u>Analyst</u>
MB for HBN 155474 [HXX/2772]	246889	07/08/2021 19:28	XLC1737	TQS2	FNS
LCS3 for HBN 155474 [HXX/2772]	246890	07/08/2021 19:47	XLC1737	TQS2	FNS
Otis St. Well(246763MS3)	246891	07/08/2021 21:21	XLC1737	TQS2	FNS
Makoti DW(246772DUP)	246892	07/08/2021 22:18	XLC1737	TQS2	FNS
Makoti DW	32101399001	07/08/2021 21:59	XLC1737	TQS2	FNS
Maggie DW - DUP	32101399002	07/08/2021 22:56	XLC1737	TQS2	FNS
Riverdale DW	32101399003	07/08/2021 23:14	XLC1737	TQS2	FNS
McLean-Sheridan DW	32101399004	07/08/2021 23:33	XLC1737	TQS2	FNS
Minnewaukan DW	32101399005	07/08/2021 23:52	XLC1737	TQS2	FNS
Maddock DW	32101399006	07/09/2021 00:11	XLC1737	TQS2	FNS
Michigan DW	32101399007	07/09/2021 00:30	XLC1737	TQS2	FNS
Oberon DW	32101399008	07/09/2021 00:49	XLC1737	TQS2	FNS
Sheyenne DW	32101399009	07/09/2021 01:08	XLC1737	TQS2	FNS
Grafton DW	32101399010	07/09/2021 01:27	XLC1737	TQS2	FNS
Greater Ramsey WD DW	32101399011	07/09/2021 01:45	XLC1737	TQS2	FNS

### Method Blank

Blank ID: MB for HBN 155474 [HXX/2772]

Matrix: Water

Blank Lab ID: 246889

QC for Samples:

32101399001, 32101399002, 32101399003, 32101399004, 32101399005, 32101399006, 32101399007, 32101399008, 32101399009, 32101399010, 32101399011

### Results by EPA 537.1

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>
NEtFOSAA	ND	U	0.826	2.00	ng/L	1
NMeFOSAA	ND	U	0.847	4.00	ng/L	1
PFBS	ND	U	0.553	2.00	ng/L	1
PFDA	ND	U	0.950	2.00	ng/L	1
PFDoA	ND	U	1.12	2.00	ng/L	1
PFHpA	ND	U	0.775	2.00	ng/L	1
PFHxA	ND	U	0.708	2.00	ng/L	1
PFHxS	ND	U	0.467	2.00	ng/L	1
PFNA	ND	U	0.792	2.00	ng/L	1
PFOA	ND	U	0.577	2.00	ng/L	1
PFOS	ND	U	0.569	2.00	ng/L	1
PFTreA	ND	U	0.380	2.00	ng/L	1
PFTriA	ND	U	0.403	2.00	ng/L	1
PFuNA	ND	U	0.414	2.00	ng/L	1
NaDONA	ND	U	0.547	2.00	ng/L	1
9Cl-PF3ONS	ND	U	0.667	2.00	ng/L	1
11Cl-PF3OUdS	ND	U	0.680	2.00	ng/L	1
HFPO-DA (GenX)	ND	U	1.73	4.00	ng/L	1

### Surrogates

13C2-PFDA	89.4			70.0-130	%	1
13C2-PFHxA	94.3			70.0-130	%	1
d5-NEtFOSAA	79.7			70.0-130	%	1
13C3-HFPO-DA	90.0			70.0-130	%	1

### Batch Information

Analytical Batch: **XLC1737**

Analytical Method: **EPA 537.1**

Instrument: **TQS2**

Analyst: **FNS**

Analytical Date/Time: **07/08/2021 19:28**

Dilution: **1**

Prep Batch: **HXX2772**

Prep Method: **EPA 537.1 Prep**

Prep Date/Time: **07/06/2021 08:10**

Prep Initial Wt./Vol.: **250 mL**

Prep Extract Vol: **1 mL**

**QC CheckCode: TQS2-210708A14.d**

### Blank Spike Summary

Blank Spike ID: LCS3 for HBN 155474 [HXX/2772]

Blank Spike Lab ID: 246890

Date Analyzed: 07/08/2021 19:47

Matrix: Water

QC for Samples: 32101399001, 32101399002, 32101399003, 32101399004, 32101399005, 32101399006, 32101399007, 32101399008, 32101399009, 32101399010, 32101399011

### Results by EPA 537.1

#### Blank Spike (ng/L)

Parameter	Spike	Result	Rec (%)	CL
NEtFOSAA	200	142	71.2	70.0-130
NMeFOSAA	200	149	74.6	70.0-130
PFBS	177	141	79.7	70.0-130
PFDA	200	158	78.8	70.0-130
PFDoA	200	142	71.2	70.0-130
PFHpA	200	158	78.9	70.0-130
PFHxA	200	155	77.7	70.0-130
PFHxS	182	149	81.7	70.0-130
PFNA	200	159	79.5	70.0-130
PFOA	200	160	80.1	70.0-130
PFOS	185	149	80.3	70.0-130
PFTreA	200	150	74.9	70.0-130
PFTriA	200	148	73.8	70.0-130
PFuNA	200	152	76.1	70.0-130
NaDONA	189	148	78.3	70.0-130
9Cl-PF3ONS	186	147	78.9	70.0-130
11Cl-PF3OUdS	188	136	72.3	70.0-130
HFPO-DA (GenX)	200	152	76.2	70.0-130

#### Surrogates

13C2-PFDA			83.7	70.0-130
13C2-PFHxA			83.1	70.0-130
d5-NEtFOSAA			75	70.0-130
13C3-HFPO-DA			81.9	70.0-130

### Batch Information

Analytical Batch: **XLC1737**

Analytical Method: **EPA 537.1**

Instrument: **TQS2**

Analyst: **FNS**

Prep Batch: **HXX2772**

Prep Method: **EPA 537.1 Prep**

Prep Date/Time: **07/06/2021 08:10**

Spike Init Wt./Vol.: **250 mL** Extract Vol: **1 mL**

Dupe Init Wt./Vol.: Extract Vol:

### Duplicate Sample Summary

Original Sample ID: 32101399001

Duplicate Sample ID: 246892

Analysis Date: 07/08/2021 21:59

Analysis Date: 07/08/2021 22:18

Matrix: Drinking Water

QC for Samples: 32101399001, 32101399002, 32101399003, 32101399004, 32101399005, 32101399006, 32101399007, 32101399008, 32101399009, 32101399010, 32101399011

### Results by EPA 537.1

<u>PARAMETER</u>	<u>Original (ng/L)</u>	<u>Qual</u>	<u>Duplicate (ng/L)</u>	<u>Qual</u>	<u>RPD (%)</u>	<u>RPD CL</u>
NEtFOSAA	ND	U	ND	U		30.00
NMeFOSAA	ND	U	ND	U		30.00
PFBS	ND	U	ND	U		30.00
PFDA	ND	U	ND	U		30.00
PFDoA	ND	U	ND	U		30.00
PFHpA	ND	U	ND	U		30.00
PFHxA	ND	U	ND	U		30.00
PFHxS	ND	U	ND	U		30.00
PFNA	ND	U	ND	U		30.00
PFOA	ND	U	ND	U		30.00
PFOS	ND	U	ND	U		30.00
PFTreA	ND	U	ND	U		30.00
PFTriA	ND	U	ND	U		30.00
PFuNA	ND	U	ND	U		30.00
NaDONA	ND	U	ND	U		30.00
9Cl-PF3ONS	ND	U	ND	U		30.00
11Cl-PF3OUdS	ND	U	ND	U		30.00
HFPO-DA (GenX)	ND	U	ND	U		30.00
<b>Surrogates</b>						
13C2-PFDA	105		96.9		4.0	30.00
13C2-PFHxA	98.8		92.5		2.4	30.00
d5-NEtFOSAA	95.5		92.8		1.5	30.00
13C3-HFPO-DA	99.7		92.2		3.6	30.00

### Batch Information

Analytical Batch: XLC1737  
 Analytical Method: EPA 537.1  
 Instrument: TQS2  
 Analyst: FNS

Prep Batch: HXX2772  
 Prep Method: EPA 537.1 Prep  
 Prep Date/Time: 07/06/2021 08:10

### Batch Summary

Analytical Method: EPA 537.1

Prep Method: EPA 537.1 Prep

Prep Batch: HXX2776

Prep Date: 07/09/2021 08:08

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Analysis Date</u>	<u>Analytical Batch</u>	<u>Instrument</u>	<u>Analyst</u>
MB for HBN 155489 [HXX/2776]	247047	07/13/2021 15:27	XLC1742	TQS2	FNS
LCS3 for HBN 155489 [HXX/2776]	247048	07/13/2021 15:46	XLC1742	TQS2	FNS
Maple River(246840MS3)	247049	07/13/2021 16:24	XLC1742	TQS2	FNS
Rolette DW(246811DUP)	247050	07/14/2021 13:05	XLC1746	TQS2	FNS
Grenora DW	32101399028	07/13/2021 16:43	XLC1742	TQS2	FNS
Upper Souris System 1 DW	32101399030	07/13/2021 17:02	XLC1742	TQS2	FNS
Lignite DW	32101399031	07/13/2021 17:21	XLC1742	TQS2	FNS
Minot DW	32101399033	07/13/2021 17:39	XLC1742	TQS2	FNS
Duplicate DW Mike	32101399034	07/13/2021 17:58	XLC1742	TQS2	FNS
Dunseith DW	32101399035	07/13/2021 18:17	XLC1742	TQS2	FNS
Maxbass DW	32101399036	07/15/2021 11:14	XLC1746	TQS2	FNS
Souris DW	32101399037	07/14/2021 12:27	XLC1746	TQS2	FNS
All Seasons DW	32101399038	07/14/2021 12:46	XLC1746	TQS2	FNS
St. John DW	32101399039	07/13/2021 19:51	XLC1742	TQS2	FNS
Rolette DW	32101399040	07/13/2021 20:10	XLC1742	TQS2	FNS
Karlsruhe DW	32101399041	07/14/2021 14:28	XLC1746	TQS2	FNS
Horace DW	32101399047	07/14/2021 15:05	XLC1746	TQS2	FNS
Ashley DW 1	32101399068	07/15/2021 11:33	XLC1746	TQS2	FNS
Maple River	32101399069	07/13/2021 16:05	XLC1742	TQS2	FNS
Washburn DW	32101399075	07/14/2021 14:46	XLC1746	TQS2	FNS



### Method Blank

Blank ID: MB for HBN 155489 [HXX/2776]

Matrix: Water

Blank Lab ID: 247047

QC for Samples:

32101399028, 32101399030, 32101399031, 32101399033, 32101399034, 32101399035, 32101399036, 32101399037, 32101399038, 32101399039, 32101399040, 32101399041, 32101399047, 32101399068, 32101399069, 32101399075

### Results by EPA 537.1

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>DL</u>	<u>LOQ/CL</u>	<u>Units</u>	<u>DF</u>
NEtFOSAA	ND	U	0.826	2.00	ng/L	1
NMeFOSAA	ND	U	0.847	4.00	ng/L	1
PFBS	ND	U	0.553	2.00	ng/L	1
PFDA	ND	U	0.950	2.00	ng/L	1
PFDoA	ND	U	1.12	2.00	ng/L	1
PFHpA	ND	U	0.775	2.00	ng/L	1
PFHxA	ND	U	0.708	2.00	ng/L	1
PFHxS	ND	U	0.467	2.00	ng/L	1
PFNA	ND	U	0.792	2.00	ng/L	1
PFOA	ND	U	0.577	2.00	ng/L	1
PFOS	ND	U	0.569	2.00	ng/L	1
PFTreA	ND	U	0.380	2.00	ng/L	1
PFTriA	ND	U	0.403	2.00	ng/L	1
PFuNA	ND	U	0.414	2.00	ng/L	1
NaDONA	ND	U	0.547	2.00	ng/L	1
9Cl-PF3ONS	ND	U	0.667	2.00	ng/L	1
11Cl-PF3OUdS	ND	U	0.680	2.00	ng/L	1
HFPO-DA (GenX)	ND	U	1.73	4.00	ng/L	1

### Surrogates

13C2-PFDA	109			70.0-130	%	1
13C2-PFHxA	115			70.0-130	%	1
d5-NEtFOSAA	110			70.0-130	%	1
13C3-HFPO-DA	114			70.0-130	%	1

### Batch Information

Analytical Batch: **XLC1742**

Analytical Method: **EPA 537.1**

Instrument: **TQS2**

Analyst: **FNS**

Analytical Date/Time: **07/13/2021 15:27**

Dilution: **1**

Prep Batch: **HXX2776**

Prep Method: **EPA 537.1 Prep**

Prep Date/Time: **07/09/2021 08:08**

Prep Initial Wt./Vol.: **250 mL**

Prep Extract Vol: **1 mL**

**QC CheckCode: TQS2-210713A013.d**

### Blank Spike Summary

Blank Spike ID: LCS3 for HBN 155489 [HXX/2776]

Blank Spike Lab ID: 247048

Date Analyzed: 07/13/2021 15:46

Matrix: Water

QC for Samples: 32101399028, 32101399030, 32101399031, 32101399033, 32101399034, 32101399035, 32101399036, 32101399037, 32101399038, 32101399039, 32101399040, 32101399041, 32101399047, 32101399068, 32101399069, 32101399075

### Results by EPA 537.1

#### Blank Spike (ng/L)

Parameter	Spike	Result	Rec (%)	CL
NEtFOSAA	200	227	114	70.0-130
NMeFOSAA	200	227	113	70.0-130
PFBS	177	191	108	70.0-130
PFDA	200	230	115	70.0-130
PFDoA	200	220	110	70.0-130
PFHpA	200	215	108	70.0-130
PFHxA	200	207	103	70.0-130
PFHxS	182	213	117	70.0-130
PFNA	200	231	116	70.0-130
PFOA	200	228	114	70.0-130
PFOS	185	216	117	70.0-130
PFTreA	200	202	101	70.0-130
PFTriA	200	247	123	70.0-130
PFuNA	200	232	116	70.0-130
NaDONA	189	202	107	70.0-130
9Cl-PF3ONS	186	222	119	70.0-130
11Cl-PF3OUdS	188	211	112	70.0-130
HFPO-DA (GenX)	200	205	102	70.0-130

#### Surrogates

13C2-PFDA			105	70.0-130
13C2-PFHxA			93.1	70.0-130
d5-NEtFOSAA			104	70.0-130
13C3-HFPO-DA			93.1	70.0-130

### Batch Information

Analytical Batch: **XLC1742**

Analytical Method: **EPA 537.1**

Instrument: **TQS2**

Analyst: **FNS**

Prep Batch: **HXX2776**

Prep Method: **EPA 537.1 Prep**

Prep Date/Time: **07/09/2021 08:08**

Spike Init Wt./Vol.: **250 mL** Extract Vol: **1 mL**

Dupe Init Wt./Vol.: Extract Vol:

### Matrix Spike Summary

Original Sample ID: 32101399069 (Maple River)  
 MS Sample ID: 247049  
 MSD Sample ID:

Analysis Date: 07/13/2021 16:05  
 Analysis Date: 07/13/2021 16:24  
 Analysis Date:  
 Matrix: Drinking Water

QC for Samples: 32101399028, 32101399030, 32101399031, 32101399033, 32101399034, 32101399035,  
 32101399036, 32101399037, 32101399038, 32101399039, 32101399040, 32101399041,  
 32101399047, 32101399068, 32101399069, 32101399075

### Results by EPA 537.1

#### Matrix Spike (ng/L)

Parameter	Sample	Spike	Result	Rec (%)	CL
NEtFOSAA	ND	175	200	114	70.0-130
NMeFOSAA	ND	175	201	115	70.0-130
PFBS	ND	155	188	121	70.0-130
PFDA	ND	175	206	117	70.0-130
PFDoA	ND	175	196	112	70.0-130
PFHpA	ND	175	212	121	70.0-130
PFHxA	ND	175	210	119	70.0-130
PFHxS	ND	160	192	120	70.0-130
PFNA	ND	175	207	118	70.0-130
PFOA	ND	175	210	120	70.0-130
PFOS	ND	162	193	119	70.0-130
PFTreA	ND	175	176	100	70.0-130
PFTriA	ND	175	225	128	70.0-130
PFuNA	ND	175	206	117	70.0-130
NaDONA	ND	166	201	121	70.0-130
9Cl-PF3ONS	ND	164	197	120	70.0-130
11Cl-PF3OUdS	ND	165	189	114	70.0-130
HFPO-DA (GenX)	ND	175	206	117	70.0-130

#### Surrogates

13C2-PFDA				109	70.0-130
13C2-PFHxA				110	70.0-130
d5-NEtFOSAA				107	70.0-130
13C3-HFPO-DA				112	70.0-130

### Batch Information

Analytical Batch: **XLC1742**  
 Analytical Method: **EPA 537.1**  
 Instrument: **TQS2**  
 Analyst: **FNS**

Prep Batch: **HXX2776**  
 Prep Method: **EPA 537.1 Prep**  
 Prep Date/Time: **07/09/2021 08:08**  
 MS Init Wt./Vol.: **285 mL** Extract Vol.: **1 mL**  
 MSD Init Wt./Vol.: Extract Vol.:

### Duplicate Sample Summary

Original Sample ID: 32101399040

Duplicate Sample ID: 247050

Analysis Date: 07/13/2021 20:10

Analysis Date: 07/14/2021 13:05

Matrix: Drinking Water

QC for Samples: 32101399028, 32101399030, 32101399031, 32101399033, 32101399034, 32101399035, 32101399036, 32101399037, 32101399038, 32101399039, 32101399040, 32101399041, 32101399047, 32101399068, 32101399069, 32101399075

### Results by EPA 537.1

PARAMETER	Original (ng/L)	Qual	Duplicate (ng/L)	Qual	RPD (%)	RPD CL
NEtFOSAA	ND	U	ND	U		30.00
NMeFOSAA	ND	U	ND	U		30.00
PFBS	ND	U	ND	U		30.00
PFDA	ND	U	ND	U		30.00
PFDoA	ND	U	ND	U		30.00
PFHpA	ND	U	ND	U		30.00
PFHxA	ND	U	ND	U		30.00
PFHxS	ND	U	ND	U		30.00
PFNA	ND	U	ND	U		30.00
PFOA	ND	U	ND	U		30.00
PFOS	ND	U	ND	U		30.00
PFTreA	ND	U	ND	U		30.00
PFTriA	ND	U	ND	U		30.00
PFuNA	ND	U	ND	U		30.00
NaDONA	ND	U	ND	U		30.00
9Cl-PF3ONS	ND	U	ND	U		30.00
11Cl-PF3OUdS	ND	U	ND	U		30.00
HFPO-DA (GenX)	ND	U	ND	U		30.00
<b>Surrogates</b>						
13C2-PFDA	111		126		21	30.00
13C2-PFHxA	118		121		10	30.00
d5-NEtFOSAA	94.1		112		26	30.00
13C3-HFPO-DA	123		125		9.3	30.00

### Batch Information

Analytical Batch: XLC1742  
 Analytical Method: EPA 537.1  
 Instrument: TQS2  
 Analyst: FNS

Prep Batch: HXX2776  
 Prep Method: EPA 537.1 Prep  
 Prep Date/Time: 07/09/2021 08:08



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM2021081001	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574511001	Total Amount Extracted	241mL
Lab File ID	A210824A_031	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_025
Collected	08/10/2021 13:30	Ending CCal File	A210824A_036
Received	08/13/2021 08:50	Blank File	A210824A_015

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	ND	2.1	2.1	0.46	1	375-22-4	
PFPeA	ND	2.1	2.1	0.45	1	2706-90-3	
HFPO-DA	ND	2.1	2.1	0.55	1	13252-13-6	
PFBS	ND	1.8	1.8	0.49	1	375-73-5	
PFHxA	ND	2.1	2.1	0.45	1	307-24-4	
4:2 FTS	ND	1.9	1.9	0.58	1	757124-72-4	
PFPeS	ND	2.0	2.0	0.49	1	2706-91-4	
PFHpA	ND	2.1	2.1	0.57	1	375-85-9	
DONA	ND	2.0	2.0	0.53	1	919005-14-4	
PFHxS	ND	1.9	1.9	0.53	1	355-46-4	
PFOA	ND	2.1	2.1	0.61	1	335-67-1	
6:2 FTS	ND	2.0	2.0	0.67	1	27619-97-2	
PFHpS	ND	2.0	2.0	0.43	1	375-92-8	
PFNA	ND	2.1	2.1	0.77	1	375-95-1	
PFOSAm	ND	2.1	2.1	0.85	1	754-91-6	
PFOS	ND	1.9	1.9	0.57	1	1763-23-1	
MeFOSA	ND	2.1	2.1	0.53	1	31506-32-8	
PFDA	ND	2.1	2.1	0.59	1	335-76-2	
EtFOSAm	ND	2.1	2.1	0.63	1	4151-50-2	
8:2 FTS	ND	2.0	2.0	0.68	1	39108-34-4	
9-CI-PF3ON	ND	1.9	1.9	0.32	1	756426-58-1	
PFNS	ND	2.0	2.0	0.46	1	68259-12-1	
PFUnDA	ND	2.1	2.1	0.56	1	2058-94-8	
NMeFOSAA	ND	2.1	2.1	0.45	1	2355-31-9	
NEtFOSAA	ND	2.1	2.1	0.58	1	2991-50-6	
PFDS	ND	2.0	2.0	0.47	1	335-77-3	
PFDOA	ND	2.1	2.1	0.50	1	307-55-1	
MeFOSE	ND	2.1	2.1	0.34	1	24448-09-7	
10:2 FTS	ND	2.0	2.0	0.76	1	120226-60-0	
EtFOSE	ND	2.1	2.1	0.52	1	1691-99-2	
11-CI-PF3OUdS	ND	2.0	2.0	0.45	1	763051-92-9	
PFTTrDA	ND	2.1	2.1	0.65	1	72629-94-8	
PFDoS	ND	2.0	2.0	0.48	1	79780-39-5	
PFTDA	ND	2.1	2.1	0.49	1	376-06-7	
PFHXDA	ND	2.1	2.1	0.38	1	67905-19-5	
PFODA	ND	2.1	2.1	0.61	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM2021081001	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574511001	Total Amount Extracted	241mL
Lab File ID	A210824A_031	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_025
Collected	08/10/2021 13:30	Ending CCal File	A210824A_036
Received	08/13/2021 08:50	Blank File	A210824A_015

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	21	21	100	50-150	
13C4_PFOA	21	22	105	50-150	
13C2_PFDA	21	21	102	50-150	
13C4_PFOS	20	19	97	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	21	21	101	50-150	
13C5_PFPeA	21	21	100	50-150	
13C3_PFBS	19	20	102	50-150	
13C2_4:2FTS	19	18	93	50-150	
13C5_PFHxA	21	21	100	50-150	
13C4_PFHpA	21	21	99	50-150	
13C3_PFHxS	20	20	100	50-150	
13C2_6:2FTS	20	19	98	50-150	
13C8_PFOA	21	23	109	50-150	
13C9_PFNA	21	19	92	50-150	
13C8_PFOS	20	19	94	50-150	
13C2_8:2FTS	20	20	100	50-150	
13C6_PFDA	21	20	95	50-150	
d3-MeFOSAA	21	20	95	50-150	
13C8_PFOA	21	17	80	50-150	
d5-EtFOSAA	21	20	95	50-150	
13C7_PFUdA	21	19	91	50-150	
13C2_PFDoA	21	20	97	50-150	
13C2_PFTeDA	21	19	94	50-150	
13C3_HFPO-DA	21	20	97	50-150	
13C2_PFHxDA	21	17	83	50-150	
d7-N-MeFOSE	21	15	71	10-150	
d9-N-EtFOSE	21	13	65	10-150	
d3-N-MeFOSA	21	7.0	34	10-150	
d5-N-EtFOSA	21	7.1	34	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM2021081001	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574511001	Total Amount Extracted	241mL
Lab File ID	A210824A_031	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_025
Collected	08/10/2021 13:30	Ending CCal File	A210824A_036
Received	08/13/2021 08:50	Blank File	A210824A_015

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.02	4.99	
13C4 PFOA	N/A	N/A	5.99	6.00	
13C2 PFDA	N/A	N/A	6.87	6.88	
13C4 PFOS	N/A	N/A	7.18	7.20	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.57	3.56	
13C5 PFPeA	N/A	N/A	4.42	4.42	
13C3 PFBS	N/A	N/A	5.20	5.18	
13C2 4:2FTS	N/A	N/A	4.80	4.80	
13C5 PFHxA	N/A	N/A	5.02	5.04	
13C4 PFHpA	N/A	N/A	5.52	5.51	
13C3 PFHxS	N/A	N/A	6.27	6.28	
13C2 6:2FTS	N/A	N/A	5.76	5.77	
13C8 PFOA	N/A	N/A	5.99	6.00	
13C9 PFNA	N/A	N/A	6.43	6.44	
13C8 PFOS	N/A	N/A	7.19	7.20	
13C2 8:2FTS	N/A	N/A	6.62	6.60	
13C6 PFDA	N/A	N/A	6.87	6.88	
d3-MeFOSAA	N/A	N/A	6.82	6.83	
13C8 PFOSA	N/A	N/A	8.78	8.78	
d5-EtFOSAA	N/A	N/A	7.03	7.02	
13C7 PFUdA	N/A	N/A	7.31	7.32	
13C2 PFDoA	N/A	N/A	7.74	7.76	
13C2 PFTeDA	N/A	N/A	8.59	8.58	
13C3 HFPO-DA	N/A	N/A	5.22	5.21	
13C2 PFHxDA	N/A	N/A	9.35	9.33	
d7-N-MeFOSE	N/A	N/A	10.06	10.02	
d9-N-EtFOSE	N/A	N/A	10.69	10.64	
d3-N-MeFOSA	N/A	N/A	10.31	10.28	
d5-N-EtFOSA	N/A	N/A	11.00	11.00	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM2021081001	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574511001	Total Amount Extracted	241mL
Lab File ID	A210824A_031	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_025
Collected	08/10/2021 13:30	Ending CCal File	A210824A_036
Received	08/13/2021 08:50	Blank File	A210824A_015

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	0.00	3.58	
PFPeA	N/A	N/A	4.43	4.40	
HFPO-DA	0.000	0.450	0.00	5.22	
PFBS	0.430	0.330	5.21	5.26	
PFHxA	0.000	0.0620	5.02	5.00	
4:2 FTS	0.000	0.580	0.00	4.80	
PFPeS	0.000	0.300	0.00	5.76	
PFHpA	0.000	0.290	5.53	5.52	
DONA	0.000	0.490	0.00	5.68	
PFHxS	0.000	0.280	0.00	6.29	
PFOA	0.000	0.380	0.00	5.97	
6:2 FTS	0.570	0.510	5.76	5.74	
PFHpS	0.000	0.230	0.00	6.76	
PFNA	0.000	0.200	0.00	6.43	
PFOSAm	N/A	N/A	8.79	8.75	
PFOS	0.000	0.240	0.00	7.27	
MeFOSA	0.000	0.910	0.00	10.32	
PFDA	0.000	0.0860	0.00	6.89	
EtFOSAm	0.000	0.710	0.00	11.04	
8:2 FTS	0.000	0.640	0.00	6.64	
9-Cl-PF3ON	0.000	0.0220	0.00	7.53	
PFNS	0.000	0.240	0.00	7.62	
PFUnDA	0.000	0.110	0.00	7.31	
NMeFOSAA	0.000	0.490	0.00	6.90	
NEtFOSAA	0.000	0.660	0.00	7.03	
PFDS	0.000	0.240	0.00	8.07	
PFDOA	0.000	0.130	0.00	7.76	
MeFOSE	N/A	N/A	0.00	10.12	
10:2 FTS	0.000	0.620	0.00	7.51	
EtFOSE	0.000	0.000	0.00	10.70	
11-Cl-PF3OUdS	0.000	0.0120	0.00	8.38	
PFTTrDA	0.000	0.150	0.00	8.19	
PFDoS	0.000	0.230	0.00	8.83	
PFTDA	0.000	0.140	0.00	8.58	
PFHXDA	0.120	0.120	9.35	9.35	
PFODA	0.000	0.0990	0.00	10.37	

**REPORT OF LABORATORY ANALYSIS**

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





**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM2021081002	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574511002	Total Amount Extracted	253mL
Lab File ID	A210824A_032	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_025
Collected	08/10/2021 13:55	Ending CCal File	A210824A_036
Received	08/13/2021 08:50	Blank File	A210824A_015

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	20	2.0	2.0	0.44	1	375-22-4	
PFPeA	9.7	2.0	2.0	0.43	1	2706-90-3	
HFPO-DA	ND	2.0	2.0	0.52	1	13252-13-6	
PFBS	ND	1.8	1.8	0.47	1	375-73-5	
PFHxA	9.4	2.0	2.0	0.43	1	307-24-4	
4:2 FTS	ND	1.9	1.9	0.55	1	757124-72-4	
PFPeS	ND	1.9	1.9	0.47	1	2706-91-4	
PFHpA	2.4	2.0	2.0	0.54	1	375-85-9	
DONA	ND	1.9	1.9	0.51	1	919005-14-4	
PFHxS	ND	1.8	1.8	0.50	1	355-46-4	
PFOA	ND	2.0	2.0	0.58	1	335-67-1	
6:2 FTS	4.3	1.9	1.9	0.64	1	27619-97-2	
PFHpS	ND	1.9	1.9	0.41	1	375-92-8	
PFNA	ND	2.0	2.0	0.73	1	375-95-1	
PFOSAm	ND	2.0	2.0	0.81	1	754-91-6	
PFOS	ND	1.8	1.8	0.54	1	1763-23-1	
MeFOSA	ND	2.0	2.0	0.51	1	31506-32-8	
PFDA	ND	2.0	2.0	0.56	1	335-76-2	
EtFOSAm	ND	2.0	2.0	0.60	1	4151-50-2	
8:2 FTS	ND	1.9	1.9	0.65	1	39108-34-4	
9-CI-PF3ON	ND	1.8	1.8	0.30	1	756426-58-1	
PFNS	ND	1.9	1.9	0.44	1	68259-12-1	
PFUnDA	ND	2.0	2.0	0.53	1	2058-94-8	
NMeFOSAA	ND	2.0	2.0	0.43	1	2355-31-9	
NEtFOSAA	ND	2.0	2.0	0.55	1	2991-50-6	
PFDS	ND	1.9	1.9	0.45	1	335-77-3	
PFDOA	ND	2.0	2.0	0.48	1	307-55-1	
MeFOSE	ND	2.0	2.0	0.33	1	24448-09-7	
10:2 FTS	ND	1.9	1.9	0.73	1	120226-60-0	
EtFOSE	ND	2.0	2.0	0.49	1	1691-99-2	
11-CI-PF3OUdS	ND	1.9	1.9	0.43	1	763051-92-9	
PFTTrDA	ND	2.0	2.0	0.62	1	72629-94-8	
PFDoS	ND	1.9	1.9	0.46	1	79780-39-5	
PFTDA	ND	2.0	2.0	0.47	1	376-06-7	
PFHXDA	ND	2.0	2.0	0.36	1	67905-19-5	
PFODA	ND	2.0	2.0	0.58	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM2021081002	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574511002	Total Amount Extracted	253mL
Lab File ID	A210824A_032	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_025
Collected	08/10/2021 13:55	Ending CCal File	A210824A_036
Received	08/13/2021 08:50	Blank File	A210824A_015

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	20	21	106	50-150	
13C4_PFOA	20	28	140	50-150	
13C2_PFDA	20	26	133	50-150	
13C4_PFOS	19	23	123	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	20	13	68	50-150	
13C5_PFPeA	20	18	89	50-150	
13C3_PFBs	18	21	113	50-150	
13C2_4:2Fts	19	54	<b>289</b>	50-150	R
13C5_PFHxA	20	20	103	50-150	
13C4_PFHpA	20	24	119	50-150	
13C3_PFHxS	19	23	125	50-150	
13C2_6:2Fts	19	43	<b>231</b>	50-150	R
13C8_PFOA	20	25	125	50-150	
13C9_PfNA	20	25	128	50-150	
13C8_PfOS	19	23	123	50-150	
13C2_8:2Fts	19	43	<b>226</b>	50-150	R
13C6_PFDA	20	25	127	50-150	
d3-MeFOSAA	20	26	132	50-150	
13C8_PFOsA	20	16	81	50-150	
d5-EtFOSAA	20	31	<b>158</b>	50-150	R
13C7_PFUdA	20	26	129	50-150	
13C2_PFDoA	20	22	113	50-150	
13C2_PFTeDA	20	18	91	50-150	
13C3_HFPO-DA	20	20	103	50-150	
13C2_PFHxDA	20	14	73	50-150	
d7-N-MeFOSE	20	15	77	10-150	
d9-N-EtFOSE	20	14	69	10-150	
d3-N-MeFOSA	20	11	54	10-150	
d5-N-EtFOSA	20	11	55	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM2021081002	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574511002	Total Amount Extracted	253mL
Lab File ID	A210824A_032	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_025
Collected	08/10/2021 13:55	Ending CCal File	A210824A_036
Received	08/13/2021 08:50	Blank File	A210824A_015

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.01	4.99	
13C4 PFOA	N/A	N/A	5.99	6.00	
13C2 PFDA	N/A	N/A	6.87	6.88	
13C4 PFOS	N/A	N/A	7.18	7.20	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.55	3.56	
13C5 PFPeA	N/A	N/A	4.42	4.42	
13C3 PFBS	N/A	N/A	5.20	5.18	
13C2 4:2FTS	N/A	N/A	4.79	4.80	R
13C5 PFHxA	N/A	N/A	5.01	5.04	
13C4 PFHpA	N/A	N/A	5.52	5.51	
13C3 PFHxS	N/A	N/A	6.27	6.28	
13C2 6:2FTS	N/A	N/A	5.75	5.77	R
13C8 PFOA	N/A	N/A	5.99	6.00	
13C9 PFNA	N/A	N/A	6.43	6.44	
13C8 PFOS	N/A	N/A	7.18	7.20	
13C2 8:2FTS	N/A	N/A	6.62	6.60	R
13C6 PFDA	N/A	N/A	6.87	6.88	
d3-MeFOSAA	N/A	N/A	6.82	6.83	
13C8 PFOSA	N/A	N/A	8.78	8.78	
d5-EtFOSAA	N/A	N/A	7.03	7.02	R
13C7 PFUdA	N/A	N/A	7.30	7.32	
13C2 PFDoA	N/A	N/A	7.74	7.76	
13C2 PFTeDA	N/A	N/A	8.59	8.58	
13C3 HFPO-DA	N/A	N/A	5.22	5.21	
13C2 PFHxDA	N/A	N/A	9.35	9.33	
d7-N-MeFOSE	N/A	N/A	10.05	10.02	
d9-N-EtFOSE	N/A	N/A	10.68	10.64	
d3-N-MeFOSA	N/A	N/A	10.31	10.28	
d5-N-EtFOSA	N/A	N/A	11.00	11.00	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM2021081002	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574511002	Total Amount Extracted	253mL
Lab File ID	A210824A_032	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_025
Collected	08/10/2021 13:55	Ending CCal File	A210824A_036
Received	08/13/2021 08:50	Blank File	A210824A_015

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	3.57	3.58	
PFPeA	N/A	N/A	4.42	4.40	
HFPO-DA	0.000	0.450	5.24	5.22	
PFBS	0.290	0.330	5.20	5.26	
PFHxA	0.067	0.0620	5.02	5.00	
4:2 FTS	0.000	0.580	4.79	4.80	
PFPeS	0.000	0.300	0.00	5.76	
PFHpA	0.360	0.290	5.53	5.52	
DONA	0.000	0.490	0.00	5.68	
PFHxS	0.000	0.280	0.00	6.29	
PFOA	0.340	0.380	5.99	5.97	
6:2 FTS	0.490	0.510	5.76	5.74	
PFHpS	0.000	0.230	6.85	6.76	
PFNA	0.230	0.200	6.44	6.43	
PFOSAm	N/A	N/A	8.79	8.75	
PFOS	0.100	0.240	7.20	7.27	
MeFOSA	0.000	0.910	0.00	10.32	
PFDA	0.000	0.0860	0.00	6.89	
EtFOSAm	0.000	0.710	0.00	11.04	
8:2 FTS	0.000	0.640	0.00	6.64	
9-Cl-PF3ON	0.000	0.0220	0.00	7.53	
PFNS	0.000	0.240	7.62	7.62	
PFUnDA	0.000	0.110	0.00	7.31	
NMeFOSAA	0.000	0.490	0.00	6.90	
NEtFOSAA	0.000	0.660	0.00	7.03	
PFDS	0.000	0.240	0.00	8.07	
PFDOA	0.000	0.130	0.00	7.76	
MeFOSE	N/A	N/A	0.00	10.12	
10:2 FTS	0.000	0.620	0.00	7.51	
EtFOSE	0.000	0.000	0.00	10.70	
11-Cl-PF3OUdS	0.000	0.0120	0.00	8.38	
PFTTrDA	0.000	0.150	0.00	8.19	
PFDoS	0.000	0.230	0.00	8.83	
PFTDA	0.000	0.140	0.00	8.58	
PFHXDA	0.140	0.120	9.35	9.35	
PFODA	0.000	0.0990	0.00	10.37	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM2021081003	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574511003	Total Amount Extracted	262mL
Lab File ID	A210824A_033	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_025
Collected	08/10/2021 16:00	Ending CCal File	A210824A_036
Received	08/13/2021 08:50	Blank File	A210824A_015

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	4.4	1.9	1.9	0.42	1	375-22-4	
PFPeA	ND	1.9	1.9	0.42	1	2706-90-3	
HFPO-DA	ND	1.9	1.9	0.50	1	13252-13-6	
PFBS	ND	1.7	1.7	0.45	1	375-73-5	
PFHxA	ND	1.9	1.9	0.42	1	307-24-4	
4:2 FTS	ND	1.8	1.8	0.53	1	757124-72-4	
PFPeS	ND	1.8	1.8	0.45	1	2706-91-4	
PFHpA	ND	1.9	1.9	0.52	1	375-85-9	
DONA	ND	1.8	1.8	0.49	1	919005-14-4	
PFHxS	ND	1.7	1.7	0.48	1	355-46-4	
PFOA	ND	1.9	1.9	0.56	1	335-67-1	
6:2 FTS	4.6	1.8	1.8	0.62	1	27619-97-2	
PFHpS	ND	1.8	1.8	0.39	1	375-92-8	
PFNA	ND	1.9	1.9	0.71	1	375-95-1	
PFOSAm	ND	1.9	1.9	0.78	1	754-91-6	
PFOS	ND	1.8	1.8	0.52	1	1763-23-1	
MeFOSA	ND	1.9	1.9	0.49	1	31506-32-8	
PFDA	ND	1.9	1.9	0.54	1	335-76-2	
EtFOSAm	ND	1.9	1.9	0.58	1	4151-50-2	
8:2 FTS	ND	1.8	1.8	0.62	1	39108-34-4	
9-CI-PF3ON	ND	1.8	1.8	0.29	1	756426-58-1	
PFNS	ND	1.8	1.8	0.43	1	68259-12-1	
PFUnDA	ND	1.9	1.9	0.52	1	2058-94-8	
NMeFOSAA	ND	1.9	1.9	0.41	1	2355-31-9	
NEtFOSAA	ND	1.9	1.9	0.53	1	2991-50-6	
PFDS	ND	1.8	1.8	0.43	1	335-77-3	
PFDOA	ND	1.9	1.9	0.46	1	307-55-1	
MeFOSE	ND	1.9	1.9	0.31	1	24448-09-7	
10:2 FTS	ND	1.8	1.8	0.70	1	120226-60-0	
EtFOSE	ND	1.9	1.9	0.47	1	1691-99-2	
11-CI-PF3OUdS	ND	1.8	1.8	0.42	1	763051-92-9	
PFTTrDA	ND	1.9	1.9	0.59	1	72629-94-8	
PFDoS	ND	1.8	1.8	0.44	1	79780-39-5	
PFTDA	ND	1.9	1.9	0.45	1	376-06-7	
PFHxDA	ND	1.9	1.9	0.35	1	67905-19-5	
PFODA	ND	1.9	1.9	0.56	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM2021081003	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574511003	Total Amount Extracted	262mL
Lab File ID	A210824A_033	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_025
Collected	08/10/2021 16:00	Ending CCal File	A210824A_036
Received	08/13/2021 08:50	Blank File	A210824A_015

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	19	17	89	50-150	
13C4_PFOA	19	17	91	50-150	
13C2_PFDA	19	16	85	50-150	
13C4_PFOS	18	17	94	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	19	18	96	50-150	
13C5_PFPeA	19	18	92	50-150	
13C3_PFBS	18	17	96	50-150	
13C2_4:2FTS	18	17	95	50-150	
13C5_PFHxA	19	17	92	50-150	
13C4_PFHpA	19	17	91	50-150	
13C3_PFHxS	18	16	89	50-150	
13C2_6:2FTS	18	15	83	50-150	
13C8_PFOA	19	18	93	50-150	
13C9_PFNA	19	16	86	50-150	
13C8_PFOS	18	16	86	50-150	
13C2_8:2FTS	18	18	99	50-150	
13C6_PFDA	19	17	90	50-150	
d3-MeFOSAA	19	16	82	50-150	
13C8_PFOA	19	12	65	50-150	
d5-EtFOSAA	19	17	87	50-150	
13C7_PFUdA	19	17	89	50-150	
13C2_PFDoA	19	16	84	50-150	
13C2_PFTeDA	19	15	78	50-150	
13C3_HFPO-DA	19	17	90	50-150	
13C2_PFHxDA	19	13	68	50-150	
d7-N-MeFOSE	19	5.4	28	10-150	
d9-N-EtFOSE	19	5.3	28	10-150	
d3-N-MeFOSA	19	0.29	1	10-150	R
d5-N-EtFOSA	19	0.24	1	10-150	R

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM2021081003	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574511003	Total Amount Extracted	262mL
Lab File ID	A210824A_033	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_025
Collected	08/10/2021 16:00	Ending CCal File	A210824A_036
Received	08/13/2021 08:50	Blank File	A210824A_015

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.01	4.99	
13C4 PFOA	N/A	N/A	5.98	6.00	
13C2 PFDA	N/A	N/A	6.86	6.88	
13C4 PFOS	N/A	N/A	7.18	7.20	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.57	3.56	
13C5 PFPeA	N/A	N/A	4.42	4.42	
13C3 PFBS	N/A	N/A	5.20	5.18	
13C2 4:2FTS	N/A	N/A	4.79	4.80	
13C5 PFHxA	N/A	N/A	5.01	5.04	
13C4 PFHpA	N/A	N/A	5.52	5.51	
13C3 PFHxS	N/A	N/A	6.27	6.28	
13C2 6:2FTS	N/A	N/A	5.75	5.77	
13C8 PFOA	N/A	N/A	5.98	6.00	
13C9 PFNA	N/A	N/A	6.43	6.44	
13C8 PFOS	N/A	N/A	7.18	7.20	
13C2 8:2FTS	N/A	N/A	6.62	6.60	
13C6 PFDA	N/A	N/A	6.86	6.88	
d3-MeFOSAA	N/A	N/A	6.81	6.83	
13C8 PFOSA	N/A	N/A	8.77	8.78	
d5-EtFOSAA	N/A	N/A	7.02	7.02	
13C7 PFUdA	N/A	N/A	7.30	7.32	
13C2 PFDoA	N/A	N/A	7.73	7.76	
13C2 PFTeDA	N/A	N/A	8.58	8.58	
13C3 HFPO-DA	N/A	N/A	5.22	5.21	
13C2 PFHxDA	N/A	N/A	9.35	9.33	
d7-N-MeFOSE	N/A	N/A	10.05	10.02	
d9-N-EtFOSE	N/A	N/A	10.68	10.64	
d3-N-MeFOSA	N/A	N/A	10.31	10.28	R
d5-N-EtFOSA	N/A	N/A	11.00	11.00	R

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM2021081003	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574511003	Total Amount Extracted	262mL
Lab File ID	A210824A_033	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_025
Collected	08/10/2021 16:00	Ending CCal File	A210824A_036
Received	08/13/2021 08:50	Blank File	A210824A_015

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	3.57	3.58	
PFPeA	N/A	N/A	4.42	4.40	
HFPO-DA	0.000	0.450	0.00	5.22	
PFBS	0.290	0.330	5.20	5.26	
PFHxA	0.064	0.0620	5.02	5.00	
4:2 FTS	0.000	0.580	0.00	4.80	
PFPeS	0.000	0.300	0.00	5.76	
PFHpA	0.000	0.290	0.00	5.52	
DONA	0.000	0.490	0.00	5.68	
PFHxS	0.000	0.280	0.00	6.29	
PFOA	0.000	0.380	0.00	5.97	
6:2 FTS	0.590	0.510	5.75	5.74	
PFHpS	0.000	0.230	0.00	6.76	
PFNA	0.000	0.200	0.00	6.43	
PFOSAm	N/A	N/A	8.78	8.75	
PFOS	0.000	0.240	0.00	7.27	
MeFOSA	0.000	0.910	0.00	10.32	
PFDA	0.000	0.0860	0.00	6.89	
EtFOSAm	0.000	0.710	0.00	11.04	
8:2 FTS	0.000	0.640	0.00	6.64	
9-Cl-PF3ON	0.000	0.0220	0.00	7.53	
PFNS	0.000	0.240	0.00	7.62	
PFUnDA	0.000	0.110	0.00	7.31	
NMeFOSAA	0.000	0.490	0.00	6.90	
NEtFOSAA	0.000	0.660	0.00	7.03	
PFDS	0.000	0.240	0.00	8.07	
PFDOA	0.000	0.130	0.00	7.76	
MeFOSE	N/A	N/A	0.00	10.12	
10:2 FTS	0.000	0.620	0.00	7.51	
EtFOSE	0.000	0.000	0.00	10.70	
11-Cl-PF3OUdS	0.000	0.0120	0.00	8.38	
PFTrDA	0.000	0.150	0.00	8.19	
PFDoS	0.000	0.230	0.00	8.83	
PFTDA	0.000	0.140	0.00	8.58	
PFHXDA	0.150	0.120	9.35	9.35	
PFODA	0.000	0.0990	0.00	10.37	

**REPORT OF LABORATORY ANALYSIS**

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





**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM2021081004	Extraction Date	08/30/2021 15:47
Lab Sample ID	10574511004-R	Total Amount Extracted	251mL
Lab File ID	Q210901B_014	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210901B_003
Collected	08/10/2021 16:15	Ending CCal File	Q210901B_017
Received	08/13/2021 08:50	Blank File	A210902A_041

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	4.4	2.0	2.0	0.44	1	375-22-4	
PFPeA	ND	2.0	2.0	0.44	1	2706-90-3	
HFPO-DA	ND	2.0	2.0	0.53	1	13252-13-6	
PFBS	ND	1.8	1.8	0.47	1	375-73-5	
PFHxA	ND	2.0	2.0	0.44	1	307-24-4	
4:2 FTS	ND	1.9	1.9	0.56	1	757124-72-4	
PFPeS	ND	1.9	1.9	0.47	1	2706-91-4	
PFHpA	ND	2.0	2.0	0.55	1	375-85-9	
DONA	ND	1.9	1.9	0.51	1	919005-14-4	
PFHxS	ND	1.8	1.8	0.51	1	355-46-4	
PFOA	ND	2.0	2.0	0.58	1	335-67-1	
6:2 FTS	4.1	1.9	1.9	0.64	1	27619-97-2	
PFHpS	ND	1.9	1.9	0.41	1	375-92-8	
PFNA	ND	2.0	2.0	0.74	1	375-95-1	
PFOSAm	ND	2.0	2.0	0.81	1	754-91-6	
PFOS	ND	1.8	1.8	0.55	1	1763-23-1	
MeFOSA	ND	2.0	2.0	0.51	1	31506-32-8	
PFDA	ND	2.0	2.0	0.56	1	335-76-2	
EtFOSAm	ND	2.0	2.0	0.61	1	4151-50-2	
8:2 FTS	ND	1.9	1.9	0.65	1	39108-34-4	
9-CI-PF3ON	ND	1.9	1.9	0.30	1	756426-58-1	
PFNS	ND	1.9	1.9	0.44	1	68259-12-1	
PFUnDA	ND	2.0	2.0	0.54	1	2058-94-8	
NMeFOSAA	ND	2.0	2.0	0.43	1	2355-31-9	
NEtFOSAA	ND	2.0	2.0	0.55	1	2991-50-6	
PFDS	ND	1.9	1.9	0.45	1	335-77-3	
PFDOA	ND	2.0	2.0	0.48	1	307-55-1	
MeFOSE	ND	2.0	2.0	0.33	1	24448-09-7	
10:2 FTS	ND	1.9	1.9	0.73	1	120226-60-0	
EtFOSE	ND	2.0	2.0	0.50	1	1691-99-2	
11-CI-PF3OUdS	ND	1.9	1.9	0.43	1	763051-92-9	
PFTTrDA	ND	2.0	2.0	0.62	1	72629-94-8	
PFDoS	ND	1.9	1.9	0.46	1	79780-39-5	
PFTDA	ND	2.0	2.0	0.47	1	376-06-7	
PFHXDA	ND	2.0	2.0	0.36	1	67905-19-5	
PFODA	ND	2.0	2.0	0.58	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM2021081004	Extraction Date	08/30/2021 15:47
Lab Sample ID	10574511004-R	Total Amount Extracted	251mL
Lab File ID	Q210901B_014	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210901B_003
Collected	08/10/2021 16:15	Ending CCal File	Q210901B_017
Received	08/13/2021 08:50	Blank File	A210902A_041

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	20	21	105	50-150	
13C4_PFOA	20	21	107	50-150	
13C2_PFDA	20	20	101	50-150	
13C4_PFOS	19	19	102	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	20	12	62	50-150	
13C5_PFPeA	20	18	91	50-150	
13C3_PFBs	19	16	88	50-150	
13C2_4:2Fts	19	22	116	50-150	
13C5_PFHxA	20	17	84	50-150	
13C4_PFHpA	20	21	103	50-150	
13C3_PFHxS	19	19	101	50-150	
13C2_6:2Fts	19	20	104	50-150	
13C8_PFOA	20	18	92	50-150	
13C9_PFNA	20	18	88	50-150	
13C8_PFOS	19	17	90	50-150	
13C2_8:2Fts	19	20	105	50-150	
13C6_PFDA	20	19	98	50-150	
d3-MeFOSAA	20	19	97	50-150	
13C8_PFOsA	20	13	64	50-150	
d5-EtFOSAA	20	20	98	50-150	
13C7_PFUdA	20	18	91	50-150	
13C2_PFDoA	20	16	78	50-150	
13C2_PFTeDA	20	14	72	50-150	
13C3_HFPO-DA	20	24	120	50-150	
13C2_PFHxDA	20	18	90	50-150	
d7-N-MeFOSE	20	6.9	34	10-150	
d9-N-EtFOSE	20	7.2	36	10-150	
d3-N-MeFOSA	20	0.26	1	10-150	R
d5-N-EtFOSA	20	0.31	2	10-150	R

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM2021081004	Extraction Date	08/30/2021 15:47
Lab Sample ID	10574511004-R	Total Amount Extracted	251mL
Lab File ID	Q210901B_014	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210901B_003
Collected	08/10/2021 16:15	Ending CCal File	Q210901B_017
Received	08/13/2021 08:50	Blank File	A210902A_041

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.29	6.29	
13C4 PFOA	N/A	N/A	7.64	7.66	
13C2 PFDA	N/A	N/A	8.99	8.98	
13C4 PFOS	N/A	N/A	9.47	9.47	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.75	4.80	
13C5 PFPeA	N/A	N/A	5.59	5.60	
13C3 PFBS	N/A	N/A	6.55	6.55	
13C2 4:2FTS	N/A	N/A	6.00	5.99	
13C5 PFHxA	N/A	N/A	6.29	6.28	
13C4 PFHpA	N/A	N/A	6.97	6.96	
13C3 PFHxS	N/A	N/A	8.06	8.08	
13C2 6:2FTS	N/A	N/A	7.29	7.29	
13C8 PFOA	N/A	N/A	7.64	7.64	
13C9 PFNA	N/A	N/A	8.32	8.33	
13C8 PFOS	N/A	N/A	9.48	9.52	
13C2 8:2FTS	N/A	N/A	8.61	8.63	
13C6 PFDA	N/A	N/A	9.00	9.03	
d3-MeFOSAA	N/A	N/A	8.87	8.90	
13C8 PFOSA	N/A	N/A	11.44	11.42	
d5-EtFOSAA	N/A	N/A	9.19	9.21	
13C7 PFUdA	N/A	N/A	9.68	9.72	
13C2 PFDoA	N/A	N/A	10.36	10.41	
13C2 PFTeDA	N/A	N/A	11.65	11.71	
13C3 HFPO-DA	N/A	N/A	6.56	6.56	
13C2 PFHxDA	N/A	N/A	12.77	12.77	
d7-N-MeFOSE	N/A	N/A	13.07	13.06	
d9-N-EtFOSE	N/A	N/A	13.55	13.53	
d3-N-MeFOSA	N/A	N/A	13.28	13.26	R
d5-N-EtFOSA	N/A	N/A	13.73	13.70	R

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM2021081004	Extraction Date	08/30/2021 15:47
Lab Sample ID	10574511004-R	Total Amount Extracted	251mL
Lab File ID	Q210901B_014	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210901B_003
Collected	08/10/2021 16:15	Ending CCal File	Q210901B_017
Received	08/13/2021 08:50	Blank File	A210902A_041

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.75	4.82	
PFPeA	N/A	N/A	5.60	5.63	
HFPO-DA	0.000	0.460	0.00	6.61	
PFBS	0.350	0.360	6.55	6.54	
PFHxA	0.081	0.0770	6.29	6.32	
4:2 FTS	0.000	1.10	6.00	5.99	
PFPeS	0.000	0.390	0.00	7.32	
PFHpA	0.650	0.350	6.99	6.96	
DONA	0.000	0.510	0.00	7.25	
PFHxS	0.450	0.290	8.07	8.05	
PFOA	0.000	0.270	0.00	7.63	
6:2 FTS	0.960	1.20	7.29	7.28	
PFHpS	0.000	0.410	8.81	8.79	
PFNA	0.000	0.290	0.00	8.32	
PFOSAm	N/A	N/A	11.44	11.40	
PFOS	0.210	0.200	9.49	9.46	
MeFOSA	0.000	0.530	0.00	13.29	
PFDA	0.000	0.140	0.00	9.02	
EtFOSAm	0.000	0.560	0.00	13.73	
8:2 FTS	0.000	1.80	0.00	8.62	
9-Cl-PF3ON	0.000	0.0510	0.00	10.00	
PFNS	0.000	0.220	0.00	10.16	
PFUnDA	0.000	0.140	0.00	9.71	
NMeFOSAA	0.000	0.770	0.00	8.89	
NEtFOSAA	0.530	0.480	9.09	9.20	
PFDS	0.000	0.240	10.83	10.82	
PFDOA	0.000	0.190	0.00	10.44	
MeFOSE	N/A	N/A	0.00	13.10	
10:2 FTS	0.000	1.60	0.00	9.95	
EtFOSE	0.000	0.000	0.00	13.58	
11-Cl-PF3OUdS	0.000	0.0240	0.00	11.29	
PFTrDA	0.000	0.190	0.00	11.02	
PFDoS	0.000	0.240	0.00	12.05	
PFTDA	0.000	0.160	0.00	11.66	
PFHXDA	0.120	0.150	12.76	12.78	
PFODA	0.000	0.160	0.00	13.62	

**REPORT OF LABORATORY ANALYSIS**

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



**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

Client Sample ID	WM2021081005	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574511005-R	Total Amount Extracted	56.7mL
Lab File ID	Q210831B_020	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210831B_014
Collected	08/10/2021 16:45	Ending CCal File	Q210831B_025
Received	08/13/2021 08:50	Blank File	Q210831B_018

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	54	8.8	8.8	1.9	1	375-22-4	
PFPeA	30	8.8	8.8	1.9	1	2706-90-3	
HFPO-DA	ND	8.8	8.8	2.3	1	13252-13-6	
PFBS	ND	7.8	7.8	2.1	1	375-73-5	
PFHxA	40	8.8	8.8	1.9	1	307-24-4	
4:2 FTS	ND	8.2	8.2	2.5	1	757124-72-4	
PFPeS	ND	8.3	8.3	2.1	1	2706-91-4	
PFHpA	ND	8.8	8.8	2.4	1	375-85-9	
DONA	ND	8.3	8.3	2.3	1	919005-14-4	
PFHxS	ND	8.0	8.0	2.2	1	355-46-4	
PFOA	ND	8.8	8.8	2.6	1	335-67-1	
6:2 FTS	9.2	8.4	8.4	2.8	1	27619-97-2	
PFHpS	ND	8.4	8.4	1.8	1	375-92-8	
PFNA	ND	8.8	8.8	3.3	1	375-95-1	
PFOSAm	ND	8.8	8.8	3.6	1	754-91-6	
PFOS	ND	8.2	8.2	2.4	1	1763-23-1	
MeFOSA	ND	8.8	8.8	2.3	1	31506-32-8	
PFDA	ND	8.8	8.8	2.5	1	335-76-2	
EtFOSAm	ND	8.8	8.8	2.7	1	4151-50-2	
8:2 FTS	ND	8.5	8.5	2.9	1	39108-34-4	
9-CI-PF3ON	ND	8.2	8.2	1.3	1	756426-58-1	
PFNS	ND	8.5	8.5	2.0	1	68259-12-1	
PFUnDA	ND	8.8	8.8	2.4	1	2058-94-8	
NMeFOSAA	ND	8.8	8.8	1.9	1	2355-31-9	
NEtFOSAA	ND	8.8	8.8	2.4	1	2991-50-6	
PFDS	ND	8.5	8.5	2.0	1	335-77-3	
PFDOA	ND	8.8	8.8	2.1	1	307-55-1	
MeFOSE	ND	8.8	8.8	1.4	1	24448-09-7	
10:2 FTS	ND	8.5	8.5	3.2	1	120226-60-0	
EtFOSE	ND	8.8	8.8	2.2	1	1691-99-2	
11-CI-PF3OUdS	ND	8.3	8.3	1.9	1	763051-92-9	
PFTTrDA	ND	8.8	8.8	2.7	1	72629-94-8	
PFDoS	ND	8.5	8.5	2.0	1	79780-39-5	
PFTDA	ND	8.8	8.8	2.1	1	376-06-7	
PFHXDA	ND	8.8	8.8	1.6	1	67905-19-5	
PFODA	ND	8.8	8.8	2.6	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM2021081005	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574511005-R	Total Amount Extracted	56.7mL
Lab File ID	Q210831B_020	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210831B_014
Collected	08/10/2021 16:45	Ending CCal File	Q210831B_025
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	88	110	129	50-150	
13C4_PFOA	88	100	113	50-150	
13C2_PFDA	88	120	131	50-150	
13C4_PFOS	84	86	102	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBa	88	46	53	50-150	
13C5_PFPeA	88	82	93	50-150	
13C3_PFBs	82	100	124	50-150	
13C2_4:2FTS	82	270	<b>329</b>	50-150	R
13C5_PFHxA	88	120	131	50-150	
13C4_PFHpA	88	94	107	50-150	
13C3_PFHxS	83	96	115	50-150	
13C2_6:2FTS	84	260	<b>306</b>	50-150	R
13C8_PFOA	88	98	111	50-150	
13C9_PFNA	88	100	117	50-150	
13C8_PFOS	84	81	96	50-150	
13C2_8:2FTS	84	210	<b>250</b>	50-150	R
13C6_PFDA	88	130	147	50-150	
d3-MeFOSAA	88	140	<b>155</b>	50-150	R
13C8_PFOsA	88	66	75	50-150	
d5-EtFOSAA	88	130	143	50-150	
13C7_PFUdA	88	120	133	50-150	
13C2_PFDoA	88	100	114	50-150	
13C2_PFTeDA	88	80	90	50-150	
13C3_HFPO-DA	88	99	113	50-150	
13C2_PFHxDA	88	71	80	50-150	
d7-N-MeFOSE	88	67	76	10-150	
d9-N-EtFOSE	88	62	71	10-150	
d3-N-MeFOSA	88	40	45	10-150	
d5-N-EtFOSA	88	38	44	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM2021081005	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574511005-R	Total Amount Extracted	56.7mL
Lab File ID	Q210831B_020	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210831B_014
Collected	08/10/2021 16:45	Ending CCal File	Q210831B_025
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.25	6.29	
13C4 PFOA	N/A	N/A	7.61	7.66	
13C2 PFDA	N/A	N/A	8.97	8.98	
13C4 PFOS	N/A	N/A	9.45	9.48	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.73	4.74	
13C5 PFPeA	N/A	N/A	5.57	5.60	
13C3 PFBS	N/A	N/A	6.51	6.55	
13C2 4:2FTS	N/A	N/A	5.97	5.99	R
13C5 PFHxA	N/A	N/A	6.26	6.28	
13C4 PFHpA	N/A	N/A	6.93	6.96	
13C3 PFHxS	N/A	N/A	8.03	8.08	
13C2 6:2FTS	N/A	N/A	7.25	7.29	R
13C8 PFOA	N/A	N/A	7.61	7.64	
13C9 PFNA	N/A	N/A	8.29	8.33	
13C8 PFOS	N/A	N/A	9.45	9.48	
13C2 8:2FTS	N/A	N/A	8.58	8.62	R
13C6 PFDA	N/A	N/A	8.97	9.03	
d3-MeFOSAA	N/A	N/A	8.85	8.90	R
13C8 PFOSA	N/A	N/A	11.42	11.42	
d5-EtFOSAA	N/A	N/A	9.16	9.18	
13C7 PFUdA	N/A	N/A	9.65	9.68	
13C2 PFDoA	N/A	N/A	10.34	10.36	
13C2 PFTeDA	N/A	N/A	11.64	11.66	
13C3 HFPO-DA	N/A	N/A	6.54	6.56	
13C2 PFHxDA	N/A	N/A	12.76	12.77	
d7-N-MeFOSE	N/A	N/A	13.06	13.06	
d9-N-EtFOSE	N/A	N/A	13.54	13.53	
d3-N-MeFOSA	N/A	N/A	13.26	13.26	
d5-N-EtFOSA	N/A	N/A	13.70	13.70	

**REPORT OF LABORATORY ANALYSIS**

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





**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM2021081005	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574511005-R	Total Amount Extracted	56.7mL
Lab File ID	Q210831B_020	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210831B_014
Collected	08/10/2021 16:45	Ending CCal File	Q210831B_025
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.74	4.82	
PFPeA	N/A	N/A	5.58	5.63	
HFPO-DA	0.000	0.380	0.00	6.61	
PFBS	0.000	0.330	0.00	6.54	
PFHxA	0.077	0.0990	6.26	6.32	
4:2 FTS	27.0	0.970	5.99	5.99	
PFPeS	0.000	0.450	7.29	7.32	
PFHpA	0.770	0.460	6.94	6.98	
DONA	0.000	0.470	0.00	7.21	
PFHxS	0.470	0.290	8.04	8.05	
PFOA	0.330	0.250	7.61	7.63	
6:2 FTS	1.00	1.20	7.26	7.28	
PFHpS	0.000	0.410	0.00	8.79	
PFNA	0.250	0.270	8.30	8.32	
PFOSAm	N/A	N/A	11.43	11.40	
PFOS	0.190	0.240	9.46	9.46	
MeFOSA	0.000	0.470	0.00	13.29	
PFDA	0.000	0.160	8.97	9.02	
EtFOSAm	0.000	0.510	0.00	13.73	
8:2 FTS	0.000	1.40	0.00	8.62	
9-Cl-PF3ON	0.000	0.0440	0.00	10.00	
PFNS	0.000	0.230	10.15	10.16	
PFUnDA	0.000	0.160	0.00	9.71	
NMeFOSAA	0.000	0.670	0.00	8.89	
NEtFOSAA	0.000	0.490	0.00	9.15	
PFDS	0.000	0.260	0.00	10.82	
PFDOA	0.000	0.160	0.00	10.44	
MeFOSE	N/A	N/A	13.09	13.10	
10:2 FTS	0.000	1.70	0.00	9.95	
EtFOSE	0.000	0.000	0.00	13.58	
11-Cl-PF3OUdS	0.000	0.0260	0.00	11.29	
PFTTrDA	0.000	0.200	0.00	11.02	
PFDoS	0.000	0.250	0.00	12.05	
PFTDA	0.000	0.140	0.00	11.66	
PFHXDA	0.082	0.140	12.75	12.78	
PFODA	0.000	0.170	0.00	13.54	

**REPORT OF LABORATORY ANALYSIS**

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





**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM2021081107	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574511006	Total Amount Extracted	239mL
Lab File ID	A210824A_037	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_036
Collected	08/11/2021 10:50	Ending CCal File	A210824A_044
Received	08/13/2021 08:50	Blank File	A210824A_015

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	ND	2.1	2.1	0.46	1	375-22-4	
PFPeA	ND	2.1	2.1	0.46	1	2706-90-3	
HFPO-DA	ND	2.1	2.1	0.55	1	13252-13-6	
PFBS	ND	1.9	1.9	0.50	1	375-73-5	
PFHxA	ND	2.1	2.1	0.46	1	307-24-4	
4:2 FTS	ND	2.0	2.0	0.58	1	757124-72-4	
PFPeS	ND	2.0	2.0	0.50	1	2706-91-4	
PFHpA	ND	2.1	2.1	0.58	1	375-85-9	
DONA	ND	2.0	2.0	0.54	1	919005-14-4	
PFHxS	ND	1.9	1.9	0.53	1	355-46-4	
PFOA	ND	2.1	2.1	0.61	1	335-67-1	
6:2 FTS	ND	2.0	2.0	0.68	1	27619-97-2	
PFHpS	ND	2.0	2.0	0.43	1	375-92-8	
PFNA	ND	2.1	2.1	0.77	1	375-95-1	
PFOSAm	ND	2.1	2.1	0.86	1	754-91-6	
PFOS	ND	1.9	1.9	0.57	1	1763-23-1	
MeFOSA	ND	2.1	2.1	0.53	1	31506-32-8	
PFDA	ND	2.1	2.1	0.59	1	335-76-2	
EtFOSAm	ND	2.1	2.1	0.64	1	4151-50-2	
8:2 FTS	ND	2.0	2.0	0.68	1	39108-34-4	
9-CI-PF3ON	ND	2.0	2.0	0.32	1	756426-58-1	
PFNS	ND	2.0	2.0	0.47	1	68259-12-1	
PFUnDA	ND	2.1	2.1	0.57	1	2058-94-8	
NMeFOSAA	ND	2.1	2.1	0.45	1	2355-31-9	
NEtFOSAA	ND	2.1	2.1	0.58	1	2991-50-6	
PFDS	ND	2.0	2.0	0.47	1	335-77-3	
PFDOA	ND	2.1	2.1	0.51	1	307-55-1	
MeFOSE	ND	2.1	2.1	0.34	1	24448-09-7	
10:2 FTS	ND	2.0	2.0	0.77	1	120226-60-0	
EtFOSE	ND	2.1	2.1	0.52	1	1691-99-2	
11-CI-PF3OUdS	ND	2.0	2.0	0.46	1	763051-92-9	
PFTTrDA	ND	2.1	2.1	0.65	1	72629-94-8	
PFDoS	ND	2.0	2.0	0.48	1	79780-39-5	
PFTDA	ND	2.1	2.1	0.50	1	376-06-7	
PFHXDA	ND	2.1	2.1	0.38	1	67905-19-5	
PFODA	ND	2.1	2.1	0.61	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM2021081107	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574511006	Total Amount Extracted	239mL
Lab File ID	A210824A_037	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_036
Collected	08/11/2021 10:50	Ending CCal File	A210824A_044
Received	08/13/2021 08:50	Blank File	A210824A_015

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	21	20	94	50-150	
13C4_PFOA	21	19	89	50-150	
13C2_PFDA	21	20	94	50-150	
13C4_PFOS	20	19	95	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	21	22	106	50-150	
13C5_PFPeA	21	19	91	50-150	
13C3_PFBS	19	19	98	50-150	
13C2_4:2FTS	20	19	99	50-150	
13C5_PFHxA	21	20	97	50-150	
13C4_PFHpA	21	19	90	50-150	
13C3_PFHxS	20	18	92	50-150	
13C2_6:2FTS	20	18	93	50-150	
13C8_PFOA	21	19	93	50-150	
13C9_PFNA	21	18	85	50-150	
13C8_PFOS	20	18	92	50-150	
13C2_8:2FTS	20	20	102	50-150	
13C6_PFDA	21	20	94	50-150	
d3-MeFOSAA	21	15	74	50-150	
13C8_PFOA	21	16	77	50-150	
d5-EtFOSAA	21	15	73	50-150	
13C7_PFUdA	21	19	91	50-150	
13C2_PFDoA	21	18	84	50-150	
13C2_PFTeDA	21	17	81	50-150	
13C3_HFPO-DA	21	18	85	50-150	
13C2_PFHxDA	21	17	81	50-150	
d7-N-MeFOSE	21	16	77	10-150	
d9-N-EtFOSE	21	15	70	10-150	
d3-N-MeFOSA	21	11	51	10-150	
d5-N-EtFOSA	21	9.6	46	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM2021081107	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574511006	Total Amount Extracted	239mL
Lab File ID	A210824A_037	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_036
Collected	08/11/2021 10:50	Ending CCal File	A210824A_044
Received	08/13/2021 08:50	Blank File	A210824A_015

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.01	4.99	
13C4 PFOA	N/A	N/A	5.98	6.00	
13C2 PFDA	N/A	N/A	6.86	6.88	
13C4 PFOS	N/A	N/A	7.17	7.20	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.57	3.56	
13C5 PFPeA	N/A	N/A	4.41	4.42	
13C3 PFBS	N/A	N/A	5.20	5.18	
13C2 4:2FTS	N/A	N/A	4.79	4.80	
13C5 PFHxA	N/A	N/A	5.01	5.04	
13C4 PFHpA	N/A	N/A	5.52	5.51	
13C3 PFHxS	N/A	N/A	6.26	6.28	
13C2 6:2FTS	N/A	N/A	5.75	5.77	
13C8 PFOA	N/A	N/A	5.98	6.00	
13C9 PFNA	N/A	N/A	6.42	6.44	
13C8 PFOS	N/A	N/A	7.18	7.20	
13C2 8:2FTS	N/A	N/A	6.61	6.60	
13C6 PFDA	N/A	N/A	6.86	6.88	
d3-MeFOSAA	N/A	N/A	6.81	6.83	
13C8 PFOSA	N/A	N/A	8.77	8.78	
d5-EtFOSAA	N/A	N/A	7.02	7.02	
13C7 PFUdA	N/A	N/A	7.29	7.32	
13C2 PFDoA	N/A	N/A	7.73	7.76	
13C2 PFTeDA	N/A	N/A	8.58	8.58	
13C3 HFPO-DA	N/A	N/A	5.21	5.21	
13C2 PFHxDA	N/A	N/A	9.34	9.33	
d7-N-MeFOSE	N/A	N/A	10.05	10.02	
d9-N-EtFOSE	N/A	N/A	10.68	10.64	
d3-N-MeFOSA	N/A	N/A	10.30	10.28	
d5-N-EtFOSA	N/A	N/A	11.00	11.00	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM2021081107	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574511006	Total Amount Extracted	239mL
Lab File ID	A210824A_037	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_036
Collected	08/11/2021 10:50	Ending CCal File	A210824A_044
Received	08/13/2021 08:50	Blank File	A210824A_015

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	3.57	3.58	
PFPeA	N/A	N/A	4.42	4.40	
HFPO-DA	0.000	0.410	0.00	5.22	
PFBS	0.300	0.300	5.20	5.26	
PFHxA	0.000	0.0670	5.01	5.00	
4:2 FTS	0.000	0.580	0.00	4.80	
PFPeS	0.000	0.290	0.00	5.76	
PFHpA	0.370	0.280	5.52	5.52	
DONA	0.000	0.480	0.00	5.68	
PFHxS	0.000	0.280	0.00	6.29	
PFOA	0.000	0.380	0.00	5.97	
6:2 FTS	0.000	0.480	0.00	5.74	
PFHpS	0.000	0.270	0.00	6.76	
PFNA	0.150	0.240	6.43	6.43	
PFOSAm	N/A	N/A	8.77	8.75	
PFOS	0.093	0.210	7.19	7.27	
MeFOSA	0.000	0.910	0.00	10.32	
PFDA	0.000	0.0760	0.00	6.89	
EtFOSAm	0.000	0.710	0.00	11.04	
8:2 FTS	0.000	0.600	0.00	6.64	
9-Cl-PF3ON	0.000	0.0240	0.00	7.53	
PFNS	0.000	0.280	0.00	7.62	
PFUnDA	0.000	0.0970	7.30	7.31	
NMeFOSAA	0.000	0.530	0.00	6.90	
NEtFOSAA	0.000	0.960	0.00	7.03	
PFDS	0.000	0.260	0.00	8.07	
PFDOA	0.000	0.130	7.73	7.76	
MeFOSE	N/A	N/A	0.00	10.12	
10:2 FTS	0.000	0.530	0.00	7.51	
EtFOSE	0.000	0.000	0.00	10.70	
11-Cl-PF3OUdS	0.000	0.0130	0.00	8.38	
PFTDA	0.000	0.170	8.16	8.19	
PFDoS	0.000	0.210	0.00	8.83	
PFTDA	0.000	0.140	0.00	8.58	
PFHXDA	0.096	0.120	9.35	9.35	
PFODA	0.000	0.100	10.37	10.37	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM202108118	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574511007	Total Amount Extracted	264mL
Lab File ID	A210824A_038	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_036
Collected	08/11/2021 11:01	Ending CCal File	A210824A_044
Received	08/13/2021 08:50	Blank File	A210824A_015

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	22	1.9	1.9	0.42	1	375-22-4	
PFPeA	61	1.9	1.9	0.42	1	2706-90-3	
HFPO-DA	ND	1.9	1.9	0.50	1	13252-13-6	
PFBS	ND	1.7	1.7	0.45	1	375-73-5	
PFHxA	42	1.9	1.9	0.42	1	307-24-4	
4:2 FTS	ND	1.8	1.8	0.53	1	757124-72-4	
PFPeS	ND	1.8	1.8	0.45	1	2706-91-4	
PFHpA	11	1.9	1.9	0.52	1	375-85-9	
DONA	ND	1.8	1.8	0.49	1	919005-14-4	
PFHxS	2.5	1.7	1.7	0.48	1	355-46-4	
PFOA	20	1.9	1.9	0.55	1	335-67-1	
6:2 FTS	7.0	1.8	1.8	0.61	1	27619-97-2	
PFHpS	ND	1.8	1.8	0.39	1	375-92-8	
PFNA	3.3	1.9	1.9	0.70	1	375-95-1	
PFOSAm	2.8	1.9	1.9	0.78	1	754-91-6	
PFOS	ND	1.8	1.8	0.52	1	1763-23-1	
MeFOSA	ND	1.9	1.9	0.48	1	31506-32-8	
PFDA	ND	1.9	1.9	0.53	1	335-76-2	
EtFOSAm	ND	1.9	1.9	0.58	1	4151-50-2	
8:2 FTS	ND	1.8	1.8	0.62	1	39108-34-4	
9-CI-PF3ON	ND	1.8	1.8	0.29	1	756426-58-1	
PFNS	ND	1.8	1.8	0.42	1	68259-12-1	
PFUnDA	ND	1.9	1.9	0.51	1	2058-94-8	
NMeFOSAA	ND	1.9	1.9	0.41	1	2355-31-9	
NEtFOSAA	ND	1.9	1.9	0.53	1	2991-50-6	
PFDS	ND	1.8	1.8	0.43	1	335-77-3	
PFDOA	ND	1.9	1.9	0.46	1	307-55-1	
MeFOSE	ND	1.9	1.9	0.31	1	24448-09-7	
10:2 FTS	ND	1.8	1.8	0.70	1	120226-60-0	
EtFOSE	ND	1.9	1.9	0.47	1	1691-99-2	
11-CI-PF3OUdS	ND	1.8	1.8	0.41	1	763051-92-9	
PFTTrDA	ND	1.9	1.9	0.59	1	72629-94-8	
PFDoS	ND	1.8	1.8	0.44	1	79780-39-5	
PFTDA	ND	1.9	1.9	0.45	1	376-06-7	
PFHxDA	ND	1.9	1.9	0.34	1	67905-19-5	
PFODA	ND	1.9	1.9	0.55	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM202108118	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574511007	Total Amount Extracted	264mL
Lab File ID	A210824A_038	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_036
Collected	08/11/2021 11:01	Ending CCal File	A210824A_044
Received	08/13/2021 08:50	Blank File	A210824A_015

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	19	23	120	50-150	
13C4_PFOA	19	21	112	50-150	
13C2_PFDA	19	21	113	50-150	
13C4_PFOS	18	23	126	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	19	24	128	50-150	
13C5_PFPeA	19	23	119	50-150	
13C3_PFBs	18	21	120	50-150	
13C2_4:2Fts	18	31	174	50-150	R
13C5_PFHxA	19	23	121	50-150	
13C4_PFHpA	19	24	124	50-150	
13C3_PFHxS	18	21	117	50-150	
13C2_6:2Fts	18	22	122	50-150	
13C8_PFOA	19	23	119	50-150	
13C9_PFNA	19	22	114	50-150	
13C8_PFOS	18	20	112	50-150	
13C2_8:2Fts	18	22	120	50-150	
13C6_PFDA	19	22	116	50-150	
d3-MeFOSAA	19	21	109	50-150	
13C8_PFOsA	19	14	73	50-150	
d5-EtFOSAA	19	21	112	50-150	
13C7_PFUdA	19	22	117	50-150	
13C2_PFDoA	19	20	106	50-150	
13C2_PFTeDA	19	21	109	50-150	
13C3_HFPO-DA	19	22	117	50-150	
13C2_PFHxDA	19	20	108	50-150	
d7-N-MeFOSE	19	7.5	40	10-150	
d9-N-EtFOSE	19	7.0	37	10-150	
d3-N-MeFOSA	19	0.45	2	10-150	R
d5-N-EtFOSA	19	0.48	3	10-150	R

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM202108118	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574511007	Total Amount Extracted	264mL
Lab File ID	A210824A_038	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_036
Collected	08/11/2021 11:01	Ending CCal File	A210824A_044
Received	08/13/2021 08:50	Blank File	A210824A_015

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.01	4.99	
13C4 PFOA	N/A	N/A	5.99	6.00	
13C2 PFDA	N/A	N/A	6.87	6.88	
13C4 PFOS	N/A	N/A	7.18	7.20	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.57	3.56	
13C5 PFPeA	N/A	N/A	4.42	4.42	
13C3 PFBS	N/A	N/A	5.20	5.18	
13C2 4:2FTS	N/A	N/A	4.80	4.80	R
13C5 PFHxA	N/A	N/A	5.02	5.04	
13C4 PFHpA	N/A	N/A	5.52	5.51	
13C3 PFHxS	N/A	N/A	6.27	6.28	
13C2 6:2FTS	N/A	N/A	5.75	5.77	
13C8 PFOA	N/A	N/A	5.99	6.00	
13C9 PFNA	N/A	N/A	6.43	6.44	
13C8 PFOS	N/A	N/A	7.18	7.20	
13C2 8:2FTS	N/A	N/A	6.62	6.60	
13C6 PFDA	N/A	N/A	6.87	6.88	
d3-MeFOSAA	N/A	N/A	6.82	6.83	
13C8 PFOSA	N/A	N/A	8.78	8.78	
d5-EtFOSAA	N/A	N/A	7.03	7.02	
13C7 PFUdA	N/A	N/A	7.30	7.32	
13C2 PFDoA	N/A	N/A	7.74	7.76	
13C2 PFTeDA	N/A	N/A	8.59	8.58	
13C3 HFPO-DA	N/A	N/A	5.22	5.21	
13C2 PFHxDA	N/A	N/A	9.35	9.33	
d7-N-MeFOSE	N/A	N/A	10.06	10.02	
d9-N-EtFOSE	N/A	N/A	10.68	10.64	
d3-N-MeFOSA	N/A	N/A	10.31	10.28	R
d5-N-EtFOSA	N/A	N/A	11.00	11.00	R

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM202108118	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574511007	Total Amount Extracted	264mL
Lab File ID	A210824A_038	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_036
Collected	08/11/2021 11:01	Ending CCal File	A210824A_044
Received	08/13/2021 08:50	Blank File	A210824A_015

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	3.58	3.58	
PFPeA	N/A	N/A	4.42	4.40	
HFPO-DA	0.000	0.410	5.24	5.22	
PFBS	0.390	0.300	5.21	5.26	
PFHxA	0.062	0.0670	5.02	5.00	
4:2 FTS	0.000	0.580	4.80	4.80	
PFPeS	0.400	0.290	5.78	5.76	
PFHpA	0.290	0.280	5.53	5.52	
DONA	0.000	0.480	0.00	5.68	
PFHxS	0.260	0.280	6.28	6.29	
PFOA	0.380	0.380	5.99	5.97	
6:2 FTS	0.580	0.480	5.76	5.74	
PFHpS	0.000	0.270	6.74	6.76	
PFNA	0.210	0.240	6.44	6.43	
PFOSAm	N/A	N/A	8.78	8.75	
PFOS	0.210	0.210	7.19	7.27	
MeFOSA	0.000	0.910	0.00	10.32	
PFDA	0.000	0.0760	0.00	6.89	
EtFOSAm	0.000	0.710	0.00	11.04	
8:2 FTS	0.000	0.600	0.00	6.64	
9-Cl-PF3ON	0.000	0.0240	0.00	7.53	
PFNS	0.000	0.280	0.00	7.62	
PFUnDA	0.073	0.0970	7.31	7.31	
NMeFOSAA	0.000	0.530	0.00	6.90	
NEtFOSAA	0.000	0.960	0.00	7.03	
PFDS	0.000	0.260	0.00	8.07	
PFDOA	0.000	0.130	0.00	7.76	
MeFOSE	N/A	N/A	0.00	10.12	
10:2 FTS	0.000	0.530	0.00	7.51	
EtFOSE	0.000	0.000	0.00	10.70	
11-Cl-PF3OUdS	0.000	0.0130	0.00	8.38	
PFTDA	0.000	0.170	0.00	8.19	
PFDoS	0.000	0.210	0.00	8.83	
PFTDA	0.000	0.140	0.00	8.58	
PFHXDA	0.170	0.120	9.36	9.35	
PFODA	0.000	0.100	0.00	10.37	

**REPORT OF LABORATORY ANALYSIS**

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





**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM202108119-D	Extraction Date	08/26/2021 09:00
Lab Sample ID	10574511008	Total Amount Extracted	242mL
Lab File ID	Q210827A_032	Ical ID	210826A01
Matrix	Non_Potable_Water	CCal File	Q210827A_028
Collected	08/11/2021 11:14	Ending CCal File	Q210827A_038
Received	08/13/2021 08:50	Blank File	A210831B_005

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	21	2.1	2.1	0.46	1	375-22-4	
PFPeA	47	2.1	2.1	0.45	1	2706-90-3	
HFPO-DA	ND	2.1	2.1	0.55	1	13252-13-6	
PFBS	3.1	1.8	1.8	0.49	1	375-73-5	
PFHxA	43	2.1	2.1	0.45	1	307-24-4	
4:2 FTS	ND	1.9	1.9	0.58	1	757124-72-4	
PFPeS	2.2	1.9	1.9	0.49	1	2706-91-4	
PFHpA	8.5	2.1	2.1	0.57	1	375-85-9	
DONA	ND	2.0	2.0	0.53	1	919005-14-4	
PFHxS	11	1.9	1.9	0.52	1	355-46-4	
PFOA	17	2.1	2.1	0.60	1	335-67-1	
6:2 FTS	18	2.0	2.0	0.67	1	27619-97-2	
PFHpS	ND	2.0	2.0	0.42	1	375-92-8	
PFNA	2.6	2.1	2.1	0.76	1	375-95-1	
PFOSAm	ND	2.1	2.1	0.84	1	754-91-6	
PFOS	9.0	1.9	1.9	0.57	1	1763-23-1	
MeFOSA	ND	2.1	2.1	0.53	1	31506-32-8	
PFDA	ND	2.1	2.1	0.58	1	335-76-2	
EtFOSAm	ND	2.1	2.1	0.63	1	4151-50-2	
8:2 FTS	ND	2.0	2.0	0.67	1	39108-34-4	
9-CI-PF3ON	ND	1.9	1.9	0.31	1	756426-58-1	
PFNS	ND	2.0	2.0	0.46	1	68259-12-1	
PFUnDA	ND	2.1	2.1	0.56	1	2058-94-8	
NMeFOSAA	ND	2.1	2.1	0.45	1	2355-31-9	
NEtFOSAA	ND	2.1	2.1	0.57	1	2991-50-6	
PFDS	ND	2.0	2.0	0.46	1	335-77-3	
PFDOA	ND	2.1	2.1	0.50	1	307-55-1	
MeFOSE	ND	2.1	2.1	0.34	1	24448-09-7	
10:2 FTS	ND	2.0	2.0	0.76	1	120226-60-0	
EtFOSE	ND	2.1	2.1	0.51	1	1691-99-2	
11-CI-PF3OUdS	ND	1.9	1.9	0.45	1	763051-92-9	
PFTTrDA	ND	2.1	2.1	0.64	1	72629-94-8	
PFDoS	ND	2.0	2.0	0.47	1	79780-39-5	
PFTDA	ND	2.1	2.1	0.49	1	376-06-7	
PFHXDA	ND	2.1	2.1	0.37	1	67905-19-5	
PFODA	ND	2.1	2.1	0.60	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM202108119-D	Extraction Date	08/26/2021 09:00
Lab Sample ID	10574511008	Total Amount Extracted	242mL
Lab File ID	Q210827A_032	Ical ID	210826A01
Matrix	Non_Potable_Water	CCal File	Q210827A_028
Collected	08/11/2021 11:14	Ending CCal File	Q210827A_038
Received	08/13/2021 08:50	Blank File	A210831B_005

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	21	24	116	50-150	
13C4_PFOA	21	18	88	50-150	
13C2_PFDA	21	21	101	50-150	
13C4_PFOS	20	18	92	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	21	15	74	50-150	
13C5_PFPeA	21	23	110	50-150	
13C3_PFBS	19	19	101	50-150	
13C2_4:2FTS	19	36	185	50-150	R
13C5_PFHxA	21	22	105	50-150	
13C4_PFHpA	21	19	94	50-150	
13C3_PFHxS	20	17	86	50-150	
13C2_6:2FTS	20	21	107	50-150	
13C8_PFOA	21	20	96	50-150	
13C9_PFNA	21	18	87	50-150	
13C8_PFOS	20	20	100	50-150	
13C2_8:2FTS	20	15	77	50-150	
13C6_PFDA	21	19	94	50-150	
d3-MeFOSAA	21	18	86	50-150	
13C8_PFOA	21	8.7	42	50-150	R
d5-EtFOSAA	21	16	76	50-150	
13C7_PFUdA	21	19	94	50-150	
13C2_PFDoA	21	19	93	50-150	
13C2_PFTeDA	21	20	95	50-150	
13C3_HFPO-DA	21	16	80	50-150	
13C2_PFHxDA	21	23	110	50-150	
d7-N-MeFOSE	21	4.7	23	10-150	
d9-N-EtFOSE	21	6.1	29	10-150	
d3-N-MeFOSA	21	0.67	3	10-150	R
d5-N-EtFOSA	21	0.73	4	10-150	R

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM202108119-D	Extraction Date	08/26/2021 09:00
Lab Sample ID	10574511008	Total Amount Extracted	242mL
Lab File ID	Q210827A_032	Ical ID	210826A01
Matrix	Non_Potable_Water	CCal File	Q210827A_028
Collected	08/11/2021 11:14	Ending CCal File	Q210827A_038
Received	08/13/2021 08:50	Blank File	A210831B_005

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.30	6.29	
13C4 PFOA	N/A	N/A	7.64	7.66	
13C2 PFDA	N/A	N/A	9.00	9.06	
13C4 PFOS	N/A	N/A	9.49	9.46	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.76	4.80	
13C5 PFPeA	N/A	N/A	5.60	5.60	
13C3 PFBS	N/A	N/A	6.56	6.55	
13C2 4:2FTS	N/A	N/A	6.01	5.99	R
13C5 PFHxA	N/A	N/A	6.30	6.28	
13C4 PFHpA	N/A	N/A	6.98	6.96	
13C3 PFHxS	N/A	N/A	8.07	8.08	
13C2 6:2FTS	N/A	N/A	7.29	7.29	
13C8 PFOA	N/A	N/A	7.65	7.64	
13C9 PFNA	N/A	N/A	8.32	8.33	
13C8 PFOS	N/A	N/A	9.49	9.52	
13C2 8:2FTS	N/A	N/A	8.61	8.63	
13C6 PFDA	N/A	N/A	9.01	9.03	
d3-MeFOSAA	N/A	N/A	8.88	8.90	
13C8 PFOSA	N/A	N/A	11.40	11.42	R
d5-EtFOSAA	N/A	N/A	9.18	9.21	
13C7 PFUdA	N/A	N/A	9.69	9.72	
13C2 PFDoA	N/A	N/A	10.37	10.41	
13C2 PFTeDA	N/A	N/A	11.69	11.71	
13C3 HFPO-DA	N/A	N/A	6.57	6.56	
13C2 PFHxDA	N/A	N/A	12.81	12.87	
d7-N-MeFOSE	N/A	N/A	13.08	13.08	
d9-N-EtFOSE	N/A	N/A	13.56	13.53	
d3-N-MeFOSA	N/A	N/A	13.28	13.26	R
d5-N-EtFOSA	N/A	N/A	13.73	13.70	R

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM202108119-D	Extraction Date	08/26/2021 09:00
Lab Sample ID	10574511008	Total Amount Extracted	242mL
Lab File ID	Q210827A_032	Ical ID	210826A01
Matrix	Non_Potable_Water	CCal File	Q210827A_028
Collected	08/11/2021 11:14	Ending CCal File	Q210827A_038
Received	08/13/2021 08:50	Blank File	A210831B_005

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.76	4.82	
PFPeA	N/A	N/A	5.61	5.63	
HFPO-DA	0.000	0.300	0.00	6.61	
PFBS	0.380	0.470	6.56	6.54	
PFHxA	0.098	0.100	6.31	6.32	
4:2 FTS	0.000	1.10	6.02	5.99	
PFPeS	0.390	0.440	7.34	7.32	
PFHpA	0.650	0.660	6.98	6.96	
DONA	0.000	0.330	0.00	7.25	
PFHxS	0.310	0.320	8.08	8.05	
PFOA	0.290	0.280	7.65	7.66	
6:2 FTS	1.20	1.10	7.30	7.30	
PFHpS	0.620	0.340	8.82	8.79	
PFNA	0.290	0.260	8.32	8.32	
PFOSAm	N/A	N/A	11.41	11.40	
PFOS	0.200	0.250	9.51	9.46	
MeFOSA	0.000	0.630	0.00	13.29	
PFDA	0.190	0.190	9.01	9.02	
EtFOSAm	0.000	0.450	0.00	13.73	
8:2 FTS	0.000	1.40	0.00	8.62	
9-Cl-PF3ON	0.000	0.0450	0.00	10.00	
PFNS	0.000	0.260	10.18	10.16	
PFUnDA	0.230	0.220	9.69	9.71	
NMeFOSAA	0.000	0.660	0.00	8.89	
NEtFOSAA	0.000	0.420	0.00	9.20	
PFDS	0.000	0.240	10.87	10.87	
PFDOA	0.000	0.170	0.00	10.44	
MeFOSE	N/A	N/A	0.00	13.10	
10:2 FTS	0.000	1.60	0.00	9.95	
EtFOSE	0.000	0.000	0.00	13.51	
11-Cl-PF3OUdS	0.000	0.0300	0.00	11.41	
PFTTrDA	0.000	0.190	0.00	11.10	
PFDoS	0.000	0.240	0.00	12.12	
PFTDA	0.000	0.150	11.69	11.66	
PFHXDA	0.110	0.150	12.82	12.87	
PFODA	0.530	0.160	13.59	13.62	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM2021081120-L	Extraction Date	08/26/2021 09:00
Lab Sample ID	10574511009	Total Amount Extracted	241mL
Lab File ID	Q210827A_033	Ical ID	210826A01
Matrix	Non_Potable_Water	CCal File	Q210827A_028
Collected	08/11/2021 11:28	Ending CCal File	Q210827A_038
Received	08/13/2021 08:50	Blank File	A210831B_005

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	ND	2.1	2.1	0.46	1	375-22-4	
PFPeA	110	2.1	2.1	0.45	1	2706-90-3	
HFPO-DA	ND	2.1	2.1	0.55	1	13252-13-6	
PFBS	6.2	1.8	1.8	0.49	1	375-73-5	
PFHxA	120	2.1	2.1	0.45	1	307-24-4	
4:2 FTS	ND	1.9	1.9	0.58	1	757124-72-4	
PFPeS	ND	1.9	1.9	0.49	1	2706-91-4	
PFHpA	19	2.1	2.1	0.57	1	375-85-9	
DONA	ND	2.0	2.0	0.53	1	919005-14-4	
PFHxS	15	1.9	1.9	0.53	1	355-46-4	
PFOA	8.2	2.1	2.1	0.61	1	335-67-1	
6:2 FTS	430 D	7.9	7.9	2.7	4	27619-97-2	
PFHpS	ND	2.0	2.0	0.43	1	375-92-8	
PFNA	2.5	2.1	2.1	0.77	1	375-95-1	
PFOSAm	ND	2.1	2.1	0.85	1	754-91-6	
PFOS	8.7	1.9	1.9	0.57	1	1763-23-1	
MeFOSA	ND	2.1	2.1	0.53	1	31506-32-8	
PFDA	ND	2.1	2.1	0.58	1	335-76-2	
EtFOSAm	ND	2.1	2.1	0.63	1	4151-50-2	
8:2 FTS	ND	2.0	2.0	0.68	1	39108-34-4	
9-CI-PF3ON	ND	1.9	1.9	0.32	1	756426-58-1	
PFNS	ND	2.0	2.0	0.46	1	68259-12-1	
PFUnDA	ND	2.1	2.1	0.56	1	2058-94-8	
NMeFOSAA	ND	2.1	2.1	0.45	1	2355-31-9	
NEtFOSAA	ND	2.1	2.1	0.57	1	2991-50-6	
PFDS	ND	2.0	2.0	0.47	1	335-77-3	
PFDOA	ND	2.1	2.1	0.50	1	307-55-1	
MeFOSE	ND	2.1	2.1	0.34	1	24448-09-7	
10:2 FTS	ND	2.0	2.0	0.76	1	120226-60-0	
EtFOSE	ND	2.1	2.1	0.51	1	1691-99-2	
11-CI-PF3OUdS	ND	2.0	2.0	0.45	1	763051-92-9	
PFTTrDA	ND	2.1	2.1	0.64	1	72629-94-8	
PFDoS	ND	2.0	2.0	0.48	1	79780-39-5	
PFTDA	ND	2.1	2.1	0.49	1	376-06-7	
PFHXDA	ND	2.1	2.1	0.38	1	67905-19-5	
PFODA	ND	2.1	2.1	0.61	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM2021081120-L	Extraction Date	08/26/2021 09:00
Lab Sample ID	10574511009	Total Amount Extracted	241mL
Lab File ID	Q210827A_033	Ical ID	210826A01
Matrix	Non_Potable_Water	CCal File	Q210827A_028
Collected	08/11/2021 11:28	Ending CCal File	Q210827A_038
Received	08/13/2021 08:50	Blank File	A210831B_005

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	21	18	88	50-150	
13C4_PFOA	21	13	64	50-150	
13C2_PFDA	21	22	107	50-150	
13C4_PFOS	20	17	87	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	21	6.6	32	50-150	R
13C5_PFPeA	21	15	72	50-150	
13C3_PFBS	19	17	88	50-150	
13C2_4:2FTS	19	46	238	50-150	R
13C5_PFHxA	21	18	87	50-150	
13C4_PFHpA	21	17	84	50-150	
13C3_PFHxS	20	17	89	50-150	
13C2_6:2FTS	20	92	466	50-150	RD
13C8_PFOA	21	15	73	50-150	
13C9_PFNA	21	16	78	50-150	
13C8_PFOS	20	20	99	50-150	
13C2_8:2FTS	20	47	238	50-150	R
13C6_PFDA	21	22	104	50-150	
d3-MeFOSAA	21	28	136	50-150	
13C8_PFOSA	21	18	88	50-150	
d5-EtFOSAA	21	30	147	50-150	
13C7_PFUdA	21	20	95	50-150	
13C2_PFDoA	21	18	85	50-150	
13C2_PFTeDA	21	12	56	50-150	
13C3_HFPO-DA	21	17	81	50-150	
13C2_PFHxDA	21	11	53	50-150	
d7-N-MeFOSE	21	11	55	10-150	
d9-N-EtFOSE	21	11	55	10-150	
d3-N-MeFOSA	21	8.4	40	10-150	
d5-N-EtFOSA	21	7.9	38	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM2021081120-L	Extraction Date	08/26/2021 09:00
Lab Sample ID	10574511009	Total Amount Extracted	241mL
Lab File ID	Q210827A_033	Ical ID	210826A01
Matrix	Non_Potable_Water	CCal File	Q210827A_028
Collected	08/11/2021 11:28	Ending CCal File	Q210827A_038
Received	08/13/2021 08:50	Blank File	A210831B_005

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.27	6.29	
13C4 PFOA	N/A	N/A	7.64	7.66	
13C2 PFDA	N/A	N/A	9.00	9.06	
13C4 PFOS	N/A	N/A	9.48	9.46	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.70	4.80	R
13C5 PFPeA	N/A	N/A	5.57	5.60	
13C3 PFBS	N/A	N/A	6.53	6.55	
13C2 4:2FTS	N/A	N/A	5.99	5.99	R
13C5 PFHxA	N/A	N/A	6.28	6.28	
13C4 PFHpA	N/A	N/A	6.96	6.96	
13C3 PFHxS	N/A	N/A	8.07	8.08	
13C2 6:2FTS	N/A	N/A	7.27	7.29	RD
13C8 PFOA	N/A	N/A	7.64	7.64	
13C9 PFNA	N/A	N/A	8.32	8.33	
13C8 PFOS	N/A	N/A	9.49	9.52	
13C2 8:2FTS	N/A	N/A	8.61	8.63	R
13C6 PFDA	N/A	N/A	9.01	9.03	
d3-MeFOSAA	N/A	N/A	8.87	8.90	
13C8 PFOSA	N/A	N/A	11.40	11.42	
d5-EtFOSAA	N/A	N/A	9.18	9.21	
13C7 PFUdA	N/A	N/A	9.69	9.72	
13C2 PFDoA	N/A	N/A	10.37	10.41	
13C2 PFTeDA	N/A	N/A	11.68	11.71	
13C3 HFPO-DA	N/A	N/A	6.56	6.56	
13C2 PFHxDA	N/A	N/A	12.80	12.87	
d7-N-MeFOSE	N/A	N/A	13.07	13.08	
d9-N-EtFOSE	N/A	N/A	13.55	13.53	
d3-N-MeFOSA	N/A	N/A	13.28	13.26	
d5-N-EtFOSA	N/A	N/A	13.72	13.70	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM2021081120-L	Extraction Date	08/26/2021 09:00
Lab Sample ID	10574511009	Total Amount Extracted	241mL
Lab File ID	Q210827A_033	Ical ID	210826A01
Matrix	Non_Potable_Water	CCal File	Q210827A_028
Collected	08/11/2021 11:28	Ending CCal File	Q210827A_038
Received	08/13/2021 08:50	Blank File	A210831B_005

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	0.00	4.82	
PFPeA	N/A	N/A	5.57	5.63	
HFPO-DA	0.000	0.300	0.00	6.61	
PFBS	0.490	0.470	6.54	6.54	
PFHxA	0.088	0.100	6.29	6.32	
4:2 FTS	7.70	1.10	5.99	5.99	
PFPeS	0.660	0.440	7.33	7.32	
PFHpA	0.390	0.660	6.97	6.96	
DONA	0.000	0.330	0.00	7.25	
PFHxS	0.220	0.320	8.08	8.05	
PFOA	0.260	0.280	7.65	7.66	
6:2 FTS	0.990	1.20	7.28	7.28	D
PFHpS	0.000	0.340	0.00	8.79	
PFNA	0.220	0.260	8.33	8.32	
PFOSAm	N/A	N/A	11.41	11.40	
PFOS	0.170	0.250	9.50	9.46	
MeFOSA	0.000	0.630	0.00	13.29	
PFDA	0.000	0.190	9.02	9.02	
EtFOSAm	0.000	0.450	0.00	13.73	
8:2 FTS	1.90	1.40	8.62	8.62	
9-Cl-PF3ON	0.000	0.0450	0.00	10.00	
PFNS	0.310	0.260	9.90	10.16	
PFUnDA	0.000	0.220	9.68	9.71	
NMeFOSAA	0.000	0.660	0.00	8.89	
NEtFOSAA	0.000	0.420	0.00	9.20	
PFDS	1.50	0.240	10.95	10.92	
PFDOA	0.000	0.170	0.00	10.44	
MeFOSE	N/A	N/A	0.00	13.10	
10:2 FTS	0.000	1.60	0.00	9.95	
EtFOSE	0.000	0.000	0.00	13.51	
11-Cl-PF3OUdS	0.000	0.0300	0.00	11.37	
PFTTrDA	0.000	0.190	0.00	11.10	
PFDoS	0.000	0.240	0.00	12.12	
PFTDA	0.000	0.150	0.00	11.66	
PFHXDA	0.033	0.150	12.80	12.87	
PFODA	0.042	0.160	13.55	13.62	

**REPORT OF LABORATORY ANALYSIS**

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





**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM2021081121	Extraction Date	08/26/2021 09:00
Lab Sample ID	10574511010	Total Amount Extracted	242mL
Lab File ID	Q210827A_034	Ical ID	210826A01
Matrix	Non_Potable_Water	CCal File	Q210827A_028
Collected	08/11/2021 15:20	Ending CCal File	Q210827A_038
Received	08/13/2021 08:50	Blank File	A210831B_005

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	2200 D	410	410	91	200	375-22-4	
PFPeA	3800 D	410	410	90	200	2706-90-3	
HFPO-DA	ND	2.1	2.1	0.55	1	13252-13-6	
PFBS	4100 D	370	370	98	200	375-73-5	
PFHxA	11000 D	410	410	90	200	307-24-4	
4:2 FTS	ND	1.9	1.9	0.58	1	757124-72-4	
PFPeS	5300 D	390	390	98	200	2706-91-4	
PFHpA	1600 D	410	410	110	200	375-85-9	
DONA	ND	2.0	2.0	0.53	1	919005-14-4	
PFHxS	32000 D	380	380	100	200	355-46-4	
PFOA	2400 D	410	410	120	200	335-67-1	
6:2 FTS	1200 D	390	390	130	200	27619-97-2	
PFHpS	1400 D	390	390	85	200	375-92-8	
PFNA	250 D	21	21	7.6	10	375-95-1	
PFOSAm	ND	2.1	2.1	0.84	1	754-91-6	
PFOS	56000 D	760	760	230	400	1763-23-1	
MeFOSA	ND	2.1	2.1	0.53	1	31506-32-8	
PFDA	ND	2.1	2.1	0.58	1	335-76-2	
EtFOSAm	ND	2.1	2.1	0.63	1	4151-50-2	
8:2 FTS	9.1	2.0	2.0	0.67	1	39108-34-4	
9-CI-PF3ON	ND	1.9	1.9	0.32	1	756426-58-1	
PFNS	3.1 I	2.0	2.0	0.46	1	68259-12-1	
PFUnDA	ND	2.1	2.1	0.56	1	2058-94-8	
NMeFOSAA	ND	2.1	2.1	0.45	1	2355-31-9	
NEtFOSAA	ND	2.1	2.1	0.57	1	2991-50-6	
PFDS	ND	2.0	2.0	0.46	1	335-77-3	
PFDOA	ND	2.1	2.1	0.50	1	307-55-1	
MeFOSE	ND	2.1	2.1	0.34	1	24448-09-7	
10:2 FTS	ND	2.0	2.0	0.76	1	120226-60-0	
EtFOSE	ND	2.1	2.1	0.51	1	1691-99-2	
11-CI-PF3OUdS	ND	1.9	1.9	0.45	1	763051-92-9	
PFTTrDA	ND	2.1	2.1	0.64	1	72629-94-8	
PFDoS	ND	2.0	2.0	0.48	1	79780-39-5	
PFTDA	ND	2.1	2.1	0.49	1	376-06-7	
PFHXDA	ND	2.1	2.1	0.37	1	67905-19-5	
PFODA	ND	2.1	2.1	0.60	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM2021081121	Extraction Date	08/26/2021 09:00
Lab Sample ID	10574511010	Total Amount Extracted	242mL
Lab File ID	Q210827A_034	Ical ID	210826A01
Matrix	Non_Potable_Water	CCal File	Q210827A_028
Collected	08/11/2021 15:20	Ending CCal File	Q210827A_038
Received	08/13/2021 08:50	Blank File	A210831B_005

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	21	12	59	50-150	
13C4_PFOA	21	11	51	50-150	
13C2_PFDA	21	16	77	50-150	
13C4_PFOS	20	2.9	15	50-150	R

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	21	29	139	50-150	D
13C5_PFPeA	21	31	151	50-150	RD
13C3_PFBs	19	24	126	50-150	D
13C2_4:2Fts	19	21	107	50-150	
13C5_PFHxA	21	29	140	50-150	D
13C4_PFHpA	21	26	128	50-150	D
13C3_PFHxS	20	21	105	50-150	D
13C2_6:2Fts	20	30	151	50-150	RD
13C8_PFOA	21	29	139	50-150	D
13C9_PFNA	21	19	91	50-150	D
13C8_PFOS	20	9.5	48	50-150	RD
13C2_8:2Fts	20	14	68	50-150	
13C6_PFDA	21	15	71	50-150	
d3-MeFOSAA	21	19	92	50-150	
13C8_PFOsA	21	16	79	50-150	
d5-EtFOSAA	21	7.9	38	50-150	R
13C7_PFUdA	21	20	98	50-150	
13C2_PFDoA	21	17	81	50-150	
13C2_PFTeDA	21	17	80	50-150	
13C3_HFPO-DA	21	16	78	50-150	
13C2_PFHxDA	21	18	89	50-150	
d7-N-MeFOSE	21	12	58	10-150	
d9-N-EtFOSE	21	13	61	10-150	
d3-N-MeFOSA	21	9.6	46	10-150	
d5-N-EtFOSA	21	9.8	47	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM2021081121	Extraction Date	08/26/2021 09:00
Lab Sample ID	10574511010	Total Amount Extracted	242mL
Lab File ID	Q210827A_034	Ical ID	210826A01
Matrix	Non_Potable_Water	CCal File	Q210827A_028
Collected	08/11/2021 15:20	Ending CCal File	Q210827A_038
Received	08/13/2021 08:50	Blank File	A210831B_005

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.28	6.29	
13C4 PFOA	N/A	N/A	7.63	7.66	
13C2 PFDA	N/A	N/A	8.99	9.06	
13C4 PFOS	N/A	N/A	9.46	9.46	R

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.75	4.77	D
13C5 PFPeA	N/A	N/A	5.59	5.60	RD
13C3 PFBS	N/A	N/A	6.55	6.55	D
13C2 4:2FTS	N/A	N/A	5.99	5.99	
13C5 PFHxA	N/A	N/A	6.29	6.28	D
13C4 PFHpA	N/A	N/A	6.97	6.96	D
13C3 PFHxS	N/A	N/A	8.08	8.08	D
13C2 6:2FTS	N/A	N/A	7.29	7.29	RD
13C8 PFOA	N/A	N/A	7.65	7.64	D
13C9 PFNA	N/A	N/A	8.29	8.33	D
13C8 PFOS	N/A	N/A	7.19	7.20	RD
13C2 8:2FTS	N/A	N/A	8.60	8.63	
13C6 PFDA	N/A	N/A	8.99	9.03	
d3-MeFOSAA	N/A	N/A	8.86	8.90	
13C8 PFOSA	N/A	N/A	11.38	11.42	
d5-EtFOSAA	N/A	N/A	9.16	9.21	R
13C7 PFUdA	N/A	N/A	9.67	9.72	
13C2 PFDoA	N/A	N/A	10.36	10.41	
13C2 PFTeDA	N/A	N/A	11.67	11.71	
13C3 HFPO-DA	N/A	N/A	6.56	6.56	
13C2 PFHxDA	N/A	N/A	12.79	12.87	
d7-N-MeFOSE	N/A	N/A	13.06	13.08	
d9-N-EtFOSE	N/A	N/A	13.54	13.53	
d3-N-MeFOSA	N/A	N/A	13.26	13.26	
d5-N-EtFOSA	N/A	N/A	13.71	13.70	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM2021081121	Extraction Date	08/26/2021 09:00
Lab Sample ID	10574511010	Total Amount Extracted	242mL
Lab File ID	Q210827A_034	Ical ID	210826A01
Matrix	Non_Potable_Water	CCal File	Q210827A_028
Collected	08/11/2021 15:20	Ending CCal File	Q210827A_038
Received	08/13/2021 08:50	Blank File	A210831B_005

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.76	4.82	D
PFPeA	N/A	N/A	5.60	5.63	D
HFPO-DA	0.000	0.300	6.58	6.61	
PFBS	0.360	0.350	6.56	6.54	D
PFHxA	0.094	0.0780	6.30	6.32	D
4:2 FTS	0.790	1.10	6.00	5.99	
PFPeS	0.420	0.400	7.34	7.32	D
PFHpA	0.550	0.490	6.98	6.96	D
DONA	0.000	0.330	0.00	7.25	
PFHxS	0.320	0.290	8.08	8.05	D
PFOA	0.210	0.250	7.65	7.63	D
6:2 FTS	1.00	0.910	7.30	7.28	D
PFHpS	0.380	0.450	8.80	8.79	D
PFNA	0.250	0.290	8.29	8.32	D
PFOSAm	N/A	N/A	11.40	11.40	
PFOS	0.240	0.210	7.20	7.27	D
MeFOSA	0.000	0.630	0.00	13.29	
PFDA	0.230	0.190	9.00	9.02	
EtFOSAm	0.000	0.450	0.00	13.73	
8:2 FTS	1.40	1.40	8.61	8.62	
9-Cl-PF3ON	0.000	0.0450	0.00	10.00	
PFNS	0.840	0.260	10.17	10.16	I
PFUnDA	0.000	0.220	0.00	9.71	
NMeFOSAA	0.000	0.660	0.00	8.89	
NEtFOSAA	0.000	0.420	0.00	9.20	
PFDS	0.000	0.240	0.00	10.92	
PFDOA	0.000	0.170	0.00	10.44	
MeFOSE	N/A	N/A	0.00	13.10	
10:2 FTS	0.000	1.60	0.00	9.95	
EtFOSE	0.000	0.000	0.00	13.51	
11-Cl-PF3OUdS	0.000	0.0300	0.00	11.32	
PFTTrDA	0.000	0.190	0.00	11.10	
PFDoS	0.000	0.240	0.00	12.12	
PFTDA	0.000	0.150	0.00	11.66	
PFHXDA	0.020	0.150	12.80	12.87	
PFODA	0.620	0.160	13.56	13.62	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Trip Blank	Extraction Date	09/01/2021 15:30
Lab Sample ID	10574511011-R	Total Amount Extracted	264mL
Lab File ID	Q210907B_003	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210907B_001
Collected	08/11/2021 00:00	Ending CCal File	Q210907B_005
Received	08/13/2021 08:50	Blank File	A210903C_004

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	ND	1.9	1.9	0.42	1	375-22-4	
PFPeA	ND	1.9	1.9	0.42	1	2706-90-3	
HFPO-DA	ND	1.9	1.9	0.50	1	13252-13-6	
PFBS	ND	1.7	1.7	0.45	1	375-73-5	
PFHxA	ND	1.9	1.9	0.42	1	307-24-4	
4:2 FTS	ND	1.8	1.8	0.53	1	757124-72-4	
PFPeS	ND	1.8	1.8	0.45	1	2706-91-4	
PFHpA	ND	1.9	1.9	0.52	1	375-85-9	
DONA	ND	1.8	1.8	0.49	1	919005-14-4	
PFHxS	ND	1.7	1.7	0.48	1	355-46-4	
PFOA	ND	1.9	1.9	0.55	1	335-67-1	
6:2 FTS	ND	1.8	1.8	0.61	1	27619-97-2	
PFHpS	ND	1.8	1.8	0.39	1	375-92-8	
PFNA	ND	1.9	1.9	0.70	1	375-95-1	
PFOSAm	ND	1.9	1.9	0.78	1	754-91-6	
PFOS	ND	1.8	1.8	0.52	1	1763-23-1	
MeFOSA	ND	1.9	1.9	0.48	1	31506-32-8	
PFDA	ND	1.9	1.9	0.53	1	335-76-2	
EtFOSAm	ND	1.9	1.9	0.58	1	4151-50-2	
8:2 FTS	ND	1.8	1.8	0.62	1	39108-34-4	
9-CI-PF3ON	ND	1.8	1.8	0.29	1	756426-58-1	
PFNS	ND	1.8	1.8	0.42	1	68259-12-1	
PFUnDA	ND	1.9	1.9	0.51	1	2058-94-8	
NMeFOSAA	ND	1.9	1.9	0.41	1	2355-31-9	
NEtFOSAA	ND	1.9	1.9	0.53	1	2991-50-6	
PFDS	ND	1.8	1.8	0.43	1	335-77-3	
PFDOA	ND	1.9	1.9	0.46	1	307-55-1	
MeFOSE	ND	1.9	1.9	0.31	1	24448-09-7	
10:2 FTS	ND	1.8	1.8	0.70	1	120226-60-0	
EtFOSE	ND	1.9	1.9	0.47	1	1691-99-2	
11-CI-PF3OUdS	ND	1.8	1.8	0.41	1	763051-92-9	
PFTTrDA	ND	1.9	1.9	0.59	1	72629-94-8	
PFDoS	ND	1.8	1.8	0.44	1	79780-39-5	
PFTDA	ND	1.9	1.9	0.45	1	376-06-7	
PFHxDA	ND	1.9	1.9	0.34	1	67905-19-5	
PFODA	ND	1.9	1.9	0.55	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Trip Blank	Extraction Date	09/01/2021 15:30
Lab Sample ID	10574511011-R	Total Amount Extracted	264mL
Lab File ID	Q210907B_003	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210907B_001
Collected	08/11/2021 00:00	Ending CCal File	Q210907B_005
Received	08/13/2021 08:50	Blank File	A210903C_004

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	19	19	100	50-150	
13C4_PFOA	19	19	99	50-150	
13C2_PFDA	19	24	126	50-150	
13C4_PFOS	18	19	106	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	19	18	94	50-150	
13C5_PFPeA	19	18	97	50-150	
13C3_PFBS	18	16	89	50-150	
13C2_4:2FTS	18	16	88	50-150	
13C5_PFHxA	19	18	97	50-150	
13C4_PFHpA	19	17	92	50-150	
13C3_PFHxS	18	17	93	50-150	
13C2_6:2FTS	18	16	88	50-150	
13C8_PFOA	19	17	89	50-150	
13C9_PFNA	19	16	85	50-150	
13C8_PFOS	18	16	88	50-150	
13C2_8:2FTS	18	14	79	50-150	
13C6_PFDA	19	16	86	50-150	
d3-MeFOSAA	19	17	89	50-150	
13C8_PFOSA	19	8.0	42	50-150	R
d5-EtFOSAA	19	16	85	50-150	
13C7_PFUdA	19	17	91	50-150	
13C2_PFDoA	19	17	91	50-150	
13C2_PFTeDA	19	14	74	50-150	
13C3_HFPO-DA	19	26	136	50-150	
13C2_PFHxDA	19	13	66	50-150	
d7-N-MeFOSE	19	4.1	21	10-150	
d9-N-EtFOSE	19	4.3	23	10-150	
d3-N-MeFOSA	19	3.7	20	10-150	
d5-N-EtFOSA	19	3.7	20	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Trip Blank	Extraction Date	09/01/2021 15:30
Lab Sample ID	10574511011-R	Total Amount Extracted	264mL
Lab File ID	Q210907B_003	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210907B_001
Collected	08/11/2021 00:00	Ending CCal File	Q210907B_005
Received	08/13/2021 08:50	Blank File	A210903C_004

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.25	6.29	
13C4 PFOA	N/A	N/A	7.64	7.66	
13C2 PFDA	N/A	N/A	9.07	8.98	
13C4 PFOS	N/A	N/A	9.56	9.54	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.71	4.80	
13C5 PFPeA	N/A	N/A	5.54	5.60	
13C3 PFBS	N/A	N/A	6.52	6.55	
13C2 4:2FTS	N/A	N/A	5.96	5.99	
13C5 PFHxA	N/A	N/A	6.25	6.28	
13C4 PFHpA	N/A	N/A	6.94	6.96	
13C3 PFHxS	N/A	N/A	8.08	8.08	
13C2 6:2FTS	N/A	N/A	7.28	7.29	
13C8 PFOA	N/A	N/A	7.64	7.64	
13C9 PFNA	N/A	N/A	8.34	8.33	
13C8 PFOS	N/A	N/A	9.56	9.52	
13C2 8:2FTS	N/A	N/A	8.65	8.63	
13C6 PFDA	N/A	N/A	9.07	9.03	
d3-MeFOSAA	N/A	N/A	8.93	8.90	
13C8 PFOSA	N/A	N/A	11.43	11.42	R
d5-EtFOSAA	N/A	N/A	9.25	9.21	
13C7 PFUdA	N/A	N/A	9.76	9.72	
13C2 PFDoA	N/A	N/A	10.44	10.41	
13C2 PFTeDA	N/A	N/A	11.72	11.71	
13C3 HFPO-DA	N/A	N/A	6.54	6.56	
13C2 PFHxDA	N/A	N/A	12.84	12.84	
d7-N-MeFOSE	N/A	N/A	13.06	13.06	
d9-N-EtFOSE	N/A	N/A	13.55	13.53	
d3-N-MeFOSA	N/A	N/A	13.27	13.26	
d5-N-EtFOSA	N/A	N/A	13.72	13.70	

**REPORT OF LABORATORY ANALYSIS**

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





**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Trip Blank	Extraction Date	09/01/2021 15:30
Lab Sample ID	10574511011-R	Total Amount Extracted	264mL
Lab File ID	Q210907B_003	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210907B_001
Collected	08/11/2021 00:00	Ending CCal File	Q210907B_005
Received	08/13/2021 08:50	Blank File	A210903C_004

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	0.00	4.82	
PFPeA	N/A	N/A	0.00	5.63	
HFPO-DA	0.000	0.440	0.00	6.61	
PFBS	0.470	0.340	6.51	6.54	
PFHxA	0.000	0.0940	0.00	6.32	
4:2 FTS	0.000	0.970	0.00	5.99	
PFPeS	0.000	0.460	0.00	7.32	
PFHpA	0.000	0.560	0.00	6.96	
DONA	0.000	0.420	0.00	7.25	
PFHxS	0.000	0.250	0.00	8.05	
PFOA	0.000	0.250	0.00	7.63	
6:2 FTS	0.000	1.10	0.00	7.28	
PFHpS	0.000	0.410	0.00	8.79	
PFNA	0.000	0.250	0.00	8.32	
PFOSAm	N/A	N/A	11.42	11.40	
PFOS	0.240	0.250	9.57	9.46	
MeFOSA	0.000	0.630	0.00	13.29	
PFDA	0.000	0.140	0.00	9.02	
EtFOSAm	0.000	0.510	0.00	13.73	
8:2 FTS	0.000	1.30	0.00	8.62	
9-Cl-PF3ON	0.000	0.0360	0.00	10.00	
PFNS	0.000	0.230	0.00	10.16	
PFUnDA	0.000	0.150	0.00	9.71	
NMeFOSAA	0.000	0.580	0.00	8.89	
NEtFOSAA	0.000	0.520	0.00	9.20	
PFDS	0.000	0.260	0.00	10.82	
PFDOA	0.000	0.200	0.00	10.44	
MeFOSE	N/A	N/A	0.00	13.10	
10:2 FTS	0.000	1.50	0.00	9.95	
EtFOSE	0.000	0.000	0.00	13.58	
11-Cl-PF3OUdS	0.000	0.0210	0.00	11.29	
PFTrDA	0.000	0.160	0.00	11.02	
PFDoS	0.000	0.250	0.00	12.05	
PFTDA	0.000	0.150	0.00	11.66	
PFHXDA	0.120	0.110	12.83	12.83	
PFODA	0.000	0.170	0.00	13.62	

**REPORT OF LABORATORY ANALYSIS**

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





**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM202108222	Extraction Date	08/26/2021 09:00
Lab Sample ID	10574513001	Total Amount Extracted	252mL
Lab File ID	A210831A_049	Ical ID	210830A03
Matrix	Non_Potable_Water	CCal File	A210831A_040
Collected	08/12/2021 10:15	Ending CCal File	A210831A_051
Received	08/13/2021 08:50	Blank File	A210831B_005

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	2.1	2.0	2.0	0.44	1	375-22-4	
PFPeA	2.2	2.0	2.0	0.43	1	2706-90-3	
HFPO-DA	ND	2.0	2.0	0.53	1	13252-13-6	
PFBS	2.1	1.8	1.8	0.47	1	375-73-5	
PFHxA	3.7	2.0	2.0	0.43	1	307-24-4	
4:2 FTS	ND	1.9	1.9	0.55	1	757124-72-4	
PFPeS	ND	1.9	1.9	0.47	1	2706-91-4	
PFHpA	ND	2.0	2.0	0.55	1	375-85-9	
DONA	ND	1.9	1.9	0.51	1	919005-14-4	
PFHxS	2.3	1.8	1.8	0.50	1	355-46-4	
PFOA	ND	2.0	2.0	0.58	1	335-67-1	
6:2 FTS	ND	1.9	1.9	0.64	1	27619-97-2	
PFHpS	ND	1.9	1.9	0.41	1	375-92-8	
PFNA	ND	2.0	2.0	0.73	1	375-95-1	
PFOSAm	ND	2.0	2.0	0.81	1	754-91-6	
PFOS	5.6	1.8	1.8	0.54	1	1763-23-1	
MeFOSA	ND	2.0	2.0	0.51	1	31506-32-8	
PFDA	ND	2.0	2.0	0.56	1	335-76-2	
EtFOSAm	ND	2.0	2.0	0.60	1	4151-50-2	
8:2 FTS	ND	1.9	1.9	0.65	1	39108-34-4	
9-CI-PF3ON	ND	1.9	1.9	0.30	1	756426-58-1	
PFNS	ND	1.9	1.9	0.44	1	68259-12-1	
PFUnDA	ND	2.0	2.0	0.54	1	2058-94-8	
NMeFOSAA	ND	2.0	2.0	0.43	1	2355-31-9	
NEtFOSAA	ND	2.0	2.0	0.55	1	2991-50-6	
PFDS	ND	1.9	1.9	0.45	1	335-77-3	
PFDOA	ND	2.0	2.0	0.48	1	307-55-1	
MeFOSE	ND	2.0	2.0	0.33	1	24448-09-7	
10:2 FTS	ND	1.9	1.9	0.73	1	120226-60-0	
EtFOSE	ND	2.0	2.0	0.49	1	1691-99-2	
11-CI-PF3OUdS	ND	1.9	1.9	0.43	1	763051-92-9	
PFTTrDA	ND	2.0	2.0	0.62	1	72629-94-8	
PFDoS	ND	1.9	1.9	0.46	1	79780-39-5	
PFTDA	ND	2.0	2.0	0.47	1	376-06-7	
PFHXDA	ND	2.0	2.0	0.36	1	67905-19-5	
PFODA	ND	2.0	2.0	0.58	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM202108222	Extraction Date	08/26/2021 09:00
Lab Sample ID	10574513001	Total Amount Extracted	252mL
Lab File ID	A210831A_049	Ical ID	210830A03
Matrix	Non_Potable_Water	CCal File	A210831A_040
Collected	08/12/2021 10:15	Ending CCal File	A210831A_051
Received	08/13/2021 08:50	Blank File	A210831B_005

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	20	20	100	50-150	
13C4_PFOA	20	23	116	50-150	
13C2_PFDA	20	26	133	50-150	
13C4_PFOS	19	20	103	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	20	22	110	50-150	
13C5_PFPeA	20	22	110	50-150	
13C3_PFBS	18	19	104	50-150	
13C2_4:2FTS	19	36	194	50-150	R
13C5_PFHxA	20	22	111	50-150	
13C4_PFHpA	20	22	112	50-150	
13C3_PFHxS	19	22	115	50-150	
13C2_6:2FTS	19	40	210	50-150	R
13C8_PFOA	20	24	119	50-150	
13C9_PFNA	20	25	125	50-150	
13C8_PFOS	19	22	117	50-150	
13C2_8:2FTS	19	63	329	50-150	R
13C6_PFDA	20	28	139	50-150	
d3-MeFOSAA	20	38	191	50-150	R
13C8_PFOSA	20	23	118	50-150	
d5-EtFOSAA	20	36	179	50-150	R
13C7_PFUdA	20	27	137	50-150	
13C2_PFDoA	20	30	149	50-150	
13C2_PFTeDA	20	31	155	50-150	R
13C3_HFPO-DA	20	21	106	50-150	
13C2_PFHxDA	20	23	114	50-150	
d7-N-MeFOSE	20	22	112	10-150	
d9-N-EtFOSE	20	22	111	10-150	
d3-N-MeFOSA	20	19	97	10-150	
d5-N-EtFOSA	20	19	95	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM202108222	Extraction Date	08/26/2021 09:00
Lab Sample ID	10574513001	Total Amount Extracted	252mL
Lab File ID	A210831A_049	Ical ID	210830A03
Matrix	Non_Potable_Water	CCal File	A210831A_040
Collected	08/12/2021 10:15	Ending CCal File	A210831A_051
Received	08/13/2021 08:50	Blank File	A210831B_005

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.02	4.99	
13C4 PFOA	N/A	N/A	5.99	6.00	
13C2 PFDA	N/A	N/A	6.87	6.88	
13C4 PFOS	N/A	N/A	7.19	7.20	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.58	3.56	
13C5 PFPeA	N/A	N/A	4.42	4.42	
13C3 PFBS	N/A	N/A	5.21	5.18	
13C2 4:2FTS	N/A	N/A	4.80	4.80	R
13C5 PFHxA	N/A	N/A	5.02	5.04	
13C4 PFHpA	N/A	N/A	5.52	5.51	
13C3 PFHxS	N/A	N/A	6.28	6.28	
13C2 6:2FTS	N/A	N/A	5.76	5.77	R
13C8 PFOA	N/A	N/A	5.99	6.00	
13C9 PFNA	N/A	N/A	6.44	6.44	
13C8 PFOS	N/A	N/A	7.19	7.20	
13C2 8:2FTS	N/A	N/A	6.63	6.60	R
13C6 PFDA	N/A	N/A	6.88	6.88	
d3-MeFOSAA	N/A	N/A	6.83	6.83	R
13C8 PFOSA	N/A	N/A	8.81	8.78	
d5-EtFOSAA	N/A	N/A	7.05	7.02	R
13C7 PFUdA	N/A	N/A	7.31	7.32	
13C2 PFDoA	N/A	N/A	7.75	7.76	
13C2 PFTeDA	N/A	N/A	8.61	8.58	R
13C3 HFPO-DA	N/A	N/A	5.22	5.21	
13C2 PFHxDA	N/A	N/A	9.37	9.33	
d7-N-MeFOSE	N/A	N/A	10.06	10.02	
d9-N-EtFOSE	N/A	N/A	10.69	10.64	
d3-N-MeFOSA	N/A	N/A	10.32	10.28	
d5-N-EtFOSA	N/A	N/A	11.01	11.00	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	WM202108222	Extraction Date	08/26/2021 09:00
Lab Sample ID	10574513001	Total Amount Extracted	252mL
Lab File ID	A210831A_049	Ical ID	210830A03
Matrix	Non_Potable_Water	CCal File	A210831A_040
Collected	08/12/2021 10:15	Ending CCal File	A210831A_051
Received	08/13/2021 08:50	Blank File	A210831B_005

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	3.58	3.58	
PFPeA	N/A	N/A	4.43	4.40	
HFPO-DA	0.000	0.460	5.36	5.22	
PFBS	0.340	0.330	5.21	5.26	
PFHxA	0.074	0.0650	5.02	5.00	
4:2 FTS	0.000	0.530	0.00	4.80	
PFPeS	0.300	0.300	5.78	5.76	
PFHpA	0.270	0.300	5.53	5.52	
DONA	0.000	0.490	0.00	5.68	
PFHxS	0.260	0.270	6.29	6.29	
PFOA	0.300	0.390	6.00	5.97	
6:2 FTS	0.390	0.460	5.76	5.74	
PFHpS	0.250	0.280	6.75	6.76	
PFNA	0.160	0.230	6.45	6.43	
PFOSAm	N/A	N/A	8.82	8.82	
PFOS	0.220	0.220	7.20	7.27	
MeFOSA	0.000	0.890	0.00	10.33	
PFDA	0.077	0.0610	6.89	6.89	
EtFOSAm	0.000	0.730	0.00	11.04	
8:2 FTS	0.550	0.790	6.63	6.64	
9-Cl-PF3ON	0.000	0.0220	0.00	7.53	
PFNS	0.000	0.250	0.00	7.62	
PFUnDA	0.000	0.110	7.32	7.31	
NMeFOSAA	0.480	0.750	6.84	6.90	
NEtFOSAA	0.550	0.850	7.06	7.03	
PFDS	0.250	0.250	8.07	8.07	
PFDOA	0.130	0.140	7.76	7.76	
MeFOSE	N/A	N/A	0.00	10.12	
10:2 FTS	0.000	0.470	0.00	7.51	
EtFOSE	0.000	0.000	0.00	10.70	
11-Cl-PF3OUdS	0.000	0.0160	8.38	8.38	
PFTTrDA	0.092	0.140	8.19	8.19	
PFDoS	0.000	0.220	0.00	8.83	
PFTDA	0.140	0.140	8.61	8.58	
PFHXDA	0.230	0.130	9.37	9.37	
PFODA	0.000	0.100	0.00	10.41	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKKL	Extraction Date	08/20/2021 13:30
Lab Sample ID	BLANK-92417	Total Amount Extracted	256mL
Lab File ID	A210824A_015	Ical ID	210823B03
Matrix	Water	CCal File	A210824A_014
Collected	08/18/2021 09:13	Ending CCal File	A210824A_025
Received	08/18/2021 09:13	Blank File	

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	ND	2.0	2.0	0.43	1	375-22-4	
PFPeA	ND	2.0	2.0	0.43	1	2706-90-3	
HFPO-DA	ND	2.0	2.0	0.52	1	13252-13-6	
PFBS	ND	1.7	1.7	0.46	1	375-73-5	
PFHxA	ND	2.0	2.0	0.43	1	307-24-4	
4:2 FTS	ND	1.8	1.8	0.55	1	757124-72-4	
PFPeS	ND	1.8	1.8	0.46	1	2706-91-4	
PFHpA	ND	2.0	2.0	0.54	1	375-85-9	
DONA	ND	1.8	1.8	0.50	1	919005-14-4	
PFHxS	ND	1.8	1.8	0.50	1	355-46-4	
PFOA	ND	2.0	2.0	0.57	1	335-67-1	
6:2 FTS	ND	1.9	1.9	0.63	1	27619-97-2	
PFHpS	ND	1.9	1.9	0.40	1	375-92-8	
PFNA	ND	2.0	2.0	0.72	1	375-95-1	
PFOSAm	ND	2.0	2.0	0.80	1	754-91-6	
PFOS	ND	1.8	1.8	0.54	1	1763-23-1	
MeFOSA	ND	2.0	2.0	0.50	1	31506-32-8	
PFDA	ND	2.0	2.0	0.55	1	335-76-2	
EtFOSAm	ND	2.0	2.0	0.59	1	4151-50-2	
8:2 FTS	ND	1.9	1.9	0.64	1	39108-34-4	
9-CI-PF3ON	ND	1.8	1.8	0.30	1	756426-58-1	
PFNS	ND	1.9	1.9	0.44	1	68259-12-1	
PFUnDA	ND	2.0	2.0	0.53	1	2058-94-8	
NMeFOSAA	ND	2.0	2.0	0.42	1	2355-31-9	
NEtFOSAA	ND	2.0	2.0	0.54	1	2991-50-6	
PFDS	ND	1.9	1.9	0.44	1	335-77-3	
PFDOA	ND	2.0	2.0	0.47	1	307-55-1	
MeFOSE	ND	2.0	2.0	0.32	1	24448-09-7	
10:2 FTS	ND	1.9	1.9	0.72	1	120226-60-0	
EtFOSE	ND	2.0	2.0	0.49	1	1691-99-2	
11-CI-PF3OUdS	ND	1.8	1.8	0.43	1	763051-92-9	
PFTTrDA	ND	2.0	2.0	0.61	1	72629-94-8	
PFDoS	ND	1.9	1.9	0.45	1	79780-39-5	
PFTDA	ND	2.0	2.0	0.47	1	376-06-7	
PFHxDA	ND	2.0	2.0	0.35	1	67905-19-5	
PFODA	ND	2.0	2.0	0.57	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKKL	Extraction Date	08/20/2021 13:30
Lab Sample ID	BLANK-92417	Total Amount Extracted	256mL
Lab File ID	A210824A_015	Ical ID	210823B03
Matrix	Water	CCal File	A210824A_014
Collected	08/18/2021 09:13	Ending CCal File	A210824A_025
Received	08/18/2021 09:13	Blank File	

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	20	20	103	50-150	
13C4_PFOA	20	20	101	50-150	
13C2_PFDA	20	20	104	50-150	
13C4_PFOS	19	20	108	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	20	20	100	50-150	
13C5_PFPeA	20	19	97	50-150	
13C3_PFBs	18	19	106	50-150	
13C2_4:2Fts	18	17	93	50-150	
13C5_PFHxA	20	18	94	50-150	
13C4_PFHpA	20	20	101	50-150	
13C3_PFHxS	18	18	96	50-150	
13C2_6:2Fts	19	19	101	50-150	
13C8_PFOA	20	19	96	50-150	
13C9_PFNA	20	19	98	50-150	
13C8_PFOS	19	17	89	50-150	
13C2_8:2Fts	19	18	95	50-150	
13C6_PFDA	20	18	94	50-150	
d3-MeFOSAA	20	17	84	50-150	
13C8_PFOsA	20	16	81	50-150	
d5-EtFOSAA	20	15	77	50-150	
13C7_PFUdA	20	19	96	50-150	
13C2_PFDoA	20	20	101	50-150	
13C2_PFTeDA	20	18	93	50-150	
13C3_HFPO-DA	20	20	103	50-150	
13C2_PFHxDA	20	17	85	50-150	
d7-N-MeFOSE	20	16	80	10-150	
d9-N-EtFOSE	20	15	78	10-150	
d3-N-MeFOSA	20	12	61	10-150	
d5-N-EtFOSA	20	12	62	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKKL	Extraction Date	08/20/2021 13:30
Lab Sample ID	BLANK-92417	Total Amount Extracted	256mL
Lab File ID	A210824A_015	Ical ID	210823B03
Matrix	Water	CCal File	A210824A_014
Collected	08/18/2021 09:13	Ending CCal File	A210824A_025
Received	08/18/2021 09:13	Blank File	

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.01	4.99	
13C4 PFOA	N/A	N/A	5.99	6.00	
13C2 PFDA	N/A	N/A	6.87	6.88	
13C4 PFOS	N/A	N/A	7.18	7.20	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.57	3.56	
13C5 PFPeA	N/A	N/A	4.42	4.42	
13C3 PFBS	N/A	N/A	5.20	5.18	
13C2 4:2FTS	N/A	N/A	4.79	4.80	
13C5 PFHxA	N/A	N/A	5.01	5.04	
13C4 PFHpA	N/A	N/A	5.52	5.51	
13C3 PFHxS	N/A	N/A	6.27	6.28	
13C2 6:2FTS	N/A	N/A	5.75	5.77	
13C8 PFOA	N/A	N/A	5.99	6.00	
13C9 PFNA	N/A	N/A	6.43	6.44	
13C8 PFOS	N/A	N/A	7.18	7.20	
13C2 8:2FTS	N/A	N/A	6.62	6.60	
13C6 PFDA	N/A	N/A	6.87	6.88	
d3-MeFOSAA	N/A	N/A	6.82	6.83	
13C8 PFOSA	N/A	N/A	8.77	8.78	
d5-EtFOSAA	N/A	N/A	7.03	7.02	
13C7 PFUdA	N/A	N/A	7.31	7.32	
13C2 PFDoA	N/A	N/A	7.74	7.76	
13C2 PFTeDA	N/A	N/A	8.59	8.58	
13C3 HFPO-DA	N/A	N/A	5.22	5.21	
13C2 PFHxDA	N/A	N/A	9.35	9.33	
d7-N-MeFOSE	N/A	N/A	10.05	10.02	
d9-N-EtFOSE	N/A	N/A	10.67	10.64	
d3-N-MeFOSA	N/A	N/A	10.31	10.28	
d5-N-EtFOSA	N/A	N/A	10.99	11.00	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKKL	Extraction Date	08/20/2021 13:30
Lab Sample ID	BLANK-92417	Total Amount Extracted	256mL
Lab File ID	A210824A_015	Ical ID	210823B03
Matrix	Water	CCal File	A210824A_014
Collected	08/18/2021 09:13	Ending CCal File	A210824A_025
Received	08/18/2021 09:13	Blank File	

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	3.57	3.58	
PFPeA	N/A	N/A	0.00	4.40	
HFPO-DA	0.000	0.470	0.00	5.22	
PFBS	0.470	0.320	5.20	5.26	
PFHxA	0.000	0.0670	0.00	5.00	
4:2 FTS	0.000	0.550	0.00	4.80	
PFPeS	0.000	0.300	0.00	5.76	
PFHpA	0.000	0.310	0.00	5.52	
DONA	0.000	0.520	0.00	5.68	
PFHxS	0.000	0.250	0.00	6.29	
PFOA	0.000	0.410	0.00	5.97	
6:2 FTS	0.000	0.560	0.00	5.74	
PFHpS	0.000	0.210	0.00	6.76	
PFNA	0.000	0.170	0.00	6.43	
PFOSAm	N/A	N/A	8.78	8.75	
PFOS	0.000	0.270	0.00	7.27	
MeFOSA	0.000	0.950	0.00	10.32	
PFDA	0.000	0.0860	0.00	6.89	
EtFOSAm	0.000	0.700	0.00	11.04	
8:2 FTS	0.000	0.540	0.00	6.64	
9-Cl-PF3ON	0.000	0.0200	0.00	7.53	
PFNS	0.000	0.250	0.00	7.62	
PFUnDA	0.000	0.0990	0.00	7.31	
NMeFOSAA	0.000	0.630	0.00	6.90	
NEtFOSAA	0.000	0.740	0.00	7.03	
PFDS	0.000	0.250	0.00	8.07	
PFDOA	0.000	0.140	0.00	7.76	
MeFOSE	N/A	N/A	0.00	10.12	
10:2 FTS	0.000	0.660	0.00	7.51	
EtFOSE	0.000	0.000	0.00	10.70	
11-Cl-PF3OUdS	0.000	0.0130	8.36	8.38	
PFTTrDA	0.000	0.160	0.00	8.19	
PFDoS	0.000	0.240	0.00	8.83	
PFTDA	0.000	0.140	0.00	8.58	
PFHXDA	0.140	0.120	9.36	9.35	
PFODA	0.000	0.0980	0.00	10.37	

**REPORT OF LABORATORY ANALYSIS**

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





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

**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Page 1 of 4

Client Sample ID	BLKLB	Extraction Date	08/27/2021 14:00
Lab Sample ID	BLANK-92500	Total Amount Extracted	247mL
Lab File ID	Q210831B_018	Ical ID	210831A01
Matrix	Water	CCal File	Q210831B_014
Collected	08/20/2021 16:58	Ending CCal File	Q210831B_025
Received	08/20/2021 16:58	Blank File	

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	ND	2.0	2.0	0.45	1	375-22-4	
PFPeA	ND	2.0	2.0	0.44	1	2706-90-3	
HFPO-DA	ND	2.0	2.0	0.54	1	13252-13-6	
PFBS	ND	1.8	1.8	0.48	1	375-73-5	
PFHxA	ND	2.0	2.0	0.44	1	307-24-4	
4:2 FTS	ND	1.9	1.9	0.56	1	757124-72-4	
PFPeS	ND	1.9	1.9	0.48	1	2706-91-4	
PFHpA	ND	2.0	2.0	0.56	1	375-85-9	
DONA	ND	1.9	1.9	0.52	1	919005-14-4	
PFHxS	ND	1.8	1.8	0.51	1	355-46-4	
PFOA	ND	2.0	2.0	0.59	1	335-67-1	
6:2 FTS	ND	1.9	1.9	0.65	1	27619-97-2	
PFHpS	ND	1.9	1.9	0.42	1	375-92-8	
PFNA	ND	2.0	2.0	0.75	1	375-95-1	
PFOSAm	ND	2.0	2.0	0.83	1	754-91-6	
PFOS	ND	1.9	1.9	0.55	1	1763-23-1	
MeFOSA	ND	2.0	2.0	0.52	1	31506-32-8	
PFDA	ND	2.0	2.0	0.57	1	335-76-2	
EtFOSAm	ND	2.0	2.0	0.62	1	4151-50-2	
8:2 FTS	ND	1.9	1.9	0.66	1	39108-34-4	
9-CI-PF3ON	ND	1.9	1.9	0.31	1	756426-58-1	
PFNS	ND	1.9	1.9	0.45	1	68259-12-1	
PFUnDA	ND	2.0	2.0	0.55	1	2058-94-8	
NMeFOSAA	ND	2.0	2.0	0.44	1	2355-31-9	
NEtFOSAA	ND	2.0	2.0	0.56	1	2991-50-6	
PFDS	ND	2.0	2.0	0.46	1	335-77-3	
PFDOA	ND	2.0	2.0	0.49	1	307-55-1	
MeFOSE	ND	2.0	2.0	0.33	1	24448-09-7	
10:2 FTS	ND	2.0	2.0	0.74	1	120226-60-0	
EtFOSE	ND	2.0	2.0	0.50	1	1691-99-2	
11-CI-PF3OUdS	ND	1.9	1.9	0.44	1	763051-92-9	
PFTTrDA	ND	2.0	2.0	0.63	1	72629-94-8	
PFDoS	ND	2.0	2.0	0.47	1	79780-39-5	
PFTDA	ND	2.0	2.0	0.48	1	376-06-7	
PFHXDA	ND	2.0	2.0	0.37	1	67905-19-5	
PFODA	ND	2.0	2.0	0.59	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKLB	Extraction Date	08/27/2021 14:00
Lab Sample ID	BLANK-92500	Total Amount Extracted	247mL
Lab File ID	Q210831B_018	Ical ID	210831A01
Matrix	Water	CCal File	Q210831B_014
Collected	08/20/2021 16:58	Ending CCal File	Q210831B_025
Received	08/20/2021 16:58	Blank File	

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	20	18	91	50-150	
13C4_PFOA	20	19	93	50-150	
13C2_PFDA	20	19	95	50-150	
13C4_PFOS	19	17	89	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBa	20	19	95	50-150	
13C5_PFPeA	20	19	93	50-150	
13C3_PFBs	19	20	107	50-150	
13C2_4:2Fts	19	17	90	50-150	
13C5_PFHxA	20	18	91	50-150	
13C4_PFHpA	20	18	89	50-150	
13C3_PFHxS	19	19	100	50-150	
13C2_6:2Fts	19	18	92	50-150	
13C8_PFOA	20	19	93	50-150	
13C9_PfNA	20	18	88	50-150	
13C8_PFOs	19	17	86	50-150	
13C2_8:2Fts	19	20	103	50-150	
13C6_PFDA	20	19	95	50-150	
d3-MeFOsAA	20	16	80	50-150	
13C8_PFOsA	20	16	81	50-150	
d5-EtFOsAA	20	14	71	50-150	
13C7_PFUdA	20	19	96	50-150	
13C2_PFDoA	20	18	90	50-150	
13C2_PFTeDA	20	17	83	50-150	
13C3_HFPO-DA	20	18	89	50-150	
13C2_PFHxDA	20	18	90	50-150	
d7-N-MeFOSE	20	17	83	10-150	
d9-N-EtFOSE	20	16	80	10-150	
d3-N-MeFOsA	20	12	57	10-150	
d5-N-EtFOsA	20	13	62	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKLB	Extraction Date	08/27/2021 14:00
Lab Sample ID	BLANK-92500	Total Amount Extracted	247mL
Lab File ID	Q210831B_018	Ical ID	210831A01
Matrix	Water	CCal File	Q210831B_014
Collected	08/20/2021 16:58	Ending CCal File	Q210831B_025
Received	08/20/2021 16:58	Blank File	

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.28	6.29	
13C4 PFOA	N/A	N/A	7.62	7.66	
13C2 PFDA	N/A	N/A	8.98	8.98	
13C4 PFOS	N/A	N/A	9.46	9.48	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.74	4.74	
13C5 PFPeA	N/A	N/A	5.58	5.60	
13C3 PFBS	N/A	N/A	6.54	6.55	
13C2 4:2FTS	N/A	N/A	5.99	5.99	
13C5 PFHxA	N/A	N/A	6.28	6.28	
13C4 PFHpA	N/A	N/A	6.95	6.96	
13C3 PFHxS	N/A	N/A	8.05	8.08	
13C2 6:2FTS	N/A	N/A	7.27	7.29	
13C8 PFOA	N/A	N/A	7.62	7.64	
13C9 PFNA	N/A	N/A	8.30	8.33	
13C8 PFOS	N/A	N/A	9.46	9.48	
13C2 8:2FTS	N/A	N/A	8.60	8.62	
13C6 PFDA	N/A	N/A	8.99	9.03	
d3-MeFOSAA	N/A	N/A	8.86	8.90	
13C8 PFOSA	N/A	N/A	11.43	11.42	
d5-EtFOSAA	N/A	N/A	9.17	9.18	
13C7 PFUdA	N/A	N/A	9.66	9.68	
13C2 PFDoA	N/A	N/A	10.34	10.36	
13C2 PFTeDA	N/A	N/A	11.65	11.66	
13C3 HFPO-DA	N/A	N/A	6.56	6.56	
13C2 PFHxDA	N/A	N/A	12.76	12.77	
d7-N-MeFOSE	N/A	N/A	13.06	13.06	
d9-N-EtFOSE	N/A	N/A	13.55	13.53	
d3-N-MeFOSA	N/A	N/A	13.27	13.26	
d5-N-EtFOSA	N/A	N/A	13.72	13.70	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKLB	Extraction Date	08/27/2021 14:00
Lab Sample ID	BLANK-92500	Total Amount Extracted	247mL
Lab File ID	Q210831B_018	Ical ID	210831A01
Matrix	Water	CCal File	Q210831B_014
Collected	08/20/2021 16:58	Ending CCal File	Q210831B_025
Received	08/20/2021 16:58	Blank File	

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.74	4.82	
PFPeA	N/A	N/A	5.59	5.63	
HFPO-DA	0.000	0.380	0.00	6.71	
PFBS	0.340	0.330	6.54	6.54	
PFHxA	0.000	0.0990	6.29	6.32	
4:2 FTS	0.000	0.970	0.00	5.99	
PFPeS	0.000	0.450	0.00	7.32	
PFHpA	0.570	0.460	6.95	6.98	
DONA	0.000	0.470	0.00	7.21	
PFHxS	0.000	0.290	8.06	8.05	
PFOA	0.000	0.250	0.00	7.63	
6:2 FTS	1.10	1.20	7.27	7.28	
PFHpS	0.000	0.410	0.00	8.79	
PFNA	0.000	0.270	0.00	8.32	
PFOSAm	N/A	N/A	11.44	11.40	
PFOS	0.160	0.240	9.47	9.46	
MeFOSA	0.000	0.470	13.30	13.29	
PFDA	0.000	0.160	0.00	9.02	
EtFOSAm	0.000	0.510	0.00	13.73	
8:2 FTS	0.000	1.40	0.00	8.62	
9-Cl-PF3ON	0.000	0.0440	0.00	10.00	
PFNS	0.000	0.230	0.00	10.16	
PFUnDA	0.000	0.160	0.00	9.71	
NMeFOSAA	0.000	0.670	0.00	8.89	
NEtFOSAA	0.000	0.490	0.00	9.15	
PFDS	0.000	0.260	0.00	10.82	
PFDOA	0.000	0.160	0.00	10.44	
MeFOSE	N/A	N/A	0.00	13.10	
10:2 FTS	0.000	1.70	10.01	9.95	
EtFOSE	0.000	0.000	0.00	13.58	
11-Cl-PF3OUdS	0.000	0.0260	0.00	11.29	
PFTrDA	0.000	0.200	0.00	11.02	
PFDoS	0.000	0.250	0.00	12.05	
PFTDA	0.000	0.140	0.00	11.66	
PFHXDA	0.150	0.140	12.77	12.78	
PFODA	0.000	0.170	0.00	13.54	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKLA	Extraction Date	08/26/2021 09:00
Lab Sample ID	BLANK-92496	Total Amount Extracted	267mL
Lab File ID	A210831B_005	Ical ID	210830A03
Matrix	Water	CCal File	A210831B_001
Collected	08/20/2021 13:52	Ending CCal File	A210831B_012
Received	08/20/2021 13:52	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	0.41	1	375-22-4	
PFPeA	ND	1.9	1.9	0.41	1	2706-90-3	
HFPO-DA	ND	1.9	1.9	0.50	1	13252-13-6	
PFBS	ND	1.7	1.7	0.44	1	375-73-5	
PFHxA	ND	1.9	1.9	0.41	1	307-24-4	
4:2 FTS	ND	1.8	1.8	0.52	1	757124-72-4	
PFPeS	ND	1.8	1.8	0.45	1	2706-91-4	
PFHpA	ND	1.9	1.9	0.52	1	375-85-9	
DONA	ND	1.8	1.8	0.48	1	919005-14-4	
PFHxS	ND	1.7	1.7	0.48	1	355-46-4	
PFOA	ND	1.9	1.9	0.55	1	335-67-1	
6:2 FTS	ND	1.8	1.8	0.60	1	27619-97-2	
PFHpS	ND	1.8	1.8	0.39	1	375-92-8	
PFNA	ND	1.9	1.9	0.69	1	375-95-1	
PFOSAm	ND	1.9	1.9	0.77	1	754-91-6	
PFOS	ND	1.7	1.7	0.51	1	1763-23-1	
MeFOSA	ND	1.9	1.9	0.48	1	31506-32-8	
PFDA	ND	1.9	1.9	0.53	1	335-76-2	
EtFOSAm	ND	1.9	1.9	0.57	1	4151-50-2	
8:2 FTS	ND	1.8	1.8	0.61	1	39108-34-4	
9-CI-PF3ON	ND	1.7	1.7	0.29	1	756426-58-1	
PFNS	ND	1.8	1.8	0.42	1	68259-12-1	
PFUnDA	ND	1.9	1.9	0.51	1	2058-94-8	
NMeFOSAA	ND	1.9	1.9	0.41	1	2355-31-9	
NEtFOSAA	ND	1.9	1.9	0.52	1	2991-50-6	
PFDS	ND	1.8	1.8	0.42	1	335-77-3	
PFDOA	ND	1.9	1.9	0.45	1	307-55-1	
MeFOSE	ND	1.9	1.9	0.31	1	24448-09-7	
10:2 FTS	ND	1.8	1.8	0.69	1	120226-60-0	
EtFOSE	ND	1.9	1.9	0.47	1	1691-99-2	
11-CI-PF3OUdS	ND	1.8	1.8	0.41	1	763051-92-9	
PFTTrDA	ND	1.9	1.9	0.58	1	72629-94-8	
PFDoS	ND	1.8	1.8	0.43	1	79780-39-5	
PFTDA	ND	1.9	1.9	0.45	1	376-06-7	
PFHxDA	ND	1.9	1.9	0.34	1	67905-19-5	
PFODA	ND	1.9	1.9	0.55	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKLA	Extraction Date	08/26/2021 09:00
Lab Sample ID	BLANK-92496	Total Amount Extracted	267mL
Lab File ID	A210831B_005	Ical ID	210830A03
Matrix	Water	CCal File	A210831B_001
Collected	08/20/2021 13:52	Ending CCal File	A210831B_012
Received	08/20/2021 13:52	Blank File	

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	19	19	104	50-150	
13C4_PFOA	19	19	103	50-150	
13C2_PFDA	19	21	109	50-150	
13C4_PFOS	18	18	101	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBa	19	18	99	50-150	
13C5_PFPeA	19	19	101	50-150	
13C3_PFBs	17	18	102	50-150	
13C2_4:2Fts	18	19	108	50-150	
13C5_PFHxA	19	18	98	50-150	
13C4_PFHpA	19	19	103	50-150	
13C3_PFHxS	18	17	97	50-150	
13C2_6:2Fts	18	17	94	50-150	
13C8_PFOA	19	18	96	50-150	
13C9_PfNA	19	20	107	50-150	
13C8_PFOs	18	16	92	50-150	
13C2_8:2Fts	18	18	101	50-150	
13C6_PFDA	19	18	94	50-150	
d3-MeFOSAA	19	16	85	50-150	
13C8_PFOsA	19	15	82	50-150	
d5-EtFOSAA	19	16	88	50-150	
13C7_PFUdA	19	17	92	50-150	
13C2_PFDoA	19	16	87	50-150	
13C2_PFTeDA	19	17	90	50-150	
13C3_HFPO-DA	19	19	101	50-150	
13C2_PFHxDA	19	16	88	50-150	
d7-N-MeFOSE	19	15	81	10-150	
d9-N-EtFOSE	19	14	76	10-150	
d3-N-MeFOSA	19	9.2	49	10-150	
d5-N-EtFOSA	19	8.9	47	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKLA	Extraction Date	08/26/2021 09:00
Lab Sample ID	BLANK-92496	Total Amount Extracted	267mL
Lab File ID	A210831B_005	Ical ID	210830A03
Matrix	Water	CCal File	A210831B_001
Collected	08/20/2021 13:52	Ending CCal File	A210831B_012
Received	08/20/2021 13:52	Blank File	

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.02	4.99	
13C4 PFOA	N/A	N/A	6.00	6.00	
13C2 PFDA	N/A	N/A	6.88	6.88	
13C4 PFOS	N/A	N/A	7.19	7.20	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.59	3.56	
13C5 PFPeA	N/A	N/A	4.43	4.42	
13C3 PFBS	N/A	N/A	5.21	5.18	
13C2 4:2FTS	N/A	N/A	4.80	4.80	
13C5 PFHxA	N/A	N/A	5.02	5.04	
13C4 PFHpA	N/A	N/A	5.53	5.51	
13C3 PFHxS	N/A	N/A	6.28	6.28	
13C2 6:2FTS	N/A	N/A	5.76	5.77	
13C8 PFOA	N/A	N/A	6.00	6.00	
13C9 PFNA	N/A	N/A	6.44	6.44	
13C8 PFOS	N/A	N/A	7.20	7.20	
13C2 8:2FTS	N/A	N/A	6.63	6.60	
13C6 PFDA	N/A	N/A	6.88	6.88	
d3-MeFOSAA	N/A	N/A	6.84	6.83	
13C8 PFOSA	N/A	N/A	8.82	8.78	
d5-EtFOSAA	N/A	N/A	7.05	7.02	
13C7 PFUdA	N/A	N/A	7.32	7.32	
13C2 PFDoA	N/A	N/A	7.75	7.76	
13C2 PFTeDA	N/A	N/A	8.61	8.58	
13C3 HFPO-DA	N/A	N/A	5.23	5.21	
13C2 PFHxDA	N/A	N/A	9.37	9.33	
d7-N-MeFOSE	N/A	N/A	10.07	10.02	
d9-N-EtFOSE	N/A	N/A	10.69	10.64	
d3-N-MeFOSA	N/A	N/A	10.32	10.28	
d5-N-EtFOSA	N/A	N/A	11.01	11.00	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKLA	Extraction Date	08/26/2021 09:00
Lab Sample ID	BLANK-92496	Total Amount Extracted	267mL
Lab File ID	A210831B_005	Ical ID	210830A03
Matrix	Water	CCal File	A210831B_001
Collected	08/20/2021 13:52	Ending CCal File	A210831B_012
Received	08/20/2021 13:52	Blank File	

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	0.00	3.58	
PFPeA	N/A	N/A	4.43	4.40	
HFPO-DA	0.000	0.480	0.00	5.22	
PFBS	0.550	0.370	5.21	5.26	
PFHxA	0.000	0.0740	5.03	5.00	
4:2 FTS	0.000	0.540	0.00	4.80	
PFPeS	0.000	0.310	0.00	5.76	
PFHpA	0.200	0.300	5.53	5.52	
DONA	0.000	0.540	0.00	5.68	
PFHxS	0.350	0.250	6.29	6.29	
PFOA	0.250	0.350	6.00	5.97	
6:2 FTS	0.420	0.470	5.76	5.74	
PFHpS	0.000	0.240	0.00	6.76	
PFNA	0.190	0.200	6.45	6.43	
PFOSAm	N/A	N/A	8.82	8.82	
PFOS	0.160	0.210	7.20	7.27	
MeFOSA	0.000	0.910	0.00	10.33	
PFDA	0.000	0.0800	0.00	6.89	
EtFOSAm	0.000	0.670	0.00	11.04	
8:2 FTS	0.000	0.670	0.00	6.64	
9-Cl-PF3ON	0.000	0.0180	0.00	7.53	
PFNS	0.000	0.240	0.00	7.62	
PFUnDA	0.000	0.100	0.00	7.31	
NMeFOSAA	0.000	0.510	0.00	6.90	
NEtFOSAA	0.000	0.470	0.00	7.03	
PFDS	0.000	0.260	0.00	8.07	
PFDOA	0.000	0.150	0.00	7.76	
MeFOSE	N/A	N/A	0.00	10.12	
10:2 FTS	0.000	0.560	0.00	7.51	
EtFOSE	0.000	0.000	0.00	10.70	
11-Cl-PF3OUdS	0.000	0.0160	0.00	8.38	
PFTTrDA	0.000	0.160	0.00	8.19	
PFDoS	0.000	0.230	0.00	8.83	
PFTDA	0.000	0.140	0.00	8.58	
PFHXDA	0.140	0.130	9.37	9.37	
PFODA	0.000	0.100	0.00	10.41	

**REPORT OF LABORATORY ANALYSIS**

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





**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKLU	Extraction Date	08/30/2021 15:47
Lab Sample ID	BLANK-92568	Total Amount Extracted	262mL
Lab File ID	A210902A_041	Ical ID	210830A03
Matrix	Water	CCal File	A210902A_035
Collected	08/24/2021 19:34	Ending CCal File	A210902A_045
Received	08/24/2021 19:34	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	0.42	1	375-22-4	
PFPeA	ND	1.9	1.9	0.42	1	2706-90-3	
HFPO-DA	ND	1.9	1.9	0.51	1	13252-13-6	
PFBS	ND	1.7	1.7	0.45	1	375-73-5	
PFHxA	ND	1.9	1.9	0.42	1	307-24-4	
4:2 FTS	ND	1.8	1.8	0.53	1	757124-72-4	
PFPeS	ND	1.8	1.8	0.45	1	2706-91-4	
PFHpA	ND	1.9	1.9	0.53	1	375-85-9	
DONA	ND	1.8	1.8	0.49	1	919005-14-4	
PFHxS	5.7	1.7	1.7	0.49	1	355-46-4	
PFOA	ND	1.9	1.9	0.56	1	335-67-1	
6:2 FTS	ND	1.8	1.8	0.62	1	27619-97-2	
PFHpS	ND	1.8	1.8	0.39	1	375-92-8	
PFNA	ND	1.9	1.9	0.71	1	375-95-1	
PFOSAm	ND	1.9	1.9	0.78	1	754-91-6	
PFOS	2.3	1.8	1.8	0.52	1	1763-23-1	
MeFOSA	ND	1.9	1.9	0.49	1	31506-32-8	
PFDA	ND	1.9	1.9	0.54	1	335-76-2	
EtFOSAm	ND	1.9	1.9	0.58	1	4151-50-2	
8:2 FTS	ND	1.8	1.8	0.62	1	39108-34-4	
9-CI-PF3ON	ND	1.8	1.8	0.29	1	756426-58-1	
PFNS	ND	1.8	1.8	0.43	1	68259-12-1	
PFUnDA	ND	1.9	1.9	0.52	1	2058-94-8	
NMeFOSAA	ND	1.9	1.9	0.41	1	2355-31-9	
NEtFOSAA	ND	1.9	1.9	0.53	1	2991-50-6	
PFDS	ND	1.8	1.8	0.43	1	335-77-3	
PFDOA	ND	1.9	1.9	0.46	1	307-55-1	
MeFOSE	ND	1.9	1.9	0.31	1	24448-09-7	
10:2 FTS	ND	1.8	1.8	0.70	1	120226-60-0	
EtFOSE	ND	1.9	1.9	0.47	1	1691-99-2	
11-CI-PF3OUdS	ND	1.8	1.8	0.42	1	763051-92-9	
PFTTrDA	ND	1.9	1.9	0.59	1	72629-94-8	
PFDoS	ND	1.9	1.9	0.44	1	79780-39-5	
PFTDA	ND	1.9	1.9	0.45	1	376-06-7	
PFHxDA	ND	1.9	1.9	0.35	1	67905-19-5	
PFODA	ND	1.9	1.9	0.56	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKLU	Extraction Date	08/30/2021 15:47
Lab Sample ID	BLANK-92568	Total Amount Extracted	262mL
Lab File ID	A210902A_041	Ical ID	210830A03
Matrix	Water	CCal File	A210902A_035
Collected	08/24/2021 19:34	Ending CCal File	A210902A_045
Received	08/24/2021 19:34	Blank File	

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	19	19	101	50-150	
13C4_PFOA	19	21	111	50-150	
13C2_PFDA	19	21	111	50-150	
13C4_PFOS	18	18	97	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBa	19	20	104	50-150	
13C5_PFPeA	19	20	102	50-150	
13C3_PFBs	18	18	101	50-150	
13C2_4:2FTS	18	18	98	50-150	
13C5_PFHxA	19	21	109	50-150	
13C4_PFHpA	19	19	100	50-150	
13C3_PFHxS	18	18	99	50-150	
13C2_6:2FTS	18	18	101	50-150	
13C8_PFOA	19	19	101	50-150	
13C9_PfNA	19	19	98	50-150	
13C8_PFOs	18	18	100	50-150	
13C2_8:2FTS	18	18	100	50-150	
13C6_PFDA	19	19	98	50-150	
d3-MeFOSAA	19	17	91	50-150	
13C8_PFOsA	19	18	95	50-150	
d5-EtFOSAA	19	16	83	50-150	
13C7_PFUdA	19	17	90	50-150	
13C2_PFDaA	19	20	104	50-150	
13C2_PFTeDA	19	18	94	50-150	
13C3_HFPO-DA	19	20	103	50-150	
13C2_PFHxDA	19	16	82	50-150	
d7-N-MeFOSE	19	15	80	10-150	
d9-N-EtFOSE	19	15	80	10-150	
d3-N-MeFOSA	19	11	58	10-150	
d5-N-EtFOSA	19	11	59	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKLU	Extraction Date	08/30/2021 15:47
Lab Sample ID	BLANK-92568	Total Amount Extracted	262mL
Lab File ID	A210902A_041	Ical ID	210830A03
Matrix	Water	CCal File	A210902A_035
Collected	08/24/2021 19:34	Ending CCal File	A210902A_045
Received	08/24/2021 19:34	Blank File	

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.02	4.99	
13C4 PFOA	N/A	N/A	5.99	6.00	
13C2 PFDA	N/A	N/A	6.88	6.88	
13C4 PFOS	N/A	N/A	7.19	7.20	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.58	3.56	
13C5 PFPeA	N/A	N/A	4.43	4.42	
13C3 PFBS	N/A	N/A	5.21	5.18	
13C2 4:2FTS	N/A	N/A	4.80	4.80	
13C5 PFHxA	N/A	N/A	5.02	5.04	
13C4 PFHpA	N/A	N/A	5.53	5.51	
13C3 PFHxS	N/A	N/A	6.28	6.28	
13C2 6:2FTS	N/A	N/A	5.76	5.77	
13C8 PFOA	N/A	N/A	5.99	6.00	
13C9 PFNA	N/A	N/A	6.44	6.44	
13C8 PFOS	N/A	N/A	7.19	7.20	
13C2 8:2FTS	N/A	N/A	6.63	6.60	
13C6 PFDA	N/A	N/A	6.88	6.88	
d3-MeFOSAA	N/A	N/A	6.84	6.83	
13C8 PFOSA	N/A	N/A	8.81	8.78	
d5-EtFOSAA	N/A	N/A	7.05	7.02	
13C7 PFUdA	N/A	N/A	7.31	7.32	
13C2 PFDoA	N/A	N/A	7.75	7.76	
13C2 PFTeDA	N/A	N/A	8.60	8.58	
13C3 HFPO-DA	N/A	N/A	5.23	5.21	
13C2 PFHxDA	N/A	N/A	9.36	9.33	
d7-N-MeFOSE	N/A	N/A	10.06	10.02	
d9-N-EtFOSE	N/A	N/A	10.69	10.64	
d3-N-MeFOSA	N/A	N/A	10.32	10.28	
d5-N-EtFOSA	N/A	N/A	11.01	11.00	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKLU	Extraction Date	08/30/2021 15:47
Lab Sample ID	BLANK-92568	Total Amount Extracted	262mL
Lab File ID	A210902A_041	Ical ID	210830A03
Matrix	Water	CCal File	A210902A_035
Collected	08/24/2021 19:34	Ending CCal File	A210902A_045
Received	08/24/2021 19:34	Blank File	

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	3.58	3.58	
PFPeA	N/A	N/A	4.43	4.40	
HFPO-DA	0.000	0.450	0.00	5.22	
PFBS	0.410	0.350	5.21	5.26	
PFHxA	0.074	0.0770	5.03	5.00	
4:2 FTS	0.000	0.580	4.80	4.80	
PFPeS	0.340	0.360	5.78	5.76	
PFHpA	0.290	0.300	5.53	5.52	
DONA	0.000	0.480	0.00	5.68	
PFHxS	0.250	0.280	6.28	6.29	
PFOA	0.440	0.380	6.00	5.97	
6:2 FTS	0.460	0.500	5.76	5.74	
PFHpS	0.340	0.230	6.75	6.76	
PFNA	0.000	0.210	0.00	6.43	
PFOSAm	N/A	N/A	8.82	8.75	
PFOS	0.190	0.240	7.14	7.27	
MeFOSA	0.000	0.950	0.00	10.33	
PFDA	0.000	0.0910	0.00	6.89	
EtFOSAm	0.000	0.720	0.00	11.04	
8:2 FTS	0.000	0.620	0.00	6.64	
9-Cl-PF3ON	0.000	0.0190	0.00	7.53	
PFNS	0.000	0.250	0.00	7.62	
PFUnDA	0.000	0.100	0.00	7.31	
NMeFOSAA	0.000	0.360	0.00	6.90	
NEtFOSAA	0.000	0.660	0.00	7.03	
PFDS	0.000	0.260	0.00	8.07	
PFDOA	0.000	0.150	0.00	7.76	
MeFOSE	N/A	N/A	0.00	10.12	
10:2 FTS	0.000	0.650	0.00	7.51	
EtFOSE	0.000	0.000	0.00	10.70	
11-Cl-PF3OUdS	0.000	0.0180	0.00	8.38	
PFTTrDA	0.000	0.140	0.00	8.19	
PFDoS	0.000	0.260	0.00	8.83	
PFTDA	0.000	0.150	0.00	8.58	
PFHXDA	0.140	0.140	9.37	9.35	
PFODA	0.000	0.100	0.00	10.37	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKOM	Extraction Date	09/01/2021 15:30
Lab Sample ID	BLANK-92706	Total Amount Extracted	254mL
Lab File ID	A210903C_004	Ical ID	210830A03
Matrix	Water	CCal File	A210903C_002
Collected	08/31/2021 09:03	Ending CCal File	A210903C_016
Received	08/31/2021 09:03	Blank File	

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	ND	2.0	2.0	0.43	1	375-22-4	
PFPeA	ND	2.0	2.0	0.43	1	2706-90-3	
HFPO-DA	ND	2.0	2.0	0.52	1	13252-13-6	
PFBS	ND	1.7	1.7	0.47	1	375-73-5	
PFHxA	ND	2.0	2.0	0.43	1	307-24-4	
4:2 FTS	ND	1.8	1.8	0.55	1	757124-72-4	
PFPeS	ND	1.9	1.9	0.47	1	2706-91-4	
PFHpA	ND	2.0	2.0	0.54	1	375-85-9	
DONA	ND	1.9	1.9	0.51	1	919005-14-4	
PFHxS	ND	1.8	1.8	0.50	1	355-46-4	
PFOA	ND	2.0	2.0	0.58	1	335-67-1	
6:2 FTS	ND	1.9	1.9	0.64	1	27619-97-2	
PFHpS	ND	1.9	1.9	0.40	1	375-92-8	
PFNA	ND	2.0	2.0	0.73	1	375-95-1	
PFOSAm	ND	2.0	2.0	0.81	1	754-91-6	
PFOS	ND	1.8	1.8	0.54	1	1763-23-1	
MeFOSA	ND	2.0	2.0	0.50	1	31506-32-8	
PFDA	ND	2.0	2.0	0.56	1	335-76-2	
EtFOSAm	ND	2.0	2.0	0.60	1	4151-50-2	
8:2 FTS	ND	1.9	1.9	0.64	1	39108-34-4	
9-CI-PF3ON	ND	1.8	1.8	0.30	1	756426-58-1	
PFNS	ND	1.9	1.9	0.44	1	68259-12-1	
PFUnDA	ND	2.0	2.0	0.53	1	2058-94-8	
NMeFOSAA	ND	2.0	2.0	0.43	1	2355-31-9	
NEtFOSAA	ND	2.0	2.0	0.55	1	2991-50-6	
PFDS	ND	1.9	1.9	0.44	1	335-77-3	
PFDOA	ND	2.0	2.0	0.48	1	307-55-1	
MeFOSE	ND	2.0	2.0	0.32	1	24448-09-7	
10:2 FTS	ND	1.9	1.9	0.73	1	120226-60-0	
EtFOSE	ND	2.0	2.0	0.49	1	1691-99-2	
11-CI-PF3OUdS	ND	1.9	1.9	0.43	1	763051-92-9	
PFTTrDA	ND	2.0	2.0	0.61	1	72629-94-8	
PFDoS	ND	1.9	1.9	0.45	1	79780-39-5	
PFTDA	ND	2.0	2.0	0.47	1	376-06-7	
PFHxDA	ND	2.0	2.0	0.36	1	67905-19-5	
PFODA	ND	2.0	2.0	0.58	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKOM	Extraction Date	09/01/2021 15:30
Lab Sample ID	BLANK-92706	Total Amount Extracted	254mL
Lab File ID	A210903C_004	Ical ID	210830A03
Matrix	Water	CCal File	A210903C_002
Collected	08/31/2021 09:03	Ending CCal File	A210903C_016
Received	08/31/2021 09:03	Blank File	

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	20	21	105	50-150	
13C4_PFOA	20	20	104	50-150	
13C2_PFDA	20	20	104	50-150	
13C4_PFOS	19	19	99	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	20	19	95	50-150	
13C5_PFPeA	20	19	96	50-150	
13C3_PFBs	18	17	91	50-150	
13C2_4:2Fts	18	18	96	50-150	
13C5_PFHxA	20	18	94	50-150	
13C4_PFHpA	20	19	98	50-150	
13C3_PFHxS	19	17	90	50-150	
13C2_6:2Fts	19	17	92	50-150	
13C8_PFOA	20	19	95	50-150	
13C9_PFNA	20	17	88	50-150	
13C8_PFOS	19	18	98	50-150	
13C2_8:2Fts	19	16	87	50-150	
13C6_PFDA	20	17	88	50-150	
d3-MeFOSAA	20	16	80	50-150	
13C8_PFOsA	20	15	76	50-150	
d5-EtFOSAA	20	16	79	50-150	
13C7_PFUdA	20	17	89	50-150	
13C2_PFDoA	20	18	93	50-150	
13C2_PFTeDA	20	19	94	50-150	
13C3_HFPO-DA	20	19	98	50-150	
13C2_PFHxDA	20	17	84	50-150	
d7-N-MeFOSE	20	13	65	10-150	
d9-N-EtFOSE	20	12	59	10-150	
d3-N-MeFOSA	20	3.3	17	10-150	
d5-N-EtFOSA	20	2.6	13	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKOM	Extraction Date	09/01/2021 15:30
Lab Sample ID	BLANK-92706	Total Amount Extracted	254mL
Lab File ID	A210903C_004	Ical ID	210830A03
Matrix	Water	CCal File	A210903C_002
Collected	08/31/2021 09:03	Ending CCal File	A210903C_016
Received	08/31/2021 09:03	Blank File	

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.02	4.99	
13C4 PFOA	N/A	N/A	5.99	6.00	
13C2 PFDA	N/A	N/A	6.87	6.88	
13C4 PFOS	N/A	N/A	7.19	7.20	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.58	3.56	
13C5 PFPeA	N/A	N/A	4.43	4.42	
13C3 PFBS	N/A	N/A	5.21	5.18	
13C2 4:2FTS	N/A	N/A	4.80	4.80	
13C5 PFHxA	N/A	N/A	5.02	5.04	
13C4 PFHpA	N/A	N/A	5.53	5.51	
13C3 PFHxS	N/A	N/A	6.28	6.28	
13C2 6:2FTS	N/A	N/A	5.76	5.77	
13C8 PFOA	N/A	N/A	5.99	6.00	
13C9 PFNA	N/A	N/A	6.44	6.44	
13C8 PFOS	N/A	N/A	7.19	7.20	
13C2 8:2FTS	N/A	N/A	6.63	6.60	
13C6 PFDA	N/A	N/A	6.87	6.88	
d3-MeFOSAA	N/A	N/A	6.83	6.83	
13C8 PFOSA	N/A	N/A	8.81	8.78	
d5-EtFOSAA	N/A	N/A	7.04	7.02	
13C7 PFUdA	N/A	N/A	7.31	7.32	
13C2 PFDoA	N/A	N/A	7.75	7.76	
13C2 PFTeDA	N/A	N/A	8.59	8.58	
13C3 HFPO-DA	N/A	N/A	5.23	5.21	
13C2 PFHxDA	N/A	N/A	9.36	9.33	
d7-N-MeFOSE	N/A	N/A	10.06	10.02	
d9-N-EtFOSE	N/A	N/A	10.69	10.64	
d3-N-MeFOSA	N/A	N/A	10.32	10.28	
d5-N-EtFOSA	N/A	N/A	11.01	11.00	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKOM	Extraction Date	09/01/2021 15:30
Lab Sample ID	BLANK-92706	Total Amount Extracted	254mL
Lab File ID	A210903C_004	Ical ID	210830A03
Matrix	Water	CCal File	A210903C_002
Collected	08/31/2021 09:03	Ending CCal File	A210903C_016
Received	08/31/2021 09:03	Blank File	

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	0.00	3.58	
PFPeA	N/A	N/A	0.00	4.40	
HFPO-DA	0.000	0.490	0.00	5.22	
PFBS	0.340	0.320	5.22	5.26	
PFHxA	0.000	0.0670	5.03	5.00	
4:2 FTS	0.000	0.540	0.00	4.80	
PFPeS	0.000	0.310	0.00	5.76	
PFHpA	0.000	0.270	5.53	5.52	
DONA	0.000	0.520	0.00	5.68	
PFHxS	0.000	0.260	6.29	6.29	
PFOA	0.000	0.380	0.00	5.97	
6:2 FTS	0.790	0.590	5.76	5.74	
PFHpS	0.000	0.250	0.00	6.76	
PFNA	0.000	0.210	0.00	6.43	
PFOSAm	N/A	N/A	8.81	8.75	
PFOS	0.140	0.220	7.20	7.27	
MeFOSA	0.000	0.850	0.00	10.33	
PFDA	0.000	0.0850	0.00	6.89	
EtFOSAm	0.000	0.690	0.00	11.04	
8:2 FTS	0.000	0.870	0.00	6.64	
9-Cl-PF3ON	0.000	0.0190	0.00	7.53	
PFNS	0.000	0.230	0.00	7.62	
PFUnDA	0.000	0.110	0.00	7.31	
NMeFOSAA	0.000	0.620	0.00	6.90	
NEtFOSAA	0.000	0.720	0.00	7.03	
PFDS	0.000	0.230	0.00	8.07	
PFDOA	0.000	0.140	0.00	7.76	
MeFOSE	N/A	N/A	0.00	10.12	
10:2 FTS	0.000	0.760	0.00	7.51	
EtFOSE	0.000	0.000	0.00	10.70	
11-Cl-PF3OUdS	0.000	0.0140	0.00	8.38	
PFTDA	0.000	0.140	0.00	8.19	
PFDoS	0.000	0.210	0.00	8.83	
PFTDA	0.000	0.150	0.00	8.58	
PFHXDA	0.140	0.130	9.36	9.35	
PFODA	0.000	0.100	0.00	10.37	

**REPORT OF LABORATORY ANALYSIS**

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





**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID	LCS-92418	Instrument ID	10LCMS03
Run File Name	A210824A_016	Column ID	118AB10133
Analyzed	08/24/2021 15:00	Ical ID	210823B03
Injected By	NH	Level	L

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	20	18	91	50-150	
13C4_PFOA	20	18	93	50-150	
13C2_PFDA	20	18	94	50-150	
13C4_PFOS	19	19	100	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	20	18	95	50-150	
13C5_PFPeA	20	18	93	50-150	
13C3_PFBFS	18	16	86	50-150	
13C2_4:2FTS	18	17	94	50-150	
13C5_PFHxA	20	16	83	50-150	
13C4_PFHpA	20	19	95	50-150	
13C3_PFHxS	18	17	89	50-150	
13C2_6:2FTS	19	18	97	50-150	
13C8_PFOA	20	17	89	50-150	
13C9_PFNA	20	18	92	50-150	
13C8_PFOS	19	16	84	50-150	
13C2_8:2FTS	19	17	94	50-150	
13C6_PFDA	20	17	88	50-150	
d3-MeFOSAA	20	15	79	50-150	
13C8_PFOSA	20	15	79	50-150	
d5-EtFOSAA	20	15	79	50-150	
13C7_PFUdA	20	17	88	50-150	
13C2_PFDaA	20	18	94	50-150	
13C2_PFTeDA	20	17	89	50-150	
13C3_HFPO-DA	20	19	99	50-150	
13C2_PFHxDA	20	17	85	50-150	
d7-N-MeFOSE	20	14	71	10-150	
d9-N-EtFOSE	20	14	72	10-150	
d3-N-MeFOSA	20	9.4	48	10-150	
d5-N-EtFOSA	20	9.7	50	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID LCS-92418  
 Run File Name A210824A\_016  
 Analyzed 08/24/2021 15:00  
 Injected By NH

Instrument ID 10LCMS03  
 Column ID 118AB10133  
 Ical ID 210823B03  
 Level L

**Native Analytes**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	CAS No.
PFBA	3.9	3.8	97	73-129		375-22-4
PFPeA	3.9	3.5	90	72-129		2706-90-3
HFPO-DA	3.9	3.5	89	70-140		13252-13-6
PFBS	3.5	3.3	96	72-130		375-73-5
PFHxA	3.9	3.7	95	72-129		307-24-4
4:2 FTS	3.7	3.1	84	63-143		757124-72-4
PFPeS	3.7	3.5	95	71-127		2706-91-4
PFHpA	3.9	3.9	99	72-130		375-85-9
DONA	3.7	3.7	101	70-140		919005-14-4
PFHxS	3.6	3.1	87	68-131		355-46-4
PFOA	3.9	3.6	93	71-133		335-67-1
6:2 FTS	3.7	3.3	88	64-140		27619-97-2
PFHpS	3.7	3.7	99	69-134		375-92-8
PFNA	3.9	3.6	92	69-130		375-95-1
PFOSAm	3.9	3.7	95	67-137		754-91-6
PFOS	3.6	3.4	94	65-140		1763-23-1
MeFOSA	3.9	3.5	91	68-141		31506-32-8
PFDA	3.9	3.6	92	71-129		335-76-2
EtFOSAm	3.9	3.3	85	70-140		4151-50-2
8:2 FTS	3.7	2.7	73	67-138		39108-34-4
9-CI-PF3ON	3.6	3.3	92	70-130		756426-58-1
PFNS	3.7	3.6	96	69-127		68259-12-1
PFUnDA	3.9	3.4	86	69-133		2058-94-8
NMeFOSAA	3.9	3.2	81	65-136		2355-31-9
NEtFOSAA	3.9	3.5	89	61-135		2991-50-6
PFDS	3.8	3.2	86	53-142		335-77-3
PFDOA	3.9	3.6	92	72-134		307-55-1
MeFOSE	3.9	3.7	94	70-140		24448-09-7
10:2 FTS	3.8	3.2	86	70-140		120226-60-0
EtFOSE	3.9	3.2	83	70-140		1691-99-2
11-CI-PF3OUdS	3.7	3.3	90	70-140		763051-92-9
PFTTrDA	3.9	3.5	89	65-144		72629-94-8
PFDoS	3.8	3.4	89	70-140		79780-39-5
PFTDA	3.9	3.5	89	71-132		376-06-7
PFHXDA	3.9	3.8	96	70-140		67905-19-5
PFODA	3.9	3.6	93	70-140		16517-11-6

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID LCS-92418  
 Run File Name A210824A\_016  
 Analyzed 08/24/2021 15:00  
 Injected By NH

Instrument ID 10LCMS03  
 Column ID 118AB10133  
 Ical ID 210823B03  
 Level L

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.01	4.99	
13C4 PFOA	N/A	N/A	5.98	6.00	
13C2 PFDA	N/A	N/A	6.87	6.88	
13C4 PFOS	N/A	N/A	7.18	7.20	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.57	3.56	
13C5 PFPeA	N/A	N/A	4.42	4.42	
13C3 PFBS	N/A	N/A	5.20	5.18	
13C2 4:2FTS	N/A	N/A	4.79	4.80	
13C5 PFHxA	N/A	N/A	5.01	5.04	
13C4 PFHpA	N/A	N/A	5.52	5.51	
13C3 PFHxS	N/A	N/A	6.27	6.28	
13C2 6:2FTS	N/A	N/A	5.75	5.77	
13C8 PFOA	N/A	N/A	5.98	6.00	
13C9 PFNA	N/A	N/A	6.43	6.44	
13C8 PFOS	N/A	N/A	7.18	7.20	
13C2 8:2FTS	N/A	N/A	6.62	6.60	
13C6 PFDA	N/A	N/A	6.87	6.88	
d3-MeFOSAA	N/A	N/A	6.82	6.83	
13C8 PFOSA	N/A	N/A	8.77	8.78	
d5-EtFOSAA	N/A	N/A	7.03	7.02	
13C7 PFUdA	N/A	N/A	7.30	7.32	
13C2 PFDoA	N/A	N/A	7.74	7.76	
13C2 PFTeDA	N/A	N/A	8.59	8.58	
13C3 HFPO-DA	N/A	N/A	5.22	5.21	
13C2 PFHxDA	N/A	N/A	9.35	9.33	
d7-N-MeFOSE	N/A	N/A	10.05	10.02	
d9-N-EtFOSE	N/A	N/A	10.68	10.64	
d3-N-MeFOSA	N/A	N/A	10.31	10.28	
d5-N-EtFOSA	N/A	N/A	11.00	11.00	

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID      LCS-92418  
 Run File Name      A210824A\_016  
 Analyzed            08/24/2021 15:00  
 Injected By        NH

Instrument ID      10LCMS03  
 Column ID         118AB10133  
 Ical ID             210823B03  
 Level                L

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	3.57	3.58	
PFPeA	N/A	N/A	4.42	4.40	
HFPO-DA	0.47	0.47	5.23	5.22	
PFBS	0.32	0.32	5.20	5.26	
PFHxA	0.06	0.06	5.02	5.00	
4:2 FTS	0.53	0.55	4.80	4.80	
PFPeS	0.29	0.30	5.77	5.76	
PFHpA	0.29	0.31	5.52	5.52	
DONA	0.45	0.52	5.70	5.68	
PFHxS	0.29	0.25	6.28	6.29	
PFOA	0.39	0.41	5.99	5.97	
6:2 FTS	0.50	0.56	5.75	5.74	
PFHpS	0.23	0.21	6.74	6.76	
PFNA	0.19	0.17	6.43	6.43	
PFOSAm	N/A	N/A	8.78	8.75	
PFOS	0.24	0.27	7.19	7.27	
MeFOSA	0.83	0.95	10.33	10.32	
PFDA	0.07	0.08	6.87	6.89	
EtFOSAm	0.69	0.70	11.03	11.04	
8:2 FTS	0.74	0.54	6.62	6.64	
9-CI-PF3ON	0.02	0.02	7.51	7.53	
PFNS	0.25	0.25	7.63	7.62	
PFUnDA	0.11	0.09	7.31	7.31	
NMeFOSAA	0.60	0.63	6.83	6.90	
NEtFOSAA	0.76	0.74	7.04	7.03	
PFDS	0.26	0.25	8.05	8.07	
PFDOA	0.13	0.14	7.74	7.76	
MeFOSE	N/A	N/A	10.09	10.12	
10:2 FTS	0.56	0.66	7.49	7.51	
EtFOSE	0.00	0.00	10.74	10.70	
11-CI-PF3OUdS	0.01	0.01	8.36	8.38	
PFTTrDA	0.15	0.16	8.17	8.19	
PFDoS	0.24	0.24	8.85	8.83	
PFTDA	0.13	0.14	8.59	8.58	
PFHXDA	0.12	0.12	9.35	9.35	
PFODA	0.09	0.09	10.38	10.37	

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID	LCS-92501	Instrument ID	10LCMS01
Run File Name	Q210831B_019	Column ID	112EB00094
Analyzed	08/31/2021 21:31	Ical ID	210831A01
Injected By	NH	Level	L

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	20	24	119	50-150	
13C4_PFOA	20	23	114	50-150	
13C2_PFDA	20	22	109	50-150	
13C4_PFOS	19	20	106	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBa	20	22	108	50-150	
13C5_PFPeA	20	21	104	50-150	
13C3_PFBs	19	21	111	50-150	
13C2_4:2Fts	19	19	103	50-150	
13C5_PFHxA	20	23	113	50-150	
13C4_PFHpA	20	22	111	50-150	
13C3_PFHxS	19	21	113	50-150	
13C2_6:2Fts	19	20	106	50-150	
13C8_PFOA	20	21	103	50-150	
13C9_PfNA	20	19	96	50-150	
13C8_PFOs	19	18	96	50-150	
13C2_8:2Fts	19	20	102	50-150	
13C6_PFDA	20	20	101	50-150	
d3-MeFOSAA	20	17	87	50-150	
13C8_PFOsA	20	17	87	50-150	
d5-EtFOSAA	20	15	74	50-150	
13C7_PFUdA	20	20	99	50-150	
13C2_PFDoA	20	19	94	50-150	
13C2_PFTeDA	20	19	94	50-150	
13C3_HFPO-DA	20	24	118	50-150	
13C2_PFHxDA	20	20	100	50-150	
d7-N-MeFOSE	20	16	82	10-150	
d9-N-EtFOSE	20	16	82	10-150	
d3-N-MeFOsA	20	14	69	10-150	
d5-N-EtFOsA	20	12	61	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID LCS-92501  
 Run File Name Q210831B\_019  
 Analyzed 08/31/2021 21:31  
 Injected By NH

Instrument ID 10LCMS01  
 Column ID 112EB00094  
 Ical ID 210831A01  
 Level L

**Native Analytes**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	CAS No.
PFBA	4.0	4.6	113	73-129		375-22-4
PFPeA	4.0	4.0	100	72-129		2706-90-3
HFPO-DA	4.0	3.2	80	70-140		13252-13-6
PFBS	3.6	4.0	113	72-130		375-73-5
PFHxA	4.0	3.9	98	72-129		307-24-4
4:2 FTS	3.8	3.6	96	63-143		757124-72-4
PFPeS	3.8	3.5	92	71-127		2706-91-4
PFHpA	4.0	3.5	88	72-130		375-85-9
DONA	3.8	4.0	107	70-140		919005-14-4
PFHxS	3.7	3.2	87	68-131		355-46-4
PFOA	4.0	4.4	109	71-133		335-67-1
6:2 FTS	3.8	3.8	99	64-140		27619-97-2
PFHpS	3.8	3.4	90	69-134		375-92-8
PFNA	4.0	4.0	99	69-130		375-95-1
PFOSAm	4.0	4.0	101	67-137		754-91-6
PFOS	3.7	3.5	94	65-140		1763-23-1
MeFOSA	4.0	3.4	86	68-141		31506-32-8
PFDA	4.0	4.1	101	71-129		335-76-2
EtFOSAm	4.0	3.7	92	70-140		4151-50-2
8:2 FTS	3.9	3.7	95	67-138		39108-34-4
9-CI-PF3ON	3.7	3.6	96	70-130		756426-58-1
PFNS	3.9	3.4	88	69-127		68259-12-1
PFUnDA	4.0	3.8	94	69-133		2058-94-8
NMeFOSAA	4.0	3.5	87	65-136		2355-31-9
NEtFOSAA	4.0	4.4	109	61-135		2991-50-6
PFDS	3.9	3.4	89	53-142		335-77-3
PFDOA	4.0	4.0	99	72-134		307-55-1
MeFOSE	4.0	3.7	93	70-140		24448-09-7
10:2 FTS	3.9	4.4	113	70-140		120226-60-0
EtFOSE	4.0	3.2	79	70-140		1691-99-2
11-CI-PF3OUdS	3.8	3.1	82	70-140		763051-92-9
PFTTrDA	4.0	3.7	93	65-144		72629-94-8
PFDoS	3.9	3.5	90	70-140		79780-39-5
PFTDA	4.0	3.4	84	71-132		376-06-7
PFHXDA	4.0	3.5	87	70-140		67905-19-5
PFODA	4.0	3.1	78	70-140		16517-11-6

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID	LCS-92501	Instrument ID	10LCMS01
Run File Name	Q210831B_019	Column ID	112EB00094
Analyzed	08/31/2021 21:31	Ical ID	210831A01
Injected By	NH	Level	L

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.27	6.29	
13C4 PFOA	N/A	N/A	7.61	7.66	
13C2 PFDA	N/A	N/A	8.97	8.98	
13C4 PFOS	N/A	N/A	9.45	9.48	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.76	4.74	
13C5 PFPeA	N/A	N/A	5.59	5.60	
13C3 PFBS	N/A	N/A	6.53	6.55	
13C2 4:2FTS	N/A	N/A	6.00	5.99	
13C5 PFHxA	N/A	N/A	6.28	6.28	
13C4 PFHpA	N/A	N/A	6.95	6.96	
13C3 PFHxS	N/A	N/A	8.04	8.08	
13C2 6:2FTS	N/A	N/A	7.26	7.29	
13C8 PFOA	N/A	N/A	7.61	7.64	
13C9 PFNA	N/A	N/A	8.29	8.33	
13C8 PFOS	N/A	N/A	9.46	9.48	
13C2 8:2FTS	N/A	N/A	8.58	8.62	
13C6 PFDA	N/A	N/A	8.98	9.03	
d3-MeFOSAA	N/A	N/A	8.85	8.90	
13C8 PFOSA	N/A	N/A	11.43	11.42	
d5-EtFOSAA	N/A	N/A	9.16	9.18	
13C7 PFUdA	N/A	N/A	9.66	9.68	
13C2 PFDoA	N/A	N/A	10.34	10.36	
13C2 PFTeDA	N/A	N/A	11.64	11.66	
13C3 HFPO-DA	N/A	N/A	6.55	6.56	
13C2 PFHxDA	N/A	N/A	12.76	12.77	
d7-N-MeFOSE	N/A	N/A	13.06	13.06	
d9-N-EtFOSE	N/A	N/A	13.54	13.53	
d3-N-MeFOSA	N/A	N/A	13.27	13.26	
d5-N-EtFOSA	N/A	N/A	13.71	13.70	

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID LCS-92501  
 Run File Name Q210831B\_019  
 Analyzed 08/31/2021 21:31  
 Injected By NH

Instrument ID 10LCMS01  
 Column ID 112EB00094  
 Ical ID 210831A01  
 Level L

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.76	4.82	
PFPeA	N/A	N/A	5.60	5.63	
HFPO-DA	0.52	0.38	6.57	6.61	
PFBS	0.32	0.33	6.54	6.54	
PFHxA	0.07	0.09	6.29	6.32	
4:2 FTS	0.96	0.97	6.00	5.99	
PFPeS	0.38	0.45	7.31	7.32	
PFHpA	0.43	0.46	6.95	6.98	
DONA	0.44	0.47	7.19	7.21	
PFHxS	0.27	0.29	8.05	8.05	
PFOA	0.26	0.25	7.62	7.63	
6:2 FTS	1.10	1.20	7.27	7.28	
PFHpS	0.45	0.41	8.77	8.79	
PFNA	0.27	0.27	8.30	8.32	
PFOSAm	N/A	N/A	11.44	11.40	
PFOS	0.21	0.24	9.47	9.46	
MeFOSA	0.51	0.47	13.30	13.29	
PFDA	0.18	0.16	8.99	9.02	
EtFOSAm	0.43	0.51	13.74	13.73	
8:2 FTS	1.50	1.40	8.60	8.62	
9-CI-PF3ON	0.03	0.04	9.96	10.00	
PFNS	0.25	0.23	10.15	10.16	
PFUnDA	0.12	0.16	9.67	9.71	
NMeFOSAA	0.67	0.67	8.86	8.89	
NEtFOSAA	0.42	0.49	9.18	9.15	
PFDS	0.25	0.26	10.82	10.82	
PFDOA	0.15	0.16	10.34	10.44	
MeFOSE	N/A	N/A	13.10	13.10	
10:2 FTS	1.80	1.70	9.94	9.95	
EtFOSE	0.00	0.00	13.58	13.58	
11-CI-PF3OUdS	0.03	0.02	11.28	11.29	
PFTrDA	0.19	0.20	11.01	11.02	
PFDoS	0.25	0.25	12.03	12.05	
PFTDA	0.14	0.14	11.65	11.66	
PFHXDA	0.13	0.14	12.76	12.78	
PFODA	0.16	0.17	13.53	13.54	

**REPORT OF LABORATORY ANALYSIS**

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





**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID	LCS-92497	Instrument ID	10LCMS03
Run File Name	A210831B_006	Column ID	118AB10133
Analyzed	09/01/2021 02:07	Ical ID	210830A03
Injected By	NH	Level	L

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	19	18	95	50-150	
13C4_PFOA	19	19	100	50-150	
13C2_PFDA	19	18	97	50-150	
13C4_PFOS	18	18	99	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBa	19	18	93	50-150	
13C5_PFPeA	19	18	94	50-150	
13C3_PFBs	18	17	97	50-150	
13C2_4:2Fts	18	17	95	50-150	
13C5_PFHxA	19	17	90	50-150	
13C4_PFHpA	19	19	99	50-150	
13C3_PFHxS	18	17	95	50-150	
13C2_6:2Fts	18	14	80	50-150	
13C8_PFOA	19	18	94	50-150	
13C9_PfNA	19	19	98	50-150	
13C8_PFOs	18	16	86	50-150	
13C2_8:2Fts	18	16	90	50-150	
13C6_PFDA	19	17	88	50-150	
d3-MeFOSAA	19	15	77	50-150	
13C8_PFOsA	19	14	75	50-150	
d5-EtFOSAA	19	15	79	50-150	
13C7_PFUdA	19	18	93	50-150	
13C2_PFDaA	19	17	88	50-150	
13C2_PFTeDA	19	17	89	50-150	
13C3_HFPO-DA	19	18	97	50-150	
13C2_PFHxDA	19	17	88	50-150	
d7-N-MeFOSE	19	13	68	10-150	
d9-N-EtFOSE	19	12	64	10-150	
d3-N-MeFOsA	19	8.9	47	10-150	
d5-N-EtFOsA	19	8.8	46	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID      LCS-92497  
 Run File Name      A210831B\_006  
 Analyzed            09/01/2021 02:07  
 Injected By        NH

Instrument ID      10LCMS03  
 Column ID         118AB10133  
 Ical ID             210830A03  
 Level                L

**Native Analytes**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	CAS No.
PFBA	3.8	3.5	93	73-129		375-22-4
PFPeA	3.8	3.5	92	72-129		2706-90-3
HFPO-DA	3.8	3.7	99	70-140		13252-13-6
PFBS	3.4	3.1	93	72-130		375-73-5
PFHxA	3.8	3.8	101	72-129		307-24-4
4:2 FTS	3.5	3.7	105	63-143		757124-72-4
PFPeS	3.6	3.3	94	71-127		2706-91-4
PFHpA	3.8	3.6	95	72-130		375-85-9
DONA	3.6	3.2	90	70-140		919005-14-4
PFHxS	3.4	3.3	95	68-131		355-46-4
PFOA	3.8	3.5	93	71-133		335-67-1
6:2 FTS	3.6	3.9	110	64-140		27619-97-2
PFHpS	3.6	3.6	99	69-134		375-92-8
PFNA	3.8	3.3	88	69-130		375-95-1
PFOSAm	3.8	3.7	97	67-137		754-91-6
PFOS	3.5	3.8	108	65-140		1763-23-1
MeFOSA	3.8	3.4	89	68-141		31506-32-8
PFDA	3.8	3.6	96	71-129		335-76-2
EtFOSAm	3.8	3.4	89	70-140		4151-50-2
8:2 FTS	3.6	3.0	84	67-138		39108-34-4
9-CI-PF3ON	3.5	3.3	94	70-130		756426-58-1
PFNS	3.6	3.3	91	69-127		68259-12-1
PFUnDA	3.8	3.3	88	69-133		2058-94-8
NMeFOSAA	3.8	3.4	88	65-136		2355-31-9
NEtFOSAA	3.8	3.8	102	61-135		2991-50-6
PFDS	3.7	3.4	93	53-142		335-77-3
PFDOA	3.8	3.4	89	72-134		307-55-1
MeFOSE	3.8	3.3	88	70-140		24448-09-7
10:2 FTS	3.7	3.3	89	70-140		120226-60-0
EtFOSE	3.8	3.5	91	70-140		1691-99-2
11-CI-PF3OUdS	3.6	3.2	89	70-140		763051-92-9
PFTTrDA	3.8	3.4	89	65-144		72629-94-8
PFDoS	3.7	3.2	87	70-140		79780-39-5
PFTDA	3.8	3.1	82	71-132		376-06-7
PFHXDA	3.8	3.5	92	70-140		67905-19-5
PFODA	3.8	3.2	84	70-140		16517-11-6

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID LCS-92497  
 Run File Name A210831B\_006  
 Analyzed 09/01/2021 02:07  
 Injected By NH

Instrument ID 10LCMS03  
 Column ID 118AB10133  
 Ical ID 210830A03  
 Level L

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.02	4.99	
13C4 PFOA	N/A	N/A	5.99	6.00	
13C2 PFDA	N/A	N/A	6.88	6.88	
13C4 PFOS	N/A	N/A	7.20	7.20	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.58	3.56	
13C5 PFPeA	N/A	N/A	4.43	4.42	
13C3 PFBS	N/A	N/A	5.21	5.18	
13C2 4:2FTS	N/A	N/A	4.80	4.80	
13C5 PFHxA	N/A	N/A	5.02	5.04	
13C4 PFHpA	N/A	N/A	5.53	5.51	
13C3 PFHxS	N/A	N/A	6.28	6.28	
13C2 6:2FTS	N/A	N/A	5.76	5.77	
13C8 PFOA	N/A	N/A	6.00	6.00	
13C9 PFNA	N/A	N/A	6.44	6.44	
13C8 PFOS	N/A	N/A	7.20	7.20	
13C2 8:2FTS	N/A	N/A	6.63	6.60	
13C6 PFDA	N/A	N/A	6.88	6.88	
d3-MeFOSAA	N/A	N/A	6.84	6.83	
13C8 PFOSA	N/A	N/A	8.82	8.78	
d5-EtFOSAA	N/A	N/A	7.05	7.02	
13C7 PFUdA	N/A	N/A	7.32	7.32	
13C2 PFDoA	N/A	N/A	7.76	7.76	
13C2 PFTeDA	N/A	N/A	8.60	8.58	
13C3 HFPO-DA	N/A	N/A	5.23	5.21	
13C2 PFHxDA	N/A	N/A	9.37	9.33	
d7-N-MeFOSE	N/A	N/A	10.07	10.02	
d9-N-EtFOSE	N/A	N/A	10.70	10.64	
d3-N-MeFOSA	N/A	N/A	10.32	10.28	
d5-N-EtFOSA	N/A	N/A	11.01	11.00	

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID LCS-92497  
 Run File Name A210831B\_006  
 Analyzed 09/01/2021 02:07  
 Injected By NH

Instrument ID 10LCMS03  
 Column ID 118AB10133  
 Ical ID 210830A03  
 Level L

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	3.59	3.58	
PFPeA	N/A	N/A	4.43	4.40	
HFPO-DA	0.41	0.48	5.24	5.22	
PFBS	0.33	0.37	5.22	5.26	
PFHxA	0.07	0.07	5.03	5.00	
4:2 FTS	0.47	0.54	4.81	4.80	
PFPeS	0.32	0.31	5.79	5.76	
PFHpA	0.29	0.30	5.53	5.52	
DONA	0.50	0.54	5.71	5.68	
PFHxS	0.28	0.25	6.29	6.29	
PFOA	0.39	0.35	6.00	5.97	
6:2 FTS	0.50	0.47	5.76	5.74	
PFHpS	0.25	0.24	6.75	6.76	
PFNA	0.20	0.20	6.45	6.43	
PFOSAm	N/A	N/A	8.82	8.82	
PFOS	0.19	0.21	7.21	7.27	
MeFOSA	0.91	0.91	10.34	10.33	
PFDA	0.10	0.08	6.89	6.89	
EtFOSAm	0.71	0.67	11.05	11.04	
8:2 FTS	0.67	0.67	6.64	6.64	
9-CI-PF3ON	0.02	0.01	7.52	7.53	
PFNS	0.23	0.24	7.64	7.62	
PFUnDA	0.10	0.10	7.33	7.31	
NMeFOSAA	0.53	0.51	6.85	6.90	
NEtFOSAA	0.70	0.47	7.06	7.03	
PFDS	0.24	0.26	8.07	8.07	
PFDOA	0.14	0.15	7.76	7.76	
MeFOSE	N/A	N/A	10.11	10.12	
10:2 FTS	0.54	0.56	7.50	7.51	
EtFOSE	0.00	0.00	10.76	10.70	
11-CI-PF3OUdS	0.01	0.01	8.38	8.38	
PFTTrDA	0.13	0.16	8.19	8.19	
PFDoS	0.23	0.23	8.87	8.83	
PFTDA	0.14	0.14	8.61	8.58	
PFHXDA	0.12	0.13	9.37	9.37	
PFODA	0.09	0.10	10.40	10.41	

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID	LCS-92569	Instrument ID	10LCMS03
Run File Name	A210902A_042	Column ID	118AB10133
Analyzed	09/02/2021 19:08	Ical ID	210830A03
Injected By	NH	Level	L

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	20	20	102	50-150	
13C4_PFOA	20	20	102	50-150	
13C2_PFDA	20	21	107	50-150	
13C4_PFOS	19	19	99	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBFA	20	20	101	50-150	
13C5_PFPeA	20	20	100	50-150	
13C3_PFBFS	18	19	102	50-150	
13C2_4:2FTS	18	16	89	50-150	
13C5_PFHxA	20	20	103	50-150	
13C4_PFHpA	20	20	99	50-150	
13C3_PFHxS	19	19	100	50-150	
13C2_6:2FTS	19	18	96	50-150	
13C8_PFOA	20	19	98	50-150	
13C9_PFNA	20	20	101	50-150	
13C8_PFOS	19	18	94	50-150	
13C2_8:2FTS	19	17	90	50-150	
13C6_PFDA	20	20	100	50-150	
d3-MeFOSAA	20	16	83	50-150	
13C8_PFOA	20	18	90	50-150	
d5-EtFOSAA	20	17	85	50-150	
13C7_PFUdA	20	17	86	50-150	
13C2_PFDaA	20	18	91	50-150	
13C2_PFTeDA	20	17	88	50-150	
13C3_HFPO-DA	20	19	99	50-150	
13C2_PFHxDA	20	17	84	50-150	
d7-N-MeFOSE	20	15	76	10-150	
d9-N-EtFOSE	20	14	71	10-150	
d3-N-MeFOSA	20	6.1	31	10-150	
d5-N-EtFOSA	20	5.9	30	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID LCS-92569  
 Run File Name A210902A\_042  
 Analyzed 09/02/2021 19:08  
 Injected By NH

Instrument ID 10LCMS03  
 Column ID 118AB10133  
 Ical ID 210830A03  
 Level L

**Native Analytes**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	CAS No.
PFBA	3.9	3.6	93	73-129		375-22-4
PFPeA	3.9	3.5	90	72-129		2706-90-3
HFPO-DA	3.9	3.5	88	70-140		13252-13-6
PFBS	3.5	3.3	94	72-130		375-73-5
PFHxA	3.9	3.6	91	72-129		307-24-4
4:2 FTS	3.7	3.1	84	63-143		757124-72-4
PFPeS	3.7	3.3	88	71-127		2706-91-4
PFHpA	3.9	3.7	94	72-130		375-85-9
DONA	3.7	3.6	96	70-140		919005-14-4
PFHxS	3.6	3.2	91	68-131	B	355-46-4
PFOA	3.9	3.7	94	71-133		335-67-1
6:2 FTS	3.7	4.2	113	64-140		27619-97-2
PFHpS	3.7	3.5	94	69-134		375-92-8
PFNA	3.9	3.5	89	69-130		375-95-1
PFOSAm	3.9	3.3	83	67-137		754-91-6
PFOS	3.6	3.5	96	65-140	B	1763-23-1
MeFOSA	3.9	3.7	95	68-141		31506-32-8
PFDA	3.9	3.3	84	71-129		335-76-2
EtFOSAm	3.9	3.5	89	70-140		4151-50-2
8:2 FTS	3.8	3.2	84	67-138		39108-34-4
9-CI-PF3ON	3.7	3.2	88	70-130		756426-58-1
PFNS	3.8	3.2	86	69-127		68259-12-1
PFUnDA	3.9	3.4	87	69-133		2058-94-8
NMeFOSAA	3.9	3.0	77	65-136	I	2355-31-9
NEtFOSAA	3.9	2.8	72	61-135		2991-50-6
PFDS	3.8	3.3	87	53-142		335-77-3
PFDOA	3.9	3.3	83	72-134		307-55-1
MeFOSE	3.9	3.2	82	70-140		24448-09-7
10:2 FTS	3.8	3.5	92	70-140		120226-60-0
EtFOSE	3.9	3.5	88	70-140		1691-99-2
11-CI-PF3OUdS	3.7	3.1	82	70-140		763051-92-9
PFTTrDA	3.9	3.2	80	65-144		72629-94-8
PFDoS	3.8	3.4	88	70-140		79780-39-5
PFTDA	3.9	3.4	86	71-132		376-06-7
PFHXDA	3.9	3.5	90	70-140		67905-19-5
PFODA	3.9	2.7	70	70-140		16517-11-6

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID LCS-92569  
 Run File Name A210902A\_042  
 Analyzed 09/02/2021 19:08  
 Injected By NH

Instrument ID 10LCMS03  
 Column ID 118AB10133  
 Ical ID 210830A03  
 Level L

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.01	4.99	
13C4 PFOA	N/A	N/A	5.99	6.00	
13C2 PFDA	N/A	N/A	6.87	6.88	
13C4 PFOS	N/A	N/A	7.19	7.20	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.58	3.56	
13C5 PFPeA	N/A	N/A	4.42	4.42	
13C3 PFBS	N/A	N/A	5.20	5.18	
13C2 4:2FTS	N/A	N/A	4.80	4.80	
13C5 PFHxA	N/A	N/A	5.01	5.04	
13C4 PFHpA	N/A	N/A	5.52	5.51	
13C3 PFHxS	N/A	N/A	6.27	6.28	
13C2 6:2FTS	N/A	N/A	5.76	5.77	
13C8 PFOA	N/A	N/A	5.99	6.00	
13C9 PFNA	N/A	N/A	6.44	6.44	
13C8 PFOS	N/A	N/A	7.19	7.20	
13C2 8:2FTS	N/A	N/A	6.63	6.60	
13C6 PFDA	N/A	N/A	6.87	6.88	
d3-MeFOSAA	N/A	N/A	6.83	6.83	
13C8 PFOSA	N/A	N/A	8.80	8.78	
d5-EtFOSAA	N/A	N/A	7.04	7.02	
13C7 PFUdA	N/A	N/A	7.31	7.32	
13C2 PFDoA	N/A	N/A	7.74	7.76	
13C2 PFTeDA	N/A	N/A	8.59	8.58	
13C3 HFPO-DA	N/A	N/A	5.22	5.21	
13C2 PFHxDA	N/A	N/A	9.36	9.33	
d7-N-MeFOSE	N/A	N/A	10.06	10.02	
d9-N-EtFOSE	N/A	N/A	10.68	10.64	
d3-N-MeFOSA	N/A	N/A	10.31	10.28	
d5-N-EtFOSA	N/A	N/A	11.00	11.00	

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID LCS-92569  
 Run File Name A210902A\_042  
 Analyzed 09/02/2021 19:08  
 Injected By NH

Instrument ID 10LCMS03  
 Column ID 118AB10133  
 Ical ID 210830A03  
 Level L

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	3.58	3.58	
PFPeA	N/A	N/A	4.43	4.40	
HFPO-DA	0.51	0.45	5.23	5.22	
PFBS	0.33	0.35	5.21	5.26	
PFHxA	0.06	0.07	5.02	5.00	
4:2 FTS	0.57	0.58	4.80	4.80	
PFPeS	0.33	0.36	5.78	5.76	
PFHpA	0.27	0.30	5.53	5.52	
DONA	0.50	0.48	5.70	5.68	
PFHxS	0.25	0.28	6.28	6.29	B
PFOA	0.38	0.38	5.99	5.97	
6:2 FTS	0.46	0.50	5.76	5.74	
PFHpS	0.24	0.23	6.75	6.76	
PFNA	0.19	0.21	6.44	6.43	
PFOSAm	N/A	N/A	8.81	8.75	
PFOS	0.22	0.24	7.20	7.27	B
MeFOSA	0.90	0.95	10.33	10.33	
PFDA	0.09	0.09	6.88	6.89	
EtFOSAm	0.73	0.72	11.03	11.04	
8:2 FTS	0.68	0.62	6.63	6.64	
9-CI-PF3ON	0.02	0.01	7.51	7.53	
PFNS	0.25	0.25	7.63	7.62	
PFUnDA	0.09	0.10	7.32	7.31	
NMeFOSAA	0.56	0.36	6.84	6.90	I
NEtFOSAA	0.87	0.66	7.05	7.03	
PFDS	0.22	0.26	8.06	8.07	
PFDOA	0.16	0.15	7.75	7.76	
MeFOSE	N/A	N/A	10.10	10.12	
10:2 FTS	0.56	0.65	7.49	7.51	
EtFOSE	0.00	0.00	10.75	10.70	
11-CI-PF3OUdS	0.01	0.01	8.37	8.38	
PFTrDA	0.15	0.14	8.18	8.19	
PFDoS	0.23	0.26	8.86	8.83	
PFTDA	0.14	0.15	8.60	8.58	
PFHXDA	0.12	0.14	9.36	9.35	
PFODA	0.09	0.10	10.39	10.37	

**REPORT OF LABORATORY ANALYSIS**

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





**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID	LCS-92707	Instrument ID	10LCMS03
Run File Name	A210903C_005	Column ID	118AB10133
Analyzed	09/03/2021 22:31	Ical ID	210830A03
Injected By	NH	Level	L

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	20	20	103	50-150	
13C4_PFOA	20	20	100	50-150	
13C2_PFDA	20	18	93	50-150	
13C4_PFOS	19	19	100	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBFA	20	18	94	50-150	
13C5_PFPeA	20	19	95	50-150	
13C3_PFBFS	18	18	97	50-150	
13C2_4:2FTS	18	17	92	50-150	
13C5_PFHxA	20	19	97	50-150	
13C4_PFHpA	20	19	98	50-150	
13C3_PFHxS	19	17	89	50-150	
13C2_6:2FTS	19	17	93	50-150	
13C8_PFOA	20	18	93	50-150	
13C9_PFNA	20	19	96	50-150	
13C8_PFOS	19	18	97	50-150	
13C2_8:2FTS	19	16	84	50-150	
13C6_PFDA	20	17	88	50-150	
d3-MeFOSAA	20	17	89	50-150	
13C8_PFOA	20	16	79	50-150	
d5-EtFOSAA	20	17	84	50-150	
13C7_PFUdA	20	18	93	50-150	
13C2_PFDaA	20	19	95	50-150	
13C2_PFTeDA	20	18	89	50-150	
13C3_HFPO-DA	20	20	100	50-150	
13C2_PFHxDA	20	15	75	50-150	
d7-N-MeFOSE	20	15	77	10-150	
d9-N-EtFOSE	20	15	75	10-150	
d3-N-MeFOSA	20	11	59	10-150	
d5-N-EtFOSA	20	12	60	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID LCS-92707  
 Run File Name A210903C\_005  
 Analyzed 09/03/2021 22:31  
 Injected By NH

Instrument ID 10LCMS03  
 Column ID 118AB10133  
 Ical ID 210830A03  
 Level L

**Native Analytes**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	CAS No.
PFBA	3.9	3.3	85	73-129		375-22-4
PFPeA	3.9	3.2	82	72-129		2706-90-3
HFPO-DA	3.9	3.3	85	70-140		13252-13-6
PFBS	3.5	2.9	85	72-130		375-73-5
PFHxA	3.9	3.7	93	72-129		307-24-4
4:2 FTS	3.7	3.4	93	63-143		757124-72-4
PFPeS	3.7	3.2	88	71-127		2706-91-4
PFHpA	3.9	3.2	82	72-130		375-85-9
DONA	3.7	3.2	86	70-140		919005-14-4
PFHxS	3.6	2.8	80	68-131		355-46-4
PFOA	3.9	3.5	90	71-133		335-67-1
6:2 FTS	3.7	3.2	85	64-140		27619-97-2
PFHpS	3.7	3.1	83	69-134		375-92-8
PFNA	3.9	3.4	87	69-130		375-95-1
PFOSAm	3.9	3.3	85	67-137		754-91-6
PFOS	3.6	3.0	82	65-140		1763-23-1
MeFOSA	3.9	3.0	76	68-141		31506-32-8
PFDA	3.9	3.6	92	71-129		335-76-2
EtFOSAm	3.9	3.2	81	70-140		4151-50-2
8:2 FTS	3.8	3.0	81	67-138		39108-34-4
9-CI-PF3ON	3.7	3.0	82	70-130		756426-58-1
PFNS	3.8	2.8	75	69-127		68259-12-1
PFUnDA	3.9	3.5	89	69-133		2058-94-8
NMeFOSAA	3.9	3.2	82	65-136		2355-31-9
NEtFOSAA	3.9	2.9	73	61-135		2991-50-6
PFDS	3.8	2.9	76	53-142		335-77-3
PFDOA	3.9	3.3	84	72-134		307-55-1
MeFOSE	3.9	3.0	77	70-140		24448-09-7
10:2 FTS	3.8	3.2	85	70-140		120226-60-0
EtFOSE	3.9	3.1	79	70-140		1691-99-2
11-CI-PF3OUdS	3.7	2.9	79	70-140		763051-92-9
PFTTrDA	3.9	2.9	74	65-144		72629-94-8
PFDoS	3.8	3.0	80	70-140		79780-39-5
PFTDA	3.9	3.0	76	71-132		376-06-7
PFHXDA	3.9	3.4	88	70-140		67905-19-5
PFODA	3.9	3.2	83	70-140		16517-11-6

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID      LCS-92707  
 Run File Name      A210903C\_005  
 Analyzed            09/03/2021 22:31  
 Injected By         NH

Instrument ID      10LCMS03  
 Column ID         118AB10133  
 Ical ID             210830A03  
 Level                L

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.01	4.99	
13C4 PFOA	N/A	N/A	5.99	6.00	
13C2 PFDA	N/A	N/A	6.87	6.88	
13C4 PFOS	N/A	N/A	7.18	7.20	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.58	3.56	
13C5 PFPeA	N/A	N/A	4.42	4.42	
13C3 PFBS	N/A	N/A	5.20	5.18	
13C2 4:2FTS	N/A	N/A	4.80	4.80	
13C5 PFHxA	N/A	N/A	5.02	5.04	
13C4 PFHpA	N/A	N/A	5.52	5.51	
13C3 PFHxS	N/A	N/A	6.27	6.28	
13C2 6:2FTS	N/A	N/A	5.75	5.77	
13C8 PFOA	N/A	N/A	5.99	6.00	
13C9 PFNA	N/A	N/A	6.43	6.44	
13C8 PFOS	N/A	N/A	7.19	7.20	
13C2 8:2FTS	N/A	N/A	6.62	6.60	
13C6 PFDA	N/A	N/A	6.87	6.88	
d3-MeFOSAA	N/A	N/A	6.83	6.83	
13C8 PFOSA	N/A	N/A	8.80	8.78	
d5-EtFOSAA	N/A	N/A	7.04	7.02	
13C7 PFUdA	N/A	N/A	7.31	7.32	
13C2 PFDoA	N/A	N/A	7.74	7.76	
13C2 PFTeDA	N/A	N/A	8.59	8.58	
13C3 HFPO-DA	N/A	N/A	5.22	5.21	
13C2 PFHxDA	N/A	N/A	9.36	9.33	
d7-N-MeFOSE	N/A	N/A	10.06	10.02	
d9-N-EtFOSE	N/A	N/A	10.68	10.64	
d3-N-MeFOSA	N/A	N/A	10.31	10.28	
d5-N-EtFOSA	N/A	N/A	11.01	11.00	

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID LCS-92707  
 Run File Name A210903C\_005  
 Analyzed 09/03/2021 22:31  
 Injected By NH

Instrument ID 10LCMS03  
 Column ID 118AB10133  
 Ical ID 210830A03  
 Level L

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	3.58	3.58	
PFPeA	N/A	N/A	4.43	4.40	
HFPO-DA	0.45	0.49	5.23	5.22	
PFBS	0.32	0.32	5.21	5.26	
PFHxA	0.06	0.06	5.02	5.00	
4:2 FTS	0.55	0.54	4.80	4.80	
PFPeS	0.30	0.31	5.78	5.76	
PFHpA	0.33	0.27	5.53	5.52	
DONA	0.48	0.52	5.70	5.68	
PFHxS	0.26	0.26	6.28	6.29	
PFOA	0.36	0.38	5.99	5.97	
6:2 FTS	0.52	0.59	5.75	5.74	
PFHpS	0.23	0.25	6.74	6.76	
PFNA	0.19	0.21	6.44	6.43	
PFOSAm	N/A	N/A	8.81	8.75	
PFOS	0.24	0.22	7.19	7.27	
MeFOSA	0.89	0.85	10.33	10.33	
PFDA	0.07	0.08	6.87	6.89	
EtFOSAm	0.66	0.69	11.04	11.04	
8:2 FTS	0.64	0.87	6.63	6.64	
9-CI-PF3ON	0.02	0.01	7.51	7.53	
PFNS	0.26	0.23	7.63	7.62	
PFUnDA	0.09	0.11	7.31	7.31	
NMeFOSAA	0.48	0.62	6.83	6.90	
NEtFOSAA	0.76	0.72	7.05	7.03	
PFDS	0.23	0.23	8.06	8.07	
PFDOA	0.13	0.14	7.75	7.76	
MeFOSE	N/A	N/A	10.10	10.12	
10:2 FTS	0.63	0.76	7.49	7.51	
EtFOSE	0.00	0.00	10.74	10.70	
11-CI-PF3OUdS	0.01	0.01	8.36	8.38	
PFTrDA	0.16	0.14	8.17	8.19	
PFDoS	0.24	0.21	8.86	8.83	
PFTDA	0.16	0.15	8.59	8.58	
PFHXDA	0.13	0.13	9.36	9.35	
PFODA	0.09	0.10	10.39	10.37	

**REPORT OF LABORATORY ANALYSIS**

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



**MS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID 10574511005-MS  
 Run File Name Q210831B\_040  
 Analyzed 09/01/2021 04:02  
 Injected By NH

Instrument ID 10LCMS01  
 Column ID 112EB00094  
 Ical ID 210831A01  
 Level

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	94	110	114	50-150	
13C4_PFOA	94	93	99	50-150	
13C2_PFDA	94	120	133	50-150	
13C4_PFOS	90	86	96	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	94	46	49	50-150	R
13C5_PFPeA	94	77	82	50-150	
13C3_PFBFS	87	83	95	50-150	
13C2_4:2FTS	88	230	262	50-150	R
13C5_PFHxA	94	120	125	50-150	
13C4_PFHpA	94	98	104	50-150	
13C3_PFHxS	89	93	104	50-150	
13C2_6:2FTS	89	260	297	50-150	R
13C8_PFOA	94	100	110	50-150	
13C9_PFNA	94	120	130	50-150	
13C8_PFOS	90	97	108	50-150	
13C2_8:2FTS	90	180	197	50-150	R
13C6_PFDA	94	120	132	50-150	
d3-MeFOSAA	94	140	149	50-150	
13C8_PFOA	94	76	81	25-150	
d5-EtFOSAA	94	110	114	50-150	
13C7_PFUdA	94	100	109	50-150	
13C2_PFDoA	94	94	100	50-150	
13C2_PFTeDA	94	75	80	50-150	
13C3_HFPO-DA	94	91	97	50-150	
13C2_PFHxDA	94	64	68	50-150	
d7-N-MeFOSE	94	68	73	10-150	
d9-N-EtFOSE	94	63	67	10-150	
d3-N-MeFOSA	94	53	57	10-150	
d5-N-EtFOSA	94	55	58	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**MS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID 10574511005-MS  
 Run File Name Q210831B\_040  
 Analyzed 09/01/2021 04:02  
 Injected By NH

Instrument ID 10LCMS01  
 Column ID 112EB00094  
 Ical ID 210831A01  
 Level

**Native Analytes**

Compound	Sample Conc.	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	CAS No.
PFBA	54	19	77	123	70-140		375-22-4
PFPeA	30	19	41	60	70-140	R	2706-90-3
HFPO-DA	0.00	19	9.0	48	70-140	JR	13252-13-6
PFBS	0.00	17	17	102	70-140		375-73-5
PFHxA	40	19	49	53	70-140	R	307-24-4
4:2 FTS	0.00	18	14	80	70-140	I	757124-72-4
PFPeS	0.00	18	13	72	70-140		2706-91-4
PFHpA	0.00	19	21	110	70-140		375-85-9
DONA	0.00	18	12	70	70-140		919005-14-4
PFHxS	0.00	17	19	114	70-140		355-46-4
PFOA	0.00	19	18	98	70-140		335-67-1
6:2 FTS	9.2	18	23	75	70-140		27619-97-2
PFHpS	0.00	18	16	87	70-140		375-92-8
PFNA	0.00	19	15	79	70-140		375-95-1
PFOSAm	0.00	19	16	87	70-140		754-91-6
PFOS	0.00	17	17	96	70-140		1763-23-1
MeFOSA	0.00	19	17	89	70-140		31506-32-8
PFDA	0.00	19	15	82	70-140		335-76-2
EtFOSAm	0.00	19	16	84	70-140		4151-50-2
8:2 FTS	0.00	18	14	77	70-140		39108-34-4
9-CI-PF3ON	0.00	18	14	79	70-140	I	756426-58-1
PFNS	0.00	18	15	83	70-140		68259-12-1
PFUnDA	0.00	19	13	70	70-140		2058-94-8
NMeFOSAA	0.00	19	14	74	70-140		2355-31-9
NEtFOSAA	0.00	19	19	99	70-140		2991-50-6
PFDS	0.00	18	13	71	70-140		335-77-3
PFDOA	0.00	19	16	84	70-140		307-55-1
MeFOSE	0.00	19	14	75	70-140		24448-09-7
10:2 FTS	0.00	18	8.1	45	70-140	JR	120226-60-0
EtFOSE	0.00	19	14	73	70-140		1691-99-2
11-CI-PF3OUdS	0.00	18	11	64	70-140	R	763051-92-9
PFTTrDA	0.00	19	14	74	70-140		72629-94-8
PFDoS	0.00	18	11	61	70-140	R	79780-39-5
PFTDA	0.00	19	16	85	70-140		376-06-7
PFHXDA	0.00	19	17	92	70-140		67905-19-5
PFODA	0.00	19	13	69	70-140	R	16517-11-6

**REPORT OF LABORATORY ANALYSIS**

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



**MS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID 10574511005-MS  
 Run File Name Q210831B\_040  
 Analyzed 09/01/2021 04:02  
 Injected By NH

Instrument ID 10LCMS01  
 Column ID 112EB00094  
 Ical ID 210831A01  
 Level

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.24	6.29	
13C4 PFOA	N/A	N/A	7.62	7.66	
13C2 PFDA	N/A	N/A	8.98	8.98	
13C4 PFOS	N/A	N/A	9.45	9.48	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.70	4.74	R
13C5 PFPeA	N/A	N/A	5.54	5.60	
13C3 PFBS	N/A	N/A	6.50	6.55	
13C2 4:2FTS	N/A	N/A	5.95	5.99	R
13C5 PFHxA	N/A	N/A	6.24	6.28	
13C4 PFHpA	N/A	N/A	6.93	6.96	
13C3 PFHxS	N/A	N/A	8.05	8.08	
13C2 6:2FTS	N/A	N/A	7.26	7.29	R
13C8 PFOA	N/A	N/A	7.62	7.64	
13C9 PFNA	N/A	N/A	8.30	8.33	
13C8 PFOS	N/A	N/A	9.45	9.48	
13C2 8:2FTS	N/A	N/A	8.60	8.62	R
13C6 PFDA	N/A	N/A	8.98	9.03	
d3-MeFOSAA	N/A	N/A	8.86	8.90	
13C8 PFOSA	N/A	N/A	11.41	11.42	
d5-EtFOSAA	N/A	N/A	9.17	9.18	
13C7 PFUdA	N/A	N/A	9.65	9.68	
13C2 PFDoA	N/A	N/A	10.33	10.36	
13C2 PFTeDA	N/A	N/A	11.62	11.66	
13C3 HFPO-DA	N/A	N/A	6.53	6.56	
13C2 PFHxDA	N/A	N/A	12.73	12.77	
d7-N-MeFOSE	N/A	N/A	13.04	13.06	
d9-N-EtFOSE	N/A	N/A	13.52	13.53	
d3-N-MeFOSA	N/A	N/A	13.24	13.26	
d5-N-EtFOSA	N/A	N/A	13.68	13.70	

**REPORT OF LABORATORY ANALYSIS**

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



**MS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID 10574511005-MS  
 Run File Name Q210831B\_040  
 Analyzed 09/01/2021 04:02  
 Injected By NH

Instrument ID 10LCMS01  
 Column ID 112EB00094  
 Ical ID 210831A01  
 Level

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.70	4.82	
PFPeA	N/A	N/A	5.55	5.63	R
HFPO-DA	0.71	0.39	6.54	6.61	JR
PFBS	0.43	0.44	6.51	6.54	
PFHxA	0.08	0.07	6.25	6.32	R
4:2 FTS	1.70	0.78	5.96	5.99	I
PFPeS	0.48	0.43	7.31	7.32	
PFHpA	0.51	0.43	6.94	6.98	
DONA	0.39	0.44	7.19	7.21	
PFHxS	0.23	0.30	8.05	8.05	
PFOA	0.29	0.26	7.62	7.63	
6:2 FTS	1.10	0.99	7.26	7.28	
PFHpS	0.43	0.33	8.77	8.79	
PFNA	0.29	0.29	8.31	8.32	
PFOSAm	N/A	N/A	11.42	11.40	
PFOS	0.21	0.19	9.47	9.46	
MeFOSA	0.56	0.55	13.27	13.29	
PFDA	0.19	0.20	8.99	9.02	
EtFOSAm	0.54	0.48	13.71	13.73	
8:2 FTS	1.60	1.60	8.60	8.62	
9-CI-PF3ON	0.05	0.03	9.95	10.00	I
PFNS	0.22	0.24	10.14	10.16	
PFUnDA	0.21	0.16	9.66	9.71	
NMeFOSAA	0.66	0.82	8.87	8.89	
NEtFOSAA	0.49	0.50	9.18	9.15	
PFDS	0.26	0.26	10.80	10.82	
PFDOA	0.21	0.16	10.33	10.44	
MeFOSE	N/A	N/A	13.08	13.10	
10:2 FTS	1.60	1.30	9.94	9.95	JR
EtFOSE	0.00	0.00	13.56	13.58	
11-CI-PF3OUdS	0.03	0.03	11.26	11.29	R
PFTDA	0.19	0.19	10.99	11.02	
PFDoS	0.26	0.26	12.00	12.05	R
PFTDA	0.14	0.14	11.62	11.66	
PFHXDA	0.11	0.14	12.73	12.78	
PFODA	0.18	0.16	13.49	13.54	R

**REPORT OF LABORATORY ANALYSIS**

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





**MSD Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID 10574511005-MSD  
 Run File Name Q210831B\_041  
 Analyzed 09/01/2021 04:20  
 Injected By NH

Instrument ID 10LCMS01  
 Column ID 112EB00094  
 Ical ID 210831A01  
 Level

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	RPD	Qualifiers
13C2_PFHxA	96	120	124	50-150	8.7	
13C4_PFOA	96	100	109	50-150	9.4	
13C2_PFDA	96	130	140	50-150	5.6	
13C4_PFOS	92	89	97	50-150	1.6	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	RPD	Qualifiers
13C4_PFBFA	96	48	50	50-150	1.4	
13C5_PFPeA	96	84	88	50-150	7.5	
13C3_PFBFS	89	85	96	50-150	0.3	
13C2_4:2FTS	90	270	<b>306</b>	50-150	15.6	R
13C5_PFHxA	96	120	130	50-150	3.5	
13C4_PFHpA	96	100	109	50-150	4.6	
13C3_PFHxS	91	99	109	50-150	4.4	
13C2_6:2FTS	91	280	<b>311</b>	50-150	4.6	R
13C8_PFOA	96	120	123	50-150	11.7	
13C9_PFNA	96	120	129	50-150	0.9	
13C8_PFOS	92	100	111	50-150	3.0	
13C2_8:2FTS	92	170	<b>189</b>	50-150	4.3	R
13C6_PFDA	96	130	134	50-150	1.5	
d3-MeFOSAA	96	140	150	50-150	0.4	
13C8_PFOSA	96	83	86	25-150	5.7	
d5-EtFOSAA	96	140	141	50-150	21.5	
13C7_PFUdA	96	100	109	50-150	0.1	
13C2_PFDaA	96	97	102	50-150	1.9	
13C2_PFTeDA	96	77	81	50-150	0.7	
13C3_HFPO-DA	96	96	100	50-150	3.9	
13C2_PFHxDA	96	74	77	50-150	13.0	
d7-N-MeFOSE	96	67	70	10-150	3.4	
d9-N-EtFOSE	96	68	71	10-150	6.1	
d3-N-MeFOSA	96	53	55	10-150	3.3	
d5-N-EtFOSA	96	51	54	10-150	8.4	

**REPORT OF LABORATORY ANALYSIS**

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



**MSD Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID 10574511005-MSD  
 Run File Name Q210831B\_041  
 Analyzed 09/01/2021 04:20  
 Injected By NH

Instrument ID 10LCMS01  
 Column ID 112EB00094  
 Ical ID 210831A01  
 Level

**Native Analytes**

Compound	Sample Conc.	Known Conc.	Conc. Found	%Recovery	Recovery Limits	RPD	Qualifiers	CAS No.
PFBA	54	19	79	128	70-140	1.1		375-22-4
PFPeA	30	19	43	68	70-140	10.9	R	2706-90-3
HFPO-DA	0.00	19	9.8	51	70-140	6.1	IR	13252-13-6
PFBS	0.00	17	20	117	70-140	13.4		375-73-5
PFHxA	40	19	48	44	70-140	41.8	R	307-24-4
4:2 FTS	0.00	18	12	66	70-140	18.8	IR	757124-72-4
PFPeS	0.00	18	13	73	70-140	0.5		2706-91-4
PFHpA	0.00	19	22	114	70-140	3.5		375-85-9
DONA	0.00	18	12	65	70-140	7.4	R	919005-14-4
PFHxS	0.00	17	19	109	70-140	4.3		355-46-4
PFOA	0.00	19	18	96	70-140	1.9		335-67-1
6:2 FTS	9.2	18	24	81	70-140	6.8		27619-97-2
PFHpS	0.00	18	14	79	70-140	10.4		375-92-8
PFNA	0.00	19	15	81	70-140	1.8		375-95-1
PFOSAm	0.00	19	17	87	70-140	0.3		754-91-6
PFOS	0.00	18	15	82	70-140	15.5		1763-23-1
MeFOSA	0.00	19	15	80	70-140	10.5		31506-32-8
PFDA	0.00	19	16	81	70-140	0.1		335-76-2
EtFOSAm	0.00	19	17	88	70-140	4.3		4151-50-2
8:2 FTS	0.00	18	17	94	70-140	19.4		39108-34-4
9-CI-PF3ON	0.00	18	14	77	70-140	2.2		756426-58-1
PFNS	0.00	18	15	81	70-140	2.0		68259-12-1
PFUnDA	0.00	19	16	81	70-140	15.0		2058-94-8
NMeFOSAA	0.00	19	15	77	70-140	4.1		2355-31-9
NEtFOSAA	0.00	19	17	87	70-140	13.0		2991-50-6
PFDS	0.00	18	13	72	70-140	1.3		335-77-3
PFDOA	0.00	19	17	86	70-140	3.3		307-55-1
MeFOSE	0.00	19	15	77	70-140	1.8		24448-09-7
10:2 FTS	0.00	18	8.0	44	70-140	3.1	JR	120226-60-0
EtFOSE	0.00	19	14	71	70-140	2.5		1691-99-2
11-CI-PF3OUdS	0.00	18	13	70	70-140	8.7		763051-92-9
PFTTrDA	0.00	19	14	75	70-140	1.5		72629-94-8
PFDoS	0.00	19	11	61	70-140	1.0	R	79780-39-5
PFTDA	0.00	19	16	84	70-140	1.2		376-06-7
PFHXDA	0.00	19	16	81	70-140	12.2		67905-19-5
PFODA	0.00	19	14	71	70-140	2.6		16517-11-6

**REPORT OF LABORATORY ANALYSIS**

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



**MSD Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID 10574511005-MSD  
 Run File Name Q210831B\_041  
 Analyzed 09/01/2021 04:20  
 Injected By NH

Instrument ID 10LCMS01  
 Column ID 112EB00094  
 Ical ID 210831A01  
 Level

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.27	6.29	
13C4 PFOA	N/A	N/A	7.62	7.66	
13C2 PFDA	N/A	N/A	8.97	8.98	
13C4 PFOS	N/A	N/A	9.44	9.48	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.74	4.74	
13C5 PFPeA	N/A	N/A	5.59	5.60	
13C3 PFBS	N/A	N/A	6.53	6.55	
13C2 4:2FTS	N/A	N/A	5.99	5.99	R
13C5 PFHxA	N/A	N/A	6.27	6.28	
13C4 PFHpA	N/A	N/A	6.95	6.96	
13C3 PFHxS	N/A	N/A	8.04	8.08	
13C2 6:2FTS	N/A	N/A	7.27	7.29	R
13C8 PFOA	N/A	N/A	7.62	7.64	
13C9 PFNA	N/A	N/A	8.29	8.33	
13C8 PFOS	N/A	N/A	9.45	9.48	
13C2 8:2FTS	N/A	N/A	8.58	8.62	R
13C6 PFDA	N/A	N/A	8.97	9.03	
d3-MeFOSAA	N/A	N/A	8.85	8.90	
13C8 PFOSA	N/A	N/A	11.40	11.42	
d5-EtFOSAA	N/A	N/A	9.16	9.18	
13C7 PFUdA	N/A	N/A	9.65	9.68	
13C2 PFDoA	N/A	N/A	10.32	10.36	
13C2 PFTeDA	N/A	N/A	11.62	11.66	
13C3 HFPO-DA	N/A	N/A	6.55	6.56	
13C2 PFHxDA	N/A	N/A	12.73	12.77	
d7-N-MeFOSE	N/A	N/A	13.04	13.06	
d9-N-EtFOSE	N/A	N/A	13.52	13.53	
d3-N-MeFOSA	N/A	N/A	13.25	13.26	
d5-N-EtFOSA	N/A	N/A	13.69	13.70	

**REPORT OF LABORATORY ANALYSIS**

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



**MSD Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID 10574511005-MSD  
 Run File Name Q210831B\_041  
 Analyzed 09/01/2021 04:20  
 Injected By NH

Instrument ID 10LCMS01  
 Column ID 112EB00094  
 Ical ID 210831A01  
 Level

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.75	4.82	
PFPeA	N/A	N/A	5.59	5.63	R
HFPO-DA	0.64	0.39	6.57	6.61	IR
PFBS	0.40	0.44	6.54	6.54	
PFHxA	0.07	0.07	6.28	6.32	R
4:2 FTS	1.70	0.78	5.99	5.99	IR
PFPeS	0.45	0.43	7.32	7.32	
PFHpA	0.44	0.43	6.96	6.98	
DONA	0.42	0.44	7.20	7.21	R
PFHxS	0.27	0.30	8.05	8.05	
PFOA	0.25	0.26	7.63	7.63	
6:2 FTS	1.00	0.99	7.27	7.28	
PFHpS	0.45	0.33	8.77	8.79	
PFNA	0.26	0.29	8.30	8.32	
PFOSAm	N/A	N/A	11.42	11.40	
PFOS	0.22	0.19	9.46	9.46	
MeFOSA	0.56	0.55	13.27	13.29	
PFDA	0.18	0.20	8.98	9.02	
EtFOSAm	0.51	0.48	13.72	13.73	
8:2 FTS	1.30	1.60	8.59	8.62	
9-CI-PF3ON	0.04	0.03	9.95	10.00	
PFNS	0.21	0.24	10.13	10.16	
PFUnDA	0.18	0.16	9.65	9.71	
NMeFOSAA	0.70	0.82	8.86	8.89	
NEtFOSAA	0.41	0.50	9.17	9.15	
PFDS	0.24	0.26	10.79	10.82	
PFDOA	0.20	0.16	10.32	10.44	
MeFOSE	N/A	N/A	13.08	13.10	
10:2 FTS	1.90	1.30	9.93	9.95	JR
EtFOSE	0.00	0.00	13.56	13.58	
11-CI-PF3OUdS	0.03	0.03	11.26	11.29	
PFTrDA	0.18	0.19	10.99	11.02	
PFDoS	0.25	0.26	12.00	12.05	R
PFTDA	0.14	0.14	11.63	11.66	
PFHXDA	0.12	0.14	12.73	12.78	
PFODA	0.22	0.16	13.51	13.54	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Bismarck Influent	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494001	Total Amount Extracted	105mL
Lab File ID	A210824A_021	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_014
Collected	08/06/2021 10:57	Ending CCal File	A210824A_025
Received	08/13/2021 08:50	Blank File	A210824A_015

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	71	4.8	4.8	1.1	1	375-22-4	
PFPeA	ND	4.8	4.8	1.0	1	2706-90-3	
HFPO-DA	ND	4.8	4.8	1.3	1	13252-13-6	
PFBS	5.0	4.2	4.2	1.1	1	375-73-5	
PFHxA	ND	4.8	4.8	1.0	1	307-24-4	
4:2 FTS	ND	4.5	4.5	1.3	1	757124-72-4	
PFPeS	ND	4.5	4.5	1.1	1	2706-91-4	
PFHpA	ND	4.8	4.8	1.3	1	375-85-9	
DONA	ND	4.5	4.5	1.2	1	919005-14-4	
PFHxS	ND	4.4	4.4	1.2	1	355-46-4	
PFOA	ND	4.8	4.8	1.4	1	335-67-1	
6:2 FTS	ND	4.5	4.5	1.5	1	27619-97-2	
PFHpS	ND	4.5	4.5	0.98	1	375-92-8	
PFNA	ND	4.8	4.8	1.8	1	375-95-1	
PFOSAm	ND	4.8	4.8	2.0	1	754-91-6	
PFOS	ND	4.4	4.4	1.3	1	1763-23-1	
MeFOSA	ND	4.8	4.8	1.2	1	31506-32-8	
PFDA	ND	4.8	4.8	1.3	1	335-76-2	
EtFOSAm	ND	4.8	4.8	1.5	1	4151-50-2	
8:2 FTS	ND	4.6	4.6	1.6	1	39108-34-4	
9-CI-PF3ON	ND	4.5	4.5	0.73	1	756426-58-1	
PFNS	ND	4.6	4.6	1.1	1	68259-12-1	
PFUnDA	ND	4.8	4.8	1.3	1	2058-94-8	
NMeFOSAA	ND	4.8	4.8	1.0	1	2355-31-9	
NEtFOSAA	ND	4.8	4.8	1.3	1	2991-50-6	
PFDS	ND	4.6	4.6	1.1	1	335-77-3	
PFDOA	ND	4.8	4.8	1.2	1	307-55-1	
MeFOSE	ND	4.8	4.8	0.79	1	24448-09-7	
10:2 FTS	ND	4.6	4.6	1.8	1	120226-60-0	
EtFOSE	ND	4.8	4.8	1.2	1	1691-99-2	
11-CI-PF3OUdS	ND	4.5	4.5	1.0	1	763051-92-9	
PFTTrDA	ND	4.8	4.8	1.5	1	72629-94-8	
PFDoS	ND	4.6	4.6	1.1	1	79780-39-5	
PFTDA	ND	4.8	4.8	1.1	1	376-06-7	
PFHXDA	ND	4.8	4.8	0.87	1	67905-19-5	
PFODA	ND	4.8	4.8	1.4	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Bismarck Influent	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494001	Total Amount Extracted	105mL
Lab File ID	A210824A_021	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_014
Collected	08/06/2021 10:57	Ending CCal File	A210824A_025
Received	08/13/2021 08:50	Blank File	A210824A_015

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	48	46	97	50-150	
13C4_PFOA	48	51	106	50-150	
13C2_PFDA	48	56	118	50-150	
13C4_PFOS	46	51	111	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBa	48	49	102	50-150	
13C5_PFPeA	48	48	100	50-150	
13C3_PFBs	44	49	109	50-150	
13C2_4:2Fts	45	76	170	50-150	R
13C5_PFHxA	48	43	90	50-150	
13C4_PFHpA	48	51	107	50-150	
13C3_PFHxS	45	53	117	50-150	
13C2_6:2Fts	45	76	167	50-150	R
13C8_PFOA	48	50	104	50-150	
13C9_PfNA	48	52	110	50-150	
13C8_PFOs	46	45	99	50-150	
13C2_8:2Fts	46	69	150	50-150	
13C6_PFDA	48	52	108	50-150	
d3-MeFOSAA	48	78	163	50-150	R
13C8_PFOsA	48	46	96	50-150	
d5-EtFOSAA	48	74	154	50-150	R
13C7_PFUdA	48	54	114	50-150	
13C2_PFDoA	48	50	104	50-150	
13C2_PFTeDA	48	37	78	50-150	
13C3_HFPO-DA	48	50	104	50-150	
13C2_PFHxDA	48	29	62	50-150	
d7-N-MeFOSE	48	30	63	10-150	
d9-N-EtFOSE	48	31	64	10-150	
d3-N-MeFOSA	48	18	38	10-150	
d5-N-EtFOSA	48	17	35	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Bismarck Influent	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494001	Total Amount Extracted	105mL
Lab File ID	A210824A_021	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_014
Collected	08/06/2021 10:57	Ending CCal File	A210824A_025
Received	08/13/2021 08:50	Blank File	A210824A_015

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.01	4.99	
13C4 PFOA	N/A	N/A	5.99	6.00	
13C2 PFDA	N/A	N/A	6.87	6.88	
13C4 PFOS	N/A	N/A	7.18	7.20	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.57	3.56	
13C5 PFPeA	N/A	N/A	4.42	4.42	
13C3 PFBS	N/A	N/A	5.20	5.18	
13C2 4:2FTS	N/A	N/A	4.79	4.80	R
13C5 PFHxA	N/A	N/A	5.02	5.04	
13C4 PFHpA	N/A	N/A	5.52	5.51	
13C3 PFHxS	N/A	N/A	6.27	6.28	
13C2 6:2FTS	N/A	N/A	5.75	5.77	R
13C8 PFOA	N/A	N/A	5.99	6.00	
13C9 PFNA	N/A	N/A	6.43	6.44	
13C8 PFOS	N/A	N/A	7.18	7.20	
13C2 8:2FTS	N/A	N/A	6.62	6.60	
13C6 PFDA	N/A	N/A	6.87	6.88	
d3-MeFOSAA	N/A	N/A	6.82	6.83	R
13C8 PFOSA	N/A	N/A	8.78	8.78	
d5-EtFOSAA	N/A	N/A	7.03	7.02	R
13C7 PFUdA	N/A	N/A	7.30	7.32	
13C2 PFDoA	N/A	N/A	7.73	7.76	
13C2 PFTeDA	N/A	N/A	8.59	8.58	
13C3 HFPO-DA	N/A	N/A	5.22	5.21	
13C2 PFHxDA	N/A	N/A	9.35	9.33	
d7-N-MeFOSE	N/A	N/A	10.05	10.02	
d9-N-EtFOSE	N/A	N/A	10.68	10.64	
d3-N-MeFOSA	N/A	N/A	10.31	10.28	
d5-N-EtFOSA	N/A	N/A	11.00	11.00	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Bismarck Influent	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494001	Total Amount Extracted	105mL
Lab File ID	A210824A_021	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_014
Collected	08/06/2021 10:57	Ending CCal File	A210824A_025
Received	08/13/2021 08:50	Blank File	A210824A_015

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	3.62	3.58	
PFPeA	N/A	N/A	4.42	4.40	
HFPO-DA	0.000	0.470	0.00	5.22	
PFBS	0.064	0.320	5.23	5.26	I
PFHxA	0.082	0.0670	5.02	5.00	
4:2 FTS	0.000	0.550	0.00	4.80	
PFPeS	0.000	0.300	0.00	5.76	
PFHpA	0.260	0.310	5.53	5.52	
DONA	0.000	0.520	0.00	5.68	
PFHxS	0.400	0.250	6.27	6.29	
PFOA	0.420	0.410	5.99	5.97	
6:2 FTS	0.600	0.560	5.76	5.74	
PFHpS	0.000	0.210	0.00	6.76	
PFNA	0.000	0.170	0.00	6.43	
PFOSAm	N/A	N/A	8.78	8.75	
PFOS	0.000	0.270	0.00	7.27	
MeFOSA	0.000	0.950	0.00	10.32	
PFDA	0.000	0.0860	0.00	6.89	
EtFOSAm	0.000	0.700	0.00	11.04	
8:2 FTS	0.000	0.540	6.62	6.64	
9-Cl-PF3ON	0.000	0.0200	0.00	7.53	
PFNS	0.000	0.250	0.00	7.62	
PFUnDA	0.000	0.0990	0.00	7.31	
NMeFOSAA	0.490	0.630	6.82	6.90	
NEtFOSAA	0.820	0.740	7.04	7.03	
PFDS	0.000	0.250	0.00	8.07	
PFDOA	0.000	0.140	0.00	7.76	
MeFOSE	N/A	N/A	0.00	10.12	
10:2 FTS	0.000	0.660	0.00	7.51	
EtFOSE	0.000	0.000	0.00	10.70	
11-Cl-PF3OUdS	0.000	0.0130	0.00	8.38	
PFTrDA	0.000	0.160	0.00	8.19	
PFDoS	0.000	0.240	0.00	8.83	
PFTDA	0.000	0.140	0.00	8.58	
PFHXDA	0.060	0.120	9.35	9.35	
PFODA	0.000	0.0980	0.00	10.37	

**REPORT OF LABORATORY ANALYSIS**

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





**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	Bismarck Biosolids	Extraction Date	08/24/2021 10:00
Lab Sample ID	10574494002	Total Amount Extracted	5.05g
Lab File ID	Q210827A_018	Ical ID	210826A01
Matrix	Soil	CCal File	Q210827A_017
Collected	08/06/2021 11:53	Ending CCal File	Q210827A_028
Received	08/13/2021 08:50	Blank File	Q210827A_015

Compound	Concentration (ng/Kg)	QL (ng/Kg)	RL (ng/Kg)	DL (ng/Kg)	Dil.	CAS No.	Qual.
PFBA	ND	99	99	23	1	375-22-4	
PFPeA	ND	99	99	26	1	2706-90-3	
HFPO-DA	ND	99	99	29	1	13252-13-6	
PFBS	340 I	88	88	22	1	375-73-5	
PFHxA	330	99	99	30	1	307-24-4	
4:2 FTS	ND	93	93	32	1	757124-72-4	
PFPeS	ND	93	93	18	1	2706-91-4	
PFHpA	ND	99	99	22	1	375-85-9	
DONA	ND	94	94	38	1	919005-14-4	
PFHxS	ND	90	90	22	1	355-46-4	
PFOA	ND	99	99	22	1	335-67-1	
6:2 FTS	ND	94	94	32	1	27619-97-2	
PFHpS	140 I	94	94	25	1	375-92-8	
PFNA	ND	99	99	28	1	375-95-1	
PFOSAm	ND	99	99	23	1	754-91-6	
PFOS	150	92	92	28	1	1763-23-1	
MeFOSA	ND	99	99	25	1	31506-32-8	
PFDA	ND	99	99	21	1	335-76-2	
EtFOSAm	ND	99	99	23	1	4151-50-2	
8:2 FTS	ND	95	95	26	1	39108-34-4	
9-CI-PF3ON	ND	92	92	14	1	756426-58-1	
PFNS	ND	95	95	18	1	68259-12-1	
PFUnDA	ND	99	99	28	1	2058-94-8	
NMeFOSAA	450	99	99	23	1	2355-31-9	
NEtFOSAA	300	99	99	24	1	2991-50-6	
PFDS	ND	96	96	25	1	335-77-3	
PFDOA	ND	99	99	26	1	307-55-1	
MeFOSE	1100	99	99	23	1	24448-09-7	
10:2 FTS	ND	96	96	36	1	120226-60-0	
EtFOSE	230	99	99	25	1	1691-99-2	
11-CI-PF3OUdS	ND	93	93	16	1	763051-92-9	
PFTTrDA	ND	99	99	21	1	72629-94-8	
PFDoS	ND	96	96	30	1	79780-39-5	
PFTDA	ND	99	99	32	1	376-06-7	
PFHXDA	ND	99	99	35	1	67905-19-5	
PFODA	ND	99	99	25	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Bismarck Biosolids	Extraction Date	08/24/2021 10:00
Lab Sample ID	10574494002	Total Amount Extracted	5.05g
Lab File ID	Q210827A_018	Ical ID	210826A01
Matrix	Soil	CCal File	Q210827A_017
Collected	08/06/2021 11:53	Ending CCal File	Q210827A_028
Received	08/13/2021 08:50	Blank File	Q210827A_015

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	990	1200	125	50-150	
13C4_PFOA	990	950	96	50-150	
13C2_PFDA	990	680	68	50-150	
13C4_PFOS	950	600	63	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBa	990	690	70	50-150	
13C5_PFPeA	990	950	96	50-150	
13C3_PFBs	920	840	92	50-150	
13C2_4:2Fts	930	3400	370	50-150	R
13C5_PFHxA	990	880	89	50-150	
13C4_PFHpA	990	800	81	50-150	
13C3_PFHxS	940	750	80	50-150	
13C2_6:2Fts	940	2000	208	50-150	R
13C8_PFOA	990	600	61	50-150	
13C9_PFNa	990	630	64	50-150	
13C8_PFOs	950	410	43	50-150	R
13C2_8:2Fts	950	1600	172	50-150	R
13C6_PFDA	990	380	38	50-150	R
d3-MeFOSAA	990	350	35	50-150	R
13C8_PFOsA	990	520	53	50-150	
d5-EtFOSAA	990	470	47	50-150	R
13C7_PFUdA	990	310	31	50-150	R
13C2_PFDaA	990	300	30	50-150	R
13C2_PFTeDA	990	380	38	50-150	R
13C3_HFPO-DA	990	750	75	50-150	
13C2_PFHxDA	990	220	22	50-150	R
d7-N-MeFOSE	990	430	43	10-150	
d9-N-EtFOSE	990	400	40	10-150	
d3-N-MeFOSA	990	150	16	10-150	
d5-N-EtFOSA	990	140	14	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Bismarck Biosolids	Extraction Date	08/24/2021 10:00
Lab Sample ID	10574494002	Total Amount Extracted	5.05g
Lab File ID	Q210827A_018	Ical ID	210826A01
Matrix	Soil	CCal File	Q210827A_017
Collected	08/06/2021 11:53	Ending CCal File	Q210827A_028
Received	08/13/2021 08:50	Blank File	Q210827A_015

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.29	6.29	
13C4 PFOA	N/A	N/A	7.65	7.66	
13C2 PFDA	N/A	N/A	8.95	9.06	
13C4 PFOS	N/A	N/A	9.30	9.30	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.76	4.80	
13C5 PFPeA	N/A	N/A	5.60	5.60	
13C3 PFBS	N/A	N/A	6.56	6.55	
13C2 4:2FTS	N/A	N/A	6.00	5.99	R
13C5 PFHxA	N/A	N/A	6.30	6.28	
13C4 PFHpA	N/A	N/A	6.97	6.96	
13C3 PFHxS	N/A	N/A	8.07	8.08	
13C2 6:2FTS	N/A	N/A	7.29	7.29	R
13C8 PFOA	N/A	N/A	7.64	7.64	
13C9 PFNA	N/A	N/A	8.32	8.33	
13C8 PFOS	N/A	N/A	9.31	9.31	R
13C2 8:2FTS	N/A	N/A	8.61	8.63	R
13C6 PFDA	N/A	N/A	8.95	9.03	R
d3-MeFOSAA	N/A	N/A	8.83	8.90	R
13C8 PFOSA	N/A	N/A	11.40	11.42	
d5-EtFOSAA	N/A	N/A	9.13	9.21	R
13C7 PFUdA	N/A	N/A	9.53	9.72	R
13C2 PFDoA	N/A	N/A	10.23	10.41	R
13C2 PFTeDA	N/A	N/A	11.70	11.71	R
13C3 HFPO-DA	N/A	N/A	6.57	6.56	
13C2 PFHxDA	N/A	N/A	12.82	12.87	R
d7-N-MeFOSE	N/A	N/A	13.07	13.08	
d9-N-EtFOSE	N/A	N/A	13.54	13.53	
d3-N-MeFOSA	N/A	N/A	13.27	13.26	
d5-N-EtFOSA	N/A	N/A	13.71	13.70	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Bismarck Biosolids	Extraction Date	08/24/2021 10:00
Lab Sample ID	10574494002	Total Amount Extracted	5.05g
Lab File ID	Q210827A_018	Ical ID	210826A01
Matrix	Soil	CCal File	Q210827A_017
Collected	08/06/2021 11:53	Ending CCal File	Q210827A_028
Received	08/13/2021 08:50	Blank File	Q210827A_015

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.76	4.97	
PFPeA	N/A	N/A	5.61	5.63	
HFPO-DA	0.000	0.350	0.00	6.61	
PFBS	0.006	0.390	6.53	6.54	I
PFHxA	0.093	0.0930	6.31	6.32	
4:2 FTS	0.000	1.10	0.00	5.99	
PFPeS	0.000	0.410	0.00	7.32	
PFHpA	0.300	0.620	6.98	6.96	
DONA	0.000	0.490	0.00	7.25	
PFHxS	0.000	0.300	0.00	8.05	
PFOA	0.250	0.290	7.66	7.66	
6:2 FTS	1.60	1.10	7.29	7.30	
PFHpS	0.004	0.450	8.77	8.79	I
PFNA	0.430	0.290	8.33	8.32	
PFOSAm	N/A	N/A	11.41	11.40	
PFOS	0.190	0.230	9.32	9.46	
MeFOSA	0.000	0.540	0.00	13.29	
PFDA	0.220	0.220	8.96	9.02	
EtFOSAm	0.000	0.510	0.00	13.73	
8:2 FTS	1.80	1.50	8.61	8.62	
9-Cl-PF3ON	0.000	0.0420	0.00	10.00	
PFNS	0.000	0.220	10.12	10.16	
PFUnDA	0.170	0.160	9.54	9.71	
NMeFOSAA	0.830	0.690	8.84	8.89	
NEtFOSAA	0.440	0.510	9.14	9.20	
PFDS	0.000	0.250	10.86	10.92	
PFDOA	0.000	0.210	10.23	10.44	
MeFOSE	N/A	N/A	13.11	13.10	
10:2 FTS	0.000	1.60	0.00	9.95	
EtFOSE	0.000	0.000	13.59	13.51	
11-Cl-PF3OUdS	0.000	0.0310	11.35	11.37	
PFTTrDA	0.150	0.220	11.04	11.10	
PFDoS	0.000	0.250	12.10	12.12	
PFTDA	0.220	0.140	11.70	11.66	
PFHXDA	0.098	0.160	12.83	12.87	
PFODA	0.510	0.190	13.57	13.62	

**REPORT OF LABORATORY ANALYSIS**

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



**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	Bismarck Effluent	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494003	Total Amount Extracted	253mL
Lab File ID	A210824A_022	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_014
Collected	08/06/2021 12:16	Ending CCal File	A210824A_025
Received	08/13/2021 08:50	Blank File	A210824A_015

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	5.1	2.0	2.0	0.44	1	375-22-4	
PFPeA	5.6	2.0	2.0	0.43	1	2706-90-3	
HFPO-DA	ND	2.0	2.0	0.52	1	13252-13-6	
PFBS	ND	1.7	1.7	0.47	1	375-73-5	
PFHxA	18	2.0	2.0	0.43	1	307-24-4	
4:2 FTS	ND	1.8	1.8	0.55	1	757124-72-4	
PFPeS	ND	1.9	1.9	0.47	1	2706-91-4	
PFHpA	ND	2.0	2.0	0.54	1	375-85-9	
DONA	ND	1.9	1.9	0.51	1	919005-14-4	
PFHxS	ND	1.8	1.8	0.50	1	355-46-4	
PFOA	3.0	2.0	2.0	0.58	1	335-67-1	
6:2 FTS	1.9	1.9	1.9	0.64	1	27619-97-2	
PFHpS	ND	1.9	1.9	0.41	1	375-92-8	
PFNA	ND	2.0	2.0	0.73	1	375-95-1	
PFOSAm	ND	2.0	2.0	0.81	1	754-91-6	
PFOS	3.3	1.8	1.8	0.54	1	1763-23-1	
MeFOSA	ND	2.0	2.0	0.50	1	31506-32-8	
PFDA	ND	2.0	2.0	0.56	1	335-76-2	
EtFOSAm	ND	2.0	2.0	0.60	1	4151-50-2	
8:2 FTS	ND	1.9	1.9	0.64	1	39108-34-4	
9-CI-PF3ON	ND	1.8	1.8	0.30	1	756426-58-1	
PFNS	ND	1.9	1.9	0.44	1	68259-12-1	
PFUnDA	ND	2.0	2.0	0.53	1	2058-94-8	
NMeFOSAA	2.2	2.0	2.0	0.43	1	2355-31-9	
NEtFOSAA	ND	2.0	2.0	0.55	1	2991-50-6	
PFDS	ND	1.9	1.9	0.44	1	335-77-3	
PFDOA	ND	2.0	2.0	0.48	1	307-55-1	
MeFOSE	ND	2.0	2.0	0.32	1	24448-09-7	
10:2 FTS	ND	1.9	1.9	0.73	1	120226-60-0	
EtFOSE	ND	2.0	2.0	0.49	1	1691-99-2	
11-CI-PF3OUdS	ND	1.9	1.9	0.43	1	763051-92-9	
PFTTrDA	ND	2.0	2.0	0.61	1	72629-94-8	
PFDoS	ND	1.9	1.9	0.45	1	79780-39-5	
PFTDA	ND	2.0	2.0	0.47	1	376-06-7	
PFHXDA	ND	2.0	2.0	0.36	1	67905-19-5	
PFODA	ND	2.0	2.0	0.58	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Bismarck Effluent	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494003	Total Amount Extracted	253mL
Lab File ID	A210824A_022	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_014
Collected	08/06/2021 12:16	Ending CCal File	A210824A_025
Received	08/13/2021 08:50	Blank File	A210824A_015

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	20	21	106	50-150	
13C4_PFOA	20	21	108	50-150	
13C2_PFDA	20	22	110	50-150	
13C4_PFOS	19	23	119	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBa	20	20	100	50-150	
13C5_PFPeA	20	20	101	50-150	
13C3_PFBs	18	19	104	50-150	
13C2_4:2Fts	18	34	184	50-150	R
13C5_PFHxA	20	19	96	50-150	
13C4_PFHpA	20	21	106	50-150	
13C3_PFHxS	19	20	109	50-150	
13C2_6:2Fts	19	25	134	50-150	
13C8_PFOA	20	21	104	50-150	
13C9_PfNA	20	20	100	50-150	
13C8_PFOs	19	19	98	50-150	
13C2_8:2Fts	19	29	152	50-150	R
13C6_PFDA	20	21	107	50-150	
d3-MeFOSAA	20	22	109	50-150	
13C8_PFOsA	20	17	86	50-150	
d5-EtFOSAA	20	23	117	50-150	
13C7_PFUdA	20	21	109	50-150	
13C2_PFDoA	20	16	80	50-150	
13C2_PFTeDA	20	8.3	42	50-150	R
13C3_HFPO-DA	20	20	101	50-150	
13C2_PFHxDA	20	8.8	44	50-150	R
d7-N-MeFOSE	20	13	65	10-150	
d9-N-EtFOSE	20	12	61	10-150	
d3-N-MeFOSA	20	11	55	10-150	
d5-N-EtFOSA	20	11	54	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Bismarck Effluent	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494003	Total Amount Extracted	253mL
Lab File ID	A210824A_022	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_014
Collected	08/06/2021 12:16	Ending CCal File	A210824A_025
Received	08/13/2021 08:50	Blank File	A210824A_015

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.01	4.99	
13C4 PFOA	N/A	N/A	5.98	6.00	
13C2 PFDA	N/A	N/A	6.87	6.88	
13C4 PFOS	N/A	N/A	7.18	7.20	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.57	3.56	
13C5 PFPeA	N/A	N/A	4.42	4.42	
13C3 PFBS	N/A	N/A	5.20	5.18	
13C2 4:2FTS	N/A	N/A	4.79	4.80	R
13C5 PFHxA	N/A	N/A	5.01	5.04	
13C4 PFHpA	N/A	N/A	5.52	5.51	
13C3 PFHxS	N/A	N/A	6.27	6.28	
13C2 6:2FTS	N/A	N/A	5.75	5.77	
13C8 PFOA	N/A	N/A	5.98	6.00	
13C9 PFNA	N/A	N/A	6.43	6.44	
13C8 PFOS	N/A	N/A	7.18	7.20	
13C2 8:2FTS	N/A	N/A	6.62	6.60	R
13C6 PFDA	N/A	N/A	6.87	6.88	
d3-MeFOSAA	N/A	N/A	6.82	6.83	
13C8 PFOSA	N/A	N/A	8.77	8.78	
d5-EtFOSAA	N/A	N/A	7.03	7.02	
13C7 PFUdA	N/A	N/A	7.30	7.32	
13C2 PFDoA	N/A	N/A	7.74	7.76	
13C2 PFTeDA	N/A	N/A	8.59	8.58	R
13C3 HFPO-DA	N/A	N/A	5.22	5.21	
13C2 PFHxDA	N/A	N/A	9.35	9.33	R
d7-N-MeFOSE	N/A	N/A	10.05	10.02	
d9-N-EtFOSE	N/A	N/A	10.68	10.64	
d3-N-MeFOSA	N/A	N/A	10.30	10.28	
d5-N-EtFOSA	N/A	N/A	10.99	11.00	

**REPORT OF LABORATORY ANALYSIS**

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





**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Bismarck Effluent	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494003	Total Amount Extracted	253mL
Lab File ID	A210824A_022	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_014
Collected	08/06/2021 12:16	Ending CCal File	A210824A_025
Received	08/13/2021 08:50	Blank File	A210824A_015

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	3.57	3.58	
PFPeA	N/A	N/A	4.42	4.40	
HFPO-DA	0.000	0.470	0.00	5.22	
PFBS	0.270	0.320	5.20	5.26	
PFHxA	0.064	0.0670	5.02	5.00	
4:2 FTS	0.000	0.550	4.81	4.80	
PFPeS	0.000	0.300	5.78	5.76	
PFHpA	0.310	0.310	5.53	5.52	
DONA	0.000	0.520	0.00	5.68	
PFHxS	0.230	0.250	6.27	6.29	
PFOA	0.450	0.410	5.99	5.97	
6:2 FTS	0.710	0.560	5.76	5.74	
PFHpS	0.000	0.210	0.00	6.76	
PFNA	0.190	0.170	6.43	6.43	
PFOSAm	N/A	N/A	8.78	8.75	
PFOS	0.110	0.270	7.20	7.27	I
MeFOSA	0.000	0.950	0.00	10.32	
PFDA	0.110	0.0860	6.87	6.89	
EtFOSAm	0.000	0.700	0.00	11.04	
8:2 FTS	0.450	0.540	6.62	6.64	
9-Cl-PF3ON	0.000	0.0200	0.00	7.53	
PFNS	0.000	0.250	0.00	7.62	
PFUnDA	0.068	0.0990	7.30	7.31	
NMeFOSAA	0.670	0.630	6.82	6.90	
NEtFOSAA	0.690	0.740	7.04	7.03	
PFDS	0.190	0.250	8.05	8.07	
PFDOA	0.170	0.140	7.74	7.76	
MeFOSE	N/A	N/A	10.09	10.12	
10:2 FTS	0.000	0.660	0.00	7.51	
EtFOSE	0.000	0.000	0.00	10.70	
11-Cl-PF3OUdS	0.000	0.0130	0.00	8.38	
PFTTrDA	0.000	0.160	0.00	8.19	
PFDoS	0.000	0.240	0.00	8.83	
PFTDA	0.000	0.140	0.00	8.58	
PFHXDA	0.170	0.120	9.35	9.35	
PFODA	0.000	0.0980	0.00	10.37	

**REPORT OF LABORATORY ANALYSIS**

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





**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	Bismarck Leachate	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494004	Total Amount Extracted	107mL
Lab File ID	A210824A_023	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_014
Collected	08/06/2021 12:48	Ending CCal File	A210824A_025
Received	08/13/2021 08:50	Blank File	A210824A_015

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	2700 D	93	93	21	20	375-22-4	
PFPeA	2500 D	93	93	20	20	2706-90-3	
HFPO-DA	ND	4.7	4.7	1.2	1	13252-13-6	
PFBS	260	4.1	4.1	1.1	1	375-73-5	
PFHxA	4200 D	93	93	20	20	307-24-4	
4:2 FTS	12	4.4	4.4	1.3	1	757124-72-4	
PFPeS	22	4.4	4.4	1.1	1	2706-91-4	
PFHpA	800 D	93	93	26	20	375-85-9	
DONA	ND	4.4	4.4	1.2	1	919005-14-4	
PFHxS	520 D	85	85	24	20	355-46-4	
PFOA	1200 D	93	93	27	20	335-67-1	
6:2 FTS	210	4.4	4.4	1.5	1	27619-97-2	
PFHpS	ND	4.4	4.4	0.96	1	375-92-8	
PFNA	43	4.7	4.7	1.7	1	375-95-1	
PFOSAm	ND	4.7	4.7	1.9	1	754-91-6	
PFOS	64	4.3	4.3	1.3	1	1763-23-1	
MeFOSA	ND	4.7	4.7	1.2	1	31506-32-8	
PFDA	10	4.7	4.7	1.3	1	335-76-2	
EtFOSAm	ND	4.7	4.7	1.4	1	4151-50-2	
8:2 FTS	11	4.5	4.5	1.5	1	39108-34-4	
9-CI-PF3ON	ND	4.3	4.3	0.71	1	756426-58-1	
PFNS	ND	4.5	4.5	1.0	1	68259-12-1	
PFUnDA	ND	4.7	4.7	1.3	1	2058-94-8	
NMeFOSAA	45	4.7	4.7	1.0	1	2355-31-9	
NEtFOSAA	12	4.7	4.7	1.3	1	2991-50-6	
PFDS	ND	4.5	4.5	1.0	1	335-77-3	
PFDOA	ND	4.7	4.7	1.1	1	307-55-1	
MeFOSE	ND	4.7	4.7	0.77	1	24448-09-7	
10:2 FTS	ND	4.5	4.5	1.7	1	120226-60-0	
EtFOSE	ND	4.7	4.7	1.2	1	1691-99-2	
11-CI-PF3OUdS	ND	4.4	4.4	1.0	1	763051-92-9	
PFTTrDA	ND	4.7	4.7	1.4	1	72629-94-8	
PFDoS	ND	4.5	4.5	1.1	1	79780-39-5	
PFTDA	ND	4.7	4.7	1.1	1	376-06-7	
PFHXDA	ND	4.7	4.7	0.84	1	67905-19-5	
PFODA	ND	4.7	4.7	1.4	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Bismarck Leachate	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494004	Total Amount Extracted	107mL
Lab File ID	A210824A_023	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_014
Collected	08/06/2021 12:48	Ending CCal File	A210824A_025
Received	08/13/2021 08:50	Blank File	A210824A_015

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	47	33	71	50-150	
13C4_PFOA	47	51	109	50-150	
13C2_PFDA	47	56	121	50-150	
13C4_PFOS	45	52	118	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	47	6.6	14	50-150	R
13C5_PFPeA	47	26	56	50-150	
13C3_PFBS	43	42	97	50-150	
13C2_4:2FTS	44	110	252	50-150	R
13C5_PFHxA	47	30	65	50-150	
13C4_PFHpA	47	48	103	50-150	
13C3_PFHxS	44	48	109	50-150	
13C2_6:2FTS	44	170	382	50-150	R
13C8_PFOA	47	50	107	50-150	
13C9_PFNA	47	58	125	50-150	
13C8_PFOS	45	44	100	50-150	
13C2_8:2FTS	45	160	354	50-150	R
13C6_PFDA	47	55	118	50-150	
d3-MeFOSAA	47	63	136	50-150	
13C8_PFOSA	47	43	93	50-150	
d5-EtFOSAA	47	72	154	50-150	R
13C7_PFUdA	47	53	114	50-150	
13C2_PFDoA	47	48	102	50-150	
13C2_PFTeDA	47	25	54	50-150	
13C3_HFPO-DA	47	39	84	50-150	
13C2_PFHxDA	47	19	41	50-150	R
d7-N-MeFOSE	47	32	70	10-150	
d9-N-EtFOSE	47	30	64	10-150	
d3-N-MeFOSA	47	31	67	10-150	
d5-N-EtFOSA	47	30	65	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Bismarck Leachate	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494004	Total Amount Extracted	107mL
Lab File ID	A210824A_023	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_014
Collected	08/06/2021 12:48	Ending CCal File	A210824A_025
Received	08/13/2021 08:50	Blank File	A210824A_015

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.01	4.99	
13C4 PFOA	N/A	N/A	5.98	6.00	
13C2 PFDA	N/A	N/A	6.86	6.88	
13C4 PFOS	N/A	N/A	7.18	7.20	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.56	3.56	R
13C5 PFPeA	N/A	N/A	4.41	4.42	
13C3 PFBS	N/A	N/A	5.19	5.18	
13C2 4:2FTS	N/A	N/A	4.79	4.80	R
13C5 PFHxA	N/A	N/A	5.01	5.04	
13C4 PFHpA	N/A	N/A	5.52	5.51	
13C3 PFHxS	N/A	N/A	6.27	6.28	
13C2 6:2FTS	N/A	N/A	5.75	5.77	R
13C8 PFOA	N/A	N/A	5.98	6.00	
13C9 PFNA	N/A	N/A	6.43	6.44	
13C8 PFOS	N/A	N/A	7.18	7.20	
13C2 8:2FTS	N/A	N/A	6.62	6.60	R
13C6 PFDA	N/A	N/A	6.87	6.88	
d3-MeFOSAA	N/A	N/A	6.82	6.83	
13C8 PFOSA	N/A	N/A	8.77	8.78	
d5-EtFOSAA	N/A	N/A	7.03	7.02	R
13C7 PFUdA	N/A	N/A	7.30	7.32	
13C2 PFDoA	N/A	N/A	7.74	7.76	
13C2 PFTeDA	N/A	N/A	8.59	8.58	
13C3 HFPO-DA	N/A	N/A	5.21	5.21	
13C2 PFHxDA	N/A	N/A	9.35	9.33	R
d7-N-MeFOSE	N/A	N/A	10.05	10.02	
d9-N-EtFOSE	N/A	N/A	10.68	10.64	
d3-N-MeFOSA	N/A	N/A	10.31	10.28	
d5-N-EtFOSA	N/A	N/A	11.00	11.00	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Bismarck Leachate	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494004	Total Amount Extracted	107mL
Lab File ID	A210824A_023	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_014
Collected	08/06/2021 12:48	Ending CCal File	A210824A_025
Received	08/13/2021 08:50	Blank File	A210824A_015

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	3.58	3.58	D
PFPeA	N/A	N/A	4.42	4.40	D
HFPO-DA	0.000	0.470	5.22	5.22	
PFBS	0.320	0.320	5.20	5.26	
PFHxA	0.066	0.0670	5.02	5.00	D
4:2 FTS	0.760	0.550	4.79	4.80	
PFPeS	0.360	0.300	5.77	5.76	
PFHpA	0.300	0.280	5.52	5.52	D
DONA	0.000	0.520	0.00	5.68	
PFHxS	0.300	0.240	6.28	6.29	D
PFOA	0.400	0.420	5.99	5.97	D
6:2 FTS	0.560	0.560	5.75	5.74	
PFHpS	0.310	0.210	6.74	6.76	
PFNA	0.190	0.170	6.43	6.43	
PFOSAm	N/A	N/A	8.78	8.75	
PFOS	0.210	0.270	7.16	7.27	
MeFOSA	0.000	0.950	0.00	10.32	
PFDA	0.077	0.0860	6.87	6.89	
EtFOSAm	0.000	0.700	0.00	11.04	
8:2 FTS	0.670	0.540	6.63	6.64	
9-Cl-PF3ON	0.000	0.0200	0.00	7.53	
PFNS	0.000	0.250	0.00	7.62	
PFUnDA	0.100	0.0990	7.30	7.31	
NMeFOSAA	0.560	0.630	6.82	6.90	
NEtFOSAA	0.770	0.740	7.04	7.03	
PFDS	0.250	0.250	8.04	8.07	
PFDOA	0.100	0.140	7.73	7.76	
MeFOSE	N/A	N/A	0.00	10.12	
10:2 FTS	0.000	0.660	0.00	7.51	
EtFOSE	0.000	0.000	0.00	10.70	
11-Cl-PF3OUdS	0.000	0.0130	0.00	8.38	
PFTDA	0.000	0.160	0.00	8.19	
PFDoS	0.000	0.240	0.00	8.83	
PFTDA	0.000	0.140	0.00	8.58	
PFHXDA	0.200	0.120	9.35	9.35	
PFODA	0.000	0.0980	0.00	10.37	

**REPORT OF LABORATORY ANALYSIS**

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



**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 Williston Influent  
 Lab Sample ID 10574494005  
 Lab File ID A210825A\_007  
 Matrix Non\_Potable\_Water  
 Collected 08/11/2021 11:25  
 Received 08/13/2021 08:50

Extraction Date 08/20/2021 13:30  
 Total Amount Extracted 53.2mL  
 Ical ID 210823B03  
 CCal File A210825A\_005  
 Ending CCal File A210825A\_012  
 Blank File A210824A\_015

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	69	9.4	9.4	2.1	1	375-22-4	
PFPeA	170	9.4	9.4	2.1	1	2706-90-3	
HFPO-DA	ND	9.4	9.4	2.5	1	13252-13-6	
PFBS	92	8.3	8.3	2.2	1	375-73-5	
PFHxA	280	9.4	9.4	2.1	1	307-24-4	
4:2 FTS	ND	8.8	8.8	2.6	1	757124-72-4	
PFPeS	ND	8.8	8.8	2.2	1	2706-91-4	
PFHpA	19	9.4	9.4	2.6	1	375-85-9	
DONA	ND	8.9	8.9	2.4	1	919005-14-4	
PFHxS	ND	8.6	8.6	2.4	1	355-46-4	
PFOA	24	9.4	9.4	2.8	1	335-67-1	
6:2 FTS	71	8.9	8.9	3.0	1	27619-97-2	
PFHpS	ND	8.9	8.9	1.9	1	375-92-8	
PFNA	ND	9.4	9.4	3.5	1	375-95-1	
PFOSAm	ND	9.4	9.4	3.8	1	754-91-6	
PFOS	18	8.7	8.7	2.6	1	1763-23-1	
MeFOSA	ND	9.4	9.4	2.4	1	31506-32-8	
PFDA	ND	9.4	9.4	2.7	1	335-76-2	
EtFOSAm	ND	9.4	9.4	2.9	1	4151-50-2	
8:2 FTS	ND	9.0	9.0	3.1	1	39108-34-4	
9-CI-PF3ON	ND	8.8	8.8	1.4	1	756426-58-1	
PFNS	ND	9.0	9.0	2.1	1	68259-12-1	
PFUnDA	ND	9.4	9.4	2.5	1	2058-94-8	
NMeFOSAA	ND	9.4	9.4	2.0	1	2355-31-9	
NEtFOSAA	ND	9.4	9.4	2.6	1	2991-50-6	
PFDS	ND	9.1	9.1	2.1	1	335-77-3	
PFDOA	ND	9.4	9.4	2.3	1	307-55-1	
MeFOSE	ND	9.4	9.4	1.5	1	24448-09-7	
10:2 FTS	ND	9.1	9.1	3.5	1	120226-60-0	
EtFOSE	ND	9.4	9.4	2.3	1	1691-99-2	
11-CI-PF3OUdS	ND	8.9	8.9	2.0	1	763051-92-9	
PFTTrDA	ND	9.4	9.4	2.9	1	72629-94-8	
PFDoS	ND	9.1	9.1	2.2	1	79780-39-5	
PFTDA	ND	9.4	9.4	2.2	1	376-06-7	
PFHxDA	ND	9.4	9.4	1.7	1	67905-19-5	
PFODA	ND	9.4	9.4	2.8	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Williston Influent	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494005	Total Amount Extracted	53.2mL
Lab File ID	A210825A_007	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210825A_005
Collected	08/11/2021 11:25	Ending CCal File	A210825A_012
Received	08/13/2021 08:50	Blank File	A210824A_015

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	94	90	96	50-150	
13C4_PFOA	94	88	94	50-150	
13C2_PFDA	94	95	101	50-150	
13C4_PFOS	90	97	108	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	94	87	92	50-150	
13C5_PFPeA	94	83	89	50-150	
13C3_PFBS	87	84	96	50-150	
13C2_4:2FTS	88	73	83	50-150	
13C5_PFHxA	94	83	88	50-150	
13C4_PFHpA	94	77	82	50-150	
13C3_PFHxS	89	83	93	50-150	
13C2_6:2FTS	89	89	100	50-150	
13C8_PFOA	94	84	90	50-150	
13C9_PFNA	94	91	97	50-150	
13C8_PFOS	90	77	86	50-150	
13C2_8:2FTS	90	72	80	50-150	
13C6_PFDA	94	85	91	50-150	
d3-MeFOSAA	94	85	90	50-150	
13C8_PFOSA	94	74	78	50-150	
d5-EtFOSAA	94	79	84	50-150	
13C7_PFUdA	94	75	79	50-150	
13C2_PFDoA	94	74	79	50-150	
13C2_PFTeDA	94	46	49	50-150	R
13C3_HFPO-DA	94	80	85	50-150	
13C2_PFHxDA	94	41	43	50-150	R
d7-N-MeFOSE	94	47	50	10-150	
d9-N-EtFOSE	94	47	50	10-150	
d3-N-MeFOSA	94	42	44	10-150	
d5-N-EtFOSA	94	40	42	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Williston Influent	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494005	Total Amount Extracted	53.2mL
Lab File ID	A210825A_007	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210825A_005
Collected	08/11/2021 11:25	Ending CCal File	A210825A_012
Received	08/13/2021 08:50	Blank File	A210824A_015

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.02	4.99	
13C4 PFOA	N/A	N/A	5.99	6.00	
13C2 PFDA	N/A	N/A	6.87	6.88	
13C4 PFOS	N/A	N/A	7.19	7.20	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.58	3.56	
13C5 PFPeA	N/A	N/A	4.42	4.42	
13C3 PFBS	N/A	N/A	5.21	5.18	
13C2 4:2FTS	N/A	N/A	4.80	4.80	
13C5 PFHxA	N/A	N/A	5.02	5.04	
13C4 PFHpA	N/A	N/A	5.53	5.51	
13C3 PFHxS	N/A	N/A	6.28	6.28	
13C2 6:2FTS	N/A	N/A	5.76	5.77	
13C8 PFOA	N/A	N/A	5.99	6.00	
13C9 PFNA	N/A	N/A	6.44	6.44	
13C8 PFOS	N/A	N/A	7.19	7.20	
13C2 8:2FTS	N/A	N/A	6.63	6.60	
13C6 PFDA	N/A	N/A	6.87	6.88	
d3-MeFOSAA	N/A	N/A	6.82	6.83	
13C8 PFOSA	N/A	N/A	8.78	8.78	
d5-EtFOSAA	N/A	N/A	7.03	7.02	
13C7 PFUdA	N/A	N/A	7.31	7.32	
13C2 PFDoA	N/A	N/A	7.74	7.76	
13C2 PFTeDA	N/A	N/A	8.60	8.58	R
13C3 HFPO-DA	N/A	N/A	5.23	5.21	
13C2 PFHxDA	N/A	N/A	9.36	9.33	R
d7-N-MeFOSE	N/A	N/A	10.06	10.02	
d9-N-EtFOSE	N/A	N/A	10.69	10.64	
d3-N-MeFOSA	N/A	N/A	10.32	10.28	
d5-N-EtFOSA	N/A	N/A	11.01	11.00	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Williston Influent	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494005	Total Amount Extracted	53.2mL
Lab File ID	A210825A_007	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210825A_005
Collected	08/11/2021 11:25	Ending CCal File	A210825A_012
Received	08/13/2021 08:50	Blank File	A210824A_015

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	3.58	3.58	
PFPeA	N/A	N/A	4.43	4.40	
HFPO-DA	0.000	0.410	0.00	5.22	
PFBS	0.330	0.320	5.21	5.26	
PFHxA	0.071	0.0670	5.03	5.00	
4:2 FTS	0.000	0.590	0.00	4.80	
PFPeS	0.270	0.300	5.78	5.76	
PFHpA	0.270	0.280	5.53	5.52	
DONA	0.000	0.490	0.00	5.68	
PFHxS	0.270	0.240	6.28	6.29	
PFOA	0.380	0.420	6.00	5.97	
6:2 FTS	0.590	0.500	5.76	5.74	
PFHpS	0.000	0.230	6.73	6.76	
PFNA	0.200	0.190	6.44	6.43	
PFOSAm	N/A	N/A	8.78	8.75	
PFOS	0.120	0.270	7.20	7.27	I
MeFOSA	0.000	0.800	0.00	10.32	
PFDA	0.110	0.110	6.88	6.89	
EtFOSAm	0.000	0.720	0.00	11.04	
8:2 FTS	0.000	0.690	0.00	6.64	
9-Cl-PF3ON	0.000	0.0230	0.00	7.53	
PFNS	0.000	0.250	7.66	7.62	
PFUnDA	0.067	0.120	7.31	7.31	
NMeFOSAA	0.800	0.480	6.82	6.90	
NEtFOSAA	0.710	0.580	7.05	7.03	
PFDS	0.190	0.260	8.06	8.07	
PFDOA	0.083	0.140	7.75	7.76	
MeFOSE	N/A	N/A	0.00	10.12	
10:2 FTS	0.000	0.560	0.00	7.51	
EtFOSE	0.000	0.000	0.00	10.70	
11-Cl-PF3OUdS	0.000	0.0140	0.00	8.38	
PFTrDA	0.000	0.150	0.00	8.19	
PFDoS	0.000	0.240	9.01	8.83	
PFTDA	0.000	0.130	0.00	8.58	
PFHXDA	0.000	0.110	9.36	9.35	
PFODA	0.000	0.0900	0.00	10.37	

**REPORT OF LABORATORY ANALYSIS**

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





**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	Williston Effluent	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494006	Total Amount Extracted	255mL
Lab File ID	A210824A_026	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_025
Collected	08/11/2021 11:35	Ending CCal File	A210824A_036
Received	08/13/2021 08:50	Blank File	A210824A_015

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	26	2.0	2.0	0.43	1	375-22-4	
PFPeA	110	2.0	2.0	0.43	1	2706-90-3	
HFPO-DA	ND	2.0	2.0	0.52	1	13252-13-6	
PFBS	28	1.7	1.7	0.46	1	375-73-5	
PFHxA	76	2.0	2.0	0.43	1	307-24-4	
4:2 FTS	ND	1.8	1.8	0.55	1	757124-72-4	
PFPeS	ND	1.8	1.8	0.47	1	2706-91-4	
PFHpA	13	2.0	2.0	0.54	1	375-85-9	
DONA	ND	1.9	1.9	0.50	1	919005-14-4	
PFHxS	ND	1.8	1.8	0.50	1	355-46-4	
PFOA	9.4	2.0	2.0	0.57	1	335-67-1	
6:2 FTS	7.4	1.9	1.9	0.63	1	27619-97-2	
PFHpS	ND	1.9	1.9	0.40	1	375-92-8	
PFNA	3.2	2.0	2.0	0.72	1	375-95-1	
PFOSAm	ND	2.0	2.0	0.80	1	754-91-6	
PFOS	2.9	1.8	1.8	0.54	1	1763-23-1	
MeFOSA	ND	2.0	2.0	0.50	1	31506-32-8	
PFDA	ND	2.0	2.0	0.55	1	335-76-2	
EtFOSAm	ND	2.0	2.0	0.60	1	4151-50-2	
8:2 FTS	ND	1.9	1.9	0.64	1	39108-34-4	
9-CI-PF3ON	ND	1.8	1.8	0.30	1	756426-58-1	
PFNS	ND	1.9	1.9	0.44	1	68259-12-1	
PFUnDA	ND	2.0	2.0	0.53	1	2058-94-8	
NMeFOSAA	ND	2.0	2.0	0.42	1	2355-31-9	
NEtFOSAA	ND	2.0	2.0	0.54	1	2991-50-6	
PFDS	ND	1.9	1.9	0.44	1	335-77-3	
PFDOA	ND	2.0	2.0	0.47	1	307-55-1	
MeFOSE	ND	2.0	2.0	0.32	1	24448-09-7	
10:2 FTS	ND	1.9	1.9	0.72	1	120226-60-0	
EtFOSE	ND	2.0	2.0	0.49	1	1691-99-2	
11-CI-PF3OUdS	ND	1.8	1.8	0.43	1	763051-92-9	
PFTTrDA	ND	2.0	2.0	0.61	1	72629-94-8	
PFDoS	ND	1.9	1.9	0.45	1	79780-39-5	
PFTDA	ND	2.0	2.0	0.47	1	376-06-7	
PFHXDA	ND	2.0	2.0	0.36	1	67905-19-5	
PFODA	ND	2.0	2.0	0.57	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Williston Effluent	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494006	Total Amount Extracted	255mL
Lab File ID	A210824A_026	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_025
Collected	08/11/2021 11:35	Ending CCal File	A210824A_036
Received	08/13/2021 08:50	Blank File	A210824A_015

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	20	17	89	50-150	
13C4_PFOA	20	18	91	50-150	
13C2_PFDA	20	17	89	50-150	
13C4_PFOS	19	16	85	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	20	16	84	50-150	
13C5_PFPeA	20	16	83	50-150	
13C3_PFBS	18	17	91	50-150	
13C2_4:2FTS	18	17	91	50-150	
13C5_PFHxA	20	17	87	50-150	
13C4_PFHpA	20	16	82	50-150	
13C3_PFHxS	19	16	88	50-150	
13C2_6:2FTS	19	13	71	50-150	
13C8_PFOA	20	17	89	50-150	
13C9_PFNA	20	17	87	50-150	
13C8_PFOS	19	14	72	50-150	
13C2_8:2FTS	19	18	95	50-150	
13C6_PFDA	20	16	83	50-150	
d3-MeFOSAA	20	17	85	50-150	
13C8_PFOA	20	13	67	50-150	
d5-EtFOSAA	20	16	80	50-150	
13C7_PFUdA	20	16	83	50-150	
13C2_PFDoA	20	16	80	50-150	
13C2_PFTeDA	20	13	65	50-150	
13C3_HFPO-DA	20	17	85	50-150	
13C2_PFHxDA	20	11	57	50-150	
d7-N-MeFOSE	20	10	52	10-150	
d9-N-EtFOSE	20	9.0	46	10-150	
d3-N-MeFOSA	20	6.6	33	10-150	
d5-N-EtFOSA	20	6.4	32	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Williston Effluent	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494006	Total Amount Extracted	255mL
Lab File ID	A210824A_026	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_025
Collected	08/11/2021 11:35	Ending CCal File	A210824A_036
Received	08/13/2021 08:50	Blank File	A210824A_015

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.02	4.99	
13C4 PFOA	N/A	N/A	5.99	6.00	
13C2 PFDA	N/A	N/A	6.87	6.88	
13C4 PFOS	N/A	N/A	7.18	7.20	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.57	3.56	
13C5 PFPeA	N/A	N/A	4.42	4.42	
13C3 PFBS	N/A	N/A	5.20	5.18	
13C2 4:2FTS	N/A	N/A	4.80	4.80	
13C5 PFHxA	N/A	N/A	5.02	5.04	
13C4 PFHpA	N/A	N/A	5.52	5.51	
13C3 PFHxS	N/A	N/A	6.27	6.28	
13C2 6:2FTS	N/A	N/A	5.76	5.77	
13C8 PFOA	N/A	N/A	5.99	6.00	
13C9 PFNA	N/A	N/A	6.43	6.44	
13C8 PFOS	N/A	N/A	7.18	7.20	
13C2 8:2FTS	N/A	N/A	6.62	6.60	
13C6 PFDA	N/A	N/A	6.87	6.88	
d3-MeFOSAA	N/A	N/A	6.82	6.83	
13C8 PFOSA	N/A	N/A	8.78	8.78	
d5-EtFOSAA	N/A	N/A	7.03	7.02	
13C7 PFUdA	N/A	N/A	7.30	7.32	
13C2 PFDoA	N/A	N/A	7.74	7.76	
13C2 PFTeDA	N/A	N/A	8.59	8.58	
13C3 HFPO-DA	N/A	N/A	5.22	5.21	
13C2 PFHxDA	N/A	N/A	9.35	9.33	
d7-N-MeFOSE	N/A	N/A	10.05	10.02	
d9-N-EtFOSE	N/A	N/A	10.68	10.64	
d3-N-MeFOSA	N/A	N/A	10.31	10.28	
d5-N-EtFOSA	N/A	N/A	11.00	11.00	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Williston Effluent	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494006	Total Amount Extracted	255mL
Lab File ID	A210824A_026	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_025
Collected	08/11/2021 11:35	Ending CCal File	A210824A_036
Received	08/13/2021 08:50	Blank File	A210824A_015

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	3.58	3.58	
PFPeA	N/A	N/A	4.42	4.40	
HFPO-DA	0.000	0.450	5.22	5.22	
PFBS	0.330	0.330	5.21	5.26	
PFHxA	0.065	0.0620	5.02	5.00	
4:2 FTS	0.000	0.580	0.00	4.80	
PFPeS	0.240	0.300	5.78	5.76	
PFHpA	0.270	0.290	5.53	5.52	
DONA	0.000	0.490	0.00	5.68	
PFHxS	0.280	0.280	6.28	6.29	
PFOA	0.330	0.380	5.99	5.97	
6:2 FTS	0.480	0.510	5.76	5.74	
PFHpS	0.550	0.230	6.75	6.76	
PFNA	0.180	0.200	6.44	6.43	
PFOSAm	N/A	N/A	8.78	8.75	
PFOS	0.200	0.240	7.13	7.27	
MeFOSA	0.000	0.910	0.00	10.32	
PFDA	0.080	0.0860	6.88	6.89	
EtFOSAm	0.000	0.710	0.00	11.04	
8:2 FTS	0.000	0.640	0.00	6.64	
9-Cl-PF3ON	0.000	0.0220	0.00	7.53	
PFNS	0.000	0.240	0.00	7.62	
PFUnDA	0.000	0.110	0.00	7.31	
NMeFOSAA	0.000	0.490	0.00	6.90	
NEtFOSAA	0.000	0.660	7.03	7.03	
PFDS	0.000	0.240	0.00	8.07	
PFDOA	0.000	0.130	0.00	7.76	
MeFOSE	N/A	N/A	0.00	10.12	
10:2 FTS	0.000	0.620	0.00	7.51	
EtFOSE	0.000	0.000	0.00	10.70	
11-Cl-PF3OUdS	0.000	0.0120	8.36	8.38	
PFTTrDA	0.000	0.150	0.00	8.19	
PFDoS	0.000	0.230	0.00	8.83	
PFTDA	0.000	0.140	0.00	8.58	
PFHXDA	0.180	0.120	9.35	9.35	
PFODA	0.000	0.0990	0.00	10.37	

**REPORT OF LABORATORY ANALYSIS**

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



**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	Williston Effluent - Dup	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494007	Total Amount Extracted	256mL
Lab File ID	A210824A_027	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_025
Collected	08/11/2021 11:37	Ending CCal File	A210824A_036
Received	08/13/2021 08:50	Blank File	A210824A_015

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	26	2.0	2.0	0.43	1	375-22-4	
PFPeA	110	2.0	2.0	0.43	1	2706-90-3	
HFPO-DA	ND	2.0	2.0	0.52	1	13252-13-6	
PFBS	28	1.7	1.7	0.46	1	375-73-5	
PFHxA	86	2.0	2.0	0.43	1	307-24-4	
4:2 FTS	ND	1.8	1.8	0.54	1	757124-72-4	
PFPeS	ND	1.8	1.8	0.46	1	2706-91-4	
PFHpA	13	2.0	2.0	0.54	1	375-85-9	
DONA	ND	1.8	1.8	0.50	1	919005-14-4	
PFHxS	ND	1.8	1.8	0.50	1	355-46-4	
PFOA	8.3	2.0	2.0	0.57	1	335-67-1	
6:2 FTS	7.1	1.9	1.9	0.63	1	27619-97-2	
PFHpS	ND	1.9	1.9	0.40	1	375-92-8	
PFNA	3.1	2.0	2.0	0.72	1	375-95-1	
PFOSAm	ND	2.0	2.0	0.80	1	754-91-6	
PFOS	2.7	1.8	1.8	0.53	1	1763-23-1	
MeFOSA	ND	2.0	2.0	0.50	1	31506-32-8	
PFDA	ND	2.0	2.0	0.55	1	335-76-2	
EtFOSAm	ND	2.0	2.0	0.59	1	4151-50-2	
8:2 FTS	ND	1.9	1.9	0.64	1	39108-34-4	
9-CI-PF3ON	ND	1.8	1.8	0.30	1	756426-58-1	
PFNS	ND	1.9	1.9	0.44	1	68259-12-1	
PFUnDA	ND	2.0	2.0	0.53	1	2058-94-8	
NMeFOSAA	ND	2.0	2.0	0.42	1	2355-31-9	
NEtFOSAA	ND	2.0	2.0	0.54	1	2991-50-6	
PFDS	ND	1.9	1.9	0.44	1	335-77-3	
PFDOA	ND	2.0	2.0	0.47	1	307-55-1	
MeFOSE	ND	2.0	2.0	0.32	1	24448-09-7	
10:2 FTS	ND	1.9	1.9	0.72	1	120226-60-0	
EtFOSE	ND	2.0	2.0	0.48	1	1691-99-2	
11-CI-PF3OUdS	ND	1.8	1.8	0.43	1	763051-92-9	
PFTTrDA	ND	2.0	2.0	0.61	1	72629-94-8	
PFDoS	ND	1.9	1.9	0.45	1	79780-39-5	
PFTDA	ND	2.0	2.0	0.46	1	376-06-7	
PFHXDA	ND	2.0	2.0	0.35	1	67905-19-5	
PFODA	ND	2.0	2.0	0.57	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Williston Effluent - Dup	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494007	Total Amount Extracted	256mL
Lab File ID	A210824A_027	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_025
Collected	08/11/2021 11:37	Ending CCal File	A210824A_036
Received	08/13/2021 08:50	Blank File	A210824A_015

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	20	19	97	50-150	
13C4_PFOA	20	20	102	50-150	
13C2_PFDA	20	18	94	50-150	
13C4_PFOS	19	17	93	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBa	20	18	91	50-150	
13C5_PFPeA	20	18	91	50-150	
13C3_PFBs	18	18	101	50-150	
13C2_4:2FTS	18	17	92	50-150	
13C5_PFHxA	20	18	93	50-150	
13C4_PFHpA	20	18	91	50-150	
13C3_PFHxS	18	16	88	50-150	
13C2_6:2FTS	19	16	87	50-150	
13C8_PFOA	20	18	91	50-150	
13C9_PFNA	20	17	86	50-150	
13C8_PFOS	19	16	87	50-150	
13C2_8:2FTS	19	18	96	50-150	
13C6_PFDA	20	18	93	50-150	
d3-MeFOSAA	20	16	84	50-150	
13C8_PFOsA	20	14	72	50-150	
d5-EtFOSAA	20	17	89	50-150	
13C7_PFUdA	20	17	87	50-150	
13C2_PFDoA	20	16	84	50-150	
13C2_PFTeDA	20	15	76	50-150	
13C3_HFPO-DA	20	18	90	50-150	
13C2_PFHxDA	20	12	60	50-150	
d7-N-MeFOSE	20	12	61	10-150	
d9-N-EtFOSE	20	9.9	51	10-150	
d3-N-MeFOSA	20	7.9	40	10-150	
d5-N-EtFOSA	20	7.4	38	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Williston Effluent - Dup	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494007	Total Amount Extracted	256mL
Lab File ID	A210824A_027	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_025
Collected	08/11/2021 11:37	Ending CCal File	A210824A_036
Received	08/13/2021 08:50	Blank File	A210824A_015

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.01	4.99	
13C4 PFOA	N/A	N/A	5.99	6.00	
13C2 PFDA	N/A	N/A	6.87	6.88	
13C4 PFOS	N/A	N/A	7.18	7.20	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.57	3.56	
13C5 PFPeA	N/A	N/A	4.42	4.42	
13C3 PFBS	N/A	N/A	5.20	5.18	
13C2 4:2FTS	N/A	N/A	4.79	4.80	
13C5 PFHxA	N/A	N/A	5.01	5.04	
13C4 PFHpA	N/A	N/A	5.52	5.51	
13C3 PFHxS	N/A	N/A	6.27	6.28	
13C2 6:2FTS	N/A	N/A	5.76	5.77	
13C8 PFOA	N/A	N/A	5.99	6.00	
13C9 PFNA	N/A	N/A	6.43	6.44	
13C8 PFOS	N/A	N/A	7.18	7.20	
13C2 8:2FTS	N/A	N/A	6.62	6.60	
13C6 PFDA	N/A	N/A	6.87	6.88	
d3-MeFOSAA	N/A	N/A	6.82	6.83	
13C8 PFOSA	N/A	N/A	8.77	8.78	
d5-EtFOSAA	N/A	N/A	7.03	7.02	
13C7 PFUdA	N/A	N/A	7.30	7.32	
13C2 PFDoA	N/A	N/A	7.74	7.76	
13C2 PFTeDA	N/A	N/A	8.59	8.58	
13C3 HFPO-DA	N/A	N/A	5.22	5.21	
13C2 PFHxDA	N/A	N/A	9.35	9.33	
d7-N-MeFOSE	N/A	N/A	10.05	10.02	
d9-N-EtFOSE	N/A	N/A	10.68	10.64	
d3-N-MeFOSA	N/A	N/A	10.31	10.28	
d5-N-EtFOSA	N/A	N/A	11.00	11.00	

**REPORT OF LABORATORY ANALYSIS**

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





**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Williston Effluent - Dup	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494007	Total Amount Extracted	256mL
Lab File ID	A210824A_027	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_025
Collected	08/11/2021 11:37	Ending CCal File	A210824A_036
Received	08/13/2021 08:50	Blank File	A210824A_015

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	3.57	3.58	
PFPeA	N/A	N/A	4.42	4.40	
HFPO-DA	0.000	0.450	5.24	5.22	
PFBS	0.330	0.330	5.21	5.26	
PFHxA	0.061	0.0620	5.02	5.00	
4:2 FTS	0.000	0.580	4.83	4.80	
PFPeS	0.490	0.300	5.78	5.76	
PFHpA	0.300	0.290	5.53	5.52	
DONA	0.000	0.490	0.00	5.68	
PFHxS	0.250	0.280	6.28	6.29	
PFOA	0.400	0.380	5.99	5.97	
6:2 FTS	0.530	0.510	5.76	5.74	
PFHpS	0.000	0.230	6.74	6.76	
PFNA	0.220	0.200	6.43	6.43	
PFOSAm	N/A	N/A	8.78	8.75	
PFOS	0.180	0.240	7.15	7.27	
MeFOSA	0.000	0.910	0.00	10.32	
PFDA	0.084	0.0860	6.87	6.89	
EtFOSAm	0.000	0.710	0.00	11.04	
8:2 FTS	0.000	0.640	0.00	6.64	
9-Cl-PF3ON	0.000	0.0220	0.00	7.53	
PFNS	0.000	0.240	0.00	7.62	
PFUnDA	0.000	0.110	0.00	7.31	
NMeFOSAA	0.000	0.490	0.00	6.90	
NEtFOSAA	0.000	0.660	0.00	7.03	
PFDS	0.000	0.240	0.00	8.07	
PFDOA	0.000	0.130	0.00	7.76	
MeFOSE	N/A	N/A	0.00	10.12	
10:2 FTS	0.000	0.620	0.00	7.51	
EtFOSE	0.000	0.000	0.00	10.70	
11-Cl-PF3OUdS	0.000	0.0120	0.00	8.38	
PFTDA	0.000	0.150	0.00	8.19	
PFDoS	0.000	0.230	0.00	8.83	
PFTDA	0.000	0.140	0.00	8.58	
PFHXDA	0.110	0.120	9.35	9.35	
PFODA	0.000	0.0990	0.00	10.37	

**REPORT OF LABORATORY ANALYSIS**

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





**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Williston Effluent - Bank	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494008	Total Amount Extracted	250mL
Lab File ID	A210824A_028	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_025
Collected	08/11/2021 11:40	Ending CCal File	A210824A_036
Received	08/13/2021 08:50	Blank File	A210824A_015

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	ND	2.0	2.0	0.44	1	375-22-4	
PFPeA	ND	2.0	2.0	0.44	1	2706-90-3	
HFPO-DA	ND	2.0	2.0	0.53	1	13252-13-6	
PFBS	ND	1.8	1.8	0.47	1	375-73-5	
PFHxA	ND	2.0	2.0	0.44	1	307-24-4	
4:2 FTS	ND	1.9	1.9	0.56	1	757124-72-4	
PFPeS	ND	1.9	1.9	0.47	1	2706-91-4	
PFHpA	ND	2.0	2.0	0.55	1	375-85-9	
DONA	ND	1.9	1.9	0.51	1	919005-14-4	
PFHxS	ND	1.8	1.8	0.51	1	355-46-4	
PFOA	ND	2.0	2.0	0.58	1	335-67-1	
6:2 FTS	ND	1.9	1.9	0.64	1	27619-97-2	
PFHpS	ND	1.9	1.9	0.41	1	375-92-8	
PFNA	ND	2.0	2.0	0.74	1	375-95-1	
PFOSAm	ND	2.0	2.0	0.82	1	754-91-6	
PFOS	ND	1.8	1.8	0.55	1	1763-23-1	
MeFOSA	ND	2.0	2.0	0.51	1	31506-32-8	
PFDA	ND	2.0	2.0	0.56	1	335-76-2	
EtFOSAm	ND	2.0	2.0	0.61	1	4151-50-2	
8:2 FTS	ND	1.9	1.9	0.65	1	39108-34-4	
9-CI-PF3ON	ND	1.9	1.9	0.30	1	756426-58-1	
PFNS	ND	1.9	1.9	0.45	1	68259-12-1	
PFUnDA	ND	2.0	2.0	0.54	1	2058-94-8	
NMeFOSAA	ND	2.0	2.0	0.43	1	2355-31-9	
NEtFOSAA	ND	2.0	2.0	0.55	1	2991-50-6	
PFDS	ND	1.9	1.9	0.45	1	335-77-3	
PFDOA	ND	2.0	2.0	0.48	1	307-55-1	
MeFOSE	ND	2.0	2.0	0.33	1	24448-09-7	
10:2 FTS	ND	1.9	1.9	0.73	1	120226-60-0	
EtFOSE	ND	2.0	2.0	0.50	1	1691-99-2	
11-CI-PF3OUdS	ND	1.9	1.9	0.44	1	763051-92-9	
PFTTrDA	ND	2.0	2.0	0.62	1	72629-94-8	
PFDoS	ND	1.9	1.9	0.46	1	79780-39-5	
PFTDA	ND	2.0	2.0	0.48	1	376-06-7	
PFHXDA	ND	2.0	2.0	0.36	1	67905-19-5	
PFODA	ND	2.0	2.0	0.58	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Williston Effluent - Bank	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494008	Total Amount Extracted	250mL
Lab File ID	A210824A_028	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_025
Collected	08/11/2021 11:40	Ending CCal File	A210824A_036
Received	08/13/2021 08:50	Blank File	A210824A_015

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	20	19	96	50-150	
13C4_PFOA	20	21	106	50-150	
13C2_PFDA	20	21	103	50-150	
13C4_PFOS	19	20	103	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBa	20	19	96	50-150	
13C5_PFPeA	20	20	98	50-150	
13C3_PFBs	19	22	117	50-150	
13C2_4:2FTS	19	18	96	50-150	
13C5_PFHxA	20	18	91	50-150	
13C4_PFHpA	20	20	99	50-150	
13C3_PFHxS	19	19	99	50-150	
13C2_6:2FTS	19	15	81	50-150	
13C8_PFOA	20	19	97	50-150	
13C9_PFNA	20	19	93	50-150	
13C8_PFOS	19	18	92	50-150	
13C2_8:2FTS	19	22	117	50-150	
13C6_PFDA	20	19	94	50-150	
d3-MeFOSAA	20	18	88	50-150	
13C8_PFOsA	20	15	77	50-150	
d5-EtFOSAA	20	18	91	50-150	
13C7_PFUdA	20	17	84	50-150	
13C2_PFDoA	20	21	103	50-150	
13C2_PFTeDA	20	18	90	50-150	
13C3_HFPO-DA	20	18	90	50-150	
13C2_PFHxDA	20	16	82	50-150	
d7-N-MeFOSE	20	15	76	10-150	
d9-N-EtFOSE	20	16	78	10-150	
d3-N-MeFOSA	20	12	58	10-150	
d5-N-EtFOSA	20	11	57	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Williston Effluent - Bank	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494008	Total Amount Extracted	250mL
Lab File ID	A210824A_028	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_025
Collected	08/11/2021 11:40	Ending CCal File	A210824A_036
Received	08/13/2021 08:50	Blank File	A210824A_015

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.01	4.99	
13C4 PFOA	N/A	N/A	5.98	6.00	
13C2 PFDA	N/A	N/A	6.86	6.88	
13C4 PFOS	N/A	N/A	7.17	7.20	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.57	3.56	
13C5 PFPeA	N/A	N/A	4.41	4.42	
13C3 PFBS	N/A	N/A	5.20	5.18	
13C2 4:2FTS	N/A	N/A	4.79	4.80	
13C5 PFHxA	N/A	N/A	5.01	5.04	
13C4 PFHpA	N/A	N/A	5.52	5.51	
13C3 PFHxS	N/A	N/A	6.27	6.28	
13C2 6:2FTS	N/A	N/A	5.75	5.77	
13C8 PFOA	N/A	N/A	5.98	6.00	
13C9 PFNA	N/A	N/A	6.43	6.44	
13C8 PFOS	N/A	N/A	7.18	7.20	
13C2 8:2FTS	N/A	N/A	6.62	6.60	
13C6 PFDA	N/A	N/A	6.86	6.88	
d3-MeFOSAA	N/A	N/A	6.81	6.83	
13C8 PFOSA	N/A	N/A	8.77	8.78	
d5-EtFOSAA	N/A	N/A	7.02	7.02	
13C7 PFUdA	N/A	N/A	7.30	7.32	
13C2 PFDoA	N/A	N/A	7.73	7.76	
13C2 PFTeDA	N/A	N/A	8.58	8.58	
13C3 HFPO-DA	N/A	N/A	5.21	5.21	
13C2 PFHxDA	N/A	N/A	9.34	9.33	
d7-N-MeFOSE	N/A	N/A	10.05	10.02	
d9-N-EtFOSE	N/A	N/A	10.67	10.64	
d3-N-MeFOSA	N/A	N/A	10.30	10.28	
d5-N-EtFOSA	N/A	N/A	10.99	11.00	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Williston Effluent - Bank	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494008	Total Amount Extracted	250mL
Lab File ID	A210824A_028	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_025
Collected	08/11/2021 11:40	Ending CCal File	A210824A_036
Received	08/13/2021 08:50	Blank File	A210824A_015

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	3.57	3.58	
PFPeA	N/A	N/A	0.00	4.40	
HFPO-DA	0.000	0.450	0.00	5.22	
PFBS	0.380	0.330	5.20	5.26	
PFHxA	0.000	0.0620	5.12	5.00	
4:2 FTS	0.000	0.580	0.00	4.80	
PFPeS	0.000	0.300	0.00	5.76	
PFHpA	0.000	0.290	0.00	5.52	
DONA	0.000	0.490	0.00	5.68	
PFHxS	0.000	0.280	0.00	6.29	
PFOA	0.000	0.380	0.00	5.97	
6:2 FTS	0.000	0.510	0.00	5.74	
PFHpS	0.000	0.230	0.00	6.76	
PFNA	0.000	0.200	0.00	6.43	
PFOSAm	N/A	N/A	8.78	8.75	
PFOS	0.000	0.240	0.00	7.27	
MeFOSA	0.000	0.910	0.00	10.32	
PFDA	0.000	0.0860	0.00	6.89	
EtFOSAm	0.000	0.710	0.00	11.04	
8:2 FTS	0.000	0.640	0.00	6.64	
9-Cl-PF3ON	0.000	0.0220	0.00	7.53	
PFNS	0.000	0.240	0.00	7.62	
PFUnDA	0.000	0.110	0.00	7.31	
NMeFOSAA	0.000	0.490	0.00	6.90	
NEtFOSAA	0.000	0.660	0.00	7.03	
PFDS	0.000	0.240	0.00	8.07	
PFDOA	0.000	0.130	0.00	7.76	
MeFOSE	N/A	N/A	0.00	10.12	
10:2 FTS	0.000	0.620	0.00	7.51	
EtFOSE	0.000	0.000	0.00	10.70	
11-Cl-PF3OUdS	0.000	0.0120	0.00	8.38	
PFTTrDA	0.000	0.150	0.00	8.19	
PFDoS	0.000	0.230	0.00	8.83	
PFTDA	0.000	0.140	0.00	8.58	
PFHXDA	0.176	0.120	9.35	9.35	
PFODA	0.000	0.0990	0.00	10.37	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Williston Biosolids	Extraction Date	08/24/2021 10:00
Lab Sample ID	10574494009	Total Amount Extracted	5.05g
Lab File ID	Q210827A_019	Ical ID	210826A01
Matrix	Soil	CCal File	Q210827A_017
Collected	08/11/2021 11:48	Ending CCal File	Q210827A_028
Received	08/13/2021 08:50	Blank File	Q210827A_015

Compound	Concentration (ng/Kg)	QL (ng/Kg)	RL (ng/Kg)	DL (ng/Kg)	Dil.	CAS No.	Qual.
PFBA	2000	99	99	23	1	375-22-4	
PFPeA	1400	99	99	26	1	2706-90-3	
HFPO-DA	ND	99	99	29	1	13252-13-6	
PFBS	6100	88	88	22	1	375-73-5	
PFHxA	17000 D	490	490	150	5	307-24-4	
4:2 FTS	ND	93	93	31	1	757124-72-4	
PFPeS	ND	93	93	18	1	2706-91-4	
PFHpA	1400	99	99	22	1	375-85-9	
DONA	ND	94	94	38	1	919005-14-4	
PFHxS	320	90	90	22	1	355-46-4	
PFOA	14000 D	490	490	110	5	335-67-1	
6:2 FTS	11000 D	470	470	160	5	27619-97-2	
PFHpS	150	94	94	25	1	375-92-8	
PFNA	7900	99	99	28	1	375-95-1	
PFOSAm	980	99	99	23	1	754-91-6	
PFOS	11000 D	460	460	140	5	1763-23-1	
MeFOSA	ND	99	99	25	1	31506-32-8	
PFDA	12000 D	490	490	110	5	335-76-2	
EtFOSAm	ND	99	99	23	1	4151-50-2	
8:2 FTS	2000	95	95	26	1	39108-34-4	
9-CI-PF3ON	ND	92	92	14	1	756426-58-1	
PFNS	ND	95	95	18	1	68259-12-1	
PFUnDA	3100	99	99	28	1	2058-94-8	
NMeFOSAA	13000 D	490	490	120	5	2355-31-9	
NEtFOSAA	5700	99	99	24	1	2991-50-6	
PFDS	1100	96	96	25	1	335-77-3	
PFDOA	3400	99	99	26	1	307-55-1	
MeFOSE	630	99	99	23	1	24448-09-7	
10:2 FTS	1400	95	95	36	1	120226-60-0	
EtFOSE	330	99	99	25	1	1691-99-2	
11-CI-PF3OUdS	ND	93	93	16	1	763051-92-9	
PFTTrDA	940	99	99	21	1	72629-94-8	
PFDoS	150	96	96	30	1	79780-39-5	
PFTDA	580	99	99	32	1	376-06-7	
PFHXDA	120	99	99	35	1	67905-19-5	
PFODA	ND	99	99	25	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Williston Biosolids	Extraction Date	08/24/2021 10:00
Lab Sample ID	10574494009	Total Amount Extracted	5.05g
Lab File ID	Q210827A_019	Ical ID	210826A01
Matrix	Soil	CCal File	Q210827A_017
Collected	08/11/2021 11:48	Ending CCal File	Q210827A_028
Received	08/13/2021 08:50	Blank File	Q210827A_015

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	990	960	97	50-150	
13C4_PFOA	990	670	67	50-150	
13C2_PFDA	990	730	74	50-150	
13C4_PFOS	950	580	61	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBa	990	810	81	50-150	
13C5_PFPeA	990	940	95	50-150	
13C3_PFBs	920	850	92	50-150	
13C2_4:2Fts	930	3900	420	50-150	R
13C5_PFHxA	990	1200	120	50-150	D
13C4_PFHpA	990	930	94	50-150	
13C3_PFHxS	940	800	86	50-150	
13C2_6:2Fts	940	2200	229	50-150	RD
13C8_PFOA	990	1000	103	50-150	D
13C9_PfNA	990	600	61	50-150	
13C8_PFOs	950	970	102	50-150	D
13C2_8:2Fts	950	2100	220	50-150	R
13C6_PFDA	990	1200	122	50-150	D
d3-MeFOSAA	990	1000	106	50-150	
13C8_PFOsA	990	510	52	50-150	
d5-EtFOSAA	990	990	100	50-150	
13C7_PFUdA	990	890	90	50-150	
13C2_PFDoA	990	870	88	50-150	
13C2_PFTeDA	990	1200	123	50-150	
13C3_HFPO-DA	990	1300	131	50-150	
13C2_PFHxDA	990	830	84	50-150	
d7-N-MeFOSE	990	370	37	10-150	
d9-N-EtFOSE	990	530	54	10-150	
d3-N-MeFOSA	990	710	72	10-150	D
d5-N-EtFOSA	990	200	20	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Williston Biosolids	Extraction Date	08/24/2021 10:00
Lab Sample ID	10574494009	Total Amount Extracted	5.05g
Lab File ID	Q210827A_019	Ical ID	210826A01
Matrix	Soil	CCal File	Q210827A_017
Collected	08/11/2021 11:48	Ending CCal File	Q210827A_028
Received	08/13/2021 08:50	Blank File	Q210827A_015

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.24	6.29	
13C4 PFOA	N/A	N/A	7.63	7.66	
13C2 PFDA	N/A	N/A	9.00	9.06	
13C4 PFOS	N/A	N/A	9.47	9.46	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.70	4.70	
13C5 PFPeA	N/A	N/A	5.54	5.60	
13C3 PFBS	N/A	N/A	6.51	6.55	
13C2 4:2FTS	N/A	N/A	5.95	5.99	R
13C5 PFHxA	N/A	N/A	6.26	6.28	D
13C4 PFHpA	N/A	N/A	6.94	6.96	
13C3 PFHxS	N/A	N/A	8.07	8.08	
13C2 6:2FTS	N/A	N/A	7.28	7.29	RD
13C8 PFOA	N/A	N/A	7.64	7.64	D
13C9 PFNA	N/A	N/A	8.32	8.33	
13C8 PFOS	N/A	N/A	9.48	9.52	D
13C2 8:2FTS	N/A	N/A	8.61	8.63	R
13C6 PFDA	N/A	N/A	9.01	9.03	D
d3-MeFOSAA	N/A	N/A	8.87	8.90	
13C8 PFOSA	N/A	N/A	11.38	11.42	
d5-EtFOSAA	N/A	N/A	9.17	9.21	
13C7 PFUdA	N/A	N/A	9.67	9.72	
13C2 PFDoA	N/A	N/A	10.32	10.41	
13C2 PFTeDA	N/A	N/A	11.65	11.71	
13C3 HFPO-DA	N/A	N/A	6.53	6.56	
13C2 PFHxDA	N/A	N/A	12.77	12.77	
d7-N-MeFOSE	N/A	N/A	13.04	13.08	
d9-N-EtFOSE	N/A	N/A	13.51	13.53	
d3-N-MeFOSA	N/A	N/A	13.24	13.26	D
d5-N-EtFOSA	N/A	N/A	13.68	13.70	

**REPORT OF LABORATORY ANALYSIS**

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





**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Williston Biosolids	Extraction Date	08/24/2021 10:00
Lab Sample ID	10574494009	Total Amount Extracted	5.05g
Lab File ID	Q210827A_019	Ical ID	210826A01
Matrix	Soil	CCal File	Q210827A_017
Collected	08/11/2021 11:48	Ending CCal File	Q210827A_028
Received	08/13/2021 08:50	Blank File	Q210827A_015

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.71	4.82	
PFPeA	N/A	N/A	5.54	5.63	
HFPO-DA	0.000	0.350	0.00	6.61	
PFBS	0.400	0.390	6.52	6.54	
PFHxA	0.095	0.0730	6.27	6.32	D
4:2 FTS	0.000	1.10	0.00	5.99	
PFPeS	0.400	0.410	7.32	7.32	
PFHpA	0.480	0.620	6.95	6.96	
DONA	0.000	0.490	0.00	7.25	
PFHxS	0.260	0.300	8.08	8.05	
PFOA	0.250	0.250	7.65	7.63	D
6:2 FTS	1.20	1.00	7.29	7.28	D
PFHpS	0.400	0.450	8.80	8.79	
PFNA	0.230	0.290	8.33	8.32	
PFOSAm	N/A	N/A	11.39	11.40	
PFOS	0.230	0.240	9.49	9.46	D
MeFOSA	0.000	0.540	0.00	13.29	
PFDA	0.160	0.160	9.01	9.02	D
EtFOSAm	0.000	0.510	0.00	13.73	
8:2 FTS	1.40	1.50	8.62	8.62	
9-Cl-PF3ON	0.098	0.0420	9.97	10.00	
PFNS	0.320	0.220	10.15	10.16	
PFUnDA	0.140	0.160	9.68	9.71	
NMeFOSAA	0.670	0.700	8.89	8.89	D
NEtFOSAA	0.470	0.510	9.19	9.20	
PFDS	0.290	0.250	10.83	10.92	
PFDOA	0.170	0.210	10.32	10.44	
MeFOSE	N/A	N/A	13.08	13.10	
10:2 FTS	1.40	1.60	9.95	9.95	
EtFOSE	0.000	0.000	13.55	13.51	
11-Cl-PF3OUdS	0.000	0.0310	11.28	11.37	
PFTTrDA	0.190	0.220	11.02	11.10	
PFDoS	0.140	0.250	12.25	12.25	
PFTDA	0.170	0.140	11.66	11.66	
PFHXDA	0.170	0.160	12.77	12.87	
PFODA	0.000	0.190	13.53	13.53	

**REPORT OF LABORATORY ANALYSIS**

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





**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Williston Leachate	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494010	Total Amount Extracted	102mL
Lab File ID	A210824A_029	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_025
Collected	08/11/2021 12:02	Ending CCal File	A210824A_036
Received	08/13/2021 08:50	Blank File	A210824A_015

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	360	4.9	4.9	1.1	1	375-22-4	
PFPeA	390	4.9	4.9	1.1	1	2706-90-3	
HFPO-DA	ND	4.9	4.9	1.3	1	13252-13-6	
PFBS	62	4.3	4.3	1.2	1	375-73-5	
PFHxA	620 D	49	49	11	10	307-24-4	
4:2 FTS	ND	4.6	4.6	1.4	1	757124-72-4	
PFPeS	6.2	4.6	4.6	1.2	1	2706-91-4	
PFHpA	130	4.9	4.9	1.3	1	375-85-9	
DONA	ND	4.6	4.6	1.3	1	919005-14-4	
PFHxS	67	4.5	4.5	1.2	1	355-46-4	
PFOA	210	4.9	4.9	1.4	1	335-67-1	
6:2 FTS	74	4.6	4.6	1.6	1	27619-97-2	
PFHpS	ND	4.6	4.6	1.0	1	375-92-8	
PFNA	8.3	4.9	4.9	1.8	1	375-95-1	
PFOSAm	ND	4.9	4.9	2.0	1	754-91-6	
PFOS	13	4.5	4.5	1.3	1	1763-23-1	
MeFOSA	ND	4.9	4.9	1.2	1	31506-32-8	
PFDA	ND	4.9	4.9	1.4	1	335-76-2	
EtFOSAm	ND	4.9	4.9	1.5	1	4151-50-2	
8:2 FTS	ND	4.7	4.7	1.6	1	39108-34-4	
9-CI-PF3ON	ND	4.6	4.6	0.75	1	756426-58-1	
PFNS	ND	4.7	4.7	1.1	1	68259-12-1	
PFUnDA	ND	4.9	4.9	1.3	1	2058-94-8	
NMeFOSAA	ND	4.9	4.9	1.1	1	2355-31-9	
NEtFOSAA	6.9	4.9	4.9	1.4	1	2991-50-6	
PFDS	ND	4.7	4.7	1.1	1	335-77-3	
PFDOA	ND	4.9	4.9	1.2	1	307-55-1	
MeFOSE	ND	4.9	4.9	0.80	1	24448-09-7	
10:2 FTS	ND	4.7	4.7	1.8	1	120226-60-0	
EtFOSE	ND	4.9	4.9	1.2	1	1691-99-2	
11-CI-PF3OUdS	ND	4.6	4.6	1.1	1	763051-92-9	
PFTTrDA	ND	4.9	4.9	1.5	1	72629-94-8	
PFDoS	ND	4.7	4.7	1.1	1	79780-39-5	
PFTDA	ND	4.9	4.9	1.2	1	376-06-7	
PFHXDA	ND	4.9	4.9	0.89	1	67905-19-5	
PFODA	ND	4.9	4.9	1.4	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Williston Leachate	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494010	Total Amount Extracted	102mL
Lab File ID	A210824A_029	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_025
Collected	08/11/2021 12:02	Ending CCal File	A210824A_036
Received	08/13/2021 08:50	Blank File	A210824A_015

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	49	52	106	50-150	
13C4_PFOA	49	57	117	50-150	
13C2_PFDA	49	52	107	50-150	
13C4_PFOS	47	57	121	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	49	35	71	50-150	
13C5_PFPeA	49	47	96	50-150	
13C3_PFBS	45	53	116	50-150	
13C2_4:2FTS	46	140	308	50-150	R
13C5_PFHxA	49	49	100	50-150	
13C4_PFHpA	49	57	116	50-150	
13C3_PFHxS	46	52	113	50-150	
13C2_6:2FTS	46	67	145	50-150	
13C8_PFOA	49	57	116	50-150	
13C9_PFNA	49	52	107	50-150	
13C8_PFOS	47	52	111	50-150	
13C2_8:2FTS	47	140	291	50-150	R
13C6_PFDA	49	52	107	50-150	
d3-MeFOSAA	49	58	118	50-150	
13C8_PFOSA	49	46	93	50-150	
d5-EtFOSAA	49	59	120	50-150	
13C7_PFUdA	49	54	111	50-150	
13C2_PFDoA	49	50	103	50-150	
13C2_PFTeDA	49	49	101	50-150	
13C3_HFPO-DA	49	50	102	50-150	
13C2_PFHxDA	49	39	81	50-150	
d7-N-MeFOSE	49	40	82	10-150	
d9-N-EtFOSE	49	40	81	10-150	
d3-N-MeFOSA	49	32	66	10-150	
d5-N-EtFOSA	49	32	65	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Williston Leachate	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494010	Total Amount Extracted	102mL
Lab File ID	A210824A_029	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_025
Collected	08/11/2021 12:02	Ending CCal File	A210824A_036
Received	08/13/2021 08:50	Blank File	A210824A_015

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.01	4.99	
13C4 PFOA	N/A	N/A	5.99	6.00	
13C2 PFDA	N/A	N/A	6.87	6.88	
13C4 PFOS	N/A	N/A	7.18	7.20	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.57	3.56	
13C5 PFPeA	N/A	N/A	4.42	4.42	
13C3 PFBS	N/A	N/A	5.20	5.18	
13C2 4:2FTS	N/A	N/A	4.80	4.80	R
13C5 PFHxA	N/A	N/A	5.01	5.04	
13C4 PFHpA	N/A	N/A	5.52	5.51	
13C3 PFHxS	N/A	N/A	6.27	6.28	
13C2 6:2FTS	N/A	N/A	5.76	5.77	
13C8 PFOA	N/A	N/A	5.99	6.00	
13C9 PFNA	N/A	N/A	6.43	6.44	
13C8 PFOS	N/A	N/A	7.18	7.20	
13C2 8:2FTS	N/A	N/A	6.63	6.60	R
13C6 PFDA	N/A	N/A	6.87	6.88	
d3-MeFOSAA	N/A	N/A	6.82	6.83	
13C8 PFOSA	N/A	N/A	8.78	8.78	
d5-EtFOSAA	N/A	N/A	7.03	7.02	
13C7 PFUdA	N/A	N/A	7.30	7.32	
13C2 PFDoA	N/A	N/A	7.74	7.76	
13C2 PFTeDA	N/A	N/A	8.59	8.58	
13C3 HFPO-DA	N/A	N/A	5.22	5.21	
13C2 PFHxDA	N/A	N/A	9.35	9.33	
d7-N-MeFOSE	N/A	N/A	10.06	10.02	
d9-N-EtFOSE	N/A	N/A	10.68	10.64	
d3-N-MeFOSA	N/A	N/A	10.31	10.28	
d5-N-EtFOSA	N/A	N/A	11.00	11.00	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Williston Leachate	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494010	Total Amount Extracted	102mL
Lab File ID	A210824A_029	Ical ID	210823B03
Matrix	Non_Potable_Water	CCal File	A210824A_025
Collected	08/11/2021 12:02	Ending CCal File	A210824A_036
Received	08/13/2021 08:50	Blank File	A210824A_015

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	3.57	3.58	
PFPeA	N/A	N/A	4.42	4.40	
HFPO-DA	0.000	0.450	5.24	5.22	
PFBS	0.320	0.330	5.21	5.26	
PFHxA	0.061	0.0670	5.02	5.00	D
4:2 FTS	0.000	0.580	4.80	4.80	
PFPeS	0.360	0.300	5.78	5.76	
PFHpA	0.300	0.290	5.53	5.52	
DONA	0.000	0.490	0.00	5.68	
PFHxS	0.320	0.280	6.28	6.29	
PFOA	0.400	0.380	5.99	5.97	
6:2 FTS	0.540	0.510	5.76	5.74	
PFHpS	0.170	0.230	6.74	6.76	
PFNA	0.210	0.200	6.44	6.43	
PFOSAm	N/A	N/A	8.78	8.75	
PFOS	0.170	0.240	7.16	7.27	
MeFOSA	0.000	0.910	0.00	10.32	
PFDA	0.078	0.0860	6.88	6.89	
EtFOSAm	0.000	0.710	0.00	11.04	
8:2 FTS	0.780	0.640	6.63	6.64	
9-Cl-PF3ON	0.000	0.0220	0.00	7.53	
PFNS	0.000	0.240	0.00	7.62	
PFUnDA	0.000	0.110	7.31	7.31	
NMeFOSAA	0.530	0.490	6.83	6.90	
NEtFOSAA	0.770	0.660	7.04	7.03	
PFDS	0.230	0.240	8.05	8.07	
PFDOA	0.160	0.130	7.74	7.76	
MeFOSE	N/A	N/A	0.00	10.12	
10:2 FTS	0.000	0.620	0.00	7.51	
EtFOSE	0.000	0.000	0.00	10.70	
11-Cl-PF3OUdS	0.000	0.0120	0.00	8.38	
PFTDA	0.000	0.150	0.00	8.19	
PFDoS	0.000	0.230	0.00	8.83	
PFTDA	0.000	0.140	0.00	8.58	
PFHXDA	0.170	0.120	9.35	9.35	
PFODA	0.000	0.0990	0.00	10.37	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Trip Blank	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494011	Total Amount Extracted	256mL
Lab File ID	A210824A_030	Ical ID	210823B03
Matrix	Water	CCal File	A210824A_025
Collected	08/11/2021 00:00	Ending CCal File	A210824A_036
Received	08/13/2021 08:50	Blank File	A210824A_015

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	ND	2.0	2.0	0.43	1	375-22-4	
PFPeA	ND	2.0	2.0	0.43	1	2706-90-3	
HFPO-DA	ND	2.0	2.0	0.52	1	13252-13-6	
PFBS	ND	1.7	1.7	0.46	1	375-73-5	
PFHxA	ND	2.0	2.0	0.43	1	307-24-4	
4:2 FTS	ND	1.8	1.8	0.55	1	757124-72-4	
PFPeS	ND	1.8	1.8	0.46	1	2706-91-4	
PFHpA	ND	2.0	2.0	0.54	1	375-85-9	
DONA	ND	1.8	1.8	0.50	1	919005-14-4	
PFHxS	ND	1.8	1.8	0.50	1	355-46-4	
PFOA	ND	2.0	2.0	0.57	1	335-67-1	
6:2 FTS	2.5	1.9	1.9	0.63	1	27619-97-2	
PFHpS	ND	1.9	1.9	0.40	1	375-92-8	
PFNA	ND	2.0	2.0	0.72	1	375-95-1	
PFOSAm	ND	2.0	2.0	0.80	1	754-91-6	
PFOS	ND	1.8	1.8	0.54	1	1763-23-1	
MeFOSA	ND	2.0	2.0	0.50	1	31506-32-8	
PFDA	ND	2.0	2.0	0.55	1	335-76-2	
EtFOSAm	ND	2.0	2.0	0.59	1	4151-50-2	
8:2 FTS	ND	1.9	1.9	0.64	1	39108-34-4	
9-CI-PF3ON	ND	1.8	1.8	0.30	1	756426-58-1	
PFNS	ND	1.9	1.9	0.44	1	68259-12-1	
PFUnDA	ND	2.0	2.0	0.53	1	2058-94-8	
NMeFOSAA	ND	2.0	2.0	0.42	1	2355-31-9	
NEtFOSAA	ND	2.0	2.0	0.54	1	2991-50-6	
PFDS	ND	1.9	1.9	0.44	1	335-77-3	
PFDOA	ND	2.0	2.0	0.47	1	307-55-1	
MeFOSE	ND	2.0	2.0	0.32	1	24448-09-7	
10:2 FTS	ND	1.9	1.9	0.72	1	120226-60-0	
EtFOSE	ND	2.0	2.0	0.49	1	1691-99-2	
11-CI-PF3OUdS	ND	1.8	1.8	0.43	1	763051-92-9	
PFTTrDA	ND	2.0	2.0	0.61	1	72629-94-8	
PFDoS	ND	1.9	1.9	0.45	1	79780-39-5	
PFTDA	ND	2.0	2.0	0.47	1	376-06-7	
PFHXDA	ND	2.0	2.0	0.36	1	67905-19-5	
PFODA	ND	2.0	2.0	0.57	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Trip Blank	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494011	Total Amount Extracted	256mL
Lab File ID	A210824A_030	Ical ID	210823B03
Matrix	Water	CCal File	A210824A_025
Collected	08/11/2021 00:00	Ending CCal File	A210824A_036
Received	08/13/2021 08:50	Blank File	A210824A_015

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	20	21	105	50-150	
13C4_PFOA	20	22	112	50-150	
13C2_PFDA	20	21	107	50-150	
13C4_PFOS	19	20	105	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBFA	20	21	107	50-150	
13C5_PFPeA	20	22	112	50-150	
13C3_PFBFS	18	20	112	50-150	
13C2_4:2FTS	18	19	104	50-150	
13C5_PFHxA	20	22	110	50-150	
13C4_PFHpA	20	22	111	50-150	
13C3_PFHxS	19	19	105	50-150	
13C2_6:2FTS	19	18	97	50-150	
13C8_PFOA	20	22	111	50-150	
13C9_PFNA	20	19	99	50-150	
13C8_PFOS	19	19	100	50-150	
13C2_8:2FTS	19	19	103	50-150	
13C6_PFDA	20	20	101	50-150	
d3-MeFOSAA	20	17	88	50-150	
13C8_PFOA	20	14	71	50-150	
d5-EtFOSAA	20	20	101	50-150	
13C7_PFUdA	20	19	99	50-150	
13C2_PFDoA	20	21	106	50-150	
13C2_PFTeDA	20	18	93	50-150	
13C3_HFPO-DA	20	22	113	50-150	
13C2_PFHxDA	20	13	67	50-150	
d7-N-MeFOSE	20	14	72	10-150	
d9-N-EtFOSE	20	13	69	10-150	
d3-N-MeFOSA	20	10	52	10-150	
d5-N-EtFOSA	20	10	54	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Trip Blank	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494011	Total Amount Extracted	256mL
Lab File ID	A210824A_030	Ical ID	210823B03
Matrix	Water	CCal File	A210824A_025
Collected	08/11/2021 00:00	Ending CCal File	A210824A_036
Received	08/13/2021 08:50	Blank File	A210824A_015

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.01	4.99	
13C4 PFOA	N/A	N/A	5.98	6.00	
13C2 PFDA	N/A	N/A	6.86	6.88	
13C4 PFOS	N/A	N/A	7.18	7.20	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.57	3.56	
13C5 PFPeA	N/A	N/A	4.42	4.42	
13C3 PFBS	N/A	N/A	5.20	5.18	
13C2 4:2FTS	N/A	N/A	4.79	4.80	
13C5 PFHxA	N/A	N/A	5.01	5.04	
13C4 PFHpA	N/A	N/A	5.52	5.51	
13C3 PFHxS	N/A	N/A	6.27	6.28	
13C2 6:2FTS	N/A	N/A	5.75	5.77	
13C8 PFOA	N/A	N/A	5.98	6.00	
13C9 PFNA	N/A	N/A	6.43	6.44	
13C8 PFOS	N/A	N/A	7.18	7.20	
13C2 8:2FTS	N/A	N/A	6.62	6.60	
13C6 PFDA	N/A	N/A	6.86	6.88	
d3-MeFOSAA	N/A	N/A	6.82	6.83	
13C8 PFOSA	N/A	N/A	8.77	8.78	
d5-EtFOSAA	N/A	N/A	7.03	7.02	
13C7 PFUdA	N/A	N/A	7.30	7.32	
13C2 PFDoA	N/A	N/A	7.73	7.76	
13C2 PFTeDA	N/A	N/A	8.59	8.58	
13C3 HFPO-DA	N/A	N/A	5.22	5.21	
13C2 PFHxDA	N/A	N/A	9.35	9.33	
d7-N-MeFOSE	N/A	N/A	10.05	10.02	
d9-N-EtFOSE	N/A	N/A	10.68	10.64	
d3-N-MeFOSA	N/A	N/A	10.31	10.28	
d5-N-EtFOSA	N/A	N/A	11.00	11.00	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Trip Blank	Extraction Date	08/20/2021 13:30
Lab Sample ID	10574494011	Total Amount Extracted	256mL
Lab File ID	A210824A_030	Ical ID	210823B03
Matrix	Water	CCal File	A210824A_025
Collected	08/11/2021 00:00	Ending CCal File	A210824A_036
Received	08/13/2021 08:50	Blank File	A210824A_015

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	3.57	3.58	
PFPeA	N/A	N/A	4.42	4.40	
HFPO-DA	0.000	0.450	0.00	5.22	
PFBS	0.380	0.330	5.20	5.26	
PFHxA	0.000	0.0620	5.02	5.00	
4:2 FTS	0.000	0.580	0.00	4.80	
PFPeS	0.000	0.300	0.00	5.76	
PFHpA	0.000	0.290	0.00	5.52	
DONA	0.000	0.490	0.00	5.68	
PFHxS	0.000	0.280	0.00	6.29	
PFOA	0.000	0.380	0.00	5.97	
6:2 FTS	0.450	0.510	5.76	5.74	
PFHpS	0.000	0.230	0.00	6.76	
PFNA	0.000	0.200	0.00	6.43	
PFOSAm	N/A	N/A	8.78	8.75	
PFOS	0.000	0.240	0.00	7.27	
MeFOSA	0.000	0.910	0.00	10.32	
PFDA	0.000	0.0860	0.00	6.89	
EtFOSAm	0.000	0.710	0.00	11.04	
8:2 FTS	0.000	0.640	0.00	6.64	
9-Cl-PF3ON	0.000	0.0220	0.00	7.53	
PFNS	0.000	0.240	0.00	7.62	
PFUnDA	0.000	0.110	0.00	7.31	
NMeFOSAA	0.000	0.490	0.00	6.90	
NEtFOSAA	0.000	0.660	0.00	7.03	
PFDS	0.000	0.240	0.00	8.07	
PFDOA	0.000	0.130	0.00	7.76	
MeFOSE	N/A	N/A	0.00	10.12	
10:2 FTS	0.000	0.620	0.00	7.51	
EtFOSE	0.000	0.000	0.00	10.70	
11-Cl-PF3OUdS	0.000	0.0120	0.00	8.38	
PFTrDA	0.000	0.150	0.00	8.19	
PFDoS	0.000	0.230	0.00	8.83	
PFTDA	0.000	0.140	0.00	8.58	
PFHXDA	0.130	0.120	9.35	9.35	
PFODA	0.000	0.0990	0.00	10.37	

**REPORT OF LABORATORY ANALYSIS**

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





**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKKL	Extraction Date	08/20/2021 13:30
Lab Sample ID	BLANK-92417	Total Amount Extracted	256mL
Lab File ID	A210824A_015	Ical ID	210823B03
Matrix	Water	CCal File	A210824A_014
Collected	08/18/2021 09:13	Ending CCal File	A210824A_025
Received	08/18/2021 09:13	Blank File	

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	ND	2.0	2.0	0.43	1	375-22-4	
PFPeA	ND	2.0	2.0	0.43	1	2706-90-3	
HFPO-DA	ND	2.0	2.0	0.52	1	13252-13-6	
PFBS	ND	1.7	1.7	0.46	1	375-73-5	
PFHxA	ND	2.0	2.0	0.43	1	307-24-4	
4:2 FTS	ND	1.8	1.8	0.55	1	757124-72-4	
PFPeS	ND	1.8	1.8	0.46	1	2706-91-4	
PFHpA	ND	2.0	2.0	0.54	1	375-85-9	
DONA	ND	1.8	1.8	0.50	1	919005-14-4	
PFHxS	ND	1.8	1.8	0.50	1	355-46-4	
PFOA	ND	2.0	2.0	0.57	1	335-67-1	
6:2 FTS	ND	1.9	1.9	0.63	1	27619-97-2	
PFHpS	ND	1.9	1.9	0.40	1	375-92-8	
PFNA	ND	2.0	2.0	0.72	1	375-95-1	
PFOSAm	ND	2.0	2.0	0.80	1	754-91-6	
PFOS	ND	1.8	1.8	0.54	1	1763-23-1	
MeFOSA	ND	2.0	2.0	0.50	1	31506-32-8	
PFDA	ND	2.0	2.0	0.55	1	335-76-2	
EtFOSAm	ND	2.0	2.0	0.59	1	4151-50-2	
8:2 FTS	ND	1.9	1.9	0.64	1	39108-34-4	
9-CI-PF3ON	ND	1.8	1.8	0.30	1	756426-58-1	
PFNS	ND	1.9	1.9	0.44	1	68259-12-1	
PFUnDA	ND	2.0	2.0	0.53	1	2058-94-8	
NMeFOSAA	ND	2.0	2.0	0.42	1	2355-31-9	
NEtFOSAA	ND	2.0	2.0	0.54	1	2991-50-6	
PFDS	ND	1.9	1.9	0.44	1	335-77-3	
PFDOA	ND	2.0	2.0	0.47	1	307-55-1	
MeFOSE	ND	2.0	2.0	0.32	1	24448-09-7	
10:2 FTS	ND	1.9	1.9	0.72	1	120226-60-0	
EtFOSE	ND	2.0	2.0	0.49	1	1691-99-2	
11-CI-PF3OUdS	ND	1.8	1.8	0.43	1	763051-92-9	
PFTTrDA	ND	2.0	2.0	0.61	1	72629-94-8	
PFDoS	ND	1.9	1.9	0.45	1	79780-39-5	
PFTDA	ND	2.0	2.0	0.47	1	376-06-7	
PFHxDA	ND	2.0	2.0	0.35	1	67905-19-5	
PFODA	ND	2.0	2.0	0.57	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKKL	Extraction Date	08/20/2021 13:30
Lab Sample ID	BLANK-92417	Total Amount Extracted	256mL
Lab File ID	A210824A_015	Ical ID	210823B03
Matrix	Water	CCal File	A210824A_014
Collected	08/18/2021 09:13	Ending CCal File	A210824A_025
Received	08/18/2021 09:13	Blank File	

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	20	20	103	50-150	
13C4_PFOA	20	20	101	50-150	
13C2_PFDA	20	20	104	50-150	
13C4_PFOS	19	20	108	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	20	20	100	50-150	
13C5_PFPeA	20	19	97	50-150	
13C3_PFBs	18	19	106	50-150	
13C2_4:2Fts	18	17	93	50-150	
13C5_PFHxA	20	18	94	50-150	
13C4_PFHpA	20	20	101	50-150	
13C3_PFHxS	18	18	96	50-150	
13C2_6:2Fts	19	19	101	50-150	
13C8_PFOA	20	19	96	50-150	
13C9_PFNA	20	19	98	50-150	
13C8_PFOS	19	17	89	50-150	
13C2_8:2Fts	19	18	95	50-150	
13C6_PFDA	20	18	94	50-150	
d3-MeFOSAA	20	17	84	50-150	
13C8_PFOsA	20	16	81	50-150	
d5-EtFOSAA	20	15	77	50-150	
13C7_PFUdA	20	19	96	50-150	
13C2_PFDoA	20	20	101	50-150	
13C2_PFTeDA	20	18	93	50-150	
13C3_HFPO-DA	20	20	103	50-150	
13C2_PFHxDA	20	17	85	50-150	
d7-N-MeFOSE	20	16	80	10-150	
d9-N-EtFOSE	20	15	78	10-150	
d3-N-MeFOSA	20	12	61	10-150	
d5-N-EtFOSA	20	12	62	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKKL	Extraction Date	08/20/2021 13:30
Lab Sample ID	BLANK-92417	Total Amount Extracted	256mL
Lab File ID	A210824A_015	Ical ID	210823B03
Matrix	Water	CCal File	A210824A_014
Collected	08/18/2021 09:13	Ending CCal File	A210824A_025
Received	08/18/2021 09:13	Blank File	

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.01	4.99	
13C4 PFOA	N/A	N/A	5.99	6.00	
13C2 PFDA	N/A	N/A	6.87	6.88	
13C4 PFOS	N/A	N/A	7.18	7.20	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.57	3.56	
13C5 PFPeA	N/A	N/A	4.42	4.42	
13C3 PFBS	N/A	N/A	5.20	5.18	
13C2 4:2FTS	N/A	N/A	4.79	4.80	
13C5 PFHxA	N/A	N/A	5.01	5.04	
13C4 PFHpA	N/A	N/A	5.52	5.51	
13C3 PFHxS	N/A	N/A	6.27	6.28	
13C2 6:2FTS	N/A	N/A	5.75	5.77	
13C8 PFOA	N/A	N/A	5.99	6.00	
13C9 PFNA	N/A	N/A	6.43	6.44	
13C8 PFOS	N/A	N/A	7.18	7.20	
13C2 8:2FTS	N/A	N/A	6.62	6.60	
13C6 PFDA	N/A	N/A	6.87	6.88	
d3-MeFOSAA	N/A	N/A	6.82	6.83	
13C8 PFOSA	N/A	N/A	8.77	8.78	
d5-EtFOSAA	N/A	N/A	7.03	7.02	
13C7 PFUdA	N/A	N/A	7.31	7.32	
13C2 PFDoA	N/A	N/A	7.74	7.76	
13C2 PFTeDA	N/A	N/A	8.59	8.58	
13C3 HFPO-DA	N/A	N/A	5.22	5.21	
13C2 PFHxDA	N/A	N/A	9.35	9.33	
d7-N-MeFOSE	N/A	N/A	10.05	10.02	
d9-N-EtFOSE	N/A	N/A	10.67	10.64	
d3-N-MeFOSA	N/A	N/A	10.31	10.28	
d5-N-EtFOSA	N/A	N/A	10.99	11.00	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKKL	Extraction Date	08/20/2021 13:30
Lab Sample ID	BLANK-92417	Total Amount Extracted	256mL
Lab File ID	A210824A_015	Ical ID	210823B03
Matrix	Water	CCal File	A210824A_014
Collected	08/18/2021 09:13	Ending CCal File	A210824A_025
Received	08/18/2021 09:13	Blank File	

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	3.57	3.58	
PFPeA	N/A	N/A	0.00	4.40	
HFPO-DA	0.000	0.470	0.00	5.22	
PFBS	0.470	0.320	5.20	5.26	
PFHxA	0.000	0.0670	0.00	5.00	
4:2 FTS	0.000	0.550	0.00	4.80	
PFPeS	0.000	0.300	0.00	5.76	
PFHpA	0.000	0.310	0.00	5.52	
DONA	0.000	0.520	0.00	5.68	
PFHxS	0.000	0.250	0.00	6.29	
PFOA	0.000	0.410	0.00	5.97	
6:2 FTS	0.000	0.560	0.00	5.74	
PFHpS	0.000	0.210	0.00	6.76	
PFNA	0.000	0.170	0.00	6.43	
PFOSAm	N/A	N/A	8.78	8.75	
PFOS	0.000	0.270	0.00	7.27	
MeFOSA	0.000	0.950	0.00	10.32	
PFDA	0.000	0.0860	0.00	6.89	
EtFOSAm	0.000	0.700	0.00	11.04	
8:2 FTS	0.000	0.540	0.00	6.64	
9-Cl-PF3ON	0.000	0.0200	0.00	7.53	
PFNS	0.000	0.250	0.00	7.62	
PFUnDA	0.000	0.0990	0.00	7.31	
NMeFOSAA	0.000	0.630	0.00	6.90	
NEtFOSAA	0.000	0.740	0.00	7.03	
PFDS	0.000	0.250	0.00	8.07	
PFDOA	0.000	0.140	0.00	7.76	
MeFOSE	N/A	N/A	0.00	10.12	
10:2 FTS	0.000	0.660	0.00	7.51	
EtFOSE	0.000	0.000	0.00	10.70	
11-Cl-PF3OUdS	0.000	0.0130	8.36	8.38	
PFTTrDA	0.000	0.160	0.00	8.19	
PFDoS	0.000	0.240	0.00	8.83	
PFTDA	0.000	0.140	0.00	8.58	
PFHXDA	0.140	0.120	9.36	9.35	
PFODA	0.000	0.0980	0.00	10.37	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKLJ	Extraction Date	08/24/2021 10:00
Lab Sample ID	BLANK-92528	Total Amount Extracted	5.07g
Lab File ID	Q210827A_015	Ical ID	210826A01
Matrix	Soil	CCal File	Q210827A_008
Collected	08/23/2021 09:14	Ending CCal File	Q210827A_017
Received	08/23/2021 09:14	Blank File	

Compound	Concentration (ng/Kg)	QL (ng/Kg)	RL (ng/Kg)	DL (ng/Kg)	Dil.	CAS No.	Qual.
PFBA	ND	99	99	23	1	375-22-4	
PFPeA	ND	99	99	26	1	2706-90-3	
HFPO-DA	ND	99	99	29	1	13252-13-6	
PFBS	ND	87	87	22	1	375-73-5	
PFHxA	ND	99	99	30	1	307-24-4	
4:2 FTS	ND	92	92	31	1	757124-72-4	
PFPeS	ND	93	93	18	1	2706-91-4	
PFHpA	ND	99	99	22	1	375-85-9	
DONA	ND	93	93	38	1	919005-14-4	
PFHxS	ND	90	90	22	1	355-46-4	
PFOA	ND	99	99	22	1	335-67-1	
6:2 FTS	ND	94	94	32	1	27619-97-2	
PFHpS	ND	94	94	25	1	375-92-8	
PFNA	ND	99	99	28	1	375-95-1	
PFOSAm	ND	99	99	23	1	754-91-6	
PFOS	ND	91	91	27	1	1763-23-1	
MeFOSA	ND	99	99	25	1	31506-32-8	
PFDA	ND	99	99	21	1	335-76-2	
EtFOSAm	ND	99	99	23	1	4151-50-2	
8:2 FTS	ND	95	95	26	1	39108-34-4	
9-CI-PF3ON	ND	92	92	14	1	756426-58-1	
PFNS	ND	95	95	18	1	68259-12-1	
PFUnDA	ND	99	99	28	1	2058-94-8	
NMeFOSAA	ND	99	99	23	1	2355-31-9	
NEtFOSAA	ND	99	99	24	1	2991-50-6	
PFDS	ND	95	95	25	1	335-77-3	
PFDOA	ND	99	99	26	1	307-55-1	
MeFOSE	ND	99	99	23	1	24448-09-7	
10:2 FTS	ND	95	95	36	1	120226-60-0	
EtFOSE	ND	99	99	25	1	1691-99-2	
11-CI-PF3OUdS	ND	93	93	16	1	763051-92-9	
PFTTrDA	ND	99	99	21	1	72629-94-8	
PFDoS	ND	95	95	29	1	79780-39-5	
PFTDA	ND	99	99	32	1	376-06-7	
PFHXDA	ND	99	99	35	1	67905-19-5	
PFODA	ND	99	99	25	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKLJ	Extraction Date	08/24/2021 10:00
Lab Sample ID	BLANK-92528	Total Amount Extracted	5.07g
Lab File ID	Q210827A_015	Ical ID	210826A01
Matrix	Soil	CCal File	Q210827A_008
Collected	08/23/2021 09:14	Ending CCal File	Q210827A_017
Received	08/23/2021 09:14	Blank File	

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	990	1000	106	50-150	
13C4_PFOA	990	960	97	50-150	
13C2_PFDA	990	960	98	50-150	
13C4_PFOS	940	1000	106	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBa	990	870	89	50-150	
13C5_PFPeA	990	800	81	50-150	
13C3_PFBs	920	770	84	50-150	
13C2_4:2FTS	920	820	89	50-150	
13C5_PFHxA	990	850	86	50-150	
13C4_PFHpA	990	830	84	50-150	
13C3_PFHxS	930	790	85	50-150	
13C2_6:2FTS	940	970	104	50-150	
13C8_PFOA	990	940	95	50-150	
13C9_PFNA	990	1000	102	50-150	
13C8_PFOS	940	780	83	50-150	
13C2_8:2FTS	940	860	91	50-150	
13C6_PFDA	990	910	92	50-150	
d3-MeFOSAA	990	1100	110	50-150	
13C8_PFOsA	990	940	95	50-150	
d5-EtFOSAA	990	860	88	50-150	
13C7_PFUdA	990	880	90	50-150	
13C2_PFDoA	990	950	97	50-150	
13C2_PFTeDA	990	880	89	50-150	
13C3_HFPO-DA	990	790	81	50-150	
13C2_PFHxDA	990	840	86	50-150	
d7-N-MeFOSE	990	870	88	10-150	
d9-N-EtFOSE	990	760	77	10-150	
d3-N-MeFOSA	990	860	87	10-150	
d5-N-EtFOSA	990	820	84	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKLJ	Extraction Date	08/24/2021 10:00
Lab Sample ID	BLANK-92528	Total Amount Extracted	5.07g
Lab File ID	Q210827A_015	Ical ID	210826A01
Matrix	Soil	CCal File	Q210827A_008
Collected	08/23/2021 09:14	Ending CCal File	Q210827A_017
Received	08/23/2021 09:14	Blank File	

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.30	6.29	
13C4 PFOA	N/A	N/A	7.65	7.66	
13C2 PFDA	N/A	N/A	9.02	9.06	
13C4 PFOS	N/A	N/A	9.51	9.46	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.76	4.80	
13C5 PFPeA	N/A	N/A	5.60	5.60	
13C3 PFBS	N/A	N/A	6.57	6.55	
13C2 4:2FTS	N/A	N/A	6.01	5.99	
13C5 PFHxA	N/A	N/A	6.30	6.28	
13C4 PFHpA	N/A	N/A	6.98	6.96	
13C3 PFHxS	N/A	N/A	8.08	8.08	
13C2 6:2FTS	N/A	N/A	7.30	7.29	
13C8 PFOA	N/A	N/A	7.65	7.64	
13C9 PFNA	N/A	N/A	8.34	8.33	
13C8 PFOS	N/A	N/A	9.51	9.52	
13C2 8:2FTS	N/A	N/A	8.63	8.63	
13C6 PFDA	N/A	N/A	9.02	9.03	
d3-MeFOSAA	N/A	N/A	8.89	8.90	
13C8 PFOSA	N/A	N/A	11.41	11.42	
d5-EtFOSAA	N/A	N/A	9.20	9.21	
13C7 PFUdA	N/A	N/A	9.71	9.72	
13C2 PFDoA	N/A	N/A	10.39	10.41	
13C2 PFTeDA	N/A	N/A	11.71	11.71	
13C3 HFPO-DA	N/A	N/A	6.57	6.56	
13C2 PFHxDA	N/A	N/A	12.83	12.87	
d7-N-MeFOSE	N/A	N/A	13.08	13.08	
d9-N-EtFOSE	N/A	N/A	13.56	13.53	
d3-N-MeFOSA	N/A	N/A	13.29	13.26	
d5-N-EtFOSA	N/A	N/A	13.73	13.70	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKLJ	Extraction Date	08/24/2021 10:00
Lab Sample ID	BLANK-92528	Total Amount Extracted	5.07g
Lab File ID	Q210827A_015	Ical ID	210826A01
Matrix	Soil	CCal File	Q210827A_008
Collected	08/23/2021 09:14	Ending CCal File	Q210827A_017
Received	08/23/2021 09:14	Blank File	

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	0.00	4.82	
PFPeA	N/A	N/A	5.61	5.63	
HFPO-DA	0.000	0.350	0.00	6.61	
PFBS	0.000	0.380	0.00	6.54	
PFHxA	0.000	0.0790	6.31	6.32	
4:2 FTS	0.000	0.860	0.00	5.99	
PFPeS	0.000	0.440	0.00	7.32	
PFHpA	0.000	0.630	0.00	6.96	
DONA	0.000	0.420	0.00	7.25	
PFHxS	0.000	0.310	0.00	8.05	
PFOA	0.000	0.230	0.00	7.66	
6:2 FTS	0.000	1.10	0.00	7.30	
PFHpS	0.000	0.420	0.00	8.79	
PFNA	0.000	0.270	0.00	8.32	
PFOSAm	N/A	N/A	11.43	11.40	
PFOS	0.000	0.230	9.52	9.46	
MeFOSA	0.000	0.580	0.00	13.29	
PFDA	0.000	0.180	0.00	9.02	
EtFOSAm	0.000	0.530	0.00	13.73	
8:2 FTS	0.000	1.50	0.00	8.62	
9-Cl-PF3ON	0.000	0.0480	0.00	10.00	
PFNS	0.000	0.240	10.20	10.16	
PFUnDA	0.490	0.170	9.72	9.71	
NMeFOSAA	0.000	0.770	0.00	8.89	
NEtFOSAA	0.000	0.490	0.00	9.20	
PFDS	0.000	0.270	0.00	10.92	
PFDOA	0.000	0.180	0.00	10.44	
MeFOSE	N/A	N/A	0.00	13.10	
10:2 FTS	0.000	1.50	0.00	9.95	
EtFOSE	0.000	0.000	0.00	13.51	
11-Cl-PF3OUdS	0.000	0.0260	0.00	11.37	
PFTTrDA	0.000	0.190	0.00	11.10	
PFDoS	0.000	0.240	0.00	12.12	
PFTDA	0.000	0.150	0.00	11.66	
PFHXDA	0.130	0.130	12.84	12.87	
PFODA	0.000	0.190	0.00	13.62	

**REPORT OF LABORATORY ANALYSIS**

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





**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID	LCS-92418	Instrument ID	10LCMS03
Run File Name	A210824A_016	Column ID	118AB10133
Analyzed	08/24/2021 15:00	Ical ID	210823B03
Injected By	NH	Level	L

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	20	18	91	50-150	
13C4_PFOA	20	18	93	50-150	
13C2_PFDA	20	18	94	50-150	
13C4_PFOS	19	19	100	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBFA	20	18	95	50-150	
13C5_PFPeA	20	18	93	50-150	
13C3_PFBFS	18	16	86	50-150	
13C2_4:2FTS	18	17	94	50-150	
13C5_PFHxA	20	16	83	50-150	
13C4_PFHpA	20	19	95	50-150	
13C3_PFHxS	18	17	89	50-150	
13C2_6:2FTS	19	18	97	50-150	
13C8_PFOA	20	17	89	50-150	
13C9_PFNA	20	18	92	50-150	
13C8_PFOS	19	16	84	50-150	
13C2_8:2FTS	19	17	94	50-150	
13C6_PFDA	20	17	88	50-150	
d3-MeFOSAA	20	15	79	50-150	
13C8_PFOSA	20	15	79	50-150	
d5-EtFOSAA	20	15	79	50-150	
13C7_PFUdA	20	17	88	50-150	
13C2_PFDaA	20	18	94	50-150	
13C2_PFTeDA	20	17	89	50-150	
13C3_HFPO-DA	20	19	99	50-150	
13C2_PFHxDA	20	17	85	50-150	
d7-N-MeFOSE	20	14	71	10-150	
d9-N-EtFOSE	20	14	72	10-150	
d3-N-MeFOSA	20	9.4	48	10-150	
d5-N-EtFOSA	20	9.7	50	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID LCS-92418  
 Run File Name A210824A\_016  
 Analyzed 08/24/2021 15:00  
 Injected By NH

Instrument ID 10LCMS03  
 Column ID 118AB10133  
 Ical ID 210823B03  
 Level L

**Native Analytes**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	CAS No.
PFBA	3.9	3.8	97	73-129		375-22-4
PFPeA	3.9	3.5	90	72-129		2706-90-3
HFPO-DA	3.9	3.5	89	70-140		13252-13-6
PFBS	3.5	3.3	96	72-130		375-73-5
PFHxA	3.9	3.7	95	72-129		307-24-4
4:2 FTS	3.7	3.1	84	63-143		757124-72-4
PFPeS	3.7	3.5	95	71-127		2706-91-4
PFHpA	3.9	3.9	99	72-130		375-85-9
DONA	3.7	3.7	101	70-140		919005-14-4
PFHxS	3.6	3.1	87	68-131		355-46-4
PFOA	3.9	3.6	93	71-133		335-67-1
6:2 FTS	3.7	3.3	88	64-140		27619-97-2
PFHpS	3.7	3.7	99	69-134		375-92-8
PFNA	3.9	3.6	92	69-130		375-95-1
PFOSAm	3.9	3.7	95	67-137		754-91-6
PFOS	3.6	3.4	94	65-140		1763-23-1
MeFOSA	3.9	3.5	91	68-141		31506-32-8
PFDA	3.9	3.6	92	71-129		335-76-2
EtFOSAm	3.9	3.3	85	70-140		4151-50-2
8:2 FTS	3.7	2.7	73	67-138		39108-34-4
9-CI-PF3ON	3.6	3.3	92	70-130		756426-58-1
PFNS	3.7	3.6	96	69-127		68259-12-1
PFUnDA	3.9	3.4	86	69-133		2058-94-8
NMeFOSAA	3.9	3.2	81	65-136		2355-31-9
NEtFOSAA	3.9	3.5	89	61-135		2991-50-6
PFDS	3.8	3.2	86	53-142		335-77-3
PFDOA	3.9	3.6	92	72-134		307-55-1
MeFOSE	3.9	3.7	94	70-140		24448-09-7
10:2 FTS	3.8	3.2	86	70-140		120226-60-0
EtFOSE	3.9	3.2	83	70-140		1691-99-2
11-CI-PF3OUdS	3.7	3.3	90	70-140		763051-92-9
PFTTrDA	3.9	3.5	89	65-144		72629-94-8
PFDoS	3.8	3.4	89	70-140		79780-39-5
PFTDA	3.9	3.5	89	71-132		376-06-7
PFHXDA	3.9	3.8	96	70-140		67905-19-5
PFODA	3.9	3.6	93	70-140		16517-11-6

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID LCS-92418  
 Run File Name A210824A\_016  
 Analyzed 08/24/2021 15:00  
 Injected By NH

Instrument ID 10LCMS03  
 Column ID 118AB10133  
 Ical ID 210823B03  
 Level L

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.01	4.99	
13C4 PFOA	N/A	N/A	5.98	6.00	
13C2 PFDA	N/A	N/A	6.87	6.88	
13C4 PFOS	N/A	N/A	7.18	7.20	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.57	3.56	
13C5 PFPeA	N/A	N/A	4.42	4.42	
13C3 PFBS	N/A	N/A	5.20	5.18	
13C2 4:2FTS	N/A	N/A	4.79	4.80	
13C5 PFHxA	N/A	N/A	5.01	5.04	
13C4 PFHpA	N/A	N/A	5.52	5.51	
13C3 PFHxS	N/A	N/A	6.27	6.28	
13C2 6:2FTS	N/A	N/A	5.75	5.77	
13C8 PFOA	N/A	N/A	5.98	6.00	
13C9 PFNA	N/A	N/A	6.43	6.44	
13C8 PFOS	N/A	N/A	7.18	7.20	
13C2 8:2FTS	N/A	N/A	6.62	6.60	
13C6 PFDA	N/A	N/A	6.87	6.88	
d3-MeFOSAA	N/A	N/A	6.82	6.83	
13C8 PFOSA	N/A	N/A	8.77	8.78	
d5-EtFOSAA	N/A	N/A	7.03	7.02	
13C7 PFUdA	N/A	N/A	7.30	7.32	
13C2 PFDoA	N/A	N/A	7.74	7.76	
13C2 PFTeDA	N/A	N/A	8.59	8.58	
13C3 HFPO-DA	N/A	N/A	5.22	5.21	
13C2 PFHxDA	N/A	N/A	9.35	9.33	
d7-N-MeFOSE	N/A	N/A	10.05	10.02	
d9-N-EtFOSE	N/A	N/A	10.68	10.64	
d3-N-MeFOSA	N/A	N/A	10.31	10.28	
d5-N-EtFOSA	N/A	N/A	11.00	11.00	

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID      LCS-92418  
 Run File Name      A210824A\_016  
 Analyzed            08/24/2021 15:00  
 Injected By        NH

Instrument ID      10LCMS03  
 Column ID         118AB10133  
 Ical ID             210823B03  
 Level                L

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	3.57	3.58	
PFPeA	N/A	N/A	4.42	4.40	
HFPO-DA	0.47	0.47	5.23	5.22	
PFBS	0.32	0.32	5.20	5.26	
PFHxA	0.06	0.06	5.02	5.00	
4:2 FTS	0.53	0.55	4.80	4.80	
PFPeS	0.29	0.30	5.77	5.76	
PFHpA	0.29	0.31	5.52	5.52	
DONA	0.45	0.52	5.70	5.68	
PFHxS	0.29	0.25	6.28	6.29	
PFOA	0.39	0.41	5.99	5.97	
6:2 FTS	0.50	0.56	5.75	5.74	
PFHpS	0.23	0.21	6.74	6.76	
PFNA	0.19	0.17	6.43	6.43	
PFOSAm	N/A	N/A	8.78	8.75	
PFOS	0.24	0.27	7.19	7.27	
MeFOSA	0.83	0.95	10.33	10.32	
PFDA	0.07	0.08	6.87	6.89	
EtFOSAm	0.69	0.70	11.03	11.04	
8:2 FTS	0.74	0.54	6.62	6.64	
9-CI-PF3ON	0.02	0.02	7.51	7.53	
PFNS	0.25	0.25	7.63	7.62	
PFUnDA	0.11	0.09	7.31	7.31	
NMeFOSAA	0.60	0.63	6.83	6.90	
NEtFOSAA	0.76	0.74	7.04	7.03	
PFDS	0.26	0.25	8.05	8.07	
PFDOA	0.13	0.14	7.74	7.76	
MeFOSE	N/A	N/A	10.09	10.12	
10:2 FTS	0.56	0.66	7.49	7.51	
EtFOSE	0.00	0.00	10.74	10.70	
11-CI-PF3OUdS	0.01	0.01	8.36	8.38	
PFTrDA	0.15	0.16	8.17	8.19	
PFDoS	0.24	0.24	8.85	8.83	
PFTDA	0.13	0.14	8.59	8.58	
PFHXDA	0.12	0.12	9.35	9.35	
PFODA	0.09	0.09	10.38	10.37	

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID	LCS-92529	Instrument ID	10LCMS01
Run File Name	Q210827A_016	Column ID	112EB00094
Analyzed	08/27/2021 15:16	Ical ID	210826A01
Injected By	NH	Level	L

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	980	950	97	50-150	
13C4_PFOA	980	790	81	50-150	
13C2_PFDA	980	1100	107	50-150	
13C4_PFOS	940	1100	114	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBFA	980	780	79	50-150	
13C5_PFPeA	980	740	76	50-150	
13C3_PFBFS	910	680	75	50-150	
13C2_4:2FTS	920	730	80	50-150	
13C5_PFHxA	980	830	84	50-150	
13C4_PFHpA	980	770	78	50-150	
13C3_PFHxS	930	670	72	50-150	
13C2_6:2FTS	930	870	93	50-150	
13C8_PFOA	980	810	83	50-150	
13C9_PFNA	980	910	93	50-150	
13C8_PFOS	940	840	90	50-150	
13C2_8:2FTS	940	800	85	50-150	
13C6_PFDA	980	960	98	50-150	
d3-MeFOSAA	980	1100	116	50-150	
13C8_PFOA	980	830	84	50-150	
d5-EtFOSAA	980	680	69	50-150	
13C7_PFUdA	980	890	90	50-150	
13C2_PFDaA	980	920	93	50-150	
13C2_PFTeDA	980	790	80	50-150	
13C3_HFPO-DA	980	700	71	50-150	
13C2_PFHxDA	980	770	78	50-150	
d7-N-MeFOSE	980	760	77	10-150	
d9-N-EtFOSE	980	690	70	10-150	
d3-N-MeFOSA	980	830	85	10-150	
d5-N-EtFOSA	980	780	79	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID LCS-92529  
 Run File Name Q210827A\_016  
 Analyzed 08/27/2021 15:16  
 Injected By NH

Instrument ID 10LCMS01  
 Column ID 112EB00094  
 Ical ID 210826A01  
 Level L

**Native Analytes**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	CAS No.
PFBA	200	210	106	71-135		375-22-4
PFPeA	200	210	107	69-132		2706-90-3
HFPO-DA	200	180	92	70-140		13252-13-6
PFBS	170	160	89	72-128		375-73-5
PFHxA	200	190	96	70-132		307-24-4
4:2 FTS	180	140	77	62-145		757124-72-4
PFPeS	180	180	96	73-123		2706-91-4
PFHpA	200	160	79	71-131		375-85-9
DONA	190	150	82	70-140		919005-14-4
PFHxS	180	190	106	67-130		355-46-4
PFOA	200	190	97	69-133		335-67-1
6:2 FTS	190	220	115	64-140		27619-97-2
PFHpS	190	180	95	70-132		375-92-8
PFNA	200	190	95	72-129		375-95-1
PFOSAm	200	190	96	67-137		754-91-6
PFOS	180	190	105	68-136		1763-23-1
MeFOSA	200	190	94	70-140		31506-32-8
PFDA	200	170	86	69-133		335-76-2
EtFOSAm	200	200	104	70-140		4151-50-2
8:2 FTS	190	190	98	65-137		39108-34-4
9-CI-PF3ON	180	190	106	70-140		756426-58-1
PFNS	190	180	95	69-125		68259-12-1
PFUnDA	200	180	89	64-136		2058-94-8
NMeFOSAA	200	180	90	63-144		2355-31-9
NEtFOSAA	200	220	110	61-139		2991-50-6
PFDS	190	180	93	59-134		335-77-3
PFDOA	200	190	97	69-135		307-55-1
MeFOSE	200	190	94	70-140		24448-09-7
10:2 FTS	190	170	88	70-140		120226-60-0
EtFOSE	200	200	100	70-140		1691-99-2
11-CI-PF3OUdS	190	160	87	70-140		763051-92-9
PFTTrDA	200	200	101	66-139		72629-94-8
PFDoS	190	160	86	70-140		79780-39-5
PFTDA	200	200	100	69-133		376-06-7
PFHXDA	200	190	99	70-140		67905-19-5
PFODA	200	170	88	70-140		16517-11-6

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID      LCS-92529  
 Run File Name      Q210827A\_016  
 Analyzed            08/27/2021 15:16  
 Injected By         NH

Instrument ID      10LCMS01  
 Column ID         112EB00094  
 Ical ID             210826A01  
 Level                L

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.29	6.29	
13C4 PFOA	N/A	N/A	7.65	7.66	
13C2 PFDA	N/A	N/A	9.03	9.06	
13C4 PFOS	N/A	N/A	9.50	9.46	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.75	4.80	
13C5 PFPeA	N/A	N/A	5.59	5.60	
13C3 PFBS	N/A	N/A	6.55	6.55	
13C2 4:2FTS	N/A	N/A	6.00	5.99	
13C5 PFHxA	N/A	N/A	6.29	6.28	
13C4 PFHpA	N/A	N/A	6.97	6.96	
13C3 PFHxS	N/A	N/A	8.08	8.08	
13C2 6:2FTS	N/A	N/A	7.30	7.29	
13C8 PFOA	N/A	N/A	7.65	7.64	
13C9 PFNA	N/A	N/A	8.33	8.33	
13C8 PFOS	N/A	N/A	9.51	9.52	
13C2 8:2FTS	N/A	N/A	8.63	8.63	
13C6 PFDA	N/A	N/A	9.03	9.03	
d3-MeFOSAA	N/A	N/A	8.89	8.90	
13C8 PFOSA	N/A	N/A	11.41	11.42	
d5-EtFOSAA	N/A	N/A	9.20	9.21	
13C7 PFUdA	N/A	N/A	9.71	9.72	
13C2 PFDoA	N/A	N/A	10.39	10.41	
13C2 PFTeDA	N/A	N/A	11.70	11.71	
13C3 HFPO-DA	N/A	N/A	6.56	6.56	
13C2 PFHxDA	N/A	N/A	12.83	12.87	
d7-N-MeFOSE	N/A	N/A	13.08	13.08	
d9-N-EtFOSE	N/A	N/A	13.55	13.53	
d3-N-MeFOSA	N/A	N/A	13.28	13.26	
d5-N-EtFOSA	N/A	N/A	13.72	13.70	

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID LCS-92529  
 Run File Name Q210827A\_016  
 Analyzed 08/27/2021 15:16  
 Injected By NH

Instrument ID 10LCMS01  
 Column ID 112EB00094  
 Ical ID 210826A01  
 Level L

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.76	4.82	
PFPeA	N/A	N/A	5.60	5.63	
HFPO-DA	0.33	0.35	6.59	6.61	
PFBS	0.38	0.38	6.56	6.54	
PFHxA	0.09	0.07	6.30	6.32	
4:2 FTS	1.20	0.86	6.00	5.99	
PFPeS	0.40	0.44	7.34	7.32	
PFHpA	0.67	0.63	6.98	6.96	
DONA	0.51	0.42	7.23	7.25	
PFHxS	0.28	0.31	8.08	8.05	
PFOA	0.28	0.23	7.66	7.66	
6:2 FTS	0.70	1.10	7.30	7.30	
PFHpS	0.39	0.42	8.81	8.79	
PFNA	0.25	0.27	8.34	8.32	
PFOSAm	N/A	N/A	11.42	11.40	
PFOS	0.20	0.23	9.52	9.46	
MeFOSA	0.56	0.58	13.31	13.29	
PFDA	0.21	0.18	9.04	9.02	
EtFOSAm	0.49	0.53	13.75	13.73	
8:2 FTS	1.20	1.50	8.63	8.62	
9-CI-PF3ON	0.03	0.04	10.02	10.00	
PFNS	0.25	0.24	10.20	10.16	
PFUnDA	0.18	0.17	9.72	9.71	
NMeFOSAA	0.84	0.77	8.90	8.89	
NEtFOSAA	0.45	0.49	9.22	9.20	
PFDS	0.26	0.27	10.87	10.92	
PFDOA	0.21	0.18	10.39	10.44	
MeFOSE	N/A	N/A	13.12	13.10	
10:2 FTS	1.50	1.50	10.00	9.95	
EtFOSE	0.00	0.00	13.59	13.51	
11-CI-PF3OUdS	0.03	0.02	11.34	11.37	
PFTrDA	0.21	0.19	11.07	11.10	
PFDoS	0.26	0.24	12.09	12.12	
PFTDA	0.15	0.15	11.71	11.66	
PFHXDA	0.14	0.13	12.83	12.87	
PFODA	0.20	0.19	13.59	13.62	

**REPORT OF LABORATORY ANALYSIS**

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





**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	14608827CCD3	Extraction Date	08/26/2021 09:00
Lab Sample ID	10574520001	Total Amount Extracted	231mL
Lab File ID	A210831A_050	Ical ID	210830A03
Matrix	Non_Potable_Water	CCal File	A210831A_040
Collected	08/09/2021 11:54	Ending CCal File	A210831A_051
Received	08/13/2021 08:50	Blank File	A210831B_005

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	ND	2.2	2.2	0.48	1	375-22-4	
PFPeA	ND	2.2	2.2	0.47	1	2706-90-3	
HFPO-DA	ND	2.2	2.2	0.57	1	13252-13-6	
PFBS	ND	1.9	1.9	0.51	1	375-73-5	
PFHxA	ND	2.2	2.2	0.47	1	307-24-4	
4:2 FTS	ND	2.0	2.0	0.60	1	757124-72-4	
PFPeS	ND	2.0	2.0	0.51	1	2706-91-4	
PFHpA	ND	2.2	2.2	0.60	1	375-85-9	
DONA	ND	2.0	2.0	0.56	1	919005-14-4	
PFHxS	ND	2.0	2.0	0.55	1	355-46-4	
PFOA	ND	2.2	2.2	0.63	1	335-67-1	
6:2 FTS	ND	2.1	2.1	0.70	1	27619-97-2	
PFHpS	ND	2.1	2.1	0.45	1	375-92-8	
PFNA	ND	2.2	2.2	0.80	1	375-95-1	
PFOSAm	ND	2.2	2.2	0.89	1	754-91-6	
PFOS	5.9	2.0	2.0	0.59	1	1763-23-1	
MeFOSA	ND	2.2	2.2	0.55	1	31506-32-8	
PFDA	ND	2.2	2.2	0.61	1	335-76-2	
EtFOSAm	ND	2.2	2.2	0.66	1	4151-50-2	
8:2 FTS	ND	2.1	2.1	0.71	1	39108-34-4	
9-CI-PF3ON	ND	2.0	2.0	0.33	1	756426-58-1	
PFNS	ND	2.1	2.1	0.48	1	68259-12-1	
PFUnDA	ND	2.2	2.2	0.59	1	2058-94-8	
NMeFOSAA	ND	2.2	2.2	0.47	1	2355-31-9	
NEtFOSAA	ND	2.2	2.2	0.60	1	2991-50-6	
PFDS	ND	2.1	2.1	0.49	1	335-77-3	
PFDOA	ND	2.2	2.2	0.52	1	307-55-1	
MeFOSE	ND	2.2	2.2	0.36	1	24448-09-7	
10:2 FTS	ND	2.1	2.1	0.80	1	120226-60-0	
EtFOSE	ND	2.2	2.2	0.54	1	1691-99-2	
11-CI-PF3OUdS	ND	2.0	2.0	0.47	1	763051-92-9	
PFTTrDA	ND	2.2	2.2	0.67	1	72629-94-8	
PFDoS	ND	2.1	2.1	0.50	1	79780-39-5	
PFTDA	ND	2.2	2.2	0.52	1	376-06-7	
PFHXDA	ND	2.2	2.2	0.39	1	67905-19-5	
PFODA	ND	2.2	2.2	0.63	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/26/2021 09:00
Lab Sample ID	10574520001	Total Amount Extracted	231mL
Lab File ID	A210831A_050	Ical ID	210830A03
Matrix	Non_Potable_Water	CCal File	A210831A_040
Collected	08/09/2021 11:54	Ending CCal File	A210831A_051
Received	08/13/2021 08:50	Blank File	A210831B_005

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	22	22	103	50-150	
13C4_PFOA	22	24	112	50-150	
13C2_PFDA	22	23	105	50-150	
13C4_PFOS	21	21	102	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	22	22	101	50-150	
13C5_PFPeA	22	22	100	50-150	
13C3_PFBs	20	20	100	50-150	
13C2_4:2Fts	20	21	104	50-150	
13C5_PFHxA	22	22	100	50-150	
13C4_PFHpA	22	22	99	50-150	
13C3_PFHxS	21	20	96	50-150	
13C2_6:2Fts	21	21	104	50-150	
13C8_PFOA	22	22	101	50-150	
13C9_PFNA	22	21	97	50-150	
13C8_PFOS	21	21	102	50-150	
13C2_8:2Fts	21	18	88	50-150	
13C6_PFDA	22	21	99	50-150	
d3-MeFOSAA	22	20	91	50-150	
13C8_PFOsA	22	20	93	50-150	
d5-EtFOSAA	22	20	92	50-150	
13C7_PFUdA	22	21	99	50-150	
13C2_PFDoA	22	24	110	50-150	
13C2_PFTeDA	22	21	95	50-150	
13C3_HFPO-DA	22	22	103	50-150	
13C2_PFHxDA	22	23	108	50-150	
d7-N-MeFOSE	22	17	80	10-150	
d9-N-EtFOSE	22	18	83	10-150	
d3-N-MeFOSA	22	11	51	10-150	
d5-N-EtFOSA	22	11	51	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/26/2021 09:00
Lab Sample ID	10574520001	Total Amount Extracted	231mL
Lab File ID	A210831A_050	Ical ID	210830A03
Matrix	Non_Potable_Water	CCal File	A210831A_040
Collected	08/09/2021 11:54	Ending CCal File	A210831A_051
Received	08/13/2021 08:50	Blank File	A210831B_005

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.02	4.99	
13C4 PFOA	N/A	N/A	5.99	6.00	
13C2 PFDA	N/A	N/A	6.87	6.88	
13C4 PFOS	N/A	N/A	7.19	7.20	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.58	3.56	
13C5 PFPeA	N/A	N/A	4.42	4.42	
13C3 PFBS	N/A	N/A	5.20	5.18	
13C2 4:2FTS	N/A	N/A	4.80	4.80	
13C5 PFHxA	N/A	N/A	5.02	5.04	
13C4 PFHpA	N/A	N/A	5.52	5.51	
13C3 PFHxS	N/A	N/A	6.28	6.28	
13C2 6:2FTS	N/A	N/A	5.76	5.77	
13C8 PFOA	N/A	N/A	5.99	6.00	
13C9 PFNA	N/A	N/A	6.44	6.44	
13C8 PFOS	N/A	N/A	7.19	7.20	
13C2 8:2FTS	N/A	N/A	6.63	6.60	
13C6 PFDA	N/A	N/A	6.88	6.88	
d3-MeFOSAA	N/A	N/A	6.83	6.83	
13C8 PFOSA	N/A	N/A	8.81	8.78	
d5-EtFOSAA	N/A	N/A	7.05	7.02	
13C7 PFUdA	N/A	N/A	7.31	7.32	
13C2 PFDoA	N/A	N/A	7.75	7.76	
13C2 PFTeDA	N/A	N/A	8.60	8.58	
13C3 HFPO-DA	N/A	N/A	5.22	5.21	
13C2 PFHxDA	N/A	N/A	9.36	9.33	
d7-N-MeFOSE	N/A	N/A	10.06	10.02	
d9-N-EtFOSE	N/A	N/A	10.69	10.64	
d3-N-MeFOSA	N/A	N/A	10.32	10.28	
d5-N-EtFOSA	N/A	N/A	11.01	11.00	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/26/2021 09:00
Lab Sample ID	10574520001	Total Amount Extracted	231mL
Lab File ID	A210831A_050	Ical ID	210830A03
Matrix	Non_Potable_Water	CCal File	A210831A_040
Collected	08/09/2021 11:54	Ending CCal File	A210831A_051
Received	08/13/2021 08:50	Blank File	A210831B_005

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	3.58	3.58	
PFPeA	N/A	N/A	4.43	4.40	
HFPO-DA	0.000	0.460	0.00	5.22	
PFBS	0.500	0.330	5.21	5.26	
PFHxA	0.000	0.0650	5.02	5.00	
4:2 FTS	0.000	0.530	0.00	4.80	
PFPeS	0.000	0.300	5.78	5.76	
PFHpA	0.000	0.300	5.46	5.52	
DONA	0.000	0.490	0.00	5.68	
PFHxS	0.240	0.270	6.28	6.29	
PFOA	0.590	0.390	6.00	5.97	
6:2 FTS	0.000	0.460	0.00	5.74	
PFHpS	0.650	0.280	6.75	6.76	
PFNA	0.000	0.230	0.00	6.43	
PFOSAm	N/A	N/A	8.82	8.82	
PFOS	0.230	0.220	7.20	7.27	
MeFOSA	0.000	0.890	0.00	10.33	
PFDA	0.000	0.0610	0.00	6.89	
EtFOSAm	0.000	0.730	0.00	11.04	
8:2 FTS	0.000	0.790	6.62	6.64	
9-Cl-PF3ON	0.000	0.0220	0.00	7.53	
PFNS	0.000	0.250	7.66	7.62	
PFUnDA	0.000	0.110	7.31	7.31	
NMeFOSAA	0.000	0.750	0.00	6.90	
NEtFOSAA	0.000	0.850	0.00	7.03	
PFDS	0.000	0.250	0.00	8.07	
PFDOA	0.000	0.140	0.00	7.76	
MeFOSE	N/A	N/A	0.00	10.12	
10:2 FTS	0.000	0.470	0.00	7.51	
EtFOSE	0.000	0.000	0.00	10.70	
11-Cl-PF3OUdS	0.000	0.0160	0.00	8.38	
PFTDA	0.000	0.140	0.00	8.19	
PFDoS	0.000	0.220	0.00	8.83	
PFTDA	0.000	0.140	0.00	8.58	
PFHXDA	0.130	0.130	9.37	9.37	
PFODA	0.000	0.100	0.00	10.41	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/26/2021 09:00
Lab Sample ID	10574520002	Total Amount Extracted	247mL
Lab File ID	A210831A_052	Ical ID	210830A03
Matrix	Non_Potable_Water	CCal File	A210831A_051
Collected	08/09/2021 13:15	Ending CCal File	A210831A_065
Received	08/13/2021 08:50	Blank File	A210831B_005

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	ND	2.0	2.0	0.45	1	375-22-4	
PFPeA	ND	2.0	2.0	0.44	1	2706-90-3	
HFPO-DA	ND	2.0	2.0	0.53	1	13252-13-6	
PFBS	ND	1.8	1.8	0.48	1	375-73-5	
PFHxA	ND	2.0	2.0	0.44	1	307-24-4	
4:2 FTS	ND	1.9	1.9	0.56	1	757124-72-4	
PFPeS	ND	1.9	1.9	0.48	1	2706-91-4	
PFHpA	ND	2.0	2.0	0.56	1	375-85-9	
DONA	ND	1.9	1.9	0.52	1	919005-14-4	
PFHxS	ND	1.8	1.8	0.51	1	355-46-4	
PFOA	ND	2.0	2.0	0.59	1	335-67-1	
6:2 FTS	ND	1.9	1.9	0.65	1	27619-97-2	
PFHpS	ND	1.9	1.9	0.42	1	375-92-8	
PFNA	ND	2.0	2.0	0.75	1	375-95-1	
PFOSAm	ND	2.0	2.0	0.83	1	754-91-6	
PFOS	5.7	1.9	1.9	0.55	1	1763-23-1	
MeFOSA	ND	2.0	2.0	0.52	1	31506-32-8	
PFDA	ND	2.0	2.0	0.57	1	335-76-2	
EtFOSAm	ND	2.0	2.0	0.61	1	4151-50-2	
8:2 FTS	ND	1.9	1.9	0.66	1	39108-34-4	
9-CI-PF3ON	ND	1.9	1.9	0.31	1	756426-58-1	
PFNS	ND	1.9	1.9	0.45	1	68259-12-1	
PFUnDA	ND	2.0	2.0	0.55	1	2058-94-8	
NMeFOSAA	ND	2.0	2.0	0.44	1	2355-31-9	
NEtFOSAA	ND	2.0	2.0	0.56	1	2991-50-6	
PFDS	ND	1.9	1.9	0.45	1	335-77-3	
PFDOA	ND	2.0	2.0	0.49	1	307-55-1	
MeFOSE	ND	2.0	2.0	0.33	1	24448-09-7	
10:2 FTS	ND	1.9	1.9	0.74	1	120226-60-0	
EtFOSE	ND	2.0	2.0	0.50	1	1691-99-2	
11-CI-PF3OUdS	ND	1.9	1.9	0.44	1	763051-92-9	
PFTTrDA	ND	2.0	2.0	0.63	1	72629-94-8	
PFDoS	ND	2.0	2.0	0.46	1	79780-39-5	
PFTDA	ND	2.0	2.0	0.48	1	376-06-7	
PFHXDA	ND	2.0	2.0	0.37	1	67905-19-5	
PFODA	ND	2.0	2.0	0.59	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/26/2021 09:00
Lab Sample ID	10574520002	Total Amount Extracted	247mL
Lab File ID	A210831A_052	Ical ID	210830A03
Matrix	Non_Potable_Water	CCal File	A210831A_051
Collected	08/09/2021 13:15	Ending CCal File	A210831A_065
Received	08/13/2021 08:50	Blank File	A210831B_005

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	20	19	95	50-150	
13C4_PFOA	20	21	104	50-150	
13C2_PFDA	20	19	94	50-150	
13C4_PFOS	19	18	93	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	20	19	95	50-150	
13C5_PFPeA	20	19	94	50-150	
13C3_PFBS	19	17	89	50-150	
13C2_4:2FTS	19	18	94	50-150	
13C5_PFHxA	20	19	92	50-150	
13C4_PFHpA	20	19	92	50-150	
13C3_PFHxS	19	18	92	50-150	
13C2_6:2FTS	19	17	91	50-150	
13C8_PFOA	20	20	98	50-150	
13C9_PFNA	20	19	96	50-150	
13C8_PFOS	19	16	84	50-150	
13C2_8:2FTS	19	18	95	50-150	
13C6_PFDA	20	20	98	50-150	
d3-MeFOSAA	20	19	93	50-150	
13C8_PFOA	20	16	80	50-150	
d5-EtFOSAA	20	19	92	50-150	
13C7_PFUdA	20	19	95	50-150	
13C2_PFDoA	20	18	87	50-150	
13C2_PFTeDA	20	17	85	50-150	
13C3_HFPO-DA	20	19	93	50-150	
13C2_PFHxDA	20	17	86	50-150	
d7-N-MeFOSE	20	14	68	10-150	
d9-N-EtFOSE	20	14	70	10-150	
d3-N-MeFOSA	20	6.9	34	10-150	
d5-N-EtFOSA	20	3.2	16	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/26/2021 09:00
Lab Sample ID	10574520002	Total Amount Extracted	247mL
Lab File ID	A210831A_052	Ical ID	210830A03
Matrix	Non_Potable_Water	CCal File	A210831A_051
Collected	08/09/2021 13:15	Ending CCal File	A210831A_065
Received	08/13/2021 08:50	Blank File	A210831B_005

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.02	4.99	
13C4 PFOA	N/A	N/A	5.99	6.00	
13C2 PFDA	N/A	N/A	6.88	6.88	
13C4 PFOS	N/A	N/A	7.19	7.20	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.58	3.56	
13C5 PFPeA	N/A	N/A	4.42	4.42	
13C3 PFBS	N/A	N/A	5.21	5.18	
13C2 4:2FTS	N/A	N/A	4.80	4.80	
13C5 PFHxA	N/A	N/A	5.02	5.04	
13C4 PFHpA	N/A	N/A	5.53	5.51	
13C3 PFHxS	N/A	N/A	6.28	6.28	
13C2 6:2FTS	N/A	N/A	5.76	5.77	
13C8 PFOA	N/A	N/A	5.99	6.00	
13C9 PFNA	N/A	N/A	6.44	6.44	
13C8 PFOS	N/A	N/A	7.19	7.20	
13C2 8:2FTS	N/A	N/A	6.63	6.60	
13C6 PFDA	N/A	N/A	6.88	6.88	
d3-MeFOSAA	N/A	N/A	6.84	6.83	
13C8 PFOSA	N/A	N/A	8.81	8.78	
d5-EtFOSAA	N/A	N/A	7.05	7.02	
13C7 PFUdA	N/A	N/A	7.32	7.32	
13C2 PFDoA	N/A	N/A	7.75	7.76	
13C2 PFTeDA	N/A	N/A	8.60	8.58	
13C3 HFPO-DA	N/A	N/A	5.23	5.21	
13C2 PFHxDA	N/A	N/A	9.36	9.33	
d7-N-MeFOSE	N/A	N/A	10.06	10.02	
d9-N-EtFOSE	N/A	N/A	10.69	10.64	
d3-N-MeFOSA	N/A	N/A	10.32	10.28	
d5-N-EtFOSA	N/A	N/A	11.00	11.00	

**REPORT OF LABORATORY ANALYSIS**

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





**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/26/2021 09:00
Lab Sample ID	10574520002	Total Amount Extracted	247mL
Lab File ID	A210831A_052	Ical ID	210830A03
Matrix	Non_Potable_Water	CCal File	A210831A_051
Collected	08/09/2021 13:15	Ending CCal File	A210831A_065
Received	08/13/2021 08:50	Blank File	A210831B_005

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	3.59	3.58	
PFPeA	N/A	N/A	4.43	4.40	
HFPO-DA	0.000	0.440	0.00	5.22	
PFBS	0.390	0.340	5.21	5.26	
PFHxA	0.000	0.0700	5.03	5.00	
4:2 FTS	0.000	0.520	0.00	4.80	
PFPeS	0.430	0.290	5.78	5.76	
PFHpA	0.000	0.300	0.00	5.52	
DONA	0.000	0.470	0.00	5.68	
PFHxS	0.460	0.270	6.29	6.29	
PFOA	0.000	0.380	0.00	5.97	
6:2 FTS	1.10	0.510	5.76	5.74	
PFHpS	0.000	0.240	6.75	6.76	
PFNA	0.000	0.190	0.00	6.43	
PFOSAm	N/A	N/A	8.82	8.82	
PFOS	0.230	0.290	7.20	7.27	
MeFOSA	0.000	0.920	0.00	10.33	
PFDA	0.000	0.0960	0.00	6.89	
EtFOSAm	0.000	0.710	0.00	11.04	
8:2 FTS	0.000	0.590	0.00	6.64	
9-Cl-PF3ON	0.000	0.0180	0.00	7.53	
PFNS	0.000	0.250	0.00	7.62	
PFUnDA	0.000	0.100	0.00	7.31	
NMeFOSAA	0.000	0.540	0.00	6.90	
NEtFOSAA	0.000	0.640	0.00	7.03	
PFDS	0.000	0.250	0.00	8.07	
PFDOA	0.000	0.130	0.00	7.76	
MeFOSE	N/A	N/A	0.00	10.12	
10:2 FTS	0.000	0.590	0.00	7.51	
EtFOSE	0.000	0.000	0.00	10.70	
11-Cl-PF3OUdS	0.000	0.0140	0.00	8.38	
PFTrDA	0.000	0.140	0.00	8.19	
PFDoS	0.000	0.220	0.00	8.83	
PFTDA	0.000	0.140	0.00	8.58	
PFHXDA	0.140	0.120	9.37	9.37	
PFODA	0.000	0.0940	0.00	10.41	

**REPORT OF LABORATORY ANALYSIS**

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





**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKLA	Extraction Date	08/26/2021 09:00
Lab Sample ID	BLANK-92496	Total Amount Extracted	267mL
Lab File ID	A210831B_005	Ical ID	210830A03
Matrix	Water	CCal File	A210831B_001
Collected	08/20/2021 13:52	Ending CCal File	A210831B_012
Received	08/20/2021 13:52	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	0.41	1	375-22-4	
PFPeA	ND	1.9	1.9	0.41	1	2706-90-3	
HFPO-DA	ND	1.9	1.9	0.50	1	13252-13-6	
PFBS	ND	1.7	1.7	0.44	1	375-73-5	
PFHxA	ND	1.9	1.9	0.41	1	307-24-4	
4:2 FTS	ND	1.8	1.8	0.52	1	757124-72-4	
PFPeS	ND	1.8	1.8	0.45	1	2706-91-4	
PFHpA	ND	1.9	1.9	0.52	1	375-85-9	
DONA	ND	1.8	1.8	0.48	1	919005-14-4	
PFHxS	ND	1.7	1.7	0.48	1	355-46-4	
PFOA	ND	1.9	1.9	0.55	1	335-67-1	
6:2 FTS	ND	1.8	1.8	0.60	1	27619-97-2	
PFHpS	ND	1.8	1.8	0.39	1	375-92-8	
PFNA	ND	1.9	1.9	0.69	1	375-95-1	
PFOSAm	ND	1.9	1.9	0.77	1	754-91-6	
PFOS	ND	1.7	1.7	0.51	1	1763-23-1	
MeFOSA	ND	1.9	1.9	0.48	1	31506-32-8	
PFDA	ND	1.9	1.9	0.53	1	335-76-2	
EtFOSAm	ND	1.9	1.9	0.57	1	4151-50-2	
8:2 FTS	ND	1.8	1.8	0.61	1	39108-34-4	
9-CI-PF3ON	ND	1.7	1.7	0.29	1	756426-58-1	
PFNS	ND	1.8	1.8	0.42	1	68259-12-1	
PFUnDA	ND	1.9	1.9	0.51	1	2058-94-8	
NMeFOSAA	ND	1.9	1.9	0.41	1	2355-31-9	
NEtFOSAA	ND	1.9	1.9	0.52	1	2991-50-6	
PFDS	ND	1.8	1.8	0.42	1	335-77-3	
PFDOA	ND	1.9	1.9	0.45	1	307-55-1	
MeFOSE	ND	1.9	1.9	0.31	1	24448-09-7	
10:2 FTS	ND	1.8	1.8	0.69	1	120226-60-0	
EtFOSE	ND	1.9	1.9	0.47	1	1691-99-2	
11-CI-PF3OUdS	ND	1.8	1.8	0.41	1	763051-92-9	
PFTTrDA	ND	1.9	1.9	0.58	1	72629-94-8	
PFDoS	ND	1.8	1.8	0.43	1	79780-39-5	
PFTDA	ND	1.9	1.9	0.45	1	376-06-7	
PFHxDA	ND	1.9	1.9	0.34	1	67905-19-5	
PFODA	ND	1.9	1.9	0.55	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKLA	Extraction Date	08/26/2021 09:00
Lab Sample ID	BLANK-92496	Total Amount Extracted	267mL
Lab File ID	A210831B_005	Ical ID	210830A03
Matrix	Water	CCal File	A210831B_001
Collected	08/20/2021 13:52	Ending CCal File	A210831B_012
Received	08/20/2021 13:52	Blank File	

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	19	19	104	50-150	
13C4_PFOA	19	19	103	50-150	
13C2_PFDA	19	21	109	50-150	
13C4_PFOS	18	18	101	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBa	19	18	99	50-150	
13C5_PFPeA	19	19	101	50-150	
13C3_PFBs	17	18	102	50-150	
13C2_4:2Fts	18	19	108	50-150	
13C5_PFHxA	19	18	98	50-150	
13C4_PFHpA	19	19	103	50-150	
13C3_PFHxS	18	17	97	50-150	
13C2_6:2Fts	18	17	94	50-150	
13C8_PFOA	19	18	96	50-150	
13C9_PFNA	19	20	107	50-150	
13C8_PFOS	18	16	92	50-150	
13C2_8:2Fts	18	18	101	50-150	
13C6_PFDA	19	18	94	50-150	
d3-MeFOSAA	19	16	85	50-150	
13C8_PFOsA	19	15	82	50-150	
d5-EtFOSAA	19	16	88	50-150	
13C7_PFUdA	19	17	92	50-150	
13C2_PFDoA	19	16	87	50-150	
13C2_PFTeDA	19	17	90	50-150	
13C3_HFPO-DA	19	19	101	50-150	
13C2_PFHxDA	19	16	88	50-150	
d7-N-MeFOSE	19	15	81	10-150	
d9-N-EtFOSE	19	14	76	10-150	
d3-N-MeFOSA	19	9.2	49	10-150	
d5-N-EtFOSA	19	8.9	47	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKLA	Extraction Date	08/26/2021 09:00
Lab Sample ID	BLANK-92496	Total Amount Extracted	267mL
Lab File ID	A210831B_005	Ical ID	210830A03
Matrix	Water	CCal File	A210831B_001
Collected	08/20/2021 13:52	Ending CCal File	A210831B_012
Received	08/20/2021 13:52	Blank File	

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.02	4.99	
13C4 PFOA	N/A	N/A	6.00	6.00	
13C2 PFDA	N/A	N/A	6.88	6.88	
13C4 PFOS	N/A	N/A	7.19	7.20	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.59	3.56	
13C5 PFPeA	N/A	N/A	4.43	4.42	
13C3 PFBS	N/A	N/A	5.21	5.18	
13C2 4:2FTS	N/A	N/A	4.80	4.80	
13C5 PFHxA	N/A	N/A	5.02	5.04	
13C4 PFHpA	N/A	N/A	5.53	5.51	
13C3 PFHxS	N/A	N/A	6.28	6.28	
13C2 6:2FTS	N/A	N/A	5.76	5.77	
13C8 PFOA	N/A	N/A	6.00	6.00	
13C9 PFNA	N/A	N/A	6.44	6.44	
13C8 PFOS	N/A	N/A	7.20	7.20	
13C2 8:2FTS	N/A	N/A	6.63	6.60	
13C6 PFDA	N/A	N/A	6.88	6.88	
d3-MeFOSAA	N/A	N/A	6.84	6.83	
13C8 PFOSA	N/A	N/A	8.82	8.78	
d5-EtFOSAA	N/A	N/A	7.05	7.02	
13C7 PFUdA	N/A	N/A	7.32	7.32	
13C2 PFDoA	N/A	N/A	7.75	7.76	
13C2 PFTeDA	N/A	N/A	8.61	8.58	
13C3 HFPO-DA	N/A	N/A	5.23	5.21	
13C2 PFHxDA	N/A	N/A	9.37	9.33	
d7-N-MeFOSE	N/A	N/A	10.07	10.02	
d9-N-EtFOSE	N/A	N/A	10.69	10.64	
d3-N-MeFOSA	N/A	N/A	10.32	10.28	
d5-N-EtFOSA	N/A	N/A	11.01	11.00	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKLA	Extraction Date	08/26/2021 09:00
Lab Sample ID	BLANK-92496	Total Amount Extracted	267mL
Lab File ID	A210831B_005	Ical ID	210830A03
Matrix	Water	CCal File	A210831B_001
Collected	08/20/2021 13:52	Ending CCal File	A210831B_012
Received	08/20/2021 13:52	Blank File	

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	0.00	3.58	
PFPeA	N/A	N/A	4.43	4.40	
HFPO-DA	0.000	0.480	0.00	5.22	
PFBS	0.550	0.370	5.21	5.26	
PFHxA	0.000	0.0740	5.03	5.00	
4:2 FTS	0.000	0.540	0.00	4.80	
PFPeS	0.000	0.310	0.00	5.76	
PFHpA	0.200	0.300	5.53	5.52	
DONA	0.000	0.540	0.00	5.68	
PFHxS	0.350	0.250	6.29	6.29	
PFOA	0.250	0.350	6.00	5.97	
6:2 FTS	0.420	0.470	5.76	5.74	
PFHpS	0.000	0.240	0.00	6.76	
PFNA	0.190	0.200	6.45	6.43	
PFOSAm	N/A	N/A	8.82	8.82	
PFOS	0.160	0.210	7.20	7.27	
MeFOSA	0.000	0.910	0.00	10.33	
PFDA	0.000	0.0800	0.00	6.89	
EtFOSAm	0.000	0.670	0.00	11.04	
8:2 FTS	0.000	0.670	0.00	6.64	
9-Cl-PF3ON	0.000	0.0180	0.00	7.53	
PFNS	0.000	0.240	0.00	7.62	
PFUnDA	0.000	0.100	0.00	7.31	
NMeFOSAA	0.000	0.510	0.00	6.90	
NEtFOSAA	0.000	0.470	0.00	7.03	
PFDS	0.000	0.260	0.00	8.07	
PFDOA	0.000	0.150	0.00	7.76	
MeFOSE	N/A	N/A	0.00	10.12	
10:2 FTS	0.000	0.560	0.00	7.51	
EtFOSE	0.000	0.000	0.00	10.70	
11-Cl-PF3OUdS	0.000	0.0160	0.00	8.38	
PFTrDA	0.000	0.160	0.00	8.19	
PFDoS	0.000	0.230	0.00	8.83	
PFTDA	0.000	0.140	0.00	8.58	
PFHXDA	0.140	0.130	9.37	9.37	
PFODA	0.000	0.100	0.00	10.41	

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID	LCS-92497	Instrument ID	10LCMS03
Run File Name	A210831B_006	Column ID	118AB10133
Analyzed	09/01/2021 02:07	Ical ID	210830A03
Injected By	NH	Level	L

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	19	18	95	50-150	
13C4_PFOA	19	19	100	50-150	
13C2_PFDA	19	18	97	50-150	
13C4_PFOS	18	18	99	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBFA	19	18	93	50-150	
13C5_PFPeA	19	18	94	50-150	
13C3_PFBFS	18	17	97	50-150	
13C2_4:2FTS	18	17	95	50-150	
13C5_PFHxA	19	17	90	50-150	
13C4_PFHpA	19	19	99	50-150	
13C3_PFHxS	18	17	95	50-150	
13C2_6:2FTS	18	14	80	50-150	
13C8_PFOA	19	18	94	50-150	
13C9_PFNA	19	19	98	50-150	
13C8_PFOS	18	16	86	50-150	
13C2_8:2FTS	18	16	90	50-150	
13C6_PFDA	19	17	88	50-150	
d3-MeFOSAA	19	15	77	50-150	
13C8_PFOA	19	14	75	50-150	
d5-EtFOSAA	19	15	79	50-150	
13C7_PFUdA	19	18	93	50-150	
13C2_PFDaA	19	17	88	50-150	
13C2_PFTeDA	19	17	89	50-150	
13C3_HFPO-DA	19	18	97	50-150	
13C2_PFHxDA	19	17	88	50-150	
d7-N-MeFOSE	19	13	68	10-150	
d9-N-EtFOSE	19	12	64	10-150	
d3-N-MeFOSA	19	8.9	47	10-150	
d5-N-EtFOSA	19	8.8	46	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID      LCS-92497  
 Run File Name      A210831B\_006  
 Analyzed            09/01/2021 02:07  
 Injected By        NH

Instrument ID      10LCMS03  
 Column ID         118AB10133  
 Ical ID             210830A03  
 Level                L

**Native Analytes**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	CAS No.
PFBA	3.8	3.5	93	73-129		375-22-4
PFPeA	3.8	3.5	92	72-129		2706-90-3
HFPO-DA	3.8	3.7	99	70-140		13252-13-6
PFBS	3.4	3.1	93	72-130		375-73-5
PFHxA	3.8	3.8	101	72-129		307-24-4
4:2 FTS	3.5	3.7	105	63-143		757124-72-4
PFPeS	3.6	3.3	94	71-127		2706-91-4
PFHpA	3.8	3.6	95	72-130		375-85-9
DONA	3.6	3.2	90	70-140		919005-14-4
PFHxS	3.4	3.3	95	68-131		355-46-4
PFOA	3.8	3.5	93	71-133		335-67-1
6:2 FTS	3.6	3.9	110	64-140		27619-97-2
PFHpS	3.6	3.6	99	69-134		375-92-8
PFNA	3.8	3.3	88	69-130		375-95-1
PFOSAm	3.8	3.7	97	67-137		754-91-6
PFOS	3.5	3.8	108	65-140		1763-23-1
MeFOSA	3.8	3.4	89	68-141		31506-32-8
PFDA	3.8	3.6	96	71-129		335-76-2
EtFOSAm	3.8	3.4	89	70-140		4151-50-2
8:2 FTS	3.6	3.0	84	67-138		39108-34-4
9-CI-PF3ON	3.5	3.3	94	70-130		756426-58-1
PFNS	3.6	3.3	91	69-127		68259-12-1
PFUnDA	3.8	3.3	88	69-133		2058-94-8
NMeFOSAA	3.8	3.4	88	65-136		2355-31-9
NEtFOSAA	3.8	3.8	102	61-135		2991-50-6
PFDS	3.7	3.4	93	53-142		335-77-3
PFDOA	3.8	3.4	89	72-134		307-55-1
MeFOSE	3.8	3.3	88	70-140		24448-09-7
10:2 FTS	3.7	3.3	89	70-140		120226-60-0
EtFOSE	3.8	3.5	91	70-140		1691-99-2
11-CI-PF3OUdS	3.6	3.2	89	70-140		763051-92-9
PFTTrDA	3.8	3.4	89	65-144		72629-94-8
PFDoS	3.7	3.2	87	70-140		79780-39-5
PFTDA	3.8	3.1	82	71-132		376-06-7
PFHXDA	3.8	3.5	92	70-140		67905-19-5
PFODA	3.8	3.2	84	70-140		16517-11-6

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID LCS-92497  
 Run File Name A210831B\_006  
 Analyzed 09/01/2021 02:07  
 Injected By NH

Instrument ID 10LCMS03  
 Column ID 118AB10133  
 Ical ID 210830A03  
 Level L

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.02	4.99	
13C4 PFOA	N/A	N/A	5.99	6.00	
13C2 PFDA	N/A	N/A	6.88	6.88	
13C4 PFOS	N/A	N/A	7.20	7.20	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.58	3.56	
13C5 PFPeA	N/A	N/A	4.43	4.42	
13C3 PFBS	N/A	N/A	5.21	5.18	
13C2 4:2FTS	N/A	N/A	4.80	4.80	
13C5 PFHxA	N/A	N/A	5.02	5.04	
13C4 PFHpA	N/A	N/A	5.53	5.51	
13C3 PFHxS	N/A	N/A	6.28	6.28	
13C2 6:2FTS	N/A	N/A	5.76	5.77	
13C8 PFOA	N/A	N/A	6.00	6.00	
13C9 PFNA	N/A	N/A	6.44	6.44	
13C8 PFOS	N/A	N/A	7.20	7.20	
13C2 8:2FTS	N/A	N/A	6.63	6.60	
13C6 PFDA	N/A	N/A	6.88	6.88	
d3-MeFOSAA	N/A	N/A	6.84	6.83	
13C8 PFOSA	N/A	N/A	8.82	8.78	
d5-EtFOSAA	N/A	N/A	7.05	7.02	
13C7 PFUdA	N/A	N/A	7.32	7.32	
13C2 PFDoA	N/A	N/A	7.76	7.76	
13C2 PFTeDA	N/A	N/A	8.60	8.58	
13C3 HFPO-DA	N/A	N/A	5.23	5.21	
13C2 PFHxDA	N/A	N/A	9.37	9.33	
d7-N-MeFOSE	N/A	N/A	10.07	10.02	
d9-N-EtFOSE	N/A	N/A	10.70	10.64	
d3-N-MeFOSA	N/A	N/A	10.32	10.28	
d5-N-EtFOSA	N/A	N/A	11.01	11.00	

**REPORT OF LABORATORY ANALYSIS**

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





**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID      LCS-92497  
 Run File Name      A210831B\_006  
 Analyzed            09/01/2021 02:07  
 Injected By        NH

Instrument ID      10LCMS03  
 Column ID         118AB10133  
 Ical ID             210830A03  
 Level                L

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	3.59	3.58	
PFPeA	N/A	N/A	4.43	4.40	
HFPO-DA	0.41	0.48	5.24	5.22	
PFBS	0.33	0.37	5.22	5.26	
PFHxA	0.07	0.07	5.03	5.00	
4:2 FTS	0.47	0.54	4.81	4.80	
PFPeS	0.32	0.31	5.79	5.76	
PFHpA	0.29	0.30	5.53	5.52	
DONA	0.50	0.54	5.71	5.68	
PFHxS	0.28	0.25	6.29	6.29	
PFOA	0.39	0.35	6.00	5.97	
6:2 FTS	0.50	0.47	5.76	5.74	
PFHpS	0.25	0.24	6.75	6.76	
PFNA	0.20	0.20	6.45	6.43	
PFOSAm	N/A	N/A	8.82	8.82	
PFOS	0.19	0.21	7.21	7.27	
MeFOSA	0.91	0.91	10.34	10.33	
PFDA	0.10	0.08	6.89	6.89	
EtFOSAm	0.71	0.67	11.05	11.04	
8:2 FTS	0.67	0.67	6.64	6.64	
9-CI-PF3ON	0.02	0.01	7.52	7.53	
PFNS	0.23	0.24	7.64	7.62	
PFUnDA	0.10	0.10	7.33	7.31	
NMeFOSAA	0.53	0.51	6.85	6.90	
NEtFOSAA	0.70	0.47	7.06	7.03	
PFDS	0.24	0.26	8.07	8.07	
PFDOA	0.14	0.15	7.76	7.76	
MeFOSE	N/A	N/A	10.11	10.12	
10:2 FTS	0.54	0.56	7.50	7.51	
EtFOSE	0.00	0.00	10.76	10.70	
11-CI-PF3OUdS	0.01	0.01	8.38	8.38	
PFTrDA	0.13	0.16	8.19	8.19	
PFDoS	0.23	0.23	8.87	8.83	
PFTDA	0.14	0.14	8.61	8.58	
PFHXDA	0.12	0.13	9.37	9.37	
PFODA	0.09	0.10	10.40	10.41	

**REPORT OF LABORATORY ANALYSIS**

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





**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/30/2021 15:47
Lab Sample ID	10574521001	Total Amount Extracted	238mL
Lab File ID	Q210901B_015	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210901B_003
Collected	08/10/2021 10:52	Ending CCal File	Q210901B_017
Received	08/13/2021 08:50	Blank File	A210902A_041

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	3.7	2.1	2.1	0.46	1	375-22-4	
PFPeA	ND	2.1	2.1	0.46	1	2706-90-3	
HFPO-DA	ND	2.1	2.1	0.55	1	13252-13-6	
PFBS	ND	1.9	1.9	0.50	1	375-73-5	
PFHxA	ND	2.1	2.1	0.46	1	307-24-4	
4:2 FTS	ND	2.0	2.0	0.59	1	757124-72-4	
PFPeS	ND	2.0	2.0	0.50	1	2706-91-4	
PFHpA	ND	2.1	2.1	0.58	1	375-85-9	
DONA	ND	2.0	2.0	0.54	1	919005-14-4	
PFHxS	ND	1.9	1.9	0.53	1	355-46-4	
PFOA	ND	2.1	2.1	0.61	1	335-67-1	
6:2 FTS	ND	2.0	2.0	0.68	1	27619-97-2	
PFHpS	ND	2.0	2.0	0.43	1	375-92-8	
PFNA	ND	2.1	2.1	0.78	1	375-95-1	
PFOSAm	ND	2.1	2.1	0.86	1	754-91-6	
PFOS	ND	1.9	1.9	0.57	1	1763-23-1	
MeFOSA	ND	2.1	2.1	0.54	1	31506-32-8	
PFDA	ND	2.1	2.1	0.59	1	335-76-2	
EtFOSAm	ND	2.1	2.1	0.64	1	4151-50-2	
8:2 FTS	ND	2.0	2.0	0.68	1	39108-34-4	
9-CI-PF3ON	ND	2.0	2.0	0.32	1	756426-58-1	
PFNS	ND	2.0	2.0	0.47	1	68259-12-1	
PFUnDA	ND	2.1	2.1	0.57	1	2058-94-8	
NMeFOSAA	ND	2.1	2.1	0.46	1	2355-31-9	
NEtFOSAA	ND	2.1	2.1	0.58	1	2991-50-6	
PFDS	ND	2.0	2.0	0.47	1	335-77-3	
PFDOA	ND	2.1	2.1	0.51	1	307-55-1	
MeFOSE	ND	2.1	2.1	0.34	1	24448-09-7	
10:2 FTS	ND	2.0	2.0	0.77	1	120226-60-0	
EtFOSE	ND	2.1	2.1	0.52	1	1691-99-2	
11-CI-PF3OUdS	ND	2.0	2.0	0.46	1	763051-92-9	
PFTTrDA	ND	2.1	2.1	0.65	1	72629-94-8	
PFDoS	ND	2.0	2.0	0.48	1	79780-39-5	
PFTDA	ND	2.1	2.1	0.50	1	376-06-7	
PFHXDA	ND	2.1	2.1	0.38	1	67905-19-5	
PFODA	ND	2.1	2.1	0.61	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/30/2021 15:47
Lab Sample ID	10574521001	Total Amount Extracted	238mL
Lab File ID	Q210901B_015	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210901B_003
Collected	08/10/2021 10:52	Ending CCal File	Q210901B_017
Received	08/13/2021 08:50	Blank File	A210902A_041

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	21	19	90	50-150	
13C4_PFOA	21	19	89	50-150	
13C2_PFDA	21	20	96	50-150	
13C4_PFOS	20	21	103	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBa	21	19	92	50-150	
13C5_PFPeA	21	21	102	50-150	
13C3_PFBs	19	18	93	50-150	
13C2_4:2Fts	20	19	95	50-150	
13C5_PFHxA	21	19	90	50-150	
13C4_PFHpA	21	23	111	50-150	
13C3_PFHxS	20	18	91	50-150	
13C2_6:2Fts	20	22	111	50-150	
13C8_PFOA	21	19	91	50-150	
13C9_PFNA	21	22	106	50-150	
13C8_PFOS	20	20	98	50-150	
13C2_8:2Fts	20	23	113	50-150	
13C6_PFDA	21	22	103	50-150	
d3-MeFOSAA	21	20	95	50-150	
13C8_PFOsA	21	17	79	50-150	
d5-EtFOSAA	21	22	106	50-150	
13C7_PFUdA	21	19	93	50-150	
13C2_PFDoA	21	17	81	50-150	
13C2_PFTeDA	21	16	76	50-150	
13C3_HFPO-DA	21	26	125	50-150	
13C2_PFHxDA	21	17	80	50-150	
d7-N-MeFOSE	21	15	72	10-150	
d9-N-EtFOSE	21	15	73	10-150	
d3-N-MeFOSA	21	9.1	44	10-150	
d5-N-EtFOSA	21	9.3	44	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/30/2021 15:47
Lab Sample ID	10574521001	Total Amount Extracted	238mL
Lab File ID	Q210901B_015	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210901B_003
Collected	08/10/2021 10:52	Ending CCal File	Q210901B_017
Received	08/13/2021 08:50	Blank File	A210902A_041

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.29	6.29	
13C4 PFOA	N/A	N/A	7.64	7.66	
13C2 PFDA	N/A	N/A	9.01	8.98	
13C4 PFOS	N/A	N/A	9.48	9.47	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.73	4.80	
13C5 PFPeA	N/A	N/A	5.58	5.60	
13C3 PFBS	N/A	N/A	6.55	6.55	
13C2 4:2FTS	N/A	N/A	6.00	5.99	
13C5 PFHxA	N/A	N/A	6.29	6.28	
13C4 PFHpA	N/A	N/A	6.97	6.96	
13C3 PFHxS	N/A	N/A	8.07	8.08	
13C2 6:2FTS	N/A	N/A	7.29	7.29	
13C8 PFOA	N/A	N/A	7.65	7.64	
13C9 PFNA	N/A	N/A	8.32	8.33	
13C8 PFOS	N/A	N/A	9.49	9.52	
13C2 8:2FTS	N/A	N/A	8.62	8.63	
13C6 PFDA	N/A	N/A	9.01	9.03	
d3-MeFOSAA	N/A	N/A	8.89	8.90	
13C8 PFOSA	N/A	N/A	11.44	11.42	
d5-EtFOSAA	N/A	N/A	9.19	9.21	
13C7 PFUdA	N/A	N/A	9.68	9.72	
13C2 PFDoA	N/A	N/A	10.37	10.41	
13C2 PFTeDA	N/A	N/A	11.66	11.71	
13C3 HFPO-DA	N/A	N/A	6.57	6.56	
13C2 PFHxDA	N/A	N/A	12.77	12.77	
d7-N-MeFOSE	N/A	N/A	13.07	13.06	
d9-N-EtFOSE	N/A	N/A	13.55	13.53	
d3-N-MeFOSA	N/A	N/A	13.28	13.26	
d5-N-EtFOSA	N/A	N/A	13.72	13.70	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/30/2021 15:47
Lab Sample ID	10574521001	Total Amount Extracted	238mL
Lab File ID	Q210901B_015	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210901B_003
Collected	08/10/2021 10:52	Ending CCal File	Q210901B_017
Received	08/13/2021 08:50	Blank File	A210902A_041

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.74	4.82	
PFPeA	N/A	N/A	5.59	5.63	
HFPO-DA	0.000	0.460	0.00	6.61	
PFBS	0.330	0.360	6.56	6.54	
PFHxA	0.085	0.0770	6.30	6.32	
4:2 FTS	0.000	1.10	0.00	5.99	
PFPeS	0.340	0.390	7.33	7.32	
PFHpA	0.380	0.350	6.96	6.96	
DONA	0.000	0.510	7.31	7.25	
PFHxS	0.280	0.290	8.07	8.05	
PFOA	0.510	0.270	7.66	7.63	
6:2 FTS	0.570	1.20	7.29	7.28	
PFHpS	0.000	0.410	8.84	8.79	
PFNA	0.000	0.290	0.00	8.32	
PFOSAm	N/A	N/A	11.45	11.40	
PFOS	0.240	0.200	9.49	9.46	
MeFOSA	0.000	0.530	0.00	13.29	
PFDA	0.150	0.140	9.03	9.02	
EtFOSAm	0.000	0.560	0.00	13.73	
8:2 FTS	0.000	1.80	8.59	8.62	
9-Cl-PF3ON	0.000	0.0510	0.00	10.00	
PFNS	0.000	0.220	0.00	10.16	
PFUnDA	0.000	0.140	0.00	9.71	
NMeFOSAA	0.000	0.770	0.00	8.89	
NEtFOSAA	0.000	0.480	0.00	9.20	
PFDS	0.530	0.240	10.84	10.82	
PFDOA	0.000	0.190	0.00	10.44	
MeFOSE	N/A	N/A	13.12	13.10	
10:2 FTS	0.000	1.60	0.00	9.95	
EtFOSE	0.000	0.000	0.00	13.58	
11-Cl-PF3OUdS	0.000	0.0240	0.00	11.29	
PFTTrDA	0.000	0.190	0.00	11.02	
PFDoS	0.000	0.240	0.00	12.05	
PFTDA	0.000	0.160	0.00	11.66	
PFHXDA	0.120	0.150	12.77	12.78	
PFODA	0.000	0.160	0.00	13.62	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574521002	Total Amount Extracted	214mL
Lab File ID	Q210901B_005	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210901B_003
Collected	08/10/2021 12:02	Ending CCal File	Q210901B_017
Received	08/13/2021 08:50	Blank File	Q210831B_018

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	ND	2.3	2.3	0.51	1	375-22-4	
PFPeA	ND	2.3	2.3	0.51	1	2706-90-3	
HFPO-DA	ND	2.3	2.3	0.62	1	13252-13-6	
PFBS	ND	2.1	2.1	0.55	1	375-73-5	
PFHxA	ND	2.3	2.3	0.51	1	307-24-4	
4:2 FTS	ND	2.2	2.2	0.65	1	757124-72-4	
PFPeS	ND	2.2	2.2	0.55	1	2706-91-4	
PFHpA	ND	2.3	2.3	0.64	1	375-85-9	
DONA	ND	2.2	2.2	0.60	1	919005-14-4	
PFHxS	ND	2.1	2.1	0.59	1	355-46-4	
PFOA	ND	2.3	2.3	0.68	1	335-67-1	
6:2 FTS	ND	2.2	2.2	0.75	1	27619-97-2	
PFHpS	ND	2.2	2.2	0.48	1	375-92-8	
PFNA	ND	2.3	2.3	0.86	1	375-95-1	
PFOSAm	ND	2.3	2.3	0.96	1	754-91-6	
PFOS	ND	2.2	2.2	0.64	1	1763-23-1	
MeFOSA	ND	2.3	2.3	0.60	1	31506-32-8	
PFDA	ND	2.3	2.3	0.66	1	335-76-2	
EtFOSAm	ND	2.3	2.3	0.71	1	4151-50-2	
8:2 FTS	ND	2.2	2.2	0.76	1	39108-34-4	
9-CI-PF3ON	ND	2.2	2.2	0.36	1	756426-58-1	
PFNS	ND	2.2	2.2	0.52	1	68259-12-1	
PFUnDA	ND	2.3	2.3	0.63	1	2058-94-8	
NMeFOSAA	ND	2.3	2.3	0.51	1	2355-31-9	
NEtFOSAA	ND	2.3	2.3	0.65	1	2991-50-6	
PFDS	ND	2.3	2.3	0.53	1	335-77-3	
PFDOA	ND	2.3	2.3	0.56	1	307-55-1	
MeFOSE	ND	2.3	2.3	0.38	1	24448-09-7	
10:2 FTS	ND	2.3	2.3	0.86	1	120226-60-0	
EtFOSE	ND	2.3	2.3	0.58	1	1691-99-2	
11-CI-PF3OUdS	ND	2.2	2.2	0.51	1	763051-92-9	
PFTTrDA	ND	2.3	2.3	0.73	1	72629-94-8	
PFDoS	ND	2.3	2.3	0.54	1	79780-39-5	
PFTDA	ND	2.3	2.3	0.56	1	376-06-7	
PFHXDA	ND	2.3	2.3	0.42	1	67905-19-5	
PFODA	ND	2.3	2.3	0.68	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574521002	Total Amount Extracted	214mL
Lab File ID	Q210901B_005	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210901B_003
Collected	08/10/2021 12:02	Ending CCal File	Q210901B_017
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	23	27	118	50-150	
13C4_PFOA	23	22	95	50-150	
13C2_PFDA	23	20	85	50-150	
13C4_PFOS	22	18	82	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBa	23	17	73	50-150	
13C5_PFPeA	23	19	82	50-150	
13C3_PFBs	22	16	75	50-150	
13C2_4:2FTS	22	20	93	50-150	
13C5_PFHxA	23	22	96	50-150	
13C4_PFHpA	23	22	93	50-150	
13C3_PFHxS	22	17	76	50-150	
13C2_6:2FTS	22	20	88	50-150	
13C8_PFOA	23	18	76	50-150	
13C9_PFNA	23	15	63	50-150	
13C8_PFOS	22	10	46	50-150	R
13C2_8:2FTS	22	15	67	50-150	
13C6_PFDA	23	13	54	50-150	
d3-MeFOSAA	23	9.9	42	50-150	R
13C8_PFOA	23	6.9	29	50-150	R
d5-EtFOSAA	23	9.6	41	50-150	R
13C7_PFUdA	23	10	43	50-150	R
13C2_PFDaA	23	7.2	31	50-150	R
13C2_PFTeDA	23	4.4	19	50-150	R
13C3_HFPO-DA	23	22	94	50-150	
13C2_PFHxDA	23	2.1	9	50-150	R
d7-N-MeFOSE	23	4.0	17	10-150	
d9-N-EtFOSE	23	3.8	16	10-150	
d3-N-MeFOSA	23	1.3	5	10-150	R
d5-N-EtFOSA	23	1.2	5	10-150	R

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574521002	Total Amount Extracted	214mL
Lab File ID	Q210901B_005	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210901B_003
Collected	08/10/2021 12:02	Ending CCal File	Q210901B_017
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.29	6.29	
13C4 PFOA	N/A	N/A	7.65	7.66	
13C2 PFDA	N/A	N/A	9.00	8.98	
13C4 PFOS	N/A	N/A	9.48	9.47	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.74	4.80	
13C5 PFPeA	N/A	N/A	5.59	5.60	
13C3 PFBS	N/A	N/A	6.55	6.55	
13C2 4:2FTS	N/A	N/A	6.00	5.99	
13C5 PFHxA	N/A	N/A	6.29	6.28	
13C4 PFHpA	N/A	N/A	6.97	6.96	
13C3 PFHxS	N/A	N/A	8.07	8.08	
13C2 6:2FTS	N/A	N/A	7.30	7.29	
13C8 PFOA	N/A	N/A	7.64	7.64	
13C9 PFNA	N/A	N/A	8.32	8.33	
13C8 PFOS	N/A	N/A	9.48	9.52	R
13C2 8:2FTS	N/A	N/A	8.62	8.63	
13C6 PFDA	N/A	N/A	9.01	9.03	
d3-MeFOSAA	N/A	N/A	8.89	8.90	R
13C8 PFOSA	N/A	N/A	11.45	11.42	R
d5-EtFOSAA	N/A	N/A	9.20	9.21	R
13C7 PFUdA	N/A	N/A	9.68	9.72	R
13C2 PFDoA	N/A	N/A	10.36	10.41	R
13C2 PFTeDA	N/A	N/A	11.68	11.71	R
13C3 HFPO-DA	N/A	N/A	6.57	6.56	
13C2 PFHxDA	N/A	N/A	12.78	12.77	R
d7-N-MeFOSE	N/A	N/A	13.08	13.06	
d9-N-EtFOSE	N/A	N/A	13.56	13.53	
d3-N-MeFOSA	N/A	N/A	13.29	13.26	R
d5-N-EtFOSA	N/A	N/A	13.73	13.70	R

**REPORT OF LABORATORY ANALYSIS**

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





**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574521002	Total Amount Extracted	214mL
Lab File ID	Q210901B_005	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210901B_003
Collected	08/10/2021 12:02	Ending CCal File	Q210901B_017
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.74	4.82	
PFPeA	N/A	N/A	5.60	5.63	
HFPO-DA	0.000	0.460	0.00	6.61	
PFBS	0.330	0.360	6.56	6.54	
PFHxA	0.000	0.0770	6.30	6.32	
4:2 FTS	0.000	1.10	0.00	5.99	
PFPeS	0.000	0.390	0.00	7.32	
PFHpA	0.250	0.350	7.01	6.96	
DONA	0.000	0.510	0.00	7.25	
PFHxS	0.000	0.290	8.09	8.05	
PFOA	0.000	0.270	0.00	7.63	
6:2 FTS	0.830	1.20	7.30	7.28	
PFHpS	0.000	0.410	8.84	8.79	
PFNA	0.000	0.290	0.00	8.32	
PFOSAm	N/A	N/A	11.45	11.45	
PFOS	0.150	0.200	9.49	9.46	
MeFOSA	0.000	0.530	0.00	13.29	
PFDA	0.000	0.140	0.00	9.02	
EtFOSAm	0.000	0.560	0.00	13.73	
8:2 FTS	0.000	1.80	0.00	8.62	
9-Cl-PF3ON	0.000	0.0510	0.00	10.00	
PFNS	0.000	0.220	0.00	10.16	
PFUnDA	0.000	0.140	0.00	9.71	
NMeFOSAA	0.000	0.770	0.00	8.89	
NEtFOSAA	0.000	0.480	0.00	9.20	
PFDS	0.910	0.240	10.81	10.82	
PFDOA	0.000	0.190	0.00	10.44	
MeFOSE	N/A	N/A	0.00	13.10	
10:2 FTS	0.000	1.60	0.00	9.95	
EtFOSE	0.000	0.000	0.00	13.58	
11-Cl-PF3OUdS	0.000	0.0240	0.00	11.29	
PFTTrDA	0.000	0.190	0.00	11.02	
PFDoS	0.000	0.240	0.00	12.05	
PFTDA	0.000	0.160	0.00	11.66	
PFHXDA	0.000	0.150	12.73	12.78	
PFODA	0.000	0.160	0.00	13.62	

**REPORT OF LABORATORY ANALYSIS**

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





**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	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574521003	Total Amount Extracted	267mL
Lab File ID	Q210901B_006	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210901B_003
Collected	08/10/2021 12:54	Ending CCal File	Q210901B_017
Received	08/13/2021 08:50	Blank File	Q210831B_018

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	2.3	1.9	1.9	0.41	1	375-22-4	
PFPeA	ND	1.9	1.9	0.41	1	2706-90-3	
HFPO-DA	ND	1.9	1.9	0.50	1	13252-13-6	
PFBS	ND	1.7	1.7	0.44	1	375-73-5	
PFHxA	ND	1.9	1.9	0.41	1	307-24-4	
4:2 FTS	ND	1.8	1.8	0.52	1	757124-72-4	
PFPeS	ND	1.8	1.8	0.45	1	2706-91-4	
PFHpA	ND	1.9	1.9	0.52	1	375-85-9	
DONA	ND	1.8	1.8	0.48	1	919005-14-4	
PFHxS	ND	1.7	1.7	0.48	1	355-46-4	
PFOA	ND	1.9	1.9	0.55	1	335-67-1	
6:2 FTS	ND	1.8	1.8	0.60	1	27619-97-2	
PFHpS	ND	1.8	1.8	0.39	1	375-92-8	
PFNA	ND	1.9	1.9	0.69	1	375-95-1	
PFOSAm	ND	1.9	1.9	0.77	1	754-91-6	
PFOS	ND	1.7	1.7	0.51	1	1763-23-1	
MeFOSA	ND	1.9	1.9	0.48	1	31506-32-8	
PFDA	ND	1.9	1.9	0.53	1	335-76-2	
EtFOSAm	ND	1.9	1.9	0.57	1	4151-50-2	
8:2 FTS	ND	1.8	1.8	0.61	1	39108-34-4	
9-CI-PF3ON	ND	1.7	1.7	0.29	1	756426-58-1	
PFNS	ND	1.8	1.8	0.42	1	68259-12-1	
PFUnDA	ND	1.9	1.9	0.51	1	2058-94-8	
NMeFOSAA	ND	1.9	1.9	0.41	1	2355-31-9	
NEtFOSAA	ND	1.9	1.9	0.52	1	2991-50-6	
PFDS	ND	1.8	1.8	0.42	1	335-77-3	
PFDOA	ND	1.9	1.9	0.45	1	307-55-1	
MeFOSE	ND	1.9	1.9	0.31	1	24448-09-7	
10:2 FTS	ND	1.8	1.8	0.69	1	120226-60-0	
EtFOSE	ND	1.9	1.9	0.47	1	1691-99-2	
11-CI-PF3OUdS	ND	1.8	1.8	0.41	1	763051-92-9	
PFTTrDA	ND	1.9	1.9	0.58	1	72629-94-8	
PFDoS	ND	1.8	1.8	0.43	1	79780-39-5	
PFTDA	ND	1.9	1.9	0.45	1	376-06-7	
PFHXDA	ND	1.9	1.9	0.34	1	67905-19-5	
PFODA	ND	1.9	1.9	0.55	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574521003	Total Amount Extracted	267mL
Lab File ID	Q210901B_006	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210901B_003
Collected	08/10/2021 12:54	Ending CCal File	Q210901B_017
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	19	21	113	50-150	
13C4_PFOA	19	22	117	50-150	
13C2_PFDA	19	21	109	50-150	
13C4_PFOS	18	22	122	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	19	19	102	50-150	
13C5_PFPeA	19	20	108	50-150	
13C3_PFBS	17	19	107	50-150	
13C2_4:2FTS	18	20	113	50-150	
13C5_PFHxA	19	21	113	50-150	
13C4_PFHpA	19	24	127	50-150	
13C3_PFHxS	18	20	111	50-150	
13C2_6:2FTS	18	20	110	50-150	
13C8_PFOA	19	20	106	50-150	
13C9_PFNA	19	20	105	50-150	
13C8_PFOS	18	21	117	50-150	
13C2_8:2FTS	18	21	120	50-150	
13C6_PFDA	19	24	126	50-150	
d3-MeFOSAA	19	21	113	50-150	
13C8_PFOA	19	12	65	50-150	
d5-EtFOSAA	19	21	112	50-150	
13C7_PFUdA	19	20	104	50-150	
13C2_PFDoA	19	17	90	50-150	
13C2_PFTeDA	19	19	100	50-150	
13C3_HFPO-DA	19	25	134	50-150	
13C2_PFHxDA	19	17	90	50-150	
d7-N-MeFOSE	19	8.0	43	10-150	
d9-N-EtFOSE	19	7.8	41	10-150	
d3-N-MeFOSA	19	2.9	16	10-150	
d5-N-EtFOSA	19	3.1	17	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574521003	Total Amount Extracted	267mL
Lab File ID	Q210901B_006	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210901B_003
Collected	08/10/2021 12:54	Ending CCal File	Q210901B_017
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.30	6.29	
13C4 PFOA	N/A	N/A	7.65	7.66	
13C2 PFDA	N/A	N/A	9.01	8.98	
13C4 PFOS	N/A	N/A	9.48	9.47	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.74	4.80	
13C5 PFPeA	N/A	N/A	5.59	5.60	
13C3 PFBS	N/A	N/A	6.55	6.55	
13C2 4:2FTS	N/A	N/A	6.01	5.99	
13C5 PFHxA	N/A	N/A	6.30	6.28	
13C4 PFHpA	N/A	N/A	6.98	6.96	
13C3 PFHxS	N/A	N/A	8.07	8.08	
13C2 6:2FTS	N/A	N/A	7.30	7.29	
13C8 PFOA	N/A	N/A	7.65	7.64	
13C9 PFNA	N/A	N/A	8.32	8.33	
13C8 PFOS	N/A	N/A	9.48	9.52	
13C2 8:2FTS	N/A	N/A	8.62	8.63	
13C6 PFDA	N/A	N/A	9.01	9.03	
d3-MeFOSAA	N/A	N/A	8.89	8.90	
13C8 PFOSA	N/A	N/A	11.45	11.42	
d5-EtFOSAA	N/A	N/A	9.20	9.21	
13C7 PFUdA	N/A	N/A	9.69	9.72	
13C2 PFDoA	N/A	N/A	10.36	10.41	
13C2 PFTeDA	N/A	N/A	11.66	11.71	
13C3 HFPO-DA	N/A	N/A	6.57	6.56	
13C2 PFHxDA	N/A	N/A	12.78	12.77	
d7-N-MeFOSE	N/A	N/A	13.08	13.06	
d9-N-EtFOSE	N/A	N/A	13.56	13.53	
d3-N-MeFOSA	N/A	N/A	13.28	13.26	
d5-N-EtFOSA	N/A	N/A	13.73	13.70	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574521003	Total Amount Extracted	267mL
Lab File ID	Q210901B_006	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210901B_003
Collected	08/10/2021 12:54	Ending CCal File	Q210901B_017
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.74	4.82	
PFPeA	N/A	N/A	5.60	5.63	
HFPO-DA	0.000	0.460	6.61	6.61	
PFBS	0.630	0.360	6.56	6.54	
PFHxA	0.000	0.0770	6.31	6.32	
4:2 FTS	0.000	1.10	0.00	5.99	
PFPeS	0.000	0.390	0.00	7.32	
PFHpA	0.480	0.350	7.00	6.96	
DONA	0.000	0.510	0.00	7.25	
PFHxS	0.000	0.290	8.09	8.05	
PFOA	0.490	0.270	7.65	7.63	
6:2 FTS	0.840	1.20	7.30	7.28	
PFHpS	0.000	0.410	8.78	8.79	
PFNA	0.000	0.290	0.00	8.32	
PFOSAm	N/A	N/A	11.46	11.40	
PFOS	0.190	0.200	9.50	9.46	
MeFOSA	0.000	0.530	0.00	13.29	
PFDA	0.000	0.140	0.00	9.02	
EtFOSAm	0.000	0.560	0.00	13.73	
8:2 FTS	0.000	1.80	0.00	8.62	
9-Cl-PF3ON	0.000	0.0510	0.00	10.00	
PFNS	0.000	0.220	0.00	10.16	
PFUnDA	0.000	0.140	0.00	9.71	
NMeFOSAA	0.000	0.770	0.00	8.89	
NEtFOSAA	0.000	0.480	0.00	9.20	
PFDS	0.000	0.240	10.84	10.82	
PFDOA	0.000	0.190	0.00	10.44	
MeFOSE	N/A	N/A	0.00	13.10	
10:2 FTS	0.000	1.60	0.00	9.95	
EtFOSE	0.000	0.000	0.00	13.58	
11-Cl-PF3OUdS	0.000	0.0240	0.00	11.29	
PFTTrDA	0.000	0.190	0.00	11.02	
PFDoS	0.000	0.240	0.00	12.05	
PFTDA	0.000	0.160	0.00	11.66	
PFHXDA	0.110	0.150	12.78	12.78	
PFODA	0.000	0.160	0.00	13.62	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID [REDACTED]  
 Lab Sample ID 10574521004  
 Lab File ID Q210831B\_023  
 Matrix Water  
 Collected 08/10/2021 13:15  
 Received 08/13/2021 08:50

Extraction Date 08/27/2021 14:00  
 Total Amount Extracted 238mL  
 Ical ID 210831A01  
 CCal File Q210831B\_014  
 Ending CCal File Q210831B\_025  
 Blank File Q210831B\_018

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	ND	2.1	2.1	0.46	1	375-22-4	
PFPeA	ND	2.1	2.1	0.46	1	2706-90-3	
HFPO-DA	ND	2.1	2.1	0.56	1	13252-13-6	
PFBS	ND	1.9	1.9	0.50	1	375-73-5	
PFHxA	ND	2.1	2.1	0.46	1	307-24-4	
4:2 FTS	ND	2.0	2.0	0.59	1	757124-72-4	
PFPeS	ND	2.0	2.0	0.50	1	2706-91-4	
PFHpA	ND	2.1	2.1	0.58	1	375-85-9	
DONA	ND	2.0	2.0	0.54	1	919005-14-4	
PFHxS	ND	1.9	1.9	0.53	1	355-46-4	
PFOA	ND	2.1	2.1	0.61	1	335-67-1	
6:2 FTS	ND	2.0	2.0	0.68	1	27619-97-2	
PFHpS	ND	2.0	2.0	0.43	1	375-92-8	
PFNA	ND	2.1	2.1	0.78	1	375-95-1	
PFOSAm	ND	2.1	2.1	0.86	1	754-91-6	
PFOS	ND	1.9	1.9	0.58	1	1763-23-1	
MeFOSA	ND	2.1	2.1	0.54	1	31506-32-8	
PFDA	ND	2.1	2.1	0.59	1	335-76-2	
EtFOSAm	ND	2.1	2.1	0.64	1	4151-50-2	
8:2 FTS	ND	2.0	2.0	0.69	1	39108-34-4	
9-CI-PF3ON	ND	2.0	2.0	0.32	1	756426-58-1	
PFNS	ND	2.0	2.0	0.47	1	68259-12-1	
PFUnDA	ND	2.1	2.1	0.57	1	2058-94-8	
NMeFOSAA	ND	2.1	2.1	0.46	1	2355-31-9	
NEtFOSAA	ND	2.1	2.1	0.58	1	2991-50-6	
PFDS	ND	2.0	2.0	0.47	1	335-77-3	
PFDOA	ND	2.1	2.1	0.51	1	307-55-1	
MeFOSE	ND	2.1	2.1	0.35	1	24448-09-7	
10:2 FTS	ND	2.0	2.0	0.77	1	120226-60-0	
EtFOSE	ND	2.1	2.1	0.52	1	1691-99-2	
11-CI-PF3OUdS	ND	2.0	2.0	0.46	1	763051-92-9	
PFTTrDA	ND	2.1	2.1	0.65	1	72629-94-8	
PFDoS	ND	2.0	2.0	0.48	1	79780-39-5	
PFTDA	ND	2.1	2.1	0.50	1	376-06-7	
PFHxDA	ND	2.1	2.1	0.38	1	67905-19-5	
PFODA	ND	2.1	2.1	0.61	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	████████████████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574521004	Total Amount Extracted	238mL
Lab File ID	Q210831B_023	Ical ID	210831A01
Matrix	Water	CCal File	Q210831B_014
Collected	08/10/2021 13:15	Ending CCal File	Q210831B_025
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	21	22	104	50-150	
13C4_PFOA	21	22	103	50-150	
13C2_PFDA	21	26	122	50-150	
13C4_PFOS	20	21	106	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBa	21	22	106	50-150	
13C5_PFPeA	21	22	104	50-150	
13C3_PFBs	19	21	108	50-150	
13C2_4:2Fts	20	20	100	50-150	
13C5_PFHxA	21	20	94	50-150	
13C4_PFHpA	21	20	97	50-150	
13C3_PFHxS	20	21	107	50-150	
13C2_6:2Fts	20	21	104	50-150	
13C8_PFOA	21	21	101	50-150	
13C9_PfNA	21	19	92	50-150	
13C8_PFOs	20	19	97	50-150	
13C2_8:2Fts	20	21	104	50-150	
13C6_PFDA	21	20	97	50-150	
d3-MeFOsAA	21	20	94	50-150	
13C8_PFOsA	21	16	78	50-150	
d5-EtFOsAA	21	17	83	50-150	
13C7_PFUdA	21	20	97	50-150	
13C2_PFDoA	21	20	94	50-150	
13C2_PFTeDA	21	17	81	50-150	
13C3_HFPO-DA	21	20	94	50-150	
13C2_PFHxDA	21	17	81	50-150	
d7-N-MeFOSE	21	15	73	10-150	
d9-N-EtFOSE	21	16	74	10-150	
d3-N-MeFOsA	21	12	58	10-150	
d5-N-EtFOsA	21	11	53	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	████████████████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574521004	Total Amount Extracted	238mL
Lab File ID	Q210831B_023	Ical ID	210831A01
Matrix	Water	CCal File	Q210831B_014
Collected	08/10/2021 13:15	Ending CCal File	Q210831B_025
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.28	6.29	
13C4 PFOA	N/A	N/A	7.62	7.66	
13C2 PFDA	N/A	N/A	8.98	8.98	
13C4 PFOS	N/A	N/A	9.45	9.48	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.75	4.74	
13C5 PFPeA	N/A	N/A	5.59	5.60	
13C3 PFBS	N/A	N/A	6.54	6.55	
13C2 4:2FTS	N/A	N/A	6.00	5.99	
13C5 PFHxA	N/A	N/A	6.28	6.28	
13C4 PFHpA	N/A	N/A	6.95	6.96	
13C3 PFHxS	N/A	N/A	8.04	8.08	
13C2 6:2FTS	N/A	N/A	7.27	7.29	
13C8 PFOA	N/A	N/A	7.62	7.64	
13C9 PFNA	N/A	N/A	8.30	8.33	
13C8 PFOS	N/A	N/A	9.46	9.48	
13C2 8:2FTS	N/A	N/A	8.59	8.62	
13C6 PFDA	N/A	N/A	8.98	9.03	
d3-MeFOSAA	N/A	N/A	8.85	8.90	
13C8 PFOSA	N/A	N/A	11.43	11.42	
d5-EtFOSAA	N/A	N/A	9.17	9.18	
13C7 PFUdA	N/A	N/A	9.66	9.68	
13C2 PFDoA	N/A	N/A	10.34	10.36	
13C2 PFTeDA	N/A	N/A	11.64	11.66	
13C3 HFPO-DA	N/A	N/A	6.56	6.56	
13C2 PFHxDA	N/A	N/A	12.76	12.77	
d7-N-MeFOSE	N/A	N/A	13.06	13.06	
d9-N-EtFOSE	N/A	N/A	13.54	13.53	
d3-N-MeFOSA	N/A	N/A	13.27	13.26	
d5-N-EtFOSA	N/A	N/A	13.71	13.70	

**REPORT OF LABORATORY ANALYSIS**

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





**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	████████████████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574521004	Total Amount Extracted	238mL
Lab File ID	Q210831B_023	Ical ID	210831A01
Matrix	Water	CCal File	Q210831B_014
Collected	08/10/2021 13:15	Ending CCal File	Q210831B_025
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.75	4.82	
PFPeA	N/A	N/A	5.60	5.63	
HFPO-DA	0.000	0.380	0.00	6.61	
PFBS	0.420	0.330	6.55	6.54	
PFHxA	0.180	0.0990	6.29	6.32	
4:2 FTS	0.000	0.970	0.00	5.99	
PFPeS	0.000	0.450	0.00	7.32	
PFHpA	0.000	0.460	6.96	6.98	
DONA	0.000	0.470	0.00	7.21	
PFHxS	0.000	0.290	0.00	8.05	
PFOA	0.160	0.250	7.62	7.63	
6:2 FTS	0.650	1.20	7.26	7.28	
PFHpS	0.000	0.410	0.00	8.79	
PFNA	0.000	0.270	0.00	8.32	
PFOSAm	N/A	N/A	11.43	11.40	
PFOS	0.000	0.240	9.53	9.46	
MeFOSA	0.000	0.470	13.31	13.29	
PFDA	0.000	0.160	0.00	9.02	
EtFOSAm	0.000	0.510	0.00	13.73	
8:2 FTS	0.000	1.40	0.00	8.62	
9-Cl-PF3ON	0.000	0.0440	0.00	10.00	
PFNS	0.000	0.230	0.00	10.16	
PFUnDA	0.000	0.160	0.00	9.71	
NMeFOSAA	0.000	0.670	0.00	8.89	
NEtFOSAA	0.000	0.490	0.00	9.15	
PFDS	0.000	0.260	0.00	10.82	
PFDOA	0.000	0.160	0.00	10.44	
MeFOSE	N/A	N/A	0.00	13.10	
10:2 FTS	0.000	1.70	0.00	9.95	
EtFOSE	0.000	0.000	0.00	13.58	
11-Cl-PF3OUdS	0.000	0.0260	0.00	11.29	
PFTrDA	0.000	0.200	0.00	11.02	
PFDoS	0.000	0.250	0.00	12.05	
PFTDA	0.000	0.140	0.00	11.66	
PFHXDA	0.140	0.140	12.76	12.78	
PFODA	0.000	0.170	0.00	13.54	

**REPORT OF LABORATORY ANALYSIS**

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





**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	████████████████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574521005	Total Amount Extracted	247mL
Lab File ID	Q210831B_024	Ical ID	210831A01
Matrix	Water	CCal File	Q210831B_014
Collected	08/10/2021 13:20	Ending CCal File	Q210831B_025
Received	08/13/2021 08:50	Blank File	Q210831B_018

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	ND	2.0	2.0	0.45	1	375-22-4	
PFPeA	ND	2.0	2.0	0.44	1	2706-90-3	
HFPO-DA	ND	2.0	2.0	0.53	1	13252-13-6	
PFBS	ND	1.8	1.8	0.48	1	375-73-5	
PFHxA	ND	2.0	2.0	0.44	1	307-24-4	
4:2 FTS	ND	1.9	1.9	0.56	1	757124-72-4	
PFPeS	ND	1.9	1.9	0.48	1	2706-91-4	
PFHpA	ND	2.0	2.0	0.56	1	375-85-9	
DONA	ND	1.9	1.9	0.52	1	919005-14-4	
PFHxS	ND	1.8	1.8	0.51	1	355-46-4	
PFOA	ND	2.0	2.0	0.59	1	335-67-1	
6:2 FTS	ND	1.9	1.9	0.65	1	27619-97-2	
PFHpS	ND	1.9	1.9	0.42	1	375-92-8	
PFNA	ND	2.0	2.0	0.75	1	375-95-1	
PFOSAm	ND	2.0	2.0	0.83	1	754-91-6	
PFOS	ND	1.9	1.9	0.55	1	1763-23-1	
MeFOSA	ND	2.0	2.0	0.52	1	31506-32-8	
PFDA	ND	2.0	2.0	0.57	1	335-76-2	
EtFOSAm	ND	2.0	2.0	0.61	1	4151-50-2	
8:2 FTS	ND	1.9	1.9	0.66	1	39108-34-4	
9-CI-PF3ON	ND	1.9	1.9	0.31	1	756426-58-1	
PFNS	ND	1.9	1.9	0.45	1	68259-12-1	
PFUnDA	ND	2.0	2.0	0.55	1	2058-94-8	
NMeFOSAA	ND	2.0	2.0	0.44	1	2355-31-9	
NEtFOSAA	ND	2.0	2.0	0.56	1	2991-50-6	
PFDS	ND	1.9	1.9	0.45	1	335-77-3	
PFDOA	ND	2.0	2.0	0.49	1	307-55-1	
MeFOSE	ND	2.0	2.0	0.33	1	24448-09-7	
10:2 FTS	ND	1.9	1.9	0.74	1	120226-60-0	
EtFOSE	ND	2.0	2.0	0.50	1	1691-99-2	
11-CI-PF3OUdS	ND	1.9	1.9	0.44	1	763051-92-9	
PFTTrDA	ND	2.0	2.0	0.63	1	72629-94-8	
PFDoS	ND	2.0	2.0	0.46	1	79780-39-5	
PFTDA	ND	2.0	2.0	0.48	1	376-06-7	
PFHXDA	ND	2.0	2.0	0.37	1	67905-19-5	
PFODA	ND	2.0	2.0	0.59	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	████████████████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574521005	Total Amount Extracted	247mL
Lab File ID	Q210831B_024	Ical ID	210831A01
Matrix	Water	CCal File	Q210831B_014
Collected	08/10/2021 13:20	Ending CCal File	Q210831B_025
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	20	22	109	50-150	
13C4_PFOA	20	22	109	50-150	
13C2_PFDA	20	23	115	50-150	
13C4_PFOS	19	20	105	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	20	22	108	50-150	
13C5_PFPeA	20	21	102	50-150	
13C3_PFBS	19	22	119	50-150	
13C2_4:2FTS	19	18	97	50-150	
13C5_PFHxA	20	20	100	50-150	
13C4_PFHpA	20	20	98	50-150	
13C3_PFHxS	19	20	106	50-150	
13C2_6:2FTS	19	20	105	50-150	
13C8_PFOA	20	22	109	50-150	
13C9_PFNA	20	20	99	50-150	
13C8_PFOS	19	19	97	50-150	
13C2_8:2FTS	19	19	98	50-150	
13C6_PFDA	20	22	107	50-150	
d3-MeFOSAA	20	19	96	50-150	
13C8_PFOA	20	15	74	50-150	
d5-EtFOSAA	20	17	83	50-150	
13C7_PFUdA	20	21	103	50-150	
13C2_PFDoA	20	19	93	50-150	
13C2_PFTeDA	20	18	88	50-150	
13C3_HFPO-DA	20	17	85	50-150	
13C2_PFHxDA	20	16	77	50-150	
d7-N-MeFOSE	20	14	68	10-150	
d9-N-EtFOSE	20	13	64	10-150	
d3-N-MeFOSA	20	9.8	48	10-150	
d5-N-EtFOSA	20	9.0	45	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	████████████████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574521005	Total Amount Extracted	247mL
Lab File ID	Q210831B_024	Ical ID	210831A01
Matrix	Water	CCal File	Q210831B_014
Collected	08/10/2021 13:20	Ending CCal File	Q210831B_025
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.28	6.29	
13C4 PFOA	N/A	N/A	7.62	7.66	
13C2 PFDA	N/A	N/A	8.98	8.98	
13C4 PFOS	N/A	N/A	9.46	9.48	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.75	4.74	
13C5 PFPeA	N/A	N/A	5.59	5.60	
13C3 PFBS	N/A	N/A	6.54	6.55	
13C2 4:2FTS	N/A	N/A	6.00	5.99	
13C5 PFHxA	N/A	N/A	6.28	6.28	
13C4 PFHpA	N/A	N/A	6.96	6.96	
13C3 PFHxS	N/A	N/A	8.04	8.08	
13C2 6:2FTS	N/A	N/A	7.27	7.29	
13C8 PFOA	N/A	N/A	7.62	7.64	
13C9 PFNA	N/A	N/A	8.29	8.33	
13C8 PFOS	N/A	N/A	9.46	9.48	
13C2 8:2FTS	N/A	N/A	8.59	8.62	
13C6 PFDA	N/A	N/A	8.98	9.03	
d3-MeFOSAA	N/A	N/A	8.86	8.90	
13C8 PFOSA	N/A	N/A	11.43	11.42	
d5-EtFOSAA	N/A	N/A	9.17	9.18	
13C7 PFUdA	N/A	N/A	9.66	9.68	
13C2 PFDoA	N/A	N/A	10.34	10.36	
13C2 PFTeDA	N/A	N/A	11.65	11.66	
13C3 HFPO-DA	N/A	N/A	6.56	6.56	
13C2 PFHxDA	N/A	N/A	12.77	12.77	
d7-N-MeFOSE	N/A	N/A	13.06	13.06	
d9-N-EtFOSE	N/A	N/A	13.55	13.53	
d3-N-MeFOSA	N/A	N/A	13.27	13.26	
d5-N-EtFOSA	N/A	N/A	13.72	13.70	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	████████████████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574521005	Total Amount Extracted	247mL
Lab File ID	Q210831B_024	Ical ID	210831A01
Matrix	Water	CCal File	Q210831B_014
Collected	08/10/2021 13:20	Ending CCal File	Q210831B_025
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.75	4.82	
PFPeA	N/A	N/A	5.60	5.63	
HFPO-DA	0.000	0.380	0.00	6.61	
PFBS	0.190	0.330	6.54	6.54	
PFHxA	0.000	0.0990	6.29	6.32	
4:2 FTS	0.000	0.970	0.00	5.99	
PFPeS	0.000	0.450	0.00	7.32	
PFHpA	0.780	0.460	6.96	6.98	
DONA	0.000	0.470	0.00	7.21	
PFHxS	0.000	0.290	8.05	8.05	
PFOA	0.150	0.250	7.63	7.63	
6:2 FTS	1.80	1.20	7.28	7.28	
PFHpS	0.000	0.410	0.00	8.79	
PFNA	0.000	0.270	0.00	8.32	
PFOSAm	N/A	N/A	11.44	11.40	
PFOS	0.220	0.240	9.48	9.46	
MeFOSA	0.000	0.470	13.31	13.29	
PFDA	0.000	0.160	0.00	9.02	
EtFOSAm	0.000	0.510	0.00	13.73	
8:2 FTS	0.000	1.40	0.00	8.62	
9-Cl-PF3ON	0.000	0.0440	0.00	10.00	
PFNS	0.000	0.230	0.00	10.16	
PFUnDA	0.000	0.160	0.00	9.71	
NMeFOSAA	0.000	0.670	0.00	8.89	
NEtFOSAA	0.000	0.490	0.00	9.15	
PFDS	0.000	0.260	0.00	10.82	
PFDOA	0.000	0.160	0.00	10.44	
MeFOSE	N/A	N/A	0.00	13.10	
10:2 FTS	0.000	1.70	0.00	9.95	
EtFOSE	0.000	0.000	0.00	13.58	
11-Cl-PF3OUdS	0.000	0.0260	0.00	11.29	
PFTTrDA	0.000	0.200	0.00	11.02	
PFDoS	0.000	0.250	0.00	12.05	
PFTDA	0.000	0.140	0.00	11.66	
PFHXDA	0.000	0.140	12.76	12.78	
PFODA	0.000	0.170	0.00	13.54	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574521006	Total Amount Extracted	260mL
Lab File ID	Q210831B_026	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210831B_025
Collected	08/10/2021 13:21	Ending CCal File	Q210831B_036
Received	08/13/2021 08:50	Blank File	Q210831B_018

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	10	1.9	1.9	0.42	1	375-22-4	
PFPeA	ND	1.9	1.9	0.42	1	2706-90-3	
HFPO-DA	ND	1.9	1.9	0.51	1	13252-13-6	
PFBS	ND	1.7	1.7	0.46	1	375-73-5	
PFHxA	ND	1.9	1.9	0.42	1	307-24-4	
4:2 FTS	ND	1.8	1.8	0.54	1	757124-72-4	
PFPeS	ND	1.8	1.8	0.46	1	2706-91-4	
PFHpA	ND	1.9	1.9	0.53	1	375-85-9	
DONA	ND	1.8	1.8	0.49	1	919005-14-4	
PFHxS	ND	1.8	1.8	0.49	1	355-46-4	
PFOA	ND	1.9	1.9	0.56	1	335-67-1	
6:2 FTS	ND	1.8	1.8	0.62	1	27619-97-2	
PFHpS	ND	1.8	1.8	0.40	1	375-92-8	
PFNA	ND	1.9	1.9	0.71	1	375-95-1	
PFOSAm	ND	1.9	1.9	0.79	1	754-91-6	
PFOS	ND	1.8	1.8	0.53	1	1763-23-1	
MeFOSA	ND	1.9	1.9	0.49	1	31506-32-8	
PFDA	ND	1.9	1.9	0.54	1	335-76-2	
EtFOSAm	ND	1.9	1.9	0.59	1	4151-50-2	
8:2 FTS	ND	1.8	1.8	0.63	1	39108-34-4	
9-CI-PF3ON	ND	1.8	1.8	0.29	1	756426-58-1	
PFNS	ND	1.8	1.8	0.43	1	68259-12-1	
PFUnDA	ND	1.9	1.9	0.52	1	2058-94-8	
NMeFOSAA	ND	1.9	1.9	0.42	1	2355-31-9	
NEtFOSAA	ND	1.9	1.9	0.53	1	2991-50-6	
PFDS	ND	1.9	1.9	0.43	1	335-77-3	
PFDOA	ND	1.9	1.9	0.46	1	307-55-1	
MeFOSE	ND	1.9	1.9	0.32	1	24448-09-7	
10:2 FTS	ND	1.9	1.9	0.71	1	120226-60-0	
EtFOSE	ND	1.9	1.9	0.48	1	1691-99-2	
11-CI-PF3OUdS	ND	1.8	1.8	0.42	1	763051-92-9	
PFTTrDA	ND	1.9	1.9	0.60	1	72629-94-8	
PFDoS	ND	1.9	1.9	0.44	1	79780-39-5	
PFTDA	ND	1.9	1.9	0.46	1	376-06-7	
PFHXDA	ND	1.9	1.9	0.35	1	67905-19-5	
PFODA	ND	1.9	1.9	0.56	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574521006	Total Amount Extracted	260mL
Lab File ID	Q210831B_026	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210831B_025
Collected	08/10/2021 13:21	Ending CCal File	Q210831B_036
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	19	21	110	50-150	
13C4_PFOA	19	20	103	50-150	
13C2_PFDA	19	20	103	50-150	
13C4_PFOS	18	21	112	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBa	19	18	95	50-150	
13C5_PFPeA	19	21	108	50-150	
13C3_PFBs	18	18	103	50-150	
13C2_4:2Fts	18	19	104	50-150	
13C5_PFHxA	19	19	98	50-150	
13C4_PFHpA	19	20	104	50-150	
13C3_PFHxS	18	18	97	50-150	
13C2_6:2Fts	18	19	104	50-150	
13C8_PFOA	19	19	100	50-150	
13C9_PfNA	19	19	100	50-150	
13C8_PFOs	18	20	110	50-150	
13C2_8:2Fts	18	17	90	50-150	
13C6_PFDA	19	21	109	50-150	
d3-MeFOsAA	19	18	91	50-150	
13C8_PFOsA	19	17	90	50-150	
d5-EtFOsAA	19	16	82	50-150	
13C7_PFUdA	19	17	89	50-150	
13C2_PFDoA	19	16	81	50-150	
13C2_PFTeDA	19	13	70	50-150	
13C3_HFPO-DA	19	20	104	50-150	
13C2_PFHxDA	19	14	73	50-150	
d7-N-MeFOSE	19	12	61	10-150	
d9-N-EtFOSE	19	11	55	10-150	
d3-N-MeFOsA	19	7.9	41	10-150	
d5-N-EtFOsA	19	8.3	43	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574521006	Total Amount Extracted	260mL
Lab File ID	Q210831B_026	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210831B_025
Collected	08/10/2021 13:21	Ending CCal File	Q210831B_036
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.28	6.29	
13C4 PFOA	N/A	N/A	7.63	7.66	
13C2 PFDA	N/A	N/A	8.98	8.98	
13C4 PFOS	N/A	N/A	9.46	9.48	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.73	4.74	
13C5 PFPeA	N/A	N/A	5.58	5.60	
13C3 PFBS	N/A	N/A	6.54	6.55	
13C2 4:2FTS	N/A	N/A	5.99	5.99	
13C5 PFHxA	N/A	N/A	6.28	6.28	
13C4 PFHpA	N/A	N/A	6.96	6.96	
13C3 PFHxS	N/A	N/A	8.05	8.08	
13C2 6:2FTS	N/A	N/A	7.28	7.29	
13C8 PFOA	N/A	N/A	7.63	7.64	
13C9 PFNA	N/A	N/A	8.30	8.33	
13C8 PFOS	N/A	N/A	9.46	9.48	
13C2 8:2FTS	N/A	N/A	8.60	8.62	
13C6 PFDA	N/A	N/A	8.98	9.03	
d3-MeFOSAA	N/A	N/A	8.86	8.90	
13C8 PFOSA	N/A	N/A	11.43	11.42	
d5-EtFOSAA	N/A	N/A	9.17	9.18	
13C7 PFUdA	N/A	N/A	9.66	9.68	
13C2 PFDoA	N/A	N/A	10.34	10.36	
13C2 PFTeDA	N/A	N/A	11.65	11.66	
13C3 HFPO-DA	N/A	N/A	6.56	6.56	
13C2 PFHxDA	N/A	N/A	12.76	12.77	
d7-N-MeFOSE	N/A	N/A	13.06	13.06	
d9-N-EtFOSE	N/A	N/A	13.54	13.53	
d3-N-MeFOSA	N/A	N/A	13.27	13.26	
d5-N-EtFOSA	N/A	N/A	13.71	13.70	

**REPORT OF LABORATORY ANALYSIS**

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





**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574521006	Total Amount Extracted	260mL
Lab File ID	Q210831B_026	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210831B_025
Collected	08/10/2021 13:21	Ending CCal File	Q210831B_036
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.74	4.82	
PFPeA	N/A	N/A	5.58	5.63	
HFPO-DA	0.000	0.350	0.00	6.61	
PFBS	0.320	0.350	6.54	6.54	
PFHxA	0.130	0.0920	6.29	6.32	
4:2 FTS	0.000	0.940	0.00	5.99	
PFPeS	0.400	0.450	7.33	7.32	
PFHpA	0.530	0.500	6.96	6.98	
DONA	0.000	0.440	0.00	7.21	
PFHxS	0.000	0.310	0.00	8.05	
PFOA	0.280	0.270	7.64	7.63	
6:2 FTS	1.50	1.10	7.28	7.28	
PFHpS	0.000	0.450	0.00	8.79	
PFNA	0.000	0.250	0.00	8.32	
PFOSAm	N/A	N/A	11.44	11.40	
PFOS	0.240	0.240	9.47	9.46	
MeFOSA	0.700	0.520	13.30	13.29	
PFDA	0.000	0.200	0.00	9.02	
EtFOSAm	0.820	0.500	13.75	13.73	
8:2 FTS	0.000	1.50	0.00	8.62	
9-Cl-PF3ON	0.000	0.0390	0.00	10.00	
PFNS	0.000	0.230	10.17	10.16	
PFUnDA	0.000	0.170	0.00	9.71	
NMeFOSAA	0.000	0.740	9.13	8.89	
NEtFOSAA	0.000	0.500	0.00	9.15	
PFDS	0.000	0.270	0.00	10.82	
PFDOA	0.000	0.180	0.00	10.44	
MeFOSE	N/A	N/A	0.00	13.10	
10:2 FTS	0.000	1.50	0.00	9.95	
EtFOSE	0.000	0.000	0.00	13.58	
11-Cl-PF3OUdS	0.000	0.0280	0.00	11.29	
PFTTrDA	0.000	0.180	0.00	11.02	
PFDoS	0.000	0.250	0.00	12.05	
PFTDA	0.000	0.140	0.00	11.66	
PFHXDA	0.190	0.130	12.77	12.78	
PFODA	0.000	0.170	13.54	13.54	

**REPORT OF LABORATORY ANALYSIS**

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





**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

Client Sample ID [REDACTED]  
 Lab Sample ID 10574521007  
 Lab File ID Q210831B\_027  
 Matrix Non\_Potable\_Water  
 Collected 08/10/2021 13:45  
 Received 08/13/2021 08:50

Extraction Date 08/27/2021 14:00  
 Total Amount Extracted 269mL  
 Ical ID 210831A01  
 CCal File Q210831B\_025  
 Ending CCal File Q210831B\_036  
 Blank File Q210831B\_018

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	10	1.9	1.9	0.41	1	375-22-4	
PFPeA	ND	1.9	1.9	0.41	1	2706-90-3	
HFPO-DA	ND	1.9	1.9	0.49	1	13252-13-6	
PFBS	ND	1.6	1.6	0.44	1	375-73-5	
PFHxA	ND	1.9	1.9	0.41	1	307-24-4	
4:2 FTS	ND	1.7	1.7	0.52	1	757124-72-4	
PFPeS	ND	1.7	1.7	0.44	1	2706-91-4	
PFHpA	ND	1.9	1.9	0.51	1	375-85-9	
DONA	ND	1.8	1.8	0.48	1	919005-14-4	
PFHxS	ND	1.7	1.7	0.47	1	355-46-4	
PFOA	ND	1.9	1.9	0.54	1	335-67-1	
6:2 FTS	ND	1.8	1.8	0.60	1	27619-97-2	
PFHpS	ND	1.8	1.8	0.38	1	375-92-8	
PFNA	ND	1.9	1.9	0.69	1	375-95-1	
PFOSAm	ND	1.9	1.9	0.76	1	754-91-6	
PFOS	ND	1.7	1.7	0.51	1	1763-23-1	
MeFOSA	ND	1.9	1.9	0.47	1	31506-32-8	
PFDA	ND	1.9	1.9	0.52	1	335-76-2	
EtFOSAm	ND	1.9	1.9	0.57	1	4151-50-2	
8:2 FTS	ND	1.8	1.8	0.61	1	39108-34-4	
9-CI-PF3ON	ND	1.7	1.7	0.28	1	756426-58-1	
PFNS	ND	1.8	1.8	0.41	1	68259-12-1	
PFUnDA	ND	1.9	1.9	0.50	1	2058-94-8	
NMeFOSAA	ND	1.9	1.9	0.40	1	2355-31-9	
NEtFOSAA	ND	1.9	1.9	0.52	1	2991-50-6	
PFDS	ND	1.8	1.8	0.42	1	335-77-3	
PFDOA	ND	1.9	1.9	0.45	1	307-55-1	
MeFOSE	ND	1.9	1.9	0.31	1	24448-09-7	
10:2 FTS	ND	1.8	1.8	0.68	1	120226-60-0	
EtFOSE	ND	1.9	1.9	0.46	1	1691-99-2	
11-CI-PF3OUdS	ND	1.8	1.8	0.41	1	763051-92-9	
PFTTrDA	ND	1.9	1.9	0.58	1	72629-94-8	
PFDoS	ND	1.8	1.8	0.43	1	79780-39-5	
PFTDA	ND	1.9	1.9	0.44	1	376-06-7	
PFHXDA	ND	1.9	1.9	0.34	1	67905-19-5	
PFODA	ND	1.9	1.9	0.54	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574521007	Total Amount Extracted	269mL
Lab File ID	Q210831B_027	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210831B_025
Collected	08/10/2021 13:45	Ending CCal File	Q210831B_036
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	19	21	111	50-150	
13C4_PFOA	19	20	105	50-150	
13C2_PFDA	19	19	103	50-150	
13C4_PFOS	18	20	113	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBa	19	18	96	50-150	
13C5_PFPeA	19	21	111	50-150	
13C3_PFBs	17	19	110	50-150	
13C2_4:2Fts	17	19	108	50-150	
13C5_PFHxA	19	18	99	50-150	
13C4_PFHpA	19	19	105	50-150	
13C3_PFHxS	18	19	109	50-150	
13C2_6:2Fts	18	22	122	50-150	
13C8_PFOA	19	19	105	50-150	
13C9_PfNA	19	21	112	50-150	
13C8_PFOs	18	22	125	50-150	
13C2_8:2Fts	18	16	92	50-150	
13C6_PFDA	19	17	93	50-150	
d3-MeFOsAA	19	17	92	50-150	
13C8_PFOsA	19	17	91	50-150	
d5-EtFOsAA	19	15	80	50-150	
13C7_PFUdA	19	16	88	50-150	
13C2_PFDoA	19	15	78	50-150	
13C2_PFTeDA	19	15	79	50-150	
13C3_HFPO-DA	19	20	105	50-150	
13C2_PFHxDA	19	14	75	50-150	
d7-N-MeFOSE	19	12	63	10-150	
d9-N-EtFOSE	19	11	58	10-150	
d3-N-MeFOsA	19	8.5	46	10-150	
d5-N-EtFOsA	19	8.7	47	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	████████████████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574521007	Total Amount Extracted	269mL
Lab File ID	Q210831B_027	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210831B_025
Collected	08/10/2021 13:45	Ending CCal File	Q210831B_036
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.27	6.29	
13C4 PFOA	N/A	N/A	7.63	7.66	
13C2 PFDA	N/A	N/A	8.99	8.98	
13C4 PFOS	N/A	N/A	9.46	9.48	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.73	4.74	
13C5 PFPeA	N/A	N/A	5.58	5.60	
13C3 PFBS	N/A	N/A	6.53	6.55	
13C2 4:2FTS	N/A	N/A	5.98	5.99	
13C5 PFHxA	N/A	N/A	6.27	6.28	
13C4 PFHpA	N/A	N/A	6.96	6.96	
13C3 PFHxS	N/A	N/A	8.05	8.08	
13C2 6:2FTS	N/A	N/A	7.28	7.29	
13C8 PFOA	N/A	N/A	7.63	7.64	
13C9 PFNA	N/A	N/A	8.31	8.33	
13C8 PFOS	N/A	N/A	9.47	9.48	
13C2 8:2FTS	N/A	N/A	8.60	8.62	
13C6 PFDA	N/A	N/A	9.00	9.03	
d3-MeFOSAA	N/A	N/A	8.87	8.90	
13C8 PFOSA	N/A	N/A	11.43	11.42	
d5-EtFOSAA	N/A	N/A	9.18	9.18	
13C7 PFUdA	N/A	N/A	9.67	9.68	
13C2 PFDoA	N/A	N/A	10.34	10.36	
13C2 PFTeDA	N/A	N/A	11.64	11.66	
13C3 HFPO-DA	N/A	N/A	6.55	6.56	
13C2 PFHxDA	N/A	N/A	12.76	12.77	
d7-N-MeFOSE	N/A	N/A	13.06	13.06	
d9-N-EtFOSE	N/A	N/A	13.54	13.53	
d3-N-MeFOSA	N/A	N/A	13.27	13.26	
d5-N-EtFOSA	N/A	N/A	13.71	13.70	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	████████████████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574521007	Total Amount Extracted	269mL
Lab File ID	Q210831B_027	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210831B_025
Collected	08/10/2021 13:45	Ending CCal File	Q210831B_036
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.74	4.82	
PFPeA	N/A	N/A	5.58	5.63	
HFPO-DA	0.000	0.350	0.00	6.61	
PFBS	0.350	0.350	6.54	6.54	
PFHxA	0.100	0.0920	6.28	6.32	
4:2 FTS	0.000	0.940	0.00	5.99	
PFPeS	0.560	0.450	7.32	7.32	
PFHpA	0.460	0.500	6.96	6.98	
DONA	0.000	0.440	0.00	7.21	
PFHxS	0.000	0.310	0.00	8.05	
PFOA	0.320	0.270	7.64	7.63	
6:2 FTS	0.870	1.10	7.28	7.28	
PFHpS	0.000	0.450	0.00	8.79	
PFNA	0.000	0.250	0.00	8.32	
PFOSAm	N/A	N/A	11.44	11.40	
PFOS	0.190	0.240	9.48	9.46	
MeFOSA	0.000	0.520	0.00	13.29	
PFDA	0.000	0.200	0.00	9.02	
EtFOSAm	0.000	0.500	0.00	13.73	
8:2 FTS	0.000	1.50	0.00	8.62	
9-Cl-PF3ON	0.000	0.0390	0.00	10.00	
PFNS	0.000	0.230	0.00	10.16	
PFUnDA	0.000	0.170	0.00	9.71	
NMeFOSAA	0.000	0.740	0.00	8.89	
NEtFOSAA	0.000	0.500	0.00	9.15	
PFDS	0.000	0.270	10.85	10.82	
PFDOA	0.000	0.180	0.00	10.44	
MeFOSE	N/A	N/A	0.00	13.10	
10:2 FTS	0.000	1.50	0.00	9.95	
EtFOSE	0.000	0.000	0.00	13.58	
11-Cl-PF3OUdS	0.000	0.0280	0.00	11.29	
PFTTrDA	0.000	0.180	0.00	11.02	
PFDoS	0.000	0.250	0.00	12.05	
PFTDA	0.000	0.140	0.00	11.66	
PFHXDA	0.250	0.130	12.76	12.78	
PFODA	0.000	0.170	0.00	13.54	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574521008	Total Amount Extracted	264mL
Lab File ID	Q210831B_028	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210831B_025
Collected	08/10/2021 14:05	Ending CCal File	Q210831B_036
Received	08/13/2021 08:50	Blank File	Q210831B_018

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	16	1.9	1.9	0.42	1	375-22-4	
PFPeA	ND	1.9	1.9	0.41	1	2706-90-3	
HFPO-DA	ND	1.9	1.9	0.50	1	13252-13-6	
PFBS	ND	1.7	1.7	0.45	1	375-73-5	
PFHxA	ND	1.9	1.9	0.41	1	307-24-4	
4:2 FTS	ND	1.8	1.8	0.53	1	757124-72-4	
PFPeS	ND	1.8	1.8	0.45	1	2706-91-4	
PFHpA	ND	1.9	1.9	0.52	1	375-85-9	
DONA	ND	1.8	1.8	0.49	1	919005-14-4	
PFHxS	ND	1.7	1.7	0.48	1	355-46-4	
PFOA	ND	1.9	1.9	0.55	1	335-67-1	
6:2 FTS	ND	1.8	1.8	0.61	1	27619-97-2	
PFHpS	ND	1.8	1.8	0.39	1	375-92-8	
PFNA	ND	1.9	1.9	0.70	1	375-95-1	
PFOSAm	ND	1.9	1.9	0.77	1	754-91-6	
PFOS	ND	1.7	1.7	0.52	1	1763-23-1	
MeFOSA	ND	1.9	1.9	0.48	1	31506-32-8	
PFDA	ND	1.9	1.9	0.53	1	335-76-2	
EtFOSAm	ND	1.9	1.9	0.58	1	4151-50-2	
8:2 FTS	ND	1.8	1.8	0.62	1	39108-34-4	
9-CI-PF3ON	ND	1.8	1.8	0.29	1	756426-58-1	
PFNS	ND	1.8	1.8	0.42	1	68259-12-1	
PFUnDA	ND	1.9	1.9	0.51	1	2058-94-8	
NMeFOSAA	ND	1.9	1.9	0.41	1	2355-31-9	
NEtFOSAA	ND	1.9	1.9	0.52	1	2991-50-6	
PFDS	ND	1.8	1.8	0.43	1	335-77-3	
PFDOA	ND	1.9	1.9	0.46	1	307-55-1	
MeFOSE	ND	1.9	1.9	0.31	1	24448-09-7	
10:2 FTS	ND	1.8	1.8	0.70	1	120226-60-0	
EtFOSE	ND	1.9	1.9	0.47	1	1691-99-2	
11-CI-PF3OUdS	ND	1.8	1.8	0.41	1	763051-92-9	
PFTTrDA	ND	1.9	1.9	0.59	1	72629-94-8	
PFDoS	ND	1.8	1.8	0.44	1	79780-39-5	
PFTDA	ND	1.9	1.9	0.45	1	376-06-7	
PFHXDA	ND	1.9	1.9	0.34	1	67905-19-5	
PFODA	ND	1.9	1.9	0.55	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574521008	Total Amount Extracted	264mL
Lab File ID	Q210831B_028	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210831B_025
Collected	08/10/2021 14:05	Ending CCal File	Q210831B_036
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	19	19	98	50-150	
13C4_PFOA	19	17	90	50-150	
13C2_PFDA	19	19	100	50-150	
13C4_PFOS	18	20	108	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	19	19	102	50-150	
13C5_PFPeA	19	19	101	50-150	
13C3_PFBS	18	18	104	50-150	
13C2_4:2FTS	18	18	104	50-150	
13C5_PFHxA	19	19	103	50-150	
13C4_PFHpA	19	19	101	50-150	
13C3_PFHxS	18	20	109	50-150	
13C2_6:2FTS	18	20	113	50-150	
13C8_PFOA	19	20	106	50-150	
13C9_PFNA	19	20	108	50-150	
13C8_PFOS	18	21	117	50-150	
13C2_8:2FTS	18	19	102	50-150	
13C6_PFDA	19	22	118	50-150	
d3-MeFOSAA	19	19	101	50-150	
13C8_PFOA	19	17	90	50-150	
d5-EtFOSAA	19	17	90	50-150	
13C7_PFUdA	19	19	98	50-150	
13C2_PFDoA	19	19	101	50-150	
13C2_PFTeDA	19	16	83	50-150	
13C3_HFPO-DA	19	15	81	50-150	
13C2_PFHxDA	19	17	88	50-150	
d7-N-MeFOSE	19	15	81	10-150	
d9-N-EtFOSE	19	13	70	10-150	
d3-N-MeFOSA	19	9.1	48	10-150	
d5-N-EtFOSA	19	9.2	49	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	████████████████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574521008	Total Amount Extracted	264mL
Lab File ID	Q210831B_028	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210831B_025
Collected	08/10/2021 14:05	Ending CCal File	Q210831B_036
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.28	6.29	
13C4 PFOA	N/A	N/A	7.63	7.66	
13C2 PFDA	N/A	N/A	8.98	8.98	
13C4 PFOS	N/A	N/A	9.46	9.48	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.75	4.74	
13C5 PFPeA	N/A	N/A	5.59	5.60	
13C3 PFBS	N/A	N/A	6.54	6.55	
13C2 4:2FTS	N/A	N/A	6.00	5.99	
13C5 PFHxA	N/A	N/A	6.28	6.28	
13C4 PFHpA	N/A	N/A	6.96	6.96	
13C3 PFHxS	N/A	N/A	8.05	8.08	
13C2 6:2FTS	N/A	N/A	7.28	7.29	
13C8 PFOA	N/A	N/A	7.63	7.64	
13C9 PFNA	N/A	N/A	8.30	8.33	
13C8 PFOS	N/A	N/A	9.46	9.48	
13C2 8:2FTS	N/A	N/A	8.60	8.62	
13C6 PFDA	N/A	N/A	8.98	9.03	
d3-MeFOSAA	N/A	N/A	8.86	8.90	
13C8 PFOSA	N/A	N/A	11.43	11.42	
d5-EtFOSAA	N/A	N/A	9.17	9.18	
13C7 PFUdA	N/A	N/A	9.66	9.68	
13C2 PFDoA	N/A	N/A	10.34	10.36	
13C2 PFTeDA	N/A	N/A	11.65	11.66	
13C3 HFPO-DA	N/A	N/A	6.56	6.56	
13C2 PFHxDA	N/A	N/A	12.76	12.77	
d7-N-MeFOSE	N/A	N/A	13.07	13.06	
d9-N-EtFOSE	N/A	N/A	13.55	13.53	
d3-N-MeFOSA	N/A	N/A	13.27	13.26	
d5-N-EtFOSA	N/A	N/A	13.72	13.70	

**REPORT OF LABORATORY ANALYSIS**

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





**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	████████████████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574521008	Total Amount Extracted	264mL
Lab File ID	Q210831B_028	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210831B_025
Collected	08/10/2021 14:05	Ending CCal File	Q210831B_036
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.76	4.82	
PFPeA	N/A	N/A	5.60	5.63	
HFPO-DA	0.000	0.350	0.00	6.61	
PFBS	0.250	0.350	6.55	6.54	
PFHxA	0.140	0.0920	6.29	6.32	
4:2 FTS	0.000	0.940	0.00	5.99	
PFPeS	0.000	0.450	7.32	7.32	
PFHpA	0.450	0.500	6.97	6.98	
DONA	0.000	0.440	0.00	7.21	
PFHxS	0.320	0.310	8.06	8.05	
PFOA	0.250	0.270	7.63	7.63	
6:2 FTS	0.000	1.10	7.28	7.28	
PFHpS	0.000	0.450	8.76	8.79	
PFNA	0.000	0.250	0.00	8.32	
PFOSAm	N/A	N/A	11.44	11.40	
PFOS	0.200	0.240	9.46	9.46	
MeFOSA	0.000	0.520	13.32	13.29	
PFDA	0.000	0.200	0.00	9.02	
EtFOSAm	0.000	0.500	0.00	13.73	
8:2 FTS	0.000	1.50	0.00	8.62	
9-Cl-PF3ON	0.000	0.0390	0.00	10.00	
PFNS	0.000	0.230	0.00	10.16	
PFUnDA	0.000	0.170	0.00	9.71	
NMeFOSAA	0.000	0.740	0.00	8.89	
NEtFOSAA	0.000	0.500	0.00	9.15	
PFDS	0.000	0.270	0.00	10.82	
PFDOA	0.000	0.180	0.00	10.44	
MeFOSE	N/A	N/A	13.10	13.10	
10:2 FTS	0.000	1.50	0.00	9.95	
EtFOSE	0.000	0.000	0.00	13.58	
11-Cl-PF3OUdS	0.000	0.0280	0.00	11.29	
PFTTrDA	0.000	0.180	0.00	11.02	
PFDoS	0.000	0.250	0.00	12.05	
PFTDA	0.000	0.140	0.00	11.66	
PFHXDA	0.190	0.130	12.77	12.78	
PFODA	0.000	0.170	0.00	13.54	

**REPORT OF LABORATORY ANALYSIS**

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





**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Trip Blank	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574521009	Total Amount Extracted	246mL
Lab File ID	Q210831B_029	Ical ID	210831A01
Matrix	Water	CCal File	Q210831B_025
Collected	08/10/2021 00:00	Ending CCal File	Q210831B_036
Received	08/13/2021 08:50	Blank File	Q210831B_018

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	ND	2.0	2.0	0.45	1	375-22-4	
PFPeA	ND	2.0	2.0	0.45	1	2706-90-3	
HFPO-DA	ND	2.0	2.0	0.54	1	13252-13-6	
PFBS	ND	1.8	1.8	0.48	1	375-73-5	
PFHxA	ND	2.0	2.0	0.45	1	307-24-4	
4:2 FTS	ND	1.9	1.9	0.57	1	757124-72-4	
PFPeS	ND	1.9	1.9	0.48	1	2706-91-4	
PFHpA	ND	2.0	2.0	0.56	1	375-85-9	
DONA	ND	1.9	1.9	0.52	1	919005-14-4	
PFHxS	ND	1.9	1.9	0.52	1	355-46-4	
PFOA	ND	2.0	2.0	0.60	1	335-67-1	
6:2 FTS	ND	1.9	1.9	0.66	1	27619-97-2	
PFHpS	ND	1.9	1.9	0.42	1	375-92-8	
PFNA	ND	2.0	2.0	0.75	1	375-95-1	
PFOSAm	ND	2.0	2.0	0.83	1	754-91-6	
PFOS	ND	1.9	1.9	0.56	1	1763-23-1	
MeFOSA	ND	2.0	2.0	0.52	1	31506-32-8	
PFDA	ND	2.0	2.0	0.57	1	335-76-2	
EtFOSAm	ND	2.0	2.0	0.62	1	4151-50-2	
8:2 FTS	ND	2.0	2.0	0.66	1	39108-34-4	
9-CI-PF3ON	ND	1.9	1.9	0.31	1	756426-58-1	
PFNS	ND	2.0	2.0	0.45	1	68259-12-1	
PFUnDA	ND	2.0	2.0	0.55	1	2058-94-8	
NMeFOSAA	ND	2.0	2.0	0.44	1	2355-31-9	
NEtFOSAA	ND	2.0	2.0	0.56	1	2991-50-6	
PFDS	ND	2.0	2.0	0.46	1	335-77-3	
PFDOA	ND	2.0	2.0	0.49	1	307-55-1	
MeFOSE	ND	2.0	2.0	0.33	1	24448-09-7	
10:2 FTS	ND	2.0	2.0	0.75	1	120226-60-0	
EtFOSE	ND	2.0	2.0	0.51	1	1691-99-2	
11-CI-PF3OUdS	ND	1.9	1.9	0.44	1	763051-92-9	
PFTTrDA	ND	2.0	2.0	0.63	1	72629-94-8	
PFDoS	ND	2.0	2.0	0.47	1	79780-39-5	
PFTDA	ND	2.0	2.0	0.48	1	376-06-7	
PFHXDA	ND	2.0	2.0	0.37	1	67905-19-5	
PFODA	ND	2.0	2.0	0.60	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Trip Blank	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574521009	Total Amount Extracted	246mL
Lab File ID	Q210831B_029	Ical ID	210831A01
Matrix	Water	CCal File	Q210831B_025
Collected	08/10/2021 00:00	Ending CCal File	Q210831B_036
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	20	19	95	50-150	
13C4_PFOA	20	21	105	50-150	
13C2_PFDA	20	21	103	50-150	
13C4_PFOS	19	20	104	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	20	21	105	50-150	
13C5_PFPeA	20	20	97	50-150	
13C3_PFBFS	19	20	108	50-150	
13C2_4:2FTS	19	19	99	50-150	
13C5_PFHxA	20	21	105	50-150	
13C4_PFHpA	20	23	111	50-150	
13C3_PFHxS	19	20	105	50-150	
13C2_6:2FTS	19	22	112	50-150	
13C8_PFOA	20	20	98	50-150	
13C9_PFNA	20	20	100	50-150	
13C8_PFOS	19	20	103	50-150	
13C2_8:2FTS	20	19	98	50-150	
13C6_PFDA	20	21	103	50-150	
d3-MeFOSAA	20	18	91	50-150	
13C8_PFOSA	20	14	68	50-150	
d5-EtFOSAA	20	17	84	50-150	
13C7_PFUdA	20	18	89	50-150	
13C2_PFDoA	20	20	96	50-150	
13C2_PFTeDA	20	18	87	50-150	
13C3_HFPO-DA	20	19	92	50-150	
13C2_PFHxDA	20	16	77	50-150	
d7-N-MeFOSE	20	14	67	10-150	
d9-N-EtFOSE	20	13	62	10-150	
d3-N-MeFOSA	20	9.9	48	10-150	
d5-N-EtFOSA	20	10	51	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Trip Blank	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574521009	Total Amount Extracted	246mL
Lab File ID	Q210831B_029	Ical ID	210831A01
Matrix	Water	CCal File	Q210831B_025
Collected	08/10/2021 00:00	Ending CCal File	Q210831B_036
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.28	6.29	
13C4 PFOA	N/A	N/A	7.62	7.66	
13C2 PFDA	N/A	N/A	8.98	8.98	
13C4 PFOS	N/A	N/A	9.46	9.48	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.75	4.74	
13C5 PFPeA	N/A	N/A	5.59	5.60	
13C3 PFBS	N/A	N/A	6.54	6.55	
13C2 4:2FTS	N/A	N/A	6.00	5.99	
13C5 PFHxA	N/A	N/A	6.28	6.28	
13C4 PFHpA	N/A	N/A	6.96	6.96	
13C3 PFHxS	N/A	N/A	8.05	8.08	
13C2 6:2FTS	N/A	N/A	7.27	7.29	
13C8 PFOA	N/A	N/A	7.62	7.64	
13C9 PFNA	N/A	N/A	8.30	8.33	
13C8 PFOS	N/A	N/A	9.46	9.48	
13C2 8:2FTS	N/A	N/A	8.59	8.62	
13C6 PFDA	N/A	N/A	8.98	9.03	
d3-MeFOSAA	N/A	N/A	8.86	8.90	
13C8 PFOSA	N/A	N/A	11.43	11.42	
d5-EtFOSAA	N/A	N/A	9.17	9.18	
13C7 PFUdA	N/A	N/A	9.66	9.68	
13C2 PFDoA	N/A	N/A	10.35	10.36	
13C2 PFTeDA	N/A	N/A	11.65	11.66	
13C3 HFPO-DA	N/A	N/A	6.56	6.56	
13C2 PFHxDA	N/A	N/A	12.76	12.77	
d7-N-MeFOSE	N/A	N/A	13.07	13.06	
d9-N-EtFOSE	N/A	N/A	13.55	13.53	
d3-N-MeFOSA	N/A	N/A	13.27	13.26	
d5-N-EtFOSA	N/A	N/A	13.72	13.70	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	Trip Blank	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574521009	Total Amount Extracted	246mL
Lab File ID	Q210831B_029	Ical ID	210831A01
Matrix	Water	CCal File	Q210831B_025
Collected	08/10/2021 00:00	Ending CCal File	Q210831B_036
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.75	4.82	
PFPeA	N/A	N/A	5.60	5.63	
HFPO-DA	0.000	0.350	0.00	6.61	
PFBS	0.220	0.350	6.55	6.54	
PFHxA	0.170	0.0920	6.29	6.32	
4:2 FTS	0.000	0.940	0.00	5.99	
PFPeS	0.000	0.450	0.00	7.32	
PFHpA	0.540	0.500	6.95	6.98	
DONA	0.000	0.440	0.00	7.21	
PFHxS	0.370	0.310	8.06	8.05	
PFOA	0.220	0.270	7.63	7.63	
6:2 FTS	1.30	1.10	7.27	7.28	
PFHpS	0.000	0.450	0.00	8.79	
PFNA	0.000	0.250	0.00	8.32	
PFOSAm	N/A	N/A	11.44	11.40	
PFOS	0.180	0.240	9.47	9.46	
MeFOSA	0.000	0.520	13.30	13.29	
PFDA	0.000	0.200	0.00	9.02	
EtFOSAm	0.000	0.500	0.00	13.73	
8:2 FTS	0.000	1.50	0.00	8.62	
9-Cl-PF3ON	0.000	0.0390	0.00	10.00	
PFNS	0.000	0.230	0.00	10.16	
PFUnDA	0.000	0.170	0.00	9.71	
NMeFOSAA	0.000	0.740	0.00	8.89	
NEtFOSAA	0.000	0.500	0.00	9.15	
PFDS	0.000	0.270	10.82	10.82	
PFDOA	0.000	0.180	0.00	10.44	
MeFOSE	N/A	N/A	0.00	13.10	
10:2 FTS	0.000	1.50	0.00	9.95	
EtFOSE	0.000	0.000	0.00	13.58	
11-Cl-PF3OUdS	0.000	0.0280	0.00	11.29	
PFTTrDA	0.000	0.180	0.00	11.02	
PFDoS	0.000	0.250	0.00	12.05	
PFTDA	0.000	0.140	0.00	11.66	
PFHXDA	0.150	0.130	12.76	12.78	
PFODA	0.000	0.170	0.00	13.54	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKLB	Extraction Date	08/27/2021 14:00
Lab Sample ID	BLANK-92500	Total Amount Extracted	247mL
Lab File ID	Q210831B_018	Ical ID	210831A01
Matrix	Water	CCal File	Q210831B_014
Collected	08/20/2021 16:58	Ending CCal File	Q210831B_025
Received	08/20/2021 16:58	Blank File	

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	ND	2.0	2.0	0.45	1	375-22-4	
PFPeA	ND	2.0	2.0	0.44	1	2706-90-3	
HFPO-DA	ND	2.0	2.0	0.54	1	13252-13-6	
PFBS	ND	1.8	1.8	0.48	1	375-73-5	
PFHxA	ND	2.0	2.0	0.44	1	307-24-4	
4:2 FTS	ND	1.9	1.9	0.56	1	757124-72-4	
PFPeS	ND	1.9	1.9	0.48	1	2706-91-4	
PFHpA	ND	2.0	2.0	0.56	1	375-85-9	
DONA	ND	1.9	1.9	0.52	1	919005-14-4	
PFHxS	ND	1.8	1.8	0.51	1	355-46-4	
PFOA	ND	2.0	2.0	0.59	1	335-67-1	
6:2 FTS	ND	1.9	1.9	0.65	1	27619-97-2	
PFHpS	ND	1.9	1.9	0.42	1	375-92-8	
PFNA	ND	2.0	2.0	0.75	1	375-95-1	
PFOSAm	ND	2.0	2.0	0.83	1	754-91-6	
PFOS	ND	1.9	1.9	0.55	1	1763-23-1	
MeFOSA	ND	2.0	2.0	0.52	1	31506-32-8	
PFDA	ND	2.0	2.0	0.57	1	335-76-2	
EtFOSAm	ND	2.0	2.0	0.62	1	4151-50-2	
8:2 FTS	ND	1.9	1.9	0.66	1	39108-34-4	
9-CI-PF3ON	ND	1.9	1.9	0.31	1	756426-58-1	
PFNS	ND	1.9	1.9	0.45	1	68259-12-1	
PFUnDA	ND	2.0	2.0	0.55	1	2058-94-8	
NMeFOSAA	ND	2.0	2.0	0.44	1	2355-31-9	
NEtFOSAA	ND	2.0	2.0	0.56	1	2991-50-6	
PFDS	ND	2.0	2.0	0.46	1	335-77-3	
PFDOA	ND	2.0	2.0	0.49	1	307-55-1	
MeFOSE	ND	2.0	2.0	0.33	1	24448-09-7	
10:2 FTS	ND	2.0	2.0	0.74	1	120226-60-0	
EtFOSE	ND	2.0	2.0	0.50	1	1691-99-2	
11-CI-PF3OUdS	ND	1.9	1.9	0.44	1	763051-92-9	
PFTTrDA	ND	2.0	2.0	0.63	1	72629-94-8	
PFDoS	ND	2.0	2.0	0.47	1	79780-39-5	
PFTDA	ND	2.0	2.0	0.48	1	376-06-7	
PFHxDA	ND	2.0	2.0	0.37	1	67905-19-5	
PFODA	ND	2.0	2.0	0.59	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKLB	Extraction Date	08/27/2021 14:00
Lab Sample ID	BLANK-92500	Total Amount Extracted	247mL
Lab File ID	Q210831B_018	Ical ID	210831A01
Matrix	Water	CCal File	Q210831B_014
Collected	08/20/2021 16:58	Ending CCal File	Q210831B_025
Received	08/20/2021 16:58	Blank File	

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	20	18	91	50-150	
13C4_PFOA	20	19	93	50-150	
13C2_PFDA	20	19	95	50-150	
13C4_PFOS	19	17	89	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBa	20	19	95	50-150	
13C5_PFPeA	20	19	93	50-150	
13C3_PFBs	19	20	107	50-150	
13C2_4:2Fts	19	17	90	50-150	
13C5_PFHxA	20	18	91	50-150	
13C4_PFHpA	20	18	89	50-150	
13C3_PFHxS	19	19	100	50-150	
13C2_6:2Fts	19	18	92	50-150	
13C8_PFOA	20	19	93	50-150	
13C9_PfNA	20	18	88	50-150	
13C8_PFOs	19	17	86	50-150	
13C2_8:2Fts	19	20	103	50-150	
13C6_PFDA	20	19	95	50-150	
d3-MeFOsAA	20	16	80	50-150	
13C8_PFOsA	20	16	81	50-150	
d5-EtFOsAA	20	14	71	50-150	
13C7_PFUdA	20	19	96	50-150	
13C2_PFDoA	20	18	90	50-150	
13C2_PFTeDA	20	17	83	50-150	
13C3_HFPO-DA	20	18	89	50-150	
13C2_PFHxDA	20	18	90	50-150	
d7-N-MeFOSE	20	17	83	10-150	
d9-N-EtFOSE	20	16	80	10-150	
d3-N-MeFOsA	20	12	57	10-150	
d5-N-EtFOsA	20	13	62	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKLB	Extraction Date	08/27/2021 14:00
Lab Sample ID	BLANK-92500	Total Amount Extracted	247mL
Lab File ID	Q210831B_018	Ical ID	210831A01
Matrix	Water	CCal File	Q210831B_014
Collected	08/20/2021 16:58	Ending CCal File	Q210831B_025
Received	08/20/2021 16:58	Blank File	

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.28	6.29	
13C4 PFOA	N/A	N/A	7.62	7.66	
13C2 PFDA	N/A	N/A	8.98	8.98	
13C4 PFOS	N/A	N/A	9.46	9.48	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.74	4.74	
13C5 PFPeA	N/A	N/A	5.58	5.60	
13C3 PFBS	N/A	N/A	6.54	6.55	
13C2 4:2FTS	N/A	N/A	5.99	5.99	
13C5 PFHxA	N/A	N/A	6.28	6.28	
13C4 PFHpA	N/A	N/A	6.95	6.96	
13C3 PFHxS	N/A	N/A	8.05	8.08	
13C2 6:2FTS	N/A	N/A	7.27	7.29	
13C8 PFOA	N/A	N/A	7.62	7.64	
13C9 PFNA	N/A	N/A	8.30	8.33	
13C8 PFOS	N/A	N/A	9.46	9.48	
13C2 8:2FTS	N/A	N/A	8.60	8.62	
13C6 PFDA	N/A	N/A	8.99	9.03	
d3-MeFOSAA	N/A	N/A	8.86	8.90	
13C8 PFOSA	N/A	N/A	11.43	11.42	
d5-EtFOSAA	N/A	N/A	9.17	9.18	
13C7 PFUdA	N/A	N/A	9.66	9.68	
13C2 PFDoA	N/A	N/A	10.34	10.36	
13C2 PFTeDA	N/A	N/A	11.65	11.66	
13C3 HFPO-DA	N/A	N/A	6.56	6.56	
13C2 PFHxDA	N/A	N/A	12.76	12.77	
d7-N-MeFOSE	N/A	N/A	13.06	13.06	
d9-N-EtFOSE	N/A	N/A	13.55	13.53	
d3-N-MeFOSA	N/A	N/A	13.27	13.26	
d5-N-EtFOSA	N/A	N/A	13.72	13.70	

**REPORT OF LABORATORY ANALYSIS**

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





**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKLB	Extraction Date	08/27/2021 14:00
Lab Sample ID	BLANK-92500	Total Amount Extracted	247mL
Lab File ID	Q210831B_018	Ical ID	210831A01
Matrix	Water	CCal File	Q210831B_014
Collected	08/20/2021 16:58	Ending CCal File	Q210831B_025
Received	08/20/2021 16:58	Blank File	

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.74	4.82	
PFPeA	N/A	N/A	5.59	5.63	
HFPO-DA	0.000	0.380	0.00	6.71	
PFBS	0.340	0.330	6.54	6.54	
PFHxA	0.000	0.0990	6.29	6.32	
4:2 FTS	0.000	0.970	0.00	5.99	
PFPeS	0.000	0.450	0.00	7.32	
PFHpA	0.570	0.460	6.95	6.98	
DONA	0.000	0.470	0.00	7.21	
PFHxS	0.000	0.290	8.06	8.05	
PFOA	0.000	0.250	0.00	7.63	
6:2 FTS	1.10	1.20	7.27	7.28	
PFHpS	0.000	0.410	0.00	8.79	
PFNA	0.000	0.270	0.00	8.32	
PFOSAm	N/A	N/A	11.44	11.40	
PFOS	0.160	0.240	9.47	9.46	
MeFOSA	0.000	0.470	13.30	13.29	
PFDA	0.000	0.160	0.00	9.02	
EtFOSAm	0.000	0.510	0.00	13.73	
8:2 FTS	0.000	1.40	0.00	8.62	
9-Cl-PF3ON	0.000	0.0440	0.00	10.00	
PFNS	0.000	0.230	0.00	10.16	
PFUnDA	0.000	0.160	0.00	9.71	
NMeFOSAA	0.000	0.670	0.00	8.89	
NEtFOSAA	0.000	0.490	0.00	9.15	
PFDS	0.000	0.260	0.00	10.82	
PFDOA	0.000	0.160	0.00	10.44	
MeFOSE	N/A	N/A	0.00	13.10	
10:2 FTS	0.000	1.70	10.01	9.95	
EtFOSE	0.000	0.000	0.00	13.58	
11-Cl-PF3OUdS	0.000	0.0260	0.00	11.29	
PFTTrDA	0.000	0.200	0.00	11.02	
PFDoS	0.000	0.250	0.00	12.05	
PFTDA	0.000	0.140	0.00	11.66	
PFHXDA	0.150	0.140	12.77	12.78	
PFODA	0.000	0.170	0.00	13.54	

**REPORT OF LABORATORY ANALYSIS**

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





**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKLU	Extraction Date	08/30/2021 15:47
Lab Sample ID	BLANK-92568	Total Amount Extracted	262mL
Lab File ID	A210902A_041	Ical ID	210830A03
Matrix	Water	CCal File	A210902A_035
Collected	08/24/2021 19:34	Ending CCal File	A210902A_045
Received	08/24/2021 19:34	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	0.42	1	375-22-4	
PFPeA	ND	1.9	1.9	0.42	1	2706-90-3	
HFPO-DA	ND	1.9	1.9	0.51	1	13252-13-6	
PFBS	ND	1.7	1.7	0.45	1	375-73-5	
PFHxA	ND	1.9	1.9	0.42	1	307-24-4	
4:2 FTS	ND	1.8	1.8	0.53	1	757124-72-4	
PFPeS	ND	1.8	1.8	0.45	1	2706-91-4	
PFHpA	ND	1.9	1.9	0.53	1	375-85-9	
DONA	ND	1.8	1.8	0.49	1	919005-14-4	
PFHxS	5.7	1.7	1.7	0.49	1	355-46-4	
PFOA	ND	1.9	1.9	0.56	1	335-67-1	
6:2 FTS	ND	1.8	1.8	0.62	1	27619-97-2	
PFHpS	ND	1.8	1.8	0.39	1	375-92-8	
PFNA	ND	1.9	1.9	0.71	1	375-95-1	
PFOSAm	ND	1.9	1.9	0.78	1	754-91-6	
PFOS	2.3	1.8	1.8	0.52	1	1763-23-1	
MeFOSA	ND	1.9	1.9	0.49	1	31506-32-8	
PFDA	ND	1.9	1.9	0.54	1	335-76-2	
EtFOSAm	ND	1.9	1.9	0.58	1	4151-50-2	
8:2 FTS	ND	1.8	1.8	0.62	1	39108-34-4	
9-CI-PF3ON	ND	1.8	1.8	0.29	1	756426-58-1	
PFNS	ND	1.8	1.8	0.43	1	68259-12-1	
PFUnDA	ND	1.9	1.9	0.52	1	2058-94-8	
NMeFOSAA	ND	1.9	1.9	0.41	1	2355-31-9	
NEtFOSAA	ND	1.9	1.9	0.53	1	2991-50-6	
PFDS	ND	1.8	1.8	0.43	1	335-77-3	
PFDOA	ND	1.9	1.9	0.46	1	307-55-1	
MeFOSE	ND	1.9	1.9	0.31	1	24448-09-7	
10:2 FTS	ND	1.8	1.8	0.70	1	120226-60-0	
EtFOSE	ND	1.9	1.9	0.47	1	1691-99-2	
11-CI-PF3OUdS	ND	1.8	1.8	0.42	1	763051-92-9	
PFTTrDA	ND	1.9	1.9	0.59	1	72629-94-8	
PFDoS	ND	1.9	1.9	0.44	1	79780-39-5	
PFTDA	ND	1.9	1.9	0.45	1	376-06-7	
PFHxDA	ND	1.9	1.9	0.35	1	67905-19-5	
PFODA	ND	1.9	1.9	0.56	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKLU	Extraction Date	08/30/2021 15:47
Lab Sample ID	BLANK-92568	Total Amount Extracted	262mL
Lab File ID	A210902A_041	Ical ID	210830A03
Matrix	Water	CCal File	A210902A_035
Collected	08/24/2021 19:34	Ending CCal File	A210902A_045
Received	08/24/2021 19:34	Blank File	

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	19	19	101	50-150	
13C4_PFOA	19	21	111	50-150	
13C2_PFDA	19	21	111	50-150	
13C4_PFOS	18	18	97	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBa	19	20	104	50-150	
13C5_PFPeA	19	20	102	50-150	
13C3_PFBs	18	18	101	50-150	
13C2_4:2Fts	18	18	98	50-150	
13C5_PFHxA	19	21	109	50-150	
13C4_PFHpA	19	19	100	50-150	
13C3_PFHxS	18	18	99	50-150	
13C2_6:2Fts	18	18	101	50-150	
13C8_PFOA	19	19	101	50-150	
13C9_PFNA	19	19	98	50-150	
13C8_PFOS	18	18	100	50-150	
13C2_8:2Fts	18	18	100	50-150	
13C6_PFDA	19	19	98	50-150	
d3-MeFOSAA	19	17	91	50-150	
13C8_PFOsA	19	18	95	50-150	
d5-EtFOSAA	19	16	83	50-150	
13C7_PFUdA	19	17	90	50-150	
13C2_PFDoA	19	20	104	50-150	
13C2_PFTeDA	19	18	94	50-150	
13C3_HFPO-DA	19	20	103	50-150	
13C2_PFHxDA	19	16	82	50-150	
d7-N-MeFOSE	19	15	80	10-150	
d9-N-EtFOSE	19	15	80	10-150	
d3-N-MeFOSA	19	11	58	10-150	
d5-N-EtFOSA	19	11	59	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKLU	Extraction Date	08/30/2021 15:47
Lab Sample ID	BLANK-92568	Total Amount Extracted	262mL
Lab File ID	A210902A_041	Ical ID	210830A03
Matrix	Water	CCal File	A210902A_035
Collected	08/24/2021 19:34	Ending CCal File	A210902A_045
Received	08/24/2021 19:34	Blank File	

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.02	4.99	
13C4 PFOA	N/A	N/A	5.99	6.00	
13C2 PFDA	N/A	N/A	6.88	6.88	
13C4 PFOS	N/A	N/A	7.19	7.20	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.58	3.56	
13C5 PFPeA	N/A	N/A	4.43	4.42	
13C3 PFBS	N/A	N/A	5.21	5.18	
13C2 4:2FTS	N/A	N/A	4.80	4.80	
13C5 PFHxA	N/A	N/A	5.02	5.04	
13C4 PFHpA	N/A	N/A	5.53	5.51	
13C3 PFHxS	N/A	N/A	6.28	6.28	
13C2 6:2FTS	N/A	N/A	5.76	5.77	
13C8 PFOA	N/A	N/A	5.99	6.00	
13C9 PFNA	N/A	N/A	6.44	6.44	
13C8 PFOS	N/A	N/A	7.19	7.20	
13C2 8:2FTS	N/A	N/A	6.63	6.60	
13C6 PFDA	N/A	N/A	6.88	6.88	
d3-MeFOSAA	N/A	N/A	6.84	6.83	
13C8 PFOSA	N/A	N/A	8.81	8.78	
d5-EtFOSAA	N/A	N/A	7.05	7.02	
13C7 PFUdA	N/A	N/A	7.31	7.32	
13C2 PFDoA	N/A	N/A	7.75	7.76	
13C2 PFTeDA	N/A	N/A	8.60	8.58	
13C3 HFPO-DA	N/A	N/A	5.23	5.21	
13C2 PFHxDA	N/A	N/A	9.36	9.33	
d7-N-MeFOSE	N/A	N/A	10.06	10.02	
d9-N-EtFOSE	N/A	N/A	10.69	10.64	
d3-N-MeFOSA	N/A	N/A	10.32	10.28	
d5-N-EtFOSA	N/A	N/A	11.01	11.00	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKLU	Extraction Date	08/30/2021 15:47
Lab Sample ID	BLANK-92568	Total Amount Extracted	262mL
Lab File ID	A210902A_041	Ical ID	210830A03
Matrix	Water	CCal File	A210902A_035
Collected	08/24/2021 19:34	Ending CCal File	A210902A_045
Received	08/24/2021 19:34	Blank File	

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	3.58	3.58	
PFPeA	N/A	N/A	4.43	4.40	
HFPO-DA	0.000	0.450	0.00	5.22	
PFBS	0.410	0.350	5.21	5.26	
PFHxA	0.074	0.0770	5.03	5.00	
4:2 FTS	0.000	0.580	4.80	4.80	
PFPeS	0.340	0.360	5.78	5.76	
PFHpA	0.290	0.300	5.53	5.52	
DONA	0.000	0.480	0.00	5.68	
PFHxS	0.250	0.280	6.28	6.29	
PFOA	0.440	0.380	6.00	5.97	
6:2 FTS	0.460	0.500	5.76	5.74	
PFHpS	0.340	0.230	6.75	6.76	
PFNA	0.000	0.210	0.00	6.43	
PFOSAm	N/A	N/A	8.82	8.75	
PFOS	0.190	0.240	7.14	7.27	
MeFOSA	0.000	0.950	0.00	10.33	
PFDA	0.000	0.0910	0.00	6.89	
EtFOSAm	0.000	0.720	0.00	11.04	
8:2 FTS	0.000	0.620	0.00	6.64	
9-Cl-PF3ON	0.000	0.0190	0.00	7.53	
PFNS	0.000	0.250	0.00	7.62	
PFUnDA	0.000	0.100	0.00	7.31	
NMeFOSAA	0.000	0.360	0.00	6.90	
NEtFOSAA	0.000	0.660	0.00	7.03	
PFDS	0.000	0.260	0.00	8.07	
PFDOA	0.000	0.150	0.00	7.76	
MeFOSE	N/A	N/A	0.00	10.12	
10:2 FTS	0.000	0.650	0.00	7.51	
EtFOSE	0.000	0.000	0.00	10.70	
11-Cl-PF3OUdS	0.000	0.0180	0.00	8.38	
PFTTrDA	0.000	0.140	0.00	8.19	
PFDoS	0.000	0.260	0.00	8.83	
PFTDA	0.000	0.150	0.00	8.58	
PFHXDA	0.140	0.140	9.37	9.35	
PFODA	0.000	0.100	0.00	10.37	

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID	LCS-92501	Instrument ID	10LCMS01
Run File Name	Q210831B_019	Column ID	112EB00094
Analyzed	08/31/2021 21:31	Ical ID	210831A01
Injected By	NH	Level	L

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	20	24	119	50-150	
13C4_PFOA	20	23	114	50-150	
13C2_PFDA	20	22	109	50-150	
13C4_PFOS	19	20	106	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	20	22	108	50-150	
13C5_PFPeA	20	21	104	50-150	
13C3_PFBS	19	21	111	50-150	
13C2_4:2FTS	19	19	103	50-150	
13C5_PFHxA	20	23	113	50-150	
13C4_PFHpA	20	22	111	50-150	
13C3_PFHxS	19	21	113	50-150	
13C2_6:2FTS	19	20	106	50-150	
13C8_PFOA	20	21	103	50-150	
13C9_PFNA	20	19	96	50-150	
13C8_PFOS	19	18	96	50-150	
13C2_8:2FTS	19	20	102	50-150	
13C6_PFDA	20	20	101	50-150	
d3-MeFOSAA	20	17	87	50-150	
13C8_PFOA	20	17	87	50-150	
d5-EtFOSAA	20	15	74	50-150	
13C7_PFUdA	20	20	99	50-150	
13C2_PFDaA	20	19	94	50-150	
13C2_PFTeDA	20	19	94	50-150	
13C3_HFPO-DA	20	24	118	50-150	
13C2_PFHxDA	20	20	100	50-150	
d7-N-MeFOSE	20	16	82	10-150	
d9-N-EtFOSE	20	16	82	10-150	
d3-N-MeFOSA	20	14	69	10-150	
d5-N-EtFOSA	20	12	61	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID LCS-92501  
 Run File Name Q210831B\_019  
 Analyzed 08/31/2021 21:31  
 Injected By NH

Instrument ID 10LCMS01  
 Column ID 112EB00094  
 Ical ID 210831A01  
 Level L

**Native Analytes**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	CAS No.
PFBA	4.0	4.6	113	73-129		375-22-4
PFPeA	4.0	4.0	100	72-129		2706-90-3
HFPO-DA	4.0	3.2	80	70-140		13252-13-6
PFBS	3.6	4.0	113	72-130		375-73-5
PFHxA	4.0	3.9	98	72-129		307-24-4
4:2 FTS	3.8	3.6	96	63-143		757124-72-4
PFPeS	3.8	3.5	92	71-127		2706-91-4
PFHpA	4.0	3.5	88	72-130		375-85-9
DONA	3.8	4.0	107	70-140		919005-14-4
PFHxS	3.7	3.2	87	68-131		355-46-4
PFOA	4.0	4.4	109	71-133		335-67-1
6:2 FTS	3.8	3.8	99	64-140		27619-97-2
PFHpS	3.8	3.4	90	69-134		375-92-8
PFNA	4.0	4.0	99	69-130		375-95-1
PFOSAm	4.0	4.0	101	67-137		754-91-6
PFOS	3.7	3.5	94	65-140		1763-23-1
MeFOSA	4.0	3.4	86	68-141		31506-32-8
PFDA	4.0	4.1	101	71-129		335-76-2
EtFOSAm	4.0	3.7	92	70-140		4151-50-2
8:2 FTS	3.9	3.7	95	67-138		39108-34-4
9-CI-PF3ON	3.7	3.6	96	70-130		756426-58-1
PFNS	3.9	3.4	88	69-127		68259-12-1
PFUnDA	4.0	3.8	94	69-133		2058-94-8
NMeFOSAA	4.0	3.5	87	65-136		2355-31-9
NEtFOSAA	4.0	4.4	109	61-135		2991-50-6
PFDS	3.9	3.4	89	53-142		335-77-3
PFDOA	4.0	4.0	99	72-134		307-55-1
MeFOSE	4.0	3.7	93	70-140		24448-09-7
10:2 FTS	3.9	4.4	113	70-140		120226-60-0
EtFOSE	4.0	3.2	79	70-140		1691-99-2
11-CI-PF3OUdS	3.8	3.1	82	70-140		763051-92-9
PFTTrDA	4.0	3.7	93	65-144		72629-94-8
PFDoS	3.9	3.5	90	70-140		79780-39-5
PFTDA	4.0	3.4	84	71-132		376-06-7
PFHXDA	4.0	3.5	87	70-140		67905-19-5
PFODA	4.0	3.1	78	70-140		16517-11-6

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID	LCS-92501	Instrument ID	10LCMS01
Run File Name	Q210831B_019	Column ID	112EB00094
Analyzed	08/31/2021 21:31	Ical ID	210831A01
Injected By	NH	Level	L

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.27	6.29	
13C4 PFOA	N/A	N/A	7.61	7.66	
13C2 PFDA	N/A	N/A	8.97	8.98	
13C4 PFOS	N/A	N/A	9.45	9.48	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.76	4.74	
13C5 PFPeA	N/A	N/A	5.59	5.60	
13C3 PFBS	N/A	N/A	6.53	6.55	
13C2 4:2FTS	N/A	N/A	6.00	5.99	
13C5 PFHxA	N/A	N/A	6.28	6.28	
13C4 PFHpA	N/A	N/A	6.95	6.96	
13C3 PFHxS	N/A	N/A	8.04	8.08	
13C2 6:2FTS	N/A	N/A	7.26	7.29	
13C8 PFOA	N/A	N/A	7.61	7.64	
13C9 PFNA	N/A	N/A	8.29	8.33	
13C8 PFOS	N/A	N/A	9.46	9.48	
13C2 8:2FTS	N/A	N/A	8.58	8.62	
13C6 PFDA	N/A	N/A	8.98	9.03	
d3-MeFOSAA	N/A	N/A	8.85	8.90	
13C8 PFOSA	N/A	N/A	11.43	11.42	
d5-EtFOSAA	N/A	N/A	9.16	9.18	
13C7 PFUdA	N/A	N/A	9.66	9.68	
13C2 PFDoA	N/A	N/A	10.34	10.36	
13C2 PFTeDA	N/A	N/A	11.64	11.66	
13C3 HFPO-DA	N/A	N/A	6.55	6.56	
13C2 PFHxDA	N/A	N/A	12.76	12.77	
d7-N-MeFOSE	N/A	N/A	13.06	13.06	
d9-N-EtFOSE	N/A	N/A	13.54	13.53	
d3-N-MeFOSA	N/A	N/A	13.27	13.26	
d5-N-EtFOSA	N/A	N/A	13.71	13.70	

**REPORT OF LABORATORY ANALYSIS**

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





**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID LCS-92501  
 Run File Name Q210831B\_019  
 Analyzed 08/31/2021 21:31  
 Injected By NH

Instrument ID 10LCMS01  
 Column ID 112EB00094  
 Ical ID 210831A01  
 Level L

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.76	4.82	
PFPeA	N/A	N/A	5.60	5.63	
HFPO-DA	0.52	0.38	6.57	6.61	
PFBS	0.32	0.33	6.54	6.54	
PFHxA	0.07	0.09	6.29	6.32	
4:2 FTS	0.96	0.97	6.00	5.99	
PFPeS	0.38	0.45	7.31	7.32	
PFHpA	0.43	0.46	6.95	6.98	
DONA	0.44	0.47	7.19	7.21	
PFHxS	0.27	0.29	8.05	8.05	
PFOA	0.26	0.25	7.62	7.63	
6:2 FTS	1.10	1.20	7.27	7.28	
PFHpS	0.45	0.41	8.77	8.79	
PFNA	0.27	0.27	8.30	8.32	
PFOSAm	N/A	N/A	11.44	11.40	
PFOS	0.21	0.24	9.47	9.46	
MeFOSA	0.51	0.47	13.30	13.29	
PFDA	0.18	0.16	8.99	9.02	
EtFOSAm	0.43	0.51	13.74	13.73	
8:2 FTS	1.50	1.40	8.60	8.62	
9-CI-PF3ON	0.03	0.04	9.96	10.00	
PFNS	0.25	0.23	10.15	10.16	
PFUnDA	0.12	0.16	9.67	9.71	
NMeFOSAA	0.67	0.67	8.86	8.89	
NEtFOSAA	0.42	0.49	9.18	9.15	
PFDS	0.25	0.26	10.82	10.82	
PFDOA	0.15	0.16	10.34	10.44	
MeFOSE	N/A	N/A	13.10	13.10	
10:2 FTS	1.80	1.70	9.94	9.95	
EtFOSE	0.00	0.00	13.58	13.58	
11-CI-PF3OUdS	0.03	0.02	11.28	11.29	
PFTrDA	0.19	0.20	11.01	11.02	
PFDoS	0.25	0.25	12.03	12.05	
PFTDA	0.14	0.14	11.65	11.66	
PFHXDA	0.13	0.14	12.76	12.78	
PFODA	0.16	0.17	13.53	13.54	

**REPORT OF LABORATORY ANALYSIS**

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





**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID	LCS-92569	Instrument ID	10LCMS03
Run File Name	A210902A_042	Column ID	118AB10133
Analyzed	09/02/2021 19:08	Ical ID	210830A03
Injected By	NH	Level	L

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	20	20	102	50-150	
13C4_PFOA	20	20	102	50-150	
13C2_PFDA	20	21	107	50-150	
13C4_PFOS	19	19	99	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBFA	20	20	101	50-150	
13C5_PFPeA	20	20	100	50-150	
13C3_PFBFS	18	19	102	50-150	
13C2_4:2FTS	18	16	89	50-150	
13C5_PFHxA	20	20	103	50-150	
13C4_PFHpA	20	20	99	50-150	
13C3_PFHxS	19	19	100	50-150	
13C2_6:2FTS	19	18	96	50-150	
13C8_PFOA	20	19	98	50-150	
13C9_PFNA	20	20	101	50-150	
13C8_PFOS	19	18	94	50-150	
13C2_8:2FTS	19	17	90	50-150	
13C6_PFDA	20	20	100	50-150	
d3-MeFOSAA	20	16	83	50-150	
13C8_PFOA	20	18	90	50-150	
d5-EtFOSAA	20	17	85	50-150	
13C7_PFUdA	20	17	86	50-150	
13C2_PFDaA	20	18	91	50-150	
13C2_PFTeDA	20	17	88	50-150	
13C3_HFPO-DA	20	19	99	50-150	
13C2_PFHxDA	20	17	84	50-150	
d7-N-MeFOSE	20	15	76	10-150	
d9-N-EtFOSE	20	14	71	10-150	
d3-N-MeFOSA	20	6.1	31	10-150	
d5-N-EtFOSA	20	5.9	30	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID      LCS-92569  
 Run File Name      A210902A\_042  
 Analyzed            09/02/2021 19:08  
 Injected By        NH

Instrument ID      10LCMS03  
 Column ID         118AB10133  
 Ical ID             210830A03  
 Level                L

**Native Analytes**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	CAS No.
PFBA	3.9	3.6	93	73-129		375-22-4
PFPeA	3.9	3.5	90	72-129		2706-90-3
HFPO-DA	3.9	3.5	88	70-140		13252-13-6
PFBS	3.5	3.3	94	72-130		375-73-5
PFHxA	3.9	3.6	91	72-129		307-24-4
4:2 FTS	3.7	3.1	84	63-143		757124-72-4
PFPeS	3.7	3.3	88	71-127		2706-91-4
PFHpA	3.9	3.7	94	72-130		375-85-9
DONA	3.7	3.6	96	70-140		919005-14-4
PFHxS	3.6	3.2	91	68-131	B	355-46-4
PFOA	3.9	3.7	94	71-133		335-67-1
6:2 FTS	3.7	4.2	113	64-140		27619-97-2
PFHpS	3.7	3.5	94	69-134		375-92-8
PFNA	3.9	3.5	89	69-130		375-95-1
PFOSAm	3.9	3.3	83	67-137		754-91-6
PFOS	3.6	3.5	96	65-140	B	1763-23-1
MeFOSA	3.9	3.7	95	68-141		31506-32-8
PFDA	3.9	3.3	84	71-129		335-76-2
EtFOSAm	3.9	3.5	89	70-140		4151-50-2
8:2 FTS	3.8	3.2	84	67-138		39108-34-4
9-CI-PF3ON	3.7	3.2	88	70-130		756426-58-1
PFNS	3.8	3.2	86	69-127		68259-12-1
PFUnDA	3.9	3.4	87	69-133		2058-94-8
NMeFOSAA	3.9	3.0	77	65-136	I	2355-31-9
NEtFOSAA	3.9	2.8	72	61-135		2991-50-6
PFDS	3.8	3.3	87	53-142		335-77-3
PFDOA	3.9	3.3	83	72-134		307-55-1
MeFOSE	3.9	3.2	82	70-140		24448-09-7
10:2 FTS	3.8	3.5	92	70-140		120226-60-0
EtFOSE	3.9	3.5	88	70-140		1691-99-2
11-CI-PF3OUdS	3.7	3.1	82	70-140		763051-92-9
PFTTrDA	3.9	3.2	80	65-144		72629-94-8
PFDoS	3.8	3.4	88	70-140		79780-39-5
PFTDA	3.9	3.4	86	71-132		376-06-7
PFHXDA	3.9	3.5	90	70-140		67905-19-5
PFODA	3.9	2.7	70	70-140		16517-11-6

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID LCS-92569  
 Run File Name A210902A\_042  
 Analyzed 09/02/2021 19:08  
 Injected By NH

Instrument ID 10LCMS03  
 Column ID 118AB10133  
 Ical ID 210830A03  
 Level L

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	5.01	4.99	
13C4 PFOA	N/A	N/A	5.99	6.00	
13C2 PFDA	N/A	N/A	6.87	6.88	
13C4 PFOS	N/A	N/A	7.19	7.20	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	3.58	3.56	
13C5 PFPeA	N/A	N/A	4.42	4.42	
13C3 PFBS	N/A	N/A	5.20	5.18	
13C2 4:2FTS	N/A	N/A	4.80	4.80	
13C5 PFHxA	N/A	N/A	5.01	5.04	
13C4 PFHpA	N/A	N/A	5.52	5.51	
13C3 PFHxS	N/A	N/A	6.27	6.28	
13C2 6:2FTS	N/A	N/A	5.76	5.77	
13C8 PFOA	N/A	N/A	5.99	6.00	
13C9 PFNA	N/A	N/A	6.44	6.44	
13C8 PFOS	N/A	N/A	7.19	7.20	
13C2 8:2FTS	N/A	N/A	6.63	6.60	
13C6 PFDA	N/A	N/A	6.87	6.88	
d3-MeFOSAA	N/A	N/A	6.83	6.83	
13C8 PFOSA	N/A	N/A	8.80	8.78	
d5-EtFOSAA	N/A	N/A	7.04	7.02	
13C7 PFUdA	N/A	N/A	7.31	7.32	
13C2 PFDoA	N/A	N/A	7.74	7.76	
13C2 PFTeDA	N/A	N/A	8.59	8.58	
13C3 HFPO-DA	N/A	N/A	5.22	5.21	
13C2 PFHxDA	N/A	N/A	9.36	9.33	
d7-N-MeFOSE	N/A	N/A	10.06	10.02	
d9-N-EtFOSE	N/A	N/A	10.68	10.64	
d3-N-MeFOSA	N/A	N/A	10.31	10.28	
d5-N-EtFOSA	N/A	N/A	11.00	11.00	

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID LCS-92569  
 Run File Name A210902A\_042  
 Analyzed 09/02/2021 19:08  
 Injected By NH

Instrument ID 10LCMS03  
 Column ID 118AB10133  
 Ical ID 210830A03  
 Level L

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	3.58	3.58	
PFPeA	N/A	N/A	4.43	4.40	
HFPO-DA	0.51	0.45	5.23	5.22	
PFBS	0.33	0.35	5.21	5.26	
PFHxA	0.06	0.07	5.02	5.00	
4:2 FTS	0.57	0.58	4.80	4.80	
PFPeS	0.33	0.36	5.78	5.76	
PFHpA	0.27	0.30	5.53	5.52	
DONA	0.50	0.48	5.70	5.68	
PFHxS	0.25	0.28	6.28	6.29	B
PFOA	0.38	0.38	5.99	5.97	
6:2 FTS	0.46	0.50	5.76	5.74	
PFHpS	0.24	0.23	6.75	6.76	
PFNA	0.19	0.21	6.44	6.43	
PFOSAm	N/A	N/A	8.81	8.75	
PFOS	0.22	0.24	7.20	7.27	B
MeFOSA	0.90	0.95	10.33	10.33	
PFDA	0.09	0.09	6.88	6.89	
EtFOSAm	0.73	0.72	11.03	11.04	
8:2 FTS	0.68	0.62	6.63	6.64	
9-CI-PF3ON	0.02	0.01	7.51	7.53	
PFNS	0.25	0.25	7.63	7.62	
PFUnDA	0.09	0.10	7.32	7.31	
NMeFOSAA	0.56	0.36	6.84	6.90	I
NEtFOSAA	0.87	0.66	7.05	7.03	
PFDS	0.22	0.26	8.06	8.07	
PFDOA	0.16	0.15	7.75	7.76	
MeFOSE	N/A	N/A	10.10	10.12	
10:2 FTS	0.56	0.65	7.49	7.51	
EtFOSE	0.00	0.00	10.75	10.70	
11-CI-PF3OUdS	0.01	0.01	8.37	8.38	
PFTTrDA	0.15	0.14	8.18	8.19	
PFDoS	0.23	0.26	8.86	8.83	
PFTDA	0.14	0.15	8.60	8.58	
PFHXDA	0.12	0.14	9.36	9.35	
PFODA	0.09	0.10	10.39	10.37	

**REPORT OF LABORATORY ANALYSIS**

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



**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	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524001	Total Amount Extracted	236mL
Lab File ID	Q210901B_007	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210901B_003
Collected	08/09/2021 10:37	Ending CCal File	Q210901B_017
Received	08/13/2021 08:50	Blank File	Q210831B_018

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	10	2.1	2.1	0.47	1	375-22-4	
PFPeA	ND	2.1	2.1	0.46	1	2706-90-3	
HFPO-DA	ND	2.1	2.1	0.56	1	13252-13-6	
PFBS	ND	1.9	1.9	0.50	1	375-73-5	
PFHxA	ND	2.1	2.1	0.46	1	307-24-4	
4:2 FTS	ND	2.0	2.0	0.59	1	757124-72-4	
PFPeS	ND	2.0	2.0	0.50	1	2706-91-4	
PFHpA	ND	2.1	2.1	0.58	1	375-85-9	
DONA	ND	2.0	2.0	0.54	1	919005-14-4	
PFHxS	ND	1.9	1.9	0.54	1	355-46-4	
PFOA	ND	2.1	2.1	0.62	1	335-67-1	
6:2 FTS	ND	2.0	2.0	0.68	1	27619-97-2	
PFHpS	ND	2.0	2.0	0.43	1	375-92-8	
PFNA	ND	2.1	2.1	0.78	1	375-95-1	
PFOSAm	ND	2.1	2.1	0.87	1	754-91-6	
PFOS	ND	2.0	2.0	0.58	1	1763-23-1	
MeFOSA	ND	2.1	2.1	0.54	1	31506-32-8	
PFDA	ND	2.1	2.1	0.60	1	335-76-2	
EtFOSAm	ND	2.1	2.1	0.64	1	4151-50-2	
8:2 FTS	ND	2.0	2.0	0.69	1	39108-34-4	
9-CI-PF3ON	ND	2.0	2.0	0.32	1	756426-58-1	
PFNS	ND	2.0	2.0	0.47	1	68259-12-1	
PFUnDA	ND	2.1	2.1	0.57	1	2058-94-8	
NMeFOSAA	ND	2.1	2.1	0.46	1	2355-31-9	
NEtFOSAA	ND	2.1	2.1	0.59	1	2991-50-6	
PFDS	ND	2.0	2.0	0.48	1	335-77-3	
PFDOA	ND	2.1	2.1	0.51	1	307-55-1	
MeFOSE	ND	2.1	2.1	0.35	1	24448-09-7	
10:2 FTS	ND	2.0	2.0	0.78	1	120226-60-0	
EtFOSE	ND	2.1	2.1	0.53	1	1691-99-2	
11-CI-PF3OUdS	ND	2.0	2.0	0.46	1	763051-92-9	
PFTTrDA	ND	2.1	2.1	0.66	1	72629-94-8	
PFDoS	ND	2.0	2.0	0.49	1	79780-39-5	
PFTDA	ND	2.1	2.1	0.50	1	376-06-7	
PFHXDA	ND	2.1	2.1	0.38	1	67905-19-5	
PFODA	ND	2.1	2.1	0.62	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524001	Total Amount Extracted	236mL
Lab File ID	Q210901B_007	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210901B_003
Collected	08/09/2021 10:37	Ending CCal File	Q210901B_017
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	21	25	119	50-150	
13C4_PFOA	21	25	120	50-150	
13C2_PFDA	21	22	102	50-150	
13C4_PFOS	20	21	103	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	21	21	97	50-150	
13C5_PFPeA	21	23	111	50-150	
13C3_PFBs	20	23	118	50-150	
13C2_4:2Fts	20	28	141	50-150	
13C5_PFHxA	21	25	118	50-150	
13C4_PFHpA	21	23	109	50-150	
13C3_PFHxS	20	24	119	50-150	
13C2_6:2Fts	20	27	136	50-150	
13C8_PFOA	21	22	106	50-150	
13C9_PFNA	21	23	107	50-150	
13C8_PFOS	20	20	97	50-150	
13C2_8:2Fts	20	26	129	50-150	
13C6_PFDA	21	23	107	50-150	
d3-MeFOSAA	21	23	107	50-150	
13C8_PFOA	21	8.6	41	50-150	R
d5-EtFOSAA	21	22	103	50-150	
13C7_PFUdA	21	21	100	50-150	
13C2_PFDoA	21	18	85	50-150	
13C2_PFTeDA	21	11	53	50-150	
13C3_HFPO-DA	21	27	128	50-150	
13C2_PFHxDA	21	4.7	22	50-150	R
d7-N-MeFOSE	21	3.1	15	10-150	
d9-N-EtFOSE	21	3.2	15	10-150	
d3-N-MeFOSA	21	1.8	8	10-150	R
d5-N-EtFOSA	21	1.9	9	10-150	R

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524001	Total Amount Extracted	236mL
Lab File ID	Q210901B_007	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210901B_003
Collected	08/09/2021 10:37	Ending CCal File	Q210901B_017
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.30	6.29	
13C4 PFOA	N/A	N/A	7.65	7.66	
13C2 PFDA	N/A	N/A	9.01	8.98	
13C4 PFOS	N/A	N/A	9.48	9.47	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.75	4.80	
13C5 PFPeA	N/A	N/A	5.61	5.60	
13C3 PFBS	N/A	N/A	6.56	6.55	
13C2 4:2FTS	N/A	N/A	6.01	5.99	
13C5 PFHxA	N/A	N/A	6.30	6.28	
13C4 PFHpA	N/A	N/A	6.98	6.96	
13C3 PFHxS	N/A	N/A	8.07	8.08	
13C2 6:2FTS	N/A	N/A	7.30	7.29	
13C8 PFOA	N/A	N/A	7.64	7.64	
13C9 PFNA	N/A	N/A	8.32	8.33	
13C8 PFOS	N/A	N/A	9.48	9.52	
13C2 8:2FTS	N/A	N/A	8.62	8.63	
13C6 PFDA	N/A	N/A	9.00	9.03	
d3-MeFOSAA	N/A	N/A	8.88	8.90	
13C8 PFOSA	N/A	N/A	11.44	11.42	R
d5-EtFOSAA	N/A	N/A	9.19	9.21	
13C7 PFUdA	N/A	N/A	9.68	9.72	
13C2 PFDoA	N/A	N/A	10.36	10.41	
13C2 PFTeDA	N/A	N/A	11.66	11.71	
13C3 HFPO-DA	N/A	N/A	6.58	6.56	
13C2 PFHxDA	N/A	N/A	12.78	12.77	R
d7-N-MeFOSE	N/A	N/A	13.08	13.06	
d9-N-EtFOSE	N/A	N/A	13.56	13.53	
d3-N-MeFOSA	N/A	N/A	13.28	13.26	R
d5-N-EtFOSA	N/A	N/A	13.73	13.70	R

**REPORT OF LABORATORY ANALYSIS**

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





**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524001	Total Amount Extracted	236mL
Lab File ID	Q210901B_007	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210901B_003
Collected	08/09/2021 10:37	Ending CCal File	Q210901B_017
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.76	4.82	
PFPeA	N/A	N/A	5.62	5.63	
HFPO-DA	0.000	0.460	0.00	6.61	
PFBS	0.490	0.360	6.57	6.54	
PFHxA	0.080	0.0770	6.31	6.32	
4:2 FTS	0.000	1.10	0.00	5.99	
PFPeS	0.000	0.390	7.33	7.32	
PFHpA	0.500	0.350	6.99	6.96	
DONA	0.000	0.510	0.00	7.25	
PFHxS	0.290	0.290	8.08	8.05	
PFOA	0.270	0.270	7.65	7.63	
6:2 FTS	1.30	1.20	7.31	7.28	
PFHpS	0.000	0.410	0.00	8.79	
PFNA	0.180	0.290	8.33	8.32	
PFOSAm	N/A	N/A	11.45	11.40	
PFOS	0.110	0.200	9.48	9.46	
MeFOSA	0.000	0.530	0.00	13.29	
PFDA	0.000	0.140	0.00	9.02	
EtFOSAm	0.000	0.560	0.00	13.73	
8:2 FTS	0.000	1.80	0.00	8.62	
9-Cl-PF3ON	0.000	0.0510	0.00	10.00	
PFNS	0.000	0.220	0.00	10.16	
PFUnDA	0.000	0.140	0.00	9.71	
NMeFOSAA	0.190	0.770	8.76	8.89	
NEtFOSAA	0.000	0.480	9.18	9.20	
PFDS	0.660	0.240	10.80	10.82	
PFDOA	0.000	0.190	0.00	10.44	
MeFOSE	N/A	N/A	0.00	13.10	
10:2 FTS	0.000	1.60	0.00	9.95	
EtFOSE	0.000	0.000	0.00	13.58	
11-Cl-PF3OUdS	0.600	0.0240	11.31	11.29	
PFTrDA	0.000	0.190	0.00	11.02	
PFDoS	0.000	0.240	0.00	12.05	
PFTDA	0.000	0.160	0.00	11.66	
PFHXDA	0.000	0.150	12.79	12.78	
PFODA	0.000	0.160	0.00	13.62	

**REPORT OF LABORATORY ANALYSIS**

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





**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524002	Total Amount Extracted	235mL
Lab File ID	Q210901B_008	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210901B_003
Collected	08/09/2021 11:12	Ending CCal File	Q210901B_017
Received	08/13/2021 08:50	Blank File	Q210831B_018

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	ND	2.1	2.1	0.47	1	375-22-4	
PFPeA	ND	2.1	2.1	0.47	1	2706-90-3	
HFPO-DA	ND	2.1	2.1	0.56	1	13252-13-6	
PFBS	ND	1.9	1.9	0.50	1	375-73-5	
PFHxA	ND	2.1	2.1	0.47	1	307-24-4	
4:2 FTS	ND	2.0	2.0	0.59	1	757124-72-4	
PFPeS	ND	2.0	2.0	0.50	1	2706-91-4	
PFHpA	ND	2.1	2.1	0.58	1	375-85-9	
DONA	ND	2.0	2.0	0.55	1	919005-14-4	
PFHxS	ND	1.9	1.9	0.54	1	355-46-4	
PFOA	ND	2.1	2.1	0.62	1	335-67-1	
6:2 FTS	ND	2.0	2.0	0.69	1	27619-97-2	
PFHpS	ND	2.0	2.0	0.44	1	375-92-8	
PFNA	ND	2.1	2.1	0.79	1	375-95-1	
PFOSAm	ND	2.1	2.1	0.87	1	754-91-6	
PFOS	ND	2.0	2.0	0.58	1	1763-23-1	
MeFOSA	ND	2.1	2.1	0.54	1	31506-32-8	
PFDA	ND	2.1	2.1	0.60	1	335-76-2	
EtFOSAm	ND	2.1	2.1	0.65	1	4151-50-2	
8:2 FTS	ND	2.0	2.0	0.69	1	39108-34-4	
9-CI-PF3ON	ND	2.0	2.0	0.32	1	756426-58-1	
PFNS	ND	2.0	2.0	0.47	1	68259-12-1	
PFUnDA	ND	2.1	2.1	0.57	1	2058-94-8	
NMeFOSAA	ND	2.1	2.1	0.46	1	2355-31-9	
NEtFOSAA	ND	2.1	2.1	0.59	1	2991-50-6	
PFDS	ND	2.1	2.1	0.48	1	335-77-3	
PFDOA	ND	2.1	2.1	0.51	1	307-55-1	
MeFOSE	ND	2.1	2.1	0.35	1	24448-09-7	
10:2 FTS	ND	2.0	2.0	0.78	1	120226-60-0	
EtFOSE	ND	2.1	2.1	0.53	1	1691-99-2	
11-CI-PF3OUdS	ND	2.0	2.0	0.46	1	763051-92-9	
PFTTrDA	ND	2.1	2.1	0.66	1	72629-94-8	
PFDoS	ND	2.1	2.1	0.49	1	79780-39-5	
PFTDA	ND	2.1	2.1	0.51	1	376-06-7	
PFHxDA	ND	2.1	2.1	0.39	1	67905-19-5	
PFODA	ND	2.1	2.1	0.62	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524002	Total Amount Extracted	235mL
Lab File ID	Q210901B_008	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210901B_003
Collected	08/09/2021 11:12	Ending CCal File	Q210901B_017
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	21	25	119	50-150	
13C4_PFOA	21	24	115	50-150	
13C2_PFDA	21	21	100	50-150	
13C4_PFOS	20	23	115	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	21	23	108	50-150	
13C5_PFPeA	21	23	109	50-150	
13C3_PFBS	20	22	110	50-150	
13C2_4:2FTS	20	23	113	50-150	
13C5_PFHxA	21	24	114	50-150	
13C4_PFHpA	21	26	121	50-150	
13C3_PFHxS	20	21	104	50-150	
13C2_6:2FTS	20	24	118	50-150	
13C8_PFOA	21	20	96	50-150	
13C9_PFNA	21	22	102	50-150	
13C8_PFOS	20	21	103	50-150	
13C2_8:2FTS	20	24	117	50-150	
13C6_PFDA	21	22	103	50-150	
d3-MeFOSAA	21	21	98	50-150	
13C8_PFOSA	21	14	67	50-150	
d5-EtFOSAA	21	21	101	50-150	
13C7_PFUdA	21	21	101	50-150	
13C2_PFDoA	21	19	90	50-150	
13C2_PFTeDA	21	19	88	50-150	
13C3_HFPO-DA	21	32	152	50-150	R
13C2_PFHxDA	21	20	92	50-150	
d7-N-MeFOSE	21	11	50	10-150	
d9-N-EtFOSE	21	11	54	10-150	
d3-N-MeFOSA	21	2.8	13	10-150	
d5-N-EtFOSA	21	3.2	15	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524002	Total Amount Extracted	235mL
Lab File ID	Q210901B_008	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210901B_003
Collected	08/09/2021 11:12	Ending CCal File	Q210901B_017
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.24	6.29	
13C4 PFOA	N/A	N/A	7.64	7.66	
13C2 PFDA	N/A	N/A	9.00	8.98	
13C4 PFOS	N/A	N/A	9.47	9.47	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.68	4.68	
13C5 PFPeA	N/A	N/A	5.53	5.60	
13C3 PFBS	N/A	N/A	6.51	6.55	
13C2 4:2FTS	N/A	N/A	5.95	5.99	
13C5 PFHxA	N/A	N/A	6.24	6.28	
13C4 PFHpA	N/A	N/A	6.96	6.96	
13C3 PFHxS	N/A	N/A	8.07	8.08	
13C2 6:2FTS	N/A	N/A	7.29	7.29	
13C8 PFOA	N/A	N/A	7.64	7.64	
13C9 PFNA	N/A	N/A	8.32	8.33	
13C8 PFOS	N/A	N/A	9.47	9.52	
13C2 8:2FTS	N/A	N/A	8.62	8.63	
13C6 PFDA	N/A	N/A	9.00	9.03	
d3-MeFOSAA	N/A	N/A	8.88	8.90	
13C8 PFOSA	N/A	N/A	11.42	11.42	
d5-EtFOSAA	N/A	N/A	9.19	9.21	
13C7 PFUdA	N/A	N/A	9.67	9.72	
13C2 PFDoA	N/A	N/A	10.34	10.41	
13C2 PFTeDA	N/A	N/A	11.63	11.71	
13C3 HFPO-DA	N/A	N/A	6.54	6.56	R
13C2 PFHxDA	N/A	N/A	12.74	12.77	
d7-N-MeFOSE	N/A	N/A	13.04	13.06	
d9-N-EtFOSE	N/A	N/A	13.52	13.53	
d3-N-MeFOSA	N/A	N/A	13.25	13.26	
d5-N-EtFOSA	N/A	N/A	13.69	13.70	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524002	Total Amount Extracted	235mL
Lab File ID	Q210901B_008	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210901B_003
Collected	08/09/2021 11:12	Ending CCal File	Q210901B_017
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.68	4.82	
PFPeA	N/A	N/A	5.53	5.53	
HFPO-DA	0.000	0.460	0.00	6.61	
PFBS	0.400	0.360	6.52	6.54	
PFHxA	0.080	0.0770	6.25	6.32	
4:2 FTS	0.000	1.10	0.00	5.99	
PFPeS	0.290	0.390	7.32	7.32	
PFHpA	0.370	0.350	6.97	6.96	
DONA	0.000	0.510	0.00	7.25	
PFHxS	0.250	0.290	7.88	8.05	
PFOA	0.310	0.270	7.65	7.63	
6:2 FTS	1.50	1.20	7.29	7.28	
PFHpS	0.000	0.410	0.00	8.79	
PFNA	0.000	0.290	0.00	8.32	
PFOSAm	N/A	N/A	11.43	11.40	
PFOS	0.100	0.200	9.49	9.46	
MeFOSA	0.000	0.530	0.00	13.29	
PFDA	0.000	0.140	0.00	9.02	
EtFOSAm	0.000	0.560	0.00	13.73	
8:2 FTS	0.000	1.80	0.00	8.62	
9-Cl-PF3ON	0.000	0.0510	0.00	10.00	
PFNS	0.000	0.220	10.16	10.16	
PFUnDA	0.000	0.140	0.00	9.71	
NMeFOSAA	0.000	0.770	0.00	8.89	
NEtFOSAA	0.000	0.480	0.00	9.20	
PFDS	0.000	0.240	10.79	10.82	
PFDOA	0.000	0.190	0.00	10.44	
MeFOSE	N/A	N/A	0.00	13.10	
10:2 FTS	0.000	1.60	0.00	9.95	
EtFOSE	0.000	0.000	0.00	13.58	
11-Cl-PF3OUdS	0.000	0.0240	0.00	11.29	
PFTTrDA	0.000	0.190	0.00	11.02	
PFDoS	0.000	0.240	0.00	12.05	
PFTDA	0.000	0.160	0.00	11.66	
PFHXDA	0.000	0.150	12.73	12.78	
PFODA	0.000	0.160	0.00	13.62	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524003	Total Amount Extracted	264mL
Lab File ID	Q210831B_032	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210831B_025
Collected	08/09/2021 12:35	Ending CCal File	Q210831B_036
Received	08/13/2021 08:50	Blank File	Q210831B_018

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	23	1.9	1.9	0.42	1	375-22-4	
PFPeA	44	1.9	1.9	0.41	1	2706-90-3	
HFPO-DA	ND	1.9	1.9	0.50	1	13252-13-6	
PFBS	3.1	1.7	1.7	0.45	1	375-73-5	
PFHxA	26	1.9	1.9	0.41	1	307-24-4	
4:2 FTS	ND	1.8	1.8	0.53	1	757124-72-4	
PFPeS	ND	1.8	1.8	0.45	1	2706-91-4	
PFHpA	2.2	1.9	1.9	0.52	1	375-85-9	
DONA	ND	1.8	1.8	0.49	1	919005-14-4	
PFHxS	10	1.7	1.7	0.48	1	355-46-4	
PFOA	1.9	1.9	1.9	0.55	1	335-67-1	
6:2 FTS	ND	1.8	1.8	0.61	1	27619-97-2	
PFHpS	ND	1.8	1.8	0.39	1	375-92-8	
PFNA	ND	1.9	1.9	0.70	1	375-95-1	
PFOSAm	ND	1.9	1.9	0.77	1	754-91-6	
PFOS	ND	1.8	1.8	0.52	1	1763-23-1	
MeFOSA	ND	1.9	1.9	0.48	1	31506-32-8	
PFDA	ND	1.9	1.9	0.53	1	335-76-2	
EtFOSAm	ND	1.9	1.9	0.58	1	4151-50-2	
8:2 FTS	ND	1.8	1.8	0.62	1	39108-34-4	
9-CI-PF3ON	ND	1.8	1.8	0.29	1	756426-58-1	
PFNS	ND	1.8	1.8	0.42	1	68259-12-1	
PFUnDA	ND	1.9	1.9	0.51	1	2058-94-8	
NMeFOSAA	ND	1.9	1.9	0.41	1	2355-31-9	
NEtFOSAA	ND	1.9	1.9	0.53	1	2991-50-6	
PFDS	ND	1.8	1.8	0.43	1	335-77-3	
PFDOA	ND	1.9	1.9	0.46	1	307-55-1	
MeFOSE	ND	1.9	1.9	0.31	1	24448-09-7	
10:2 FTS	ND	1.8	1.8	0.70	1	120226-60-0	
EtFOSE	ND	1.9	1.9	0.47	1	1691-99-2	
11-CI-PF3OUdS	ND	1.8	1.8	0.41	1	763051-92-9	
PFTTrDA	ND	1.9	1.9	0.59	1	72629-94-8	
PFDoS	ND	1.8	1.8	0.44	1	79780-39-5	
PFTDA	ND	1.9	1.9	0.45	1	376-06-7	
PFHXDA	ND	1.9	1.9	0.34	1	67905-19-5	
PFODA	ND	1.9	1.9	0.55	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524003	Total Amount Extracted	264mL
Lab File ID	Q210831B_032	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210831B_025
Collected	08/09/2021 12:35	Ending CCal File	Q210831B_036
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	19	19	103	50-150	
13C4_PFOA	19	21	112	50-150	
13C2_PFDA	19	21	110	50-150	
13C4_PFOS	18	20	108	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBa	19	19	101	50-150	
13C5_PFPeA	19	21	110	50-150	
13C3_PFBs	18	19	111	50-150	
13C2_4:2FTS	18	19	106	50-150	
13C5_PFHxA	19	19	101	50-150	
13C4_PFHpA	19	21	110	50-150	
13C3_PFHxS	18	18	103	50-150	
13C2_6:2FTS	18	22	121	50-150	
13C8_PFOA	19	21	112	50-150	
13C9_PfNA	19	22	114	50-150	
13C8_PFOs	18	21	115	50-150	
13C2_8:2FTS	18	18	101	50-150	
13C6_PFDA	19	25	130	50-150	
d3-MeFOSAA	19	20	108	50-150	
13C8_PFOsA	19	18	94	50-150	
d5-EtFOSAA	19	18	96	50-150	
13C7_PFUdA	19	20	107	50-150	
13C2_PFDoA	19	19	102	50-150	
13C2_PFTeDA	19	18	95	50-150	
13C3_HFPO-DA	19	18	97	50-150	
13C2_PFHxDA	19	18	93	50-150	
d7-N-MeFOSE	19	17	90	10-150	
d9-N-EtFOSE	19	16	85	10-150	
d3-N-MeFOSA	19	12	64	10-150	
d5-N-EtFOSA	19	12	65	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524003	Total Amount Extracted	264mL
Lab File ID	Q210831B_032	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210831B_025
Collected	08/09/2021 12:35	Ending CCal File	Q210831B_036
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.28	6.29	
13C4 PFOA	N/A	N/A	7.63	7.66	
13C2 PFDA	N/A	N/A	8.99	8.98	
13C4 PFOS	N/A	N/A	9.47	9.48	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.76	4.74	
13C5 PFPeA	N/A	N/A	5.60	5.60	
13C3 PFBS	N/A	N/A	6.54	6.55	
13C2 4:2FTS	N/A	N/A	6.00	5.99	
13C5 PFHxA	N/A	N/A	6.29	6.28	
13C4 PFHpA	N/A	N/A	6.96	6.96	
13C3 PFHxS	N/A	N/A	8.06	8.08	
13C2 6:2FTS	N/A	N/A	7.28	7.29	
13C8 PFOA	N/A	N/A	7.63	7.64	
13C9 PFNA	N/A	N/A	8.31	8.33	
13C8 PFOS	N/A	N/A	9.47	9.48	
13C2 8:2FTS	N/A	N/A	8.61	8.62	
13C6 PFDA	N/A	N/A	9.00	9.03	
d3-MeFOSAA	N/A	N/A	8.87	8.90	
13C8 PFOSA	N/A	N/A	11.44	11.42	
d5-EtFOSAA	N/A	N/A	9.18	9.18	
13C7 PFUdA	N/A	N/A	9.67	9.68	
13C2 PFDoA	N/A	N/A	10.35	10.36	
13C2 PFTeDA	N/A	N/A	11.65	11.66	
13C3 HFPO-DA	N/A	N/A	6.56	6.56	
13C2 PFHxDA	N/A	N/A	12.77	12.77	
d7-N-MeFOSE	N/A	N/A	13.07	13.06	
d9-N-EtFOSE	N/A	N/A	13.55	13.53	
d3-N-MeFOSA	N/A	N/A	13.28	13.26	
d5-N-EtFOSA	N/A	N/A	13.72	13.70	

**REPORT OF LABORATORY ANALYSIS**

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





**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524003	Total Amount Extracted	264mL
Lab File ID	Q210831B_032	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210831B_025
Collected	08/09/2021 12:35	Ending CCal File	Q210831B_036
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.77	4.82	
PFPeA	N/A	N/A	5.61	5.63	
HFPO-DA	0.000	0.350	0.00	6.61	
PFBS	0.420	0.350	6.55	6.54	
PFHxA	0.083	0.0920	6.30	6.32	
4:2 FTS	0.000	0.940	0.00	5.99	
PFPeS	0.400	0.450	7.32	7.32	
PFHpA	0.610	0.500	6.96	6.98	
DONA	0.000	0.440	0.00	7.17	
PFHxS	0.270	0.310	8.07	8.05	
PFOA	0.260	0.270	7.64	7.63	
6:2 FTS	1.20	1.10	7.29	7.28	
PFHpS	0.000	0.450	0.00	8.79	
PFNA	0.000	0.250	0.00	8.32	
PFOSAm	N/A	N/A	11.45	11.40	
PFOS	0.170	0.240	9.39	9.46	
MeFOSA	0.000	0.520	0.00	13.29	
PFDA	0.000	0.200	0.00	9.02	
EtFOSAm	0.000	0.500	0.00	13.73	
8:2 FTS	0.000	1.50	0.00	8.62	
9-Cl-PF3ON	0.000	0.0390	0.00	10.00	
PFNS	0.000	0.230	0.00	10.16	
PFUnDA	0.000	0.170	0.00	9.71	
NMeFOSAA	0.000	0.740	0.00	8.89	
NEtFOSAA	0.000	0.500	0.00	9.15	
PFDS	0.000	0.270	10.82	10.82	
PFDOA	0.000	0.180	0.00	10.44	
MeFOSE	N/A	N/A	0.00	13.10	
10:2 FTS	0.000	1.50	0.00	9.95	
EtFOSE	0.000	0.000	0.00	13.58	
11-Cl-PF3OUdS	0.000	0.0280	0.00	11.29	
PFTTrDA	0.000	0.180	0.00	11.02	
PFDoS	0.000	0.250	0.00	12.05	
PFTDA	0.000	0.140	0.00	11.66	
PFHXDA	0.130	0.130	12.76	12.78	
PFODA	0.000	0.170	0.00	13.54	

**REPORT OF LABORATORY ANALYSIS**

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





**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524004	Total Amount Extracted	240mL
Lab File ID	Q210831B_033	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210831B_025
Collected	08/09/2021 13:28	Ending CCal File	Q210831B_036
Received	08/13/2021 08:50	Blank File	Q210831B_018

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	ND	2.1	2.1	0.46	1	375-22-4	
PFPeA	ND	2.1	2.1	0.46	1	2706-90-3	
HFPO-DA	ND	2.1	2.1	0.55	1	13252-13-6	
PFBS	ND	1.8	1.8	0.49	1	375-73-5	
PFHxA	ND	2.1	2.1	0.46	1	307-24-4	
4:2 FTS	ND	1.9	1.9	0.58	1	757124-72-4	
PFPeS	ND	2.0	2.0	0.49	1	2706-91-4	
PFHpA	ND	2.1	2.1	0.57	1	375-85-9	
DONA	ND	2.0	2.0	0.54	1	919005-14-4	
PFHxS	ND	1.9	1.9	0.53	1	355-46-4	
PFOA	ND	2.1	2.1	0.61	1	335-67-1	
6:2 FTS	ND	2.0	2.0	0.67	1	27619-97-2	
PFHpS	ND	2.0	2.0	0.43	1	375-92-8	
PFNA	ND	2.1	2.1	0.77	1	375-95-1	
PFOSAm	ND	2.1	2.1	0.85	1	754-91-6	
PFOS	ND	1.9	1.9	0.57	1	1763-23-1	
MeFOSA	ND	2.1	2.1	0.53	1	31506-32-8	
PFDA	ND	2.1	2.1	0.59	1	335-76-2	
EtFOSAm	ND	2.1	2.1	0.63	1	4151-50-2	
8:2 FTS	ND	2.0	2.0	0.68	1	39108-34-4	
9-CI-PF3ON	ND	1.9	1.9	0.32	1	756426-58-1	
PFNS	ND	2.0	2.0	0.46	1	68259-12-1	
PFUnDA	ND	2.1	2.1	0.56	1	2058-94-8	
NMeFOSAA	ND	2.1	2.1	0.45	1	2355-31-9	
NEtFOSAA	ND	2.1	2.1	0.58	1	2991-50-6	
PFDS	ND	2.0	2.0	0.47	1	335-77-3	
PFDOA	ND	2.1	2.1	0.50	1	307-55-1	
MeFOSE	ND	2.1	2.1	0.34	1	24448-09-7	
10:2 FTS	ND	2.0	2.0	0.77	1	120226-60-0	
EtFOSE	ND	2.1	2.1	0.52	1	1691-99-2	
11-CI-PF3OUdS	ND	2.0	2.0	0.45	1	763051-92-9	
PFTTrDA	ND	2.1	2.1	0.65	1	72629-94-8	
PFDoS	ND	2.0	2.0	0.48	1	79780-39-5	
PFTDA	ND	2.1	2.1	0.50	1	376-06-7	
PFHXDA	ND	2.1	2.1	0.38	1	67905-19-5	
PFODA	ND	2.1	2.1	0.61	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524004	Total Amount Extracted	240mL
Lab File ID	Q210831B_033	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210831B_025
Collected	08/09/2021 13:28	Ending CCal File	Q210831B_036
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	21	20	96	50-150	
13C4_PFOA	21	21	100	50-150	
13C2_PFDA	21	21	98	50-150	
13C4_PFOS	20	20	100	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	21	21	102	50-150	
13C5_PFPeA	21	20	98	50-150	
13C3_PFBs	19	18	95	50-150	
13C2_4:2Fts	19	19	95	50-150	
13C5_PFHxA	21	20	98	50-150	
13C4_PFHpA	21	20	94	50-150	
13C3_PFHxS	20	19	95	50-150	
13C2_6:2Fts	20	21	108	50-150	
13C8_PFOA	21	20	95	50-150	
13C9_PFNA	21	20	94	50-150	
13C8_PFOS	20	22	108	50-150	
13C2_8:2Fts	20	18	89	50-150	
13C6_PFDA	21	22	104	50-150	
d3-MeFOSAA	21	18	85	50-150	
13C8_PFOSA	21	15	73	50-150	
d5-EtFOSAA	21	17	83	50-150	
13C7_PFUdA	21	20	94	50-150	
13C2_PFDoA	21	20	95	50-150	
13C2_PFTeDA	21	18	89	50-150	
13C3_HFPO-DA	21	18	84	50-150	
13C2_PFHxDA	21	19	91	50-150	
d7-N-MeFOSE	21	15	73	10-150	
d9-N-EtFOSE	21	15	72	10-150	
d3-N-MeFOSA	21	7.6	36	10-150	
d5-N-EtFOSA	21	8.4	41	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524004	Total Amount Extracted	240mL
Lab File ID	Q210831B_033	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210831B_025
Collected	08/09/2021 13:28	Ending CCal File	Q210831B_036
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.29	6.29	
13C4 PFOA	N/A	N/A	7.63	7.66	
13C2 PFDA	N/A	N/A	8.98	8.98	
13C4 PFOS	N/A	N/A	9.46	9.48	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.75	4.74	
13C5 PFPeA	N/A	N/A	5.59	5.60	
13C3 PFBS	N/A	N/A	6.55	6.55	
13C2 4:2FTS	N/A	N/A	6.00	5.99	
13C5 PFHxA	N/A	N/A	6.29	6.28	
13C4 PFHpA	N/A	N/A	6.96	6.96	
13C3 PFHxS	N/A	N/A	8.05	8.08	
13C2 6:2FTS	N/A	N/A	7.28	7.29	
13C8 PFOA	N/A	N/A	7.63	7.64	
13C9 PFNA	N/A	N/A	8.30	8.33	
13C8 PFOS	N/A	N/A	9.46	9.48	
13C2 8:2FTS	N/A	N/A	8.59	8.62	
13C6 PFDA	N/A	N/A	8.98	9.03	
d3-MeFOSAA	N/A	N/A	8.86	8.90	
13C8 PFOSA	N/A	N/A	11.43	11.42	
d5-EtFOSAA	N/A	N/A	9.17	9.18	
13C7 PFUdA	N/A	N/A	9.66	9.68	
13C2 PFDoA	N/A	N/A	10.35	10.36	
13C2 PFTeDA	N/A	N/A	11.65	11.66	
13C3 HFPO-DA	N/A	N/A	6.56	6.56	
13C2 PFHxDA	N/A	N/A	12.76	12.77	
d7-N-MeFOSE	N/A	N/A	13.07	13.06	
d9-N-EtFOSE	N/A	N/A	13.55	13.53	
d3-N-MeFOSA	N/A	N/A	13.27	13.26	
d5-N-EtFOSA	N/A	N/A	13.72	13.70	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524004	Total Amount Extracted	240mL
Lab File ID	Q210831B_033	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210831B_025
Collected	08/09/2021 13:28	Ending CCal File	Q210831B_036
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.75	4.82	
PFPeA	N/A	N/A	5.60	5.63	
HFPO-DA	0.000	0.350	0.00	6.61	
PFBS	0.270	0.350	6.55	6.54	
PFHxA	0.093	0.0920	6.30	6.32	
4:2 FTS	0.000	0.940	0.00	5.99	
PFPeS	0.000	0.450	0.00	7.32	
PFHpA	0.690	0.500	6.97	6.98	
DONA	0.000	0.440	0.00	7.21	
PFHxS	0.000	0.310	0.00	8.05	
PFOA	0.200	0.270	7.64	7.63	
6:2 FTS	1.10	1.10	7.29	7.28	
PFHpS	0.000	0.450	0.00	8.79	
PFNA	0.000	0.250	0.00	8.32	
PFOSAm	N/A	N/A	11.44	11.40	
PFOS	0.150	0.240	9.48	9.46	
MeFOSA	0.000	0.520	0.00	13.29	
PFDA	0.000	0.200	0.00	9.02	
EtFOSAm	0.000	0.500	0.00	13.73	
8:2 FTS	0.000	1.50	0.00	8.62	
9-Cl-PF3ON	0.000	0.0390	0.00	10.00	
PFNS	0.000	0.230	0.00	10.16	
PFUnDA	0.000	0.170	0.00	9.71	
NMeFOSAA	0.000	0.740	0.00	8.89	
NEtFOSAA	0.000	0.500	0.00	9.15	
PFDS	0.000	0.270	0.00	10.82	
PFDOA	0.000	0.180	0.00	10.44	
MeFOSE	N/A	N/A	13.10	13.10	
10:2 FTS	0.000	1.50	0.00	9.95	
EtFOSE	0.000	0.000	0.00	13.58	
11-Cl-PF3OUdS	0.000	0.0280	0.00	11.29	
PFTTrDA	0.000	0.180	0.00	11.02	
PFDoS	0.000	0.250	0.00	12.05	
PFTDA	0.000	0.140	0.00	11.66	
PFHXDA	0.110	0.130	12.76	12.78	
PFODA	0.000	0.170	0.00	13.54	

**REPORT OF LABORATORY ANALYSIS**

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



**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 [REDACTED]  
 Lab Sample ID 10574524005  
 Lab File ID Q210901B\_009  
 Matrix Non\_Potable\_Water  
 Collected 08/09/2021 14:37  
 Received 08/13/2021 08:50

Extraction Date 08/27/2021 14:00  
 Total Amount Extracted 236mL  
 Ical ID 210831A01  
 CCal File Q210901B\_003  
 Ending CCal File Q210901B\_017  
 Blank File Q210831B\_018

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	ND	2.1	2.1	0.47	1	375-22-4	
PFPeA	ND	2.1	2.1	0.46	1	2706-90-3	
HFPO-DA	ND	2.1	2.1	0.56	1	13252-13-6	
PFBS	ND	1.9	1.9	0.50	1	375-73-5	
PFHxA	ND	2.1	2.1	0.46	1	307-24-4	
4:2 FTS	ND	2.0	2.0	0.59	1	757124-72-4	
PFPeS	ND	2.0	2.0	0.50	1	2706-91-4	
PFHpA	ND	2.1	2.1	0.58	1	375-85-9	
DONA	ND	2.0	2.0	0.54	1	919005-14-4	
PFHxS	ND	1.9	1.9	0.54	1	355-46-4	
PFOA	ND	2.1	2.1	0.62	1	335-67-1	
6:2 FTS	11	2.0	2.0	0.68	1	27619-97-2	
PFHpS	ND	2.0	2.0	0.44	1	375-92-8	
PFNA	ND	2.1	2.1	0.78	1	375-95-1	
PFOSAm	ND	2.1	2.1	0.87	1	754-91-6	
PFOS	ND	2.0	2.0	0.58	1	1763-23-1	
MeFOSA	ND	2.1	2.1	0.54	1	31506-32-8	
PFDA	ND	2.1	2.1	0.60	1	335-76-2	
EtFOSAm	ND	2.1	2.1	0.64	1	4151-50-2	
8:2 FTS	ND	2.0	2.0	0.69	1	39108-34-4	
9-CI-PF3ON	ND	2.0	2.0	0.32	1	756426-58-1	
PFNS	ND	2.0	2.0	0.47	1	68259-12-1	
PFUnDA	ND	2.1	2.1	0.57	1	2058-94-8	
NMeFOSAA	ND	2.1	2.1	0.46	1	2355-31-9	
NEtFOSAA	ND	2.1	2.1	0.59	1	2991-50-6	
PFDS	ND	2.0	2.0	0.48	1	335-77-3	
PFDOA	ND	2.1	2.1	0.51	1	307-55-1	
MeFOSE	ND	2.1	2.1	0.35	1	24448-09-7	
10:2 FTS	ND	2.0	2.0	0.78	1	120226-60-0	
EtFOSE	ND	2.1	2.1	0.53	1	1691-99-2	
11-CI-PF3OUdS	ND	2.0	2.0	0.46	1	763051-92-9	
PFTTrDA	ND	2.1	2.1	0.66	1	72629-94-8	
PFDoS	ND	2.1	2.1	0.49	1	79780-39-5	
PFTDA	ND	2.1	2.1	0.50	1	376-06-7	
PFHXDA	ND	2.1	2.1	0.38	1	67905-19-5	
PFODA	ND	2.1	2.1	0.62	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524005	Total Amount Extracted	236mL
Lab File ID	Q210901B_009	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210901B_003
Collected	08/09/2021 14:37	Ending CCal File	Q210901B_017
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	21	26	122	50-150	
13C4_PFOA	21	24	113	50-150	
13C2_PFDA	21	24	115	50-150	
13C4_PFOS	20	24	120	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	21	22	105	50-150	
13C5_PFPeA	21	24	116	50-150	
13C3_PFBS	20	21	108	50-150	
13C2_4:2FTS	20	21	107	50-150	
13C5_PFHxA	21	24	114	50-150	
13C4_PFHpA	21	30	140	50-150	
13C3_PFHxS	20	23	112	50-150	
13C2_6:2FTS	20	24	122	50-150	
13C8_PFOA	21	22	102	50-150	
13C9_PFNA	21	21	98	50-150	
13C8_PFOS	20	23	111	50-150	
13C2_8:2FTS	20	26	127	50-150	
13C6_PFDA	21	26	123	50-150	
d3-MeFOSAA	21	21	97	50-150	
13C8_PFOA	21	14	66	50-150	
d5-EtFOSAA	21	22	104	50-150	
13C7_PFUdA	21	25	118	50-150	
13C2_PFDoA	21	21	99	50-150	
13C2_PFTeDA	21	18	87	50-150	
13C3_HFPO-DA	21	32	149	50-150	
13C2_PFHxDA	21	13	59	50-150	
d7-N-MeFOSE	21	7.6	36	10-150	
d9-N-EtFOSE	21	8.4	39	10-150	
d3-N-MeFOSA	21	4.3	20	10-150	
d5-N-EtFOSA	21	4.3	20	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524005	Total Amount Extracted	236mL
Lab File ID	Q210901B_009	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210901B_003
Collected	08/09/2021 14:37	Ending CCal File	Q210901B_017
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.25	6.29	
13C4 PFOA	N/A	N/A	7.61	7.66	
13C2 PFDA	N/A	N/A	8.97	8.98	
13C4 PFOS	N/A	N/A	9.44	9.47	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.74	4.80	
13C5 PFPeA	N/A	N/A	5.57	5.60	
13C3 PFBS	N/A	N/A	6.51	6.55	
13C2 4:2FTS	N/A	N/A	5.97	5.99	
13C5 PFHxA	N/A	N/A	6.26	6.28	
13C4 PFHpA	N/A	N/A	6.94	6.96	
13C3 PFHxS	N/A	N/A	8.04	8.08	
13C2 6:2FTS	N/A	N/A	7.26	7.29	
13C8 PFOA	N/A	N/A	7.61	7.64	
13C9 PFNA	N/A	N/A	8.30	8.33	
13C8 PFOS	N/A	N/A	9.45	9.52	
13C2 8:2FTS	N/A	N/A	8.59	8.63	
13C6 PFDA	N/A	N/A	8.98	9.03	
d3-MeFOSAA	N/A	N/A	8.85	8.90	
13C8 PFOSA	N/A	N/A	11.40	11.42	
d5-EtFOSAA	N/A	N/A	9.16	9.21	
13C7 PFUdA	N/A	N/A	9.65	9.72	
13C2 PFDoA	N/A	N/A	10.33	10.41	
13C2 PFTeDA	N/A	N/A	11.62	11.71	
13C3 HFPO-DA	N/A	N/A	6.54	6.56	
13C2 PFHxDA	N/A	N/A	12.73	12.77	
d7-N-MeFOSE	N/A	N/A	13.04	13.06	
d9-N-EtFOSE	N/A	N/A	13.52	13.53	
d3-N-MeFOSA	N/A	N/A	13.24	13.26	
d5-N-EtFOSA	N/A	N/A	13.68	13.70	

**REPORT OF LABORATORY ANALYSIS**

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





**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524005	Total Amount Extracted	236mL
Lab File ID	Q210901B_009	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210901B_003
Collected	08/09/2021 14:37	Ending CCal File	Q210901B_017
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.75	4.82	
PFPeA	N/A	N/A	5.57	5.63	
HFPO-DA	0.000	0.460	0.00	6.61	
PFBS	0.380	0.360	6.52	6.54	
PFHxA	0.082	0.0770	6.26	6.32	
4:2 FTS	0.000	1.10	0.00	5.99	
PFPeS	0.000	0.390	7.39	7.32	
PFHpA	0.710	0.350	6.94	6.96	
DONA	0.000	0.510	0.00	7.25	
PFHxS	0.000	0.290	8.04	8.05	
PFOA	0.360	0.270	7.62	7.63	
6:2 FTS	1.10	1.20	7.26	7.28	
PFHpS	0.000	0.410	8.77	8.79	
PFNA	0.150	0.290	8.29	8.32	
PFOSAm	N/A	N/A	11.41	11.40	
PFOS	0.190	0.200	9.46	9.46	
MeFOSA	0.000	0.530	0.00	13.29	
PFDA	0.130	0.140	8.99	9.02	
EtFOSAm	0.000	0.560	0.00	13.73	
8:2 FTS	0.000	1.80	0.00	8.62	
9-Cl-PF3ON	0.000	0.0510	0.00	10.00	
PFNS	0.000	0.220	0.00	10.16	
PFUnDA	0.000	0.140	9.68	9.71	
NMeFOSAA	0.490	0.770	8.86	8.89	
NEtFOSAA	0.440	0.480	9.17	9.20	
PFDS	0.290	0.240	10.79	10.82	
PFDOA	0.210	0.190	10.34	10.44	
MeFOSE	N/A	N/A	0.00	13.10	
10:2 FTS	0.000	1.60	0.00	9.95	
EtFOSE	0.000	0.000	0.00	13.58	
11-Cl-PF3OUdS	0.000	0.0240	0.00	11.29	
PFTTrDA	0.000	0.190	0.00	11.02	
PFDoS	0.000	0.240	0.00	12.05	
PFTDA	0.000	0.160	0.00	11.66	
PFHXDA	0.200	0.150	12.72	12.78	
PFODA	0.000	0.160	0.00	13.62	

**REPORT OF LABORATORY ANALYSIS**

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





**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	████████████████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524006	Total Amount Extracted	245mL
Lab File ID	Q210831B_035	Ical ID	210831A01
Matrix	Water	CCal File	Q210831B_025
Collected	08/09/2021 13:52	Ending CCal File	Q210831B_036
Received	08/13/2021 08:50	Blank File	Q210831B_018

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	ND	2.0	2.0	0.45	1	375-22-4	
PFPeA	ND	2.0	2.0	0.45	1	2706-90-3	
HFPO-DA	ND	2.0	2.0	0.54	1	13252-13-6	
PFBS	ND	1.8	1.8	0.48	1	375-73-5	
PFHxA	ND	2.0	2.0	0.45	1	307-24-4	
4:2 FTS	ND	1.9	1.9	0.57	1	757124-72-4	
PFPeS	ND	1.9	1.9	0.48	1	2706-91-4	
PFHpA	ND	2.0	2.0	0.56	1	375-85-9	
DONA	ND	1.9	1.9	0.52	1	919005-14-4	
PFHxS	ND	1.9	1.9	0.52	1	355-46-4	
PFOA	ND	2.0	2.0	0.60	1	335-67-1	
6:2 FTS	ND	1.9	1.9	0.66	1	27619-97-2	
PFHpS	ND	1.9	1.9	0.42	1	375-92-8	
PFNA	ND	2.0	2.0	0.75	1	375-95-1	
PFOSAm	ND	2.0	2.0	0.83	1	754-91-6	
PFOS	ND	1.9	1.9	0.56	1	1763-23-1	
MeFOSA	ND	2.0	2.0	0.52	1	31506-32-8	
PFDA	ND	2.0	2.0	0.57	1	335-76-2	
EtFOSAm	ND	2.0	2.0	0.62	1	4151-50-2	
8:2 FTS	ND	2.0	2.0	0.67	1	39108-34-4	
9-CI-PF3ON	ND	1.9	1.9	0.31	1	756426-58-1	
PFNS	ND	2.0	2.0	0.45	1	68259-12-1	
PFUnDA	ND	2.0	2.0	0.55	1	2058-94-8	
NMeFOSAA	ND	2.0	2.0	0.44	1	2355-31-9	
NEtFOSAA	ND	2.0	2.0	0.57	1	2991-50-6	
PFDS	ND	2.0	2.0	0.46	1	335-77-3	
PFDOA	ND	2.0	2.0	0.49	1	307-55-1	
MeFOSE	ND	2.0	2.0	0.34	1	24448-09-7	
10:2 FTS	ND	2.0	2.0	0.75	1	120226-60-0	
EtFOSE	ND	2.0	2.0	0.51	1	1691-99-2	
11-CI-PF3OUdS	ND	1.9	1.9	0.44	1	763051-92-9	
PFTTrDA	ND	2.0	2.0	0.63	1	72629-94-8	
PFDoS	ND	2.0	2.0	0.47	1	79780-39-5	
PFTDA	ND	2.0	2.0	0.49	1	376-06-7	
PFHXDA	ND	2.0	2.0	0.37	1	67905-19-5	
PFODA	ND	2.0	2.0	0.60	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	████████████████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524006	Total Amount Extracted	245mL
Lab File ID	Q210831B_035	Ical ID	210831A01
Matrix	Water	CCal File	Q210831B_025
Collected	08/09/2021 13:52	Ending CCal File	Q210831B_036
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	20	20	100	50-150	
13C4_PFOA	20	25	122	50-150	
13C2_PFDA	20	22	110	50-150	
13C4_PFOS	20	21	105	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	20	23	113	50-150	
13C5_PFPeA	20	21	104	50-150	
13C3_PFBS	19	18	93	50-150	
13C2_4:2FTS	19	19	99	50-150	
13C5_PFHxA	20	23	112	50-150	
13C4_PFHpA	20	24	116	50-150	
13C3_PFHxS	19	19	98	50-150	
13C2_6:2FTS	19	21	108	50-150	
13C8_PFOA	20	21	105	50-150	
13C9_PFNA	20	22	108	50-150	
13C8_PFOS	20	21	108	50-150	
13C2_8:2FTS	20	18	90	50-150	
13C6_PFDA	20	22	106	50-150	
d3-MeFOSAA	20	19	92	50-150	
13C8_PFOA	20	15	74	50-150	
d5-EtFOSAA	20	17	84	50-150	
13C7_PFUdA	20	19	91	50-150	
13C2_PFDoA	20	19	92	50-150	
13C2_PFTeDA	20	18	87	50-150	
13C3_HFPO-DA	20	26	128	50-150	
13C2_PFHxDA	20	18	87	50-150	
d7-N-MeFOSE	20	13	64	10-150	
d9-N-EtFOSE	20	12	58	10-150	
d3-N-MeFOSA	20	7.7	38	10-150	
d5-N-EtFOSA	20	7.8	38	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	████████████████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524006	Total Amount Extracted	245mL
Lab File ID	Q210831B_035	Ical ID	210831A01
Matrix	Water	CCal File	Q210831B_025
Collected	08/09/2021 13:52	Ending CCal File	Q210831B_036
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.25	6.29	
13C4 PFOA	N/A	N/A	7.62	7.66	
13C2 PFDA	N/A	N/A	8.98	8.98	
13C4 PFOS	N/A	N/A	9.45	9.48	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.72	4.74	
13C5 PFPeA	N/A	N/A	5.55	5.60	
13C3 PFBS	N/A	N/A	6.51	6.55	
13C2 4:2FTS	N/A	N/A	5.96	5.99	
13C5 PFHxA	N/A	N/A	6.25	6.28	
13C4 PFHpA	N/A	N/A	6.94	6.96	
13C3 PFHxS	N/A	N/A	8.05	8.08	
13C2 6:2FTS	N/A	N/A	7.27	7.29	
13C8 PFOA	N/A	N/A	7.62	7.64	
13C9 PFNA	N/A	N/A	8.30	8.33	
13C8 PFOS	N/A	N/A	9.45	9.48	
13C2 8:2FTS	N/A	N/A	8.60	8.62	
13C6 PFDA	N/A	N/A	8.98	9.03	
d3-MeFOSAA	N/A	N/A	8.86	8.90	
13C8 PFOSA	N/A	N/A	11.41	11.42	
d5-EtFOSAA	N/A	N/A	9.17	9.18	
13C7 PFUdA	N/A	N/A	9.66	9.68	
13C2 PFDoA	N/A	N/A	10.33	10.36	
13C2 PFTeDA	N/A	N/A	11.62	11.66	
13C3 HFPO-DA	N/A	N/A	6.53	6.56	
13C2 PFHxDA	N/A	N/A	12.73	12.77	
d7-N-MeFOSE	N/A	N/A	13.04	13.06	
d9-N-EtFOSE	N/A	N/A	13.52	13.53	
d3-N-MeFOSA	N/A	N/A	13.24	13.26	
d5-N-EtFOSA	N/A	N/A	13.69	13.70	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	[REDACTED]	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524006	Total Amount Extracted	245mL
Lab File ID	Q210831B_035	Ical ID	210831A01
Matrix	Water	CCal File	Q210831B_025
Collected	08/09/2021 13:52	Ending CCal File	Q210831B_036
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.72	4.82	
PFPeA	N/A	N/A	5.56	5.56	
HFPO-DA	0.000	0.350	0.00	6.61	
PFBS	0.490	0.350	6.52	6.54	
PFHxA	0.054	0.0920	6.25	6.32	
4:2 FTS	0.000	0.940	0.00	5.99	
PFPeS	0.000	0.450	0.00	7.32	
PFHpA	0.580	0.500	6.94	6.98	
DONA	0.000	0.440	0.00	7.21	
PFHxS	0.000	0.310	0.00	8.05	
PFOA	0.240	0.270	7.63	7.63	
6:2 FTS	1.80	1.10	7.28	7.28	
PFHpS	0.000	0.450	0.00	8.79	
PFNA	0.000	0.250	0.00	8.32	
PFOSAm	N/A	N/A	11.42	11.40	
PFOS	0.240	0.240	9.47	9.46	
MeFOSA	0.000	0.520	0.00	13.29	
PFDA	0.000	0.200	0.00	9.02	
EtFOSAm	0.000	0.500	0.00	13.73	
8:2 FTS	0.000	1.50	0.00	8.62	
9-Cl-PF3ON	0.000	0.0390	0.00	10.00	
PFNS	0.000	0.230	0.00	10.16	
PFUnDA	0.000	0.170	0.00	9.71	
NMeFOSAA	0.000	0.740	0.00	8.89	
NEtFOSAA	0.000	0.500	0.00	9.15	
PFDS	0.000	0.270	0.00	10.82	
PFDOA	0.000	0.180	0.00	10.44	
MeFOSE	N/A	N/A	13.08	13.10	
10:2 FTS	0.000	1.50	0.00	9.95	
EtFOSE	0.000	0.000	0.00	13.58	
11-Cl-PF3OUdS	0.000	0.0280	0.00	11.29	
PFTTrDA	0.000	0.180	0.00	11.02	
PFDoS	0.000	0.250	0.00	12.05	
PFTDA	0.000	0.140	0.00	11.66	
PFHXDA	0.220	0.130	12.73	12.73	
PFODA	0.000	0.170	0.00	13.54	

**REPORT OF LABORATORY ANALYSIS**

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



**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

Client Sample ID [REDACTED]  
 Lab Sample ID 10574524007  
 Lab File ID Q210831B\_037  
 Matrix Water  
 Collected 08/09/2021 13:43  
 Received 08/13/2021 08:50

Extraction Date 08/27/2021 14:00  
 Total Amount Extracted 250mL  
 Ical ID 210831A01  
 CCal File Q210831B\_036  
 Ending CCal File Q210831B\_044  
 Blank File Q210831B\_018

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	ND	2.0	2.0	0.44	1	375-22-4	
PFPeA	ND	2.0	2.0	0.44	1	2706-90-3	
HFPO-DA	ND	2.0	2.0	0.53	1	13252-13-6	
PFBS	ND	1.8	1.8	0.47	1	375-73-5	
PFHxA	ND	2.0	2.0	0.44	1	307-24-4	
4:2 FTS	ND	1.9	1.9	0.56	1	757124-72-4	
PFPeS	ND	1.9	1.9	0.48	1	2706-91-4	
PFHpA	ND	2.0	2.0	0.55	1	375-85-9	
DONA	ND	1.9	1.9	0.51	1	919005-14-4	
PFHxS	ND	1.8	1.8	0.51	1	355-46-4	
PFOA	ND	2.0	2.0	0.59	1	335-67-1	
6:2 FTS	ND	1.9	1.9	0.65	1	27619-97-2	
PFHpS	ND	1.9	1.9	0.41	1	375-92-8	
PFNA	ND	2.0	2.0	0.74	1	375-95-1	
PFOSAm	ND	2.0	2.0	0.82	1	754-91-6	
PFOS	ND	1.9	1.9	0.55	1	1763-23-1	
MeFOSA	ND	2.0	2.0	0.51	1	31506-32-8	
PFDA	ND	2.0	2.0	0.56	1	335-76-2	
EtFOSAm	ND	2.0	2.0	0.61	1	4151-50-2	
8:2 FTS	ND	1.9	1.9	0.65	1	39108-34-4	
9-CI-PF3ON	ND	1.9	1.9	0.31	1	756426-58-1	
PFNS	ND	1.9	1.9	0.45	1	68259-12-1	
PFUnDA	ND	2.0	2.0	0.54	1	2058-94-8	
NMeFOSAA	ND	2.0	2.0	0.43	1	2355-31-9	
NEtFOSAA	ND	2.0	2.0	0.56	1	2991-50-6	
PFDS	ND	1.9	1.9	0.45	1	335-77-3	
PFDOA	ND	2.0	2.0	0.48	1	307-55-1	
MeFOSE	ND	2.0	2.0	0.33	1	24448-09-7	
10:2 FTS	ND	1.9	1.9	0.74	1	120226-60-0	
EtFOSE	ND	2.0	2.0	0.50	1	1691-99-2	
11-CI-PF3OUdS	ND	1.9	1.9	0.44	1	763051-92-9	
PFTTrDA	ND	2.0	2.0	0.62	1	72629-94-8	
PFDoS	ND	1.9	1.9	0.46	1	79780-39-5	
PFTDA	ND	2.0	2.0	0.48	1	376-06-7	
PFHXDA	ND	2.0	2.0	0.36	1	67905-19-5	
PFODA	ND	2.0	2.0	0.59	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	████████████████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524007	Total Amount Extracted	250mL
Lab File ID	Q210831B_037	Ical ID	210831A01
Matrix	Water	CCal File	Q210831B_036
Collected	08/09/2021 13:43	Ending CCal File	Q210831B_044
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	20	21	106	50-150	
13C4_PFOA	20	20	101	50-150	
13C2_PFDA	20	20	98	50-150	
13C4_PFOS	19	18	94	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBa	20	19	96	50-150	
13C5_PFPeA	20	19	93	50-150	
13C3_PFBs	19	19	101	50-150	
13C2_4:2FTS	19	17	89	50-150	
13C5_PFHxA	20	19	95	50-150	
13C4_PFHpA	20	21	104	50-150	
13C3_PFHxS	19	16	85	50-150	
13C2_6:2FTS	19	18	96	50-150	
13C8_PFOA	20	19	94	50-150	
13C9_PFNA	20	20	100	50-150	
13C8_PFOS	19	17	90	50-150	
13C2_8:2FTS	19	15	78	50-150	
13C6_PFDA	20	18	91	50-150	
d3-MeFOSAA	20	15	75	50-150	
13C8_PFOsA	20	11	57	50-150	
d5-EtFOSAA	20	14	69	50-150	
13C7_PFUdA	20	17	85	50-150	
13C2_PFDoA	20	16	82	50-150	
13C2_PFTeDA	20	17	86	50-150	
13C3_HFPO-DA	20	18	89	50-150	
13C2_PFHxDA	20	19	93	50-150	
d7-N-MeFOSE	20	9.8	49	10-150	
d9-N-EtFOSE	20	9.4	47	10-150	
d3-N-MeFOSA	20	6.5	33	10-150	
d5-N-EtFOSA	20	5.8	29	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	████████████████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524007	Total Amount Extracted	250mL
Lab File ID	Q210831B_037	Ical ID	210831A01
Matrix	Water	CCal File	Q210831B_036
Collected	08/09/2021 13:43	Ending CCal File	Q210831B_044
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.28	6.29	
13C4 PFOA	N/A	N/A	7.62	7.66	
13C2 PFDA	N/A	N/A	8.98	8.98	
13C4 PFOS	N/A	N/A	9.46	9.48	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.74	4.74	
13C5 PFPeA	N/A	N/A	5.58	5.60	
13C3 PFBS	N/A	N/A	6.54	6.55	
13C2 4:2FTS	N/A	N/A	5.99	5.99	
13C5 PFHxA	N/A	N/A	6.28	6.28	
13C4 PFHpA	N/A	N/A	6.95	6.96	
13C3 PFHxS	N/A	N/A	8.05	8.08	
13C2 6:2FTS	N/A	N/A	7.27	7.29	
13C8 PFOA	N/A	N/A	7.63	7.64	
13C9 PFNA	N/A	N/A	8.30	8.33	
13C8 PFOS	N/A	N/A	9.46	9.48	
13C2 8:2FTS	N/A	N/A	8.60	8.62	
13C6 PFDA	N/A	N/A	8.98	9.03	
d3-MeFOSAA	N/A	N/A	8.86	8.90	
13C8 PFOSA	N/A	N/A	11.42	11.42	
d5-EtFOSAA	N/A	N/A	9.17	9.18	
13C7 PFUdA	N/A	N/A	9.66	9.68	
13C2 PFDoA	N/A	N/A	10.34	10.36	
13C2 PFTeDA	N/A	N/A	11.64	11.66	
13C3 HFPO-DA	N/A	N/A	6.55	6.56	
13C2 PFHxDA	N/A	N/A	12.75	12.77	
d7-N-MeFOSE	N/A	N/A	13.06	13.06	
d9-N-EtFOSE	N/A	N/A	13.54	13.53	
d3-N-MeFOSA	N/A	N/A	13.27	13.26	
d5-N-EtFOSA	N/A	N/A	13.71	13.70	

**REPORT OF LABORATORY ANALYSIS**

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





**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	████████████████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524007	Total Amount Extracted	250mL
Lab File ID	Q210831B_037	Ical ID	210831A01
Matrix	Water	CCal File	Q210831B_036
Collected	08/09/2021 13:43	Ending CCal File	Q210831B_044
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.75	4.82	
PFPeA	N/A	N/A	5.60	5.63	
HFPO-DA	0.000	0.390	0.00	6.61	
PFBS	0.360	0.440	6.54	6.54	
PFHxA	0.000	0.0710	6.29	6.32	
4:2 FTS	0.000	0.780	0.00	5.99	
PFPeS	0.000	0.430	0.00	7.32	
PFHpA	0.550	0.430	6.96	6.98	
DONA	0.000	0.440	0.00	7.21	
PFHxS	0.000	0.300	0.00	8.05	
PFOA	0.000	0.260	0.00	7.63	
6:2 FTS	1.30	0.990	7.28	7.28	
PFHpS	0.000	0.330	0.00	8.79	
PFNA	0.000	0.290	0.00	8.32	
PFOSAm	N/A	N/A	11.43	11.40	
PFOS	0.170	0.190	9.48	9.46	
MeFOSA	0.000	0.550	0.00	13.29	
PFDA	0.000	0.200	0.00	9.02	
EtFOSAm	0.000	0.480	0.00	13.73	
8:2 FTS	0.000	1.60	0.00	8.62	
9-Cl-PF3ON	0.000	0.0330	0.00	10.00	
PFNS	0.000	0.240	10.19	10.16	
PFUnDA	0.000	0.160	0.00	9.71	
NMeFOSAA	0.000	0.820	0.00	8.89	
NEtFOSAA	0.000	0.500	0.00	9.15	
PFDS	0.000	0.260	0.00	10.82	
PFDOA	0.000	0.160	0.00	10.44	
MeFOSE	N/A	N/A	13.10	13.10	
10:2 FTS	0.000	1.30	0.00	9.95	
EtFOSE	0.000	0.000	0.00	13.58	
11-Cl-PF3OUdS	0.000	0.0310	0.00	11.29	
PFTTrDA	0.000	0.190	0.00	11.02	
PFDoS	0.000	0.260	0.00	12.05	
PFTDA	0.000	0.140	0.00	11.66	
PFHXDA	0.095	0.140	12.75	12.78	
PFODA	0.000	0.160	0.00	13.54	

**REPORT OF LABORATORY ANALYSIS**

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





**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524008	Total Amount Extracted	268mL
Lab File ID	Q210831B_038	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210831B_036
Collected	08/09/2021 15:02	Ending CCal File	Q210831B_044
Received	08/13/2021 08:50	Blank File	Q210831B_018

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	12	1.9	1.9	0.41	1	375-22-4	
PFPeA	2.9	1.9	1.9	0.41	1	2706-90-3	
HFPO-DA	ND	1.9	1.9	0.49	1	13252-13-6	
PFBS	ND	1.7	1.7	0.44	1	375-73-5	
PFHxA	2.1	1.9	1.9	0.41	1	307-24-4	
4:2 FTS	ND	1.7	1.7	0.52	1	757124-72-4	
PFPeS	ND	1.8	1.8	0.44	1	2706-91-4	
PFHpA	ND	1.9	1.9	0.51	1	375-85-9	
DONA	ND	1.8	1.8	0.48	1	919005-14-4	
PFHxS	ND	1.7	1.7	0.47	1	355-46-4	
PFOA	ND	1.9	1.9	0.55	1	335-67-1	
6:2 FTS	ND	1.8	1.8	0.60	1	27619-97-2	
PFHpS	ND	1.8	1.8	0.38	1	375-92-8	
PFNA	ND	1.9	1.9	0.69	1	375-95-1	
PFOSAm	ND	1.9	1.9	0.76	1	754-91-6	
PFOS	ND	1.7	1.7	0.51	1	1763-23-1	
MeFOSA	ND	1.9	1.9	0.48	1	31506-32-8	
PFDA	ND	1.9	1.9	0.53	1	335-76-2	
EtFOSAm	ND	1.9	1.9	0.57	1	4151-50-2	
8:2 FTS	ND	1.8	1.8	0.61	1	39108-34-4	
9-CI-PF3ON	ND	1.7	1.7	0.28	1	756426-58-1	
PFNS	ND	1.8	1.8	0.42	1	68259-12-1	
PFUnDA	ND	1.9	1.9	0.50	1	2058-94-8	
NMeFOSAA	ND	1.9	1.9	0.41	1	2355-31-9	
NEtFOSAA	ND	1.9	1.9	0.52	1	2991-50-6	
PFDS	ND	1.8	1.8	0.42	1	335-77-3	
PFDOA	ND	1.9	1.9	0.45	1	307-55-1	
MeFOSE	ND	1.9	1.9	0.31	1	24448-09-7	
10:2 FTS	ND	1.8	1.8	0.69	1	120226-60-0	
EtFOSE	ND	1.9	1.9	0.46	1	1691-99-2	
11-CI-PF3OUdS	ND	1.8	1.8	0.41	1	763051-92-9	
PFTTrDA	ND	1.9	1.9	0.58	1	72629-94-8	
PFDoS	ND	1.8	1.8	0.43	1	79780-39-5	
PFTDA	ND	1.9	1.9	0.44	1	376-06-7	
PFHxDA	ND	1.9	1.9	0.34	1	67905-19-5	
PFODA	ND	1.9	1.9	0.55	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524008	Total Amount Extracted	268mL
Lab File ID	Q210831B_038	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210831B_036
Collected	08/09/2021 15:02	Ending CCal File	Q210831B_044
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	19	21	113	50-150	
13C4_PFOA	19	19	104	50-150	
13C2_PFDA	19	21	111	50-150	
13C4_PFOS	18	17	97	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBa	19	15	80	50-150	
13C5_PFPeA	19	19	103	50-150	
13C3_PFBs	17	16	94	50-150	
13C2_4:2Fts	17	29	167	50-150	R
13C5_PFHxA	19	21	110	50-150	
13C4_PFHpA	19	22	117	50-150	
13C3_PFHxS	18	18	105	50-150	
13C2_6:2Fts	18	23	130	50-150	
13C8_PFOA	19	19	104	50-150	
13C9_PfNA	19	19	104	50-150	
13C8_PFOs	18	17	96	50-150	
13C2_8:2Fts	18	17	97	50-150	
13C6_PFDA	19	20	108	50-150	
d3-MeFOSAA	19	18	99	50-150	
13C8_PFOsA	19	13	70	50-150	
d5-EtFOSAA	19	17	91	50-150	
13C7_PFUdA	19	18	94	50-150	
13C2_PFDoA	19	18	98	50-150	
13C2_PFTeDA	19	17	93	50-150	
13C3_HFPO-DA	19	19	99	50-150	
13C2_PFHxDA	19	16	85	50-150	
d7-N-MeFOSE	19	11	61	10-150	
d9-N-EtFOSE	19	11	58	10-150	
d3-N-MeFOSA	19	7.0	37	10-150	
d5-N-EtFOSA	19	6.2	33	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524008	Total Amount Extracted	268mL
Lab File ID	Q210831B_038	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210831B_036
Collected	08/09/2021 15:02	Ending CCal File	Q210831B_044
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.27	6.29	
13C4 PFOA	N/A	N/A	7.61	7.66	
13C2 PFDA	N/A	N/A	8.98	8.98	
13C4 PFOS	N/A	N/A	9.46	9.48	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.76	4.74	
13C5 PFPeA	N/A	N/A	5.60	5.60	
13C3 PFBS	N/A	N/A	6.53	6.55	
13C2 4:2FTS	N/A	N/A	5.99	5.99	R
13C5 PFHxA	N/A	N/A	6.27	6.28	
13C4 PFHpA	N/A	N/A	6.94	6.96	
13C3 PFHxS	N/A	N/A	8.04	8.08	
13C2 6:2FTS	N/A	N/A	7.26	7.29	
13C8 PFOA	N/A	N/A	7.61	7.64	
13C9 PFNA	N/A	N/A	8.29	8.33	
13C8 PFOS	N/A	N/A	9.47	9.48	
13C2 8:2FTS	N/A	N/A	8.59	8.62	
13C6 PFDA	N/A	N/A	8.98	9.03	
d3-MeFOSAA	N/A	N/A	8.86	8.90	
13C8 PFOSA	N/A	N/A	11.43	11.42	
d5-EtFOSAA	N/A	N/A	9.17	9.18	
13C7 PFUdA	N/A	N/A	9.67	9.68	
13C2 PFDoA	N/A	N/A	10.35	10.36	
13C2 PFTeDA	N/A	N/A	11.64	11.66	
13C3 HFPO-DA	N/A	N/A	6.54	6.56	
13C2 PFHxDA	N/A	N/A	12.75	12.77	
d7-N-MeFOSE	N/A	N/A	13.06	13.06	
d9-N-EtFOSE	N/A	N/A	13.54	13.53	
d3-N-MeFOSA	N/A	N/A	13.26	13.26	
d5-N-EtFOSA	N/A	N/A	13.71	13.70	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524008	Total Amount Extracted	268mL
Lab File ID	Q210831B_038	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210831B_036
Collected	08/09/2021 15:02	Ending CCal File	Q210831B_044
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.76	4.82	
PFPeA	N/A	N/A	5.61	5.63	
HFPO-DA	0.000	0.390	0.00	6.61	
PFBS	0.440	0.440	6.53	6.54	
PFHxA	0.100	0.0710	6.28	6.32	
4:2 FTS	0.000	0.780	0.00	5.99	
PFPeS	0.230	0.430	7.31	7.32	
PFHpA	0.460	0.430	6.95	6.98	
DONA	0.000	0.440	0.00	7.15	
PFHxS	0.290	0.300	8.04	8.05	
PFOA	0.290	0.260	7.62	7.63	
6:2 FTS	1.10	0.990	7.26	7.28	
PFHpS	0.000	0.330	0.00	8.79	
PFNA	0.160	0.290	8.29	8.32	
PFOSAm	N/A	N/A	11.44	11.40	
PFOS	0.160	0.190	9.48	9.46	
MeFOSA	0.000	0.550	0.00	13.29	
PFDA	0.110	0.200	8.99	9.02	
EtFOSAm	0.000	0.480	0.00	13.73	
8:2 FTS	1.70	1.60	8.60	8.62	
9-Cl-PF3ON	0.000	0.0330	0.00	10.00	
PFNS	0.000	0.240	0.00	10.16	
PFUnDA	0.000	0.160	0.00	9.71	
NMeFOSAA	0.610	0.820	8.87	8.89	
NEtFOSAA	0.530	0.500	9.00	9.15	
PFDS	0.000	0.260	0.00	10.82	
PFDOA	0.000	0.160	0.00	10.44	
MeFOSE	N/A	N/A	13.11	13.10	
10:2 FTS	0.000	1.30	0.00	9.95	
EtFOSE	0.000	0.000	0.00	13.58	
11-Cl-PF3OUdS	0.000	0.0310	0.00	11.29	
PFTTrDA	0.000	0.190	0.00	11.02	
PFDoS	0.000	0.260	0.00	12.05	
PFTDA	0.000	0.140	0.00	11.66	
PFHXDA	0.180	0.140	12.75	12.78	
PFODA	0.000	0.160	0.00	13.54	

**REPORT OF LABORATORY ANALYSIS**

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



**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	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524009	Total Amount Extracted	248mL
Lab File ID	Q210831B_039	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210831B_036
Collected	08/09/2021 15:07	Ending CCal File	Q210831B_044
Received	08/13/2021 08:50	Blank File	Q210831B_018

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	12	2.0	2.0	0.44	1	375-22-4	
PFPeA	2.5	2.0	2.0	0.44	1	2706-90-3	
HFPO-DA	ND	2.0	2.0	0.53	1	13252-13-6	
PFBS	ND	1.8	1.8	0.48	1	375-73-5	
PFHxA	2.1	2.0	2.0	0.44	1	307-24-4	
4:2 FTS	ND	1.9	1.9	0.56	1	757124-72-4	
PFPeS	ND	1.9	1.9	0.48	1	2706-91-4	
PFHpA	2.1	2.0	2.0	0.55	1	375-85-9	
DONA	ND	1.9	1.9	0.52	1	919005-14-4	
PFHxS	ND	1.8	1.8	0.51	1	355-46-4	
PFOA	ND	2.0	2.0	0.59	1	335-67-1	
6:2 FTS	ND	1.9	1.9	0.65	1	27619-97-2	
PFHpS	ND	1.9	1.9	0.41	1	375-92-8	
PFNA	ND	2.0	2.0	0.75	1	375-95-1	
PFOSAm	ND	2.0	2.0	0.82	1	754-91-6	
PFOS	ND	1.9	1.9	0.55	1	1763-23-1	
MeFOSA	ND	2.0	2.0	0.51	1	31506-32-8	
PFDA	ND	2.0	2.0	0.57	1	335-76-2	
EtFOSAm	ND	2.0	2.0	0.61	1	4151-50-2	
8:2 FTS	ND	1.9	1.9	0.66	1	39108-34-4	
9-CI-PF3ON	ND	1.9	1.9	0.31	1	756426-58-1	
PFNS	ND	1.9	1.9	0.45	1	68259-12-1	
PFUnDA	ND	2.0	2.0	0.54	1	2058-94-8	
NMeFOSAA	ND	2.0	2.0	0.44	1	2355-31-9	
NEtFOSAA	ND	2.0	2.0	0.56	1	2991-50-6	
PFDS	ND	1.9	1.9	0.45	1	335-77-3	
PFDOA	ND	2.0	2.0	0.49	1	307-55-1	
MeFOSE	ND	2.0	2.0	0.33	1	24448-09-7	
10:2 FTS	ND	1.9	1.9	0.74	1	120226-60-0	
EtFOSE	ND	2.0	2.0	0.50	1	1691-99-2	
11-CI-PF3OUdS	ND	1.9	1.9	0.44	1	763051-92-9	
PFTTrDA	ND	2.0	2.0	0.63	1	72629-94-8	
PFDoS	ND	2.0	2.0	0.46	1	79780-39-5	
PFTDA	ND	2.0	2.0	0.48	1	376-06-7	
PFHXDA	ND	2.0	2.0	0.37	1	67905-19-5	
PFODA	ND	2.0	2.0	0.59	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	██████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524009	Total Amount Extracted	248mL
Lab File ID	Q210831B_039	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210831B_036
Collected	08/09/2021 15:07	Ending CCal File	Q210831B_044
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	20	25	124	50-150	
13C4_PFOA	20	23	116	50-150	
13C2_PFDA	20	25	122	50-150	
13C4_PFOS	19	20	101	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBa	20	17	83	50-150	
13C5_PFPeA	20	22	108	50-150	
13C3_PFBs	19	21	111	50-150	
13C2_4:2Fts	19	30	160	50-150	R
13C5_PFHxA	20	23	115	50-150	
13C4_PFHpA	20	24	119	50-150	
13C3_PFHxS	19	22	116	50-150	
13C2_6:2Fts	19	24	127	50-150	
13C8_PFOA	20	22	110	50-150	
13C9_PfNA	20	25	125	50-150	
13C8_PFOs	19	22	117	50-150	
13C2_8:2Fts	19	21	108	50-150	
13C6_PFDA	20	25	123	50-150	
d3-MeFOSAA	20	19	95	50-150	
13C8_PFOsA	20	15	72	50-150	
d5-EtFOSAA	20	16	81	50-150	
13C7_PFUdA	20	19	92	50-150	
13C2_PFDoA	20	16	79	50-150	
13C2_PFTeDA	20	15	75	50-150	
13C3_HFPO-DA	20	20	100	50-150	
13C2_PFHxDA	20	14	72	50-150	
d7-N-MeFOSE	20	11	55	10-150	
d9-N-EtFOSE	20	11	53	10-150	
d3-N-MeFOSA	20	9.1	45	10-150	
d5-N-EtFOSA	20	8.7	43	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	████████████████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524009	Total Amount Extracted	248mL
Lab File ID	Q210831B_039	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210831B_036
Collected	08/09/2021 15:07	Ending CCal File	Q210831B_044
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.28	6.29	
13C4 PFOA	N/A	N/A	7.62	7.66	
13C2 PFDA	N/A	N/A	8.98	8.98	
13C4 PFOS	N/A	N/A	9.46	9.48	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.74	4.74	
13C5 PFPeA	N/A	N/A	5.59	5.60	
13C3 PFBS	N/A	N/A	6.54	6.55	
13C2 4:2FTS	N/A	N/A	6.00	5.99	R
13C5 PFHxA	N/A	N/A	6.28	6.28	
13C4 PFHpA	N/A	N/A	6.95	6.96	
13C3 PFHxS	N/A	N/A	8.04	8.08	
13C2 6:2FTS	N/A	N/A	7.27	7.29	
13C8 PFOA	N/A	N/A	7.62	7.64	
13C9 PFNA	N/A	N/A	8.30	8.33	
13C8 PFOS	N/A	N/A	9.46	9.48	
13C2 8:2FTS	N/A	N/A	8.60	8.62	
13C6 PFDA	N/A	N/A	8.98	9.03	
d3-MeFOSAA	N/A	N/A	8.86	8.90	
13C8 PFOSA	N/A	N/A	11.42	11.42	
d5-EtFOSAA	N/A	N/A	9.17	9.18	
13C7 PFUdA	N/A	N/A	9.66	9.68	
13C2 PFDoA	N/A	N/A	10.34	10.36	
13C2 PFTeDA	N/A	N/A	11.64	11.66	
13C3 HFPO-DA	N/A	N/A	6.56	6.56	
13C2 PFHxDA	N/A	N/A	12.75	12.77	
d7-N-MeFOSE	N/A	N/A	13.06	13.06	
d9-N-EtFOSE	N/A	N/A	13.54	13.53	
d3-N-MeFOSA	N/A	N/A	13.26	13.26	
d5-N-EtFOSA	N/A	N/A	13.71	13.70	

**REPORT OF LABORATORY ANALYSIS**

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





**Sample Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	████████████████████	Extraction Date	08/27/2021 14:00
Lab Sample ID	10574524009	Total Amount Extracted	248mL
Lab File ID	Q210831B_039	Ical ID	210831A01
Matrix	Non_Potable_Water	CCal File	Q210831B_036
Collected	08/09/2021 15:07	Ending CCal File	Q210831B_044
Received	08/13/2021 08:50	Blank File	Q210831B_018

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.75	4.82	
PFPeA	N/A	N/A	5.59	5.63	
HFPO-DA	0.000	0.390	6.57	6.61	
PFBS	0.250	0.440	6.54	6.54	
PFHxA	0.110	0.0710	6.29	6.32	I
4:2 FTS	0.000	0.780	0.00	5.99	
PFPeS	0.400	0.430	7.32	7.32	
PFHpA	0.420	0.430	6.96	6.98	
DONA	0.000	0.440	0.00	7.21	
PFHxS	0.330	0.300	8.06	8.05	
PFOA	0.290	0.260	7.63	7.63	
6:2 FTS	1.20	0.990	7.27	7.28	
PFHpS	0.000	0.330	0.00	8.79	
PFNA	0.190	0.290	8.31	8.32	
PFOSAm	N/A	N/A	11.43	11.40	
PFOS	0.230	0.190	9.48	9.46	
MeFOSA	0.000	0.550	0.00	13.29	
PFDA	0.150	0.200	8.99	9.02	
EtFOSAm	0.000	0.480	0.00	13.73	
8:2 FTS	0.000	1.60	8.59	8.62	
9-Cl-PF3ON	0.000	0.0330	0.00	10.00	
PFNS	0.000	0.240	0.00	10.16	
PFUnDA	0.000	0.160	0.00	9.71	
NMeFOSAA	1.10	0.820	8.88	8.89	
NEtFOSAA	0.000	0.500	0.00	9.15	
PFDS	0.000	0.260	0.00	10.82	
PFDOA	0.000	0.160	0.00	10.44	
MeFOSE	N/A	N/A	13.11	13.10	
10:2 FTS	0.000	1.30	0.00	9.95	
EtFOSE	0.000	0.000	0.00	13.58	
11-Cl-PF3OUdS	0.000	0.0310	0.00	11.29	
PFTTrDA	0.000	0.190	0.00	11.02	
PFDoS	0.000	0.260	0.00	12.05	
PFTDA	0.000	0.140	0.00	11.66	
PFHXDA	0.140	0.140	12.75	12.78	
PFODA	0.000	0.160	13.51	13.54	

**REPORT OF LABORATORY ANALYSIS**

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





**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKLB	Extraction Date	08/27/2021 14:00
Lab Sample ID	BLANK-92500	Total Amount Extracted	247mL
Lab File ID	Q210831B_018	Ical ID	210831A01
Matrix	Water	CCal File	Q210831B_014
Collected	08/20/2021 16:58	Ending CCal File	Q210831B_025
Received	08/20/2021 16:58	Blank File	

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.
PFBA	ND	2.0	2.0	0.45	1	375-22-4	
PFPeA	ND	2.0	2.0	0.44	1	2706-90-3	
HFPO-DA	ND	2.0	2.0	0.54	1	13252-13-6	
PFBS	ND	1.8	1.8	0.48	1	375-73-5	
PFHxA	ND	2.0	2.0	0.44	1	307-24-4	
4:2 FTS	ND	1.9	1.9	0.56	1	757124-72-4	
PFPeS	ND	1.9	1.9	0.48	1	2706-91-4	
PFHpA	ND	2.0	2.0	0.56	1	375-85-9	
DONA	ND	1.9	1.9	0.52	1	919005-14-4	
PFHxS	ND	1.8	1.8	0.51	1	355-46-4	
PFOA	ND	2.0	2.0	0.59	1	335-67-1	
6:2 FTS	ND	1.9	1.9	0.65	1	27619-97-2	
PFHpS	ND	1.9	1.9	0.42	1	375-92-8	
PFNA	ND	2.0	2.0	0.75	1	375-95-1	
PFOSAm	ND	2.0	2.0	0.83	1	754-91-6	
PFOS	ND	1.9	1.9	0.55	1	1763-23-1	
MeFOSA	ND	2.0	2.0	0.52	1	31506-32-8	
PFDA	ND	2.0	2.0	0.57	1	335-76-2	
EtFOSAm	ND	2.0	2.0	0.62	1	4151-50-2	
8:2 FTS	ND	1.9	1.9	0.66	1	39108-34-4	
9-CI-PF3ON	ND	1.9	1.9	0.31	1	756426-58-1	
PFNS	ND	1.9	1.9	0.45	1	68259-12-1	
PFUnDA	ND	2.0	2.0	0.55	1	2058-94-8	
NMeFOSAA	ND	2.0	2.0	0.44	1	2355-31-9	
NEtFOSAA	ND	2.0	2.0	0.56	1	2991-50-6	
PFDS	ND	2.0	2.0	0.46	1	335-77-3	
PFDOA	ND	2.0	2.0	0.49	1	307-55-1	
MeFOSE	ND	2.0	2.0	0.33	1	24448-09-7	
10:2 FTS	ND	2.0	2.0	0.74	1	120226-60-0	
EtFOSE	ND	2.0	2.0	0.50	1	1691-99-2	
11-CI-PF3OUdS	ND	1.9	1.9	0.44	1	763051-92-9	
PFTTrDA	ND	2.0	2.0	0.63	1	72629-94-8	
PFDoS	ND	2.0	2.0	0.47	1	79780-39-5	
PFTDA	ND	2.0	2.0	0.48	1	376-06-7	
PFHxDA	ND	2.0	2.0	0.37	1	67905-19-5	
PFODA	ND	2.0	2.0	0.59	1	16517-11-6	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKLB	Extraction Date	08/27/2021 14:00
Lab Sample ID	BLANK-92500	Total Amount Extracted	247mL
Lab File ID	Q210831B_018	Ical ID	210831A01
Matrix	Water	CCal File	Q210831B_014
Collected	08/20/2021 16:58	Ending CCal File	Q210831B_025
Received	08/20/2021 16:58	Blank File	

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	20	18	91	50-150	
13C4_PFOA	20	19	93	50-150	
13C2_PFDA	20	19	95	50-150	
13C4_PFOS	19	17	89	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBa	20	19	95	50-150	
13C5_PFPeA	20	19	93	50-150	
13C3_PFBs	19	20	107	50-150	
13C2_4:2FTS	19	17	90	50-150	
13C5_PFHxA	20	18	91	50-150	
13C4_PFHpA	20	18	89	50-150	
13C3_PFHxS	19	19	100	50-150	
13C2_6:2FTS	19	18	92	50-150	
13C8_PFOA	20	19	93	50-150	
13C9_PFNA	20	18	88	50-150	
13C8_PFOS	19	17	86	50-150	
13C2_8:2FTS	19	20	103	50-150	
13C6_PFDA	20	19	95	50-150	
d3-MeFOSAA	20	16	80	50-150	
13C8_PFOsA	20	16	81	50-150	
d5-EtFOSAA	20	14	71	50-150	
13C7_PFUdA	20	19	96	50-150	
13C2_PFDoA	20	18	90	50-150	
13C2_PFTeDA	20	17	83	50-150	
13C3_HFPO-DA	20	18	89	50-150	
13C2_PFHxDA	20	18	90	50-150	
d7-N-MeFOSE	20	17	83	10-150	
d9-N-EtFOSE	20	16	80	10-150	
d3-N-MeFOSA	20	12	57	10-150	
d5-N-EtFOSA	20	13	62	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKLB	Extraction Date	08/27/2021 14:00
Lab Sample ID	BLANK-92500	Total Amount Extracted	247mL
Lab File ID	Q210831B_018	Ical ID	210831A01
Matrix	Water	CCal File	Q210831B_014
Collected	08/20/2021 16:58	Ending CCal File	Q210831B_025
Received	08/20/2021 16:58	Blank File	

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.28	6.29	
13C4 PFOA	N/A	N/A	7.62	7.66	
13C2 PFDA	N/A	N/A	8.98	8.98	
13C4 PFOS	N/A	N/A	9.46	9.48	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.74	4.74	
13C5 PFPeA	N/A	N/A	5.58	5.60	
13C3 PFBS	N/A	N/A	6.54	6.55	
13C2 4:2FTS	N/A	N/A	5.99	5.99	
13C5 PFHxA	N/A	N/A	6.28	6.28	
13C4 PFHpA	N/A	N/A	6.95	6.96	
13C3 PFHxS	N/A	N/A	8.05	8.08	
13C2 6:2FTS	N/A	N/A	7.27	7.29	
13C8 PFOA	N/A	N/A	7.62	7.64	
13C9 PFNA	N/A	N/A	8.30	8.33	
13C8 PFOS	N/A	N/A	9.46	9.48	
13C2 8:2FTS	N/A	N/A	8.60	8.62	
13C6 PFDA	N/A	N/A	8.99	9.03	
d3-MeFOSAA	N/A	N/A	8.86	8.90	
13C8 PFOSA	N/A	N/A	11.43	11.42	
d5-EtFOSAA	N/A	N/A	9.17	9.18	
13C7 PFUdA	N/A	N/A	9.66	9.68	
13C2 PFDoA	N/A	N/A	10.34	10.36	
13C2 PFTeDA	N/A	N/A	11.65	11.66	
13C3 HFPO-DA	N/A	N/A	6.56	6.56	
13C2 PFHxDA	N/A	N/A	12.76	12.77	
d7-N-MeFOSE	N/A	N/A	13.06	13.06	
d9-N-EtFOSE	N/A	N/A	13.55	13.53	
d3-N-MeFOSA	N/A	N/A	13.27	13.26	
d5-N-EtFOSA	N/A	N/A	13.72	13.70	

**REPORT OF LABORATORY ANALYSIS**

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



**Method Blank Analysis Summary**  
 PFAS by Isotope Dilution

Client Sample ID	BLKLB	Extraction Date	08/27/2021 14:00
Lab Sample ID	BLANK-92500	Total Amount Extracted	247mL
Lab File ID	Q210831B_018	Ical ID	210831A01
Matrix	Water	CCal File	Q210831B_014
Collected	08/20/2021 16:58	Ending CCal File	Q210831B_025
Received	08/20/2021 16:58	Blank File	

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.74	4.82	
PFPeA	N/A	N/A	5.59	5.63	
HFPO-DA	0.000	0.380	0.00	6.71	
PFBS	0.340	0.330	6.54	6.54	
PFHxA	0.000	0.0990	6.29	6.32	
4:2 FTS	0.000	0.970	0.00	5.99	
PFPeS	0.000	0.450	0.00	7.32	
PFHpA	0.570	0.460	6.95	6.98	
DONA	0.000	0.470	0.00	7.21	
PFHxS	0.000	0.290	8.06	8.05	
PFOA	0.000	0.250	0.00	7.63	
6:2 FTS	1.10	1.20	7.27	7.28	
PFHpS	0.000	0.410	0.00	8.79	
PFNA	0.000	0.270	0.00	8.32	
PFOSAm	N/A	N/A	11.44	11.40	
PFOS	0.160	0.240	9.47	9.46	
MeFOSA	0.000	0.470	13.30	13.29	
PFDA	0.000	0.160	0.00	9.02	
EtFOSAm	0.000	0.510	0.00	13.73	
8:2 FTS	0.000	1.40	0.00	8.62	
9-Cl-PF3ON	0.000	0.0440	0.00	10.00	
PFNS	0.000	0.230	0.00	10.16	
PFUnDA	0.000	0.160	0.00	9.71	
NMeFOSAA	0.000	0.670	0.00	8.89	
NEtFOSAA	0.000	0.490	0.00	9.15	
PFDS	0.000	0.260	0.00	10.82	
PFDOA	0.000	0.160	0.00	10.44	
MeFOSE	N/A	N/A	0.00	13.10	
10:2 FTS	0.000	1.70	10.01	9.95	
EtFOSE	0.000	0.000	0.00	13.58	
11-Cl-PF3OUdS	0.000	0.0260	0.00	11.29	
PFTTrDA	0.000	0.200	0.00	11.02	
PFDoS	0.000	0.250	0.00	12.05	
PFTDA	0.000	0.140	0.00	11.66	
PFHXDA	0.150	0.140	12.77	12.78	
PFODA	0.000	0.170	0.00	13.54	

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID	LCS-92501	Instrument ID	10LCMS01
Run File Name	Q210831B_019	Column ID	112EB00094
Analyzed	08/31/2021 21:31	Ical ID	210831A01
Injected By	NH	Level	L

**Injection Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	20	24	119	50-150	
13C4_PFOA	20	23	114	50-150	
13C2_PFDA	20	22	109	50-150	
13C4_PFOS	19	20	106	50-150	

**Extracted Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	20	22	108	50-150	
13C5_PFPeA	20	21	104	50-150	
13C3_PFBs	19	21	111	50-150	
13C2_4:2FTS	19	19	103	50-150	
13C5_PFHxA	20	23	113	50-150	
13C4_PFHpA	20	22	111	50-150	
13C3_PFHxS	19	21	113	50-150	
13C2_6:2FTS	19	20	106	50-150	
13C8_PFOA	20	21	103	50-150	
13C9_PFNA	20	19	96	50-150	
13C8_PFOS	19	18	96	50-150	
13C2_8:2FTS	19	20	102	50-150	
13C6_PFDA	20	20	101	50-150	
d3-MeFOSAA	20	17	87	50-150	
13C8_PFOSA	20	17	87	50-150	
d5-EtFOSAA	20	15	74	50-150	
13C7_PFUdA	20	20	99	50-150	
13C2_PFDaA	20	19	94	50-150	
13C2_PFTeDA	20	19	94	50-150	
13C3_HFPO-DA	20	24	118	50-150	
13C2_PFHxDA	20	20	100	50-150	
d7-N-MeFOSE	20	16	82	10-150	
d9-N-EtFOSE	20	16	82	10-150	
d3-N-MeFOSA	20	14	69	10-150	
d5-N-EtFOSA	20	12	61	10-150	

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID LCS-92501  
 Run File Name Q210831B\_019  
 Analyzed 08/31/2021 21:31  
 Injected By NH

Instrument ID 10LCMS01  
 Column ID 112EB00094  
 Ical ID 210831A01  
 Level L

**Native Analytes**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	CAS No.
PFBA	4.0	4.6	113	73-129		375-22-4
PFPeA	4.0	4.0	100	72-129		2706-90-3
HFPO-DA	4.0	3.2	80	70-140		13252-13-6
PFBS	3.6	4.0	113	72-130		375-73-5
PFHxA	4.0	3.9	98	72-129		307-24-4
4:2 FTS	3.8	3.6	96	63-143		757124-72-4
PFPeS	3.8	3.5	92	71-127		2706-91-4
PFHpA	4.0	3.5	88	72-130		375-85-9
DONA	3.8	4.0	107	70-140		919005-14-4
PFHxS	3.7	3.2	87	68-131		355-46-4
PFOA	4.0	4.4	109	71-133		335-67-1
6:2 FTS	3.8	3.8	99	64-140		27619-97-2
PFHpS	3.8	3.4	90	69-134		375-92-8
PFNA	4.0	4.0	99	69-130		375-95-1
PFOSAm	4.0	4.0	101	67-137		754-91-6
PFOS	3.7	3.5	94	65-140		1763-23-1
MeFOSA	4.0	3.4	86	68-141		31506-32-8
PFDA	4.0	4.1	101	71-129		335-76-2
EtFOSAm	4.0	3.7	92	70-140		4151-50-2
8:2 FTS	3.9	3.7	95	67-138		39108-34-4
9-CI-PF3ON	3.7	3.6	96	70-130		756426-58-1
PFNS	3.9	3.4	88	69-127		68259-12-1
PFUnDA	4.0	3.8	94	69-133		2058-94-8
NMeFOSAA	4.0	3.5	87	65-136		2355-31-9
NEtFOSAA	4.0	4.4	109	61-135		2991-50-6
PFDS	3.9	3.4	89	53-142		335-77-3
PFDOA	4.0	4.0	99	72-134		307-55-1
MeFOSE	4.0	3.7	93	70-140		24448-09-7
10:2 FTS	3.9	4.4	113	70-140		120226-60-0
EtFOSE	4.0	3.2	79	70-140		1691-99-2
11-CI-PF3OUdS	3.8	3.1	82	70-140		763051-92-9
PFTTrDA	4.0	3.7	93	65-144		72629-94-8
PFDoS	3.9	3.5	90	70-140		79780-39-5
PFTDA	4.0	3.4	84	71-132		376-06-7
PFHXDA	4.0	3.5	87	70-140		67905-19-5
PFODA	4.0	3.1	78	70-140		16517-11-6

**REPORT OF LABORATORY ANALYSIS**

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



**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID	LCS-92501	Instrument ID	10LCMS01
Run File Name	Q210831B_019	Column ID	112EB00094
Analyzed	08/31/2021 21:31	Ical ID	210831A01
Injected By	NH	Level	L

**Injection Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.27	6.29	
13C4 PFOA	N/A	N/A	7.61	7.66	
13C2 PFDA	N/A	N/A	8.97	8.98	
13C4 PFOS	N/A	N/A	9.45	9.48	

**Extracted Internal Standards**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.76	4.74	
13C5 PFPeA	N/A	N/A	5.59	5.60	
13C3 PFBS	N/A	N/A	6.53	6.55	
13C2 4:2FTS	N/A	N/A	6.00	5.99	
13C5 PFHxA	N/A	N/A	6.28	6.28	
13C4 PFHpA	N/A	N/A	6.95	6.96	
13C3 PFHxS	N/A	N/A	8.04	8.08	
13C2 6:2FTS	N/A	N/A	7.26	7.29	
13C8 PFOA	N/A	N/A	7.61	7.64	
13C9 PFNA	N/A	N/A	8.29	8.33	
13C8 PFOS	N/A	N/A	9.46	9.48	
13C2 8:2FTS	N/A	N/A	8.58	8.62	
13C6 PFDA	N/A	N/A	8.98	9.03	
d3-MeFOSAA	N/A	N/A	8.85	8.90	
13C8 PFOSA	N/A	N/A	11.43	11.42	
d5-EtFOSAA	N/A	N/A	9.16	9.18	
13C7 PFUdA	N/A	N/A	9.66	9.68	
13C2 PFDoA	N/A	N/A	10.34	10.36	
13C2 PFTeDA	N/A	N/A	11.64	11.66	
13C3 HFPO-DA	N/A	N/A	6.55	6.56	
13C2 PFHxDA	N/A	N/A	12.76	12.77	
d7-N-MeFOSE	N/A	N/A	13.06	13.06	
d9-N-EtFOSE	N/A	N/A	13.54	13.53	
d3-N-MeFOSA	N/A	N/A	13.27	13.26	
d5-N-EtFOSA	N/A	N/A	13.71	13.70	

**REPORT OF LABORATORY ANALYSIS**

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





**LCS Analysis Summary**  
 PFAS by Isotope Dilution

Lab Sample ID LCS-92501  
 Run File Name Q210831B\_019  
 Analyzed 08/31/2021 21:31  
 Injected By NH

Instrument ID 10LCMS01  
 Column ID 112EB00094  
 Ical ID 210831A01  
 Level L

**Native Analytes**

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.76	4.82	
PFPeA	N/A	N/A	5.60	5.63	
HFPO-DA	0.52	0.38	6.57	6.61	
PFBS	0.32	0.33	6.54	6.54	
PFHxA	0.07	0.09	6.29	6.32	
4:2 FTS	0.96	0.97	6.00	5.99	
PFPeS	0.38	0.45	7.31	7.32	
PFHpA	0.43	0.46	6.95	6.98	
DONA	0.44	0.47	7.19	7.21	
PFHxS	0.27	0.29	8.05	8.05	
PFOA	0.26	0.25	7.62	7.63	
6:2 FTS	1.10	1.20	7.27	7.28	
PFHpS	0.45	0.41	8.77	8.79	
PFNA	0.27	0.27	8.30	8.32	
PFOSAm	N/A	N/A	11.44	11.40	
PFOS	0.21	0.24	9.47	9.46	
MeFOSA	0.51	0.47	13.30	13.29	
PFDA	0.18	0.16	8.99	9.02	
EtFOSAm	0.43	0.51	13.74	13.73	
8:2 FTS	1.50	1.40	8.60	8.62	
9-CI-PF3ON	0.03	0.04	9.96	10.00	
PFNS	0.25	0.23	10.15	10.16	
PFUnDA	0.12	0.16	9.67	9.71	
NMeFOSAA	0.67	0.67	8.86	8.89	
NEtFOSAA	0.42	0.49	9.18	9.15	
PFDS	0.25	0.26	10.82	10.82	
PFDOA	0.15	0.16	10.34	10.44	
MeFOSE	N/A	N/A	13.10	13.10	
10:2 FTS	1.80	1.70	9.94	9.95	
EtFOSE	0.00	0.00	13.58	13.58	
11-CI-PF3OUdS	0.03	0.02	11.28	11.29	
PFTrDA	0.19	0.20	11.01	11.02	
PFDoS	0.25	0.25	12.03	12.05	
PFTDA	0.14	0.14	11.65	11.66	
PFHXDA	0.13	0.14	12.76	12.78	
PFODA	0.16	0.17	13.53	13.54	

**REPORT OF LABORATORY ANALYSIS**

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



## Appendix C

### Sample ID Key

<b>Sample ID</b>	<b>Sample Media</b>	<b>Sample Location</b>
Aquifer 1A	Water	Antelope Creek Aquifer
Aquifer 1B	Water	Antelope Creek Aquifer
Aquifer 2A	Water	Wahpeton Shallow Sand Aquifer
Aquifer 2B	Water	Wahpeton Shallow Sand Aquifer
Aquifer 2C	Water	Wahpeton Shallow Sand Aquifer
Aquifer 2D	Water	Wahpeton Shallow Sand Aquifer
Aquifer 2E	Water	Wahpeton Shallow Sand Aquifer
Aquifer 3A	Water	Souris River Aquifer
Aquifer 3B	Water	Souris River Aquifer
Aquifer 4A	Water	Minot Aquifer
Aquifer 4B	Water	Minot Aquifer
Aquifer 4C	Water	Minot Aquifer
Aquifer 4D	Water	Minot Aquifer
DEQ postfilter	RO Purified Water	
DEQ postfilter FRB	RO Purified Water	
DEQ prefilter tap FRB	RO Purified Water	
DEQ prefilter tap	RO Purified Water	
Industrial 1A	Water	Industrial Monitoring Well
Industrial 1B	Water	Industrial Monitoring Well
Industrial 1C	Water	Industrial Monitoring Well
Industrial 1D	Water	Industrial Monitoring Well
Industrial 1E	Water	Industrial Monitoring Well
Industrial 1F	Water	Industrial Monitoring Well
Industrial 1G	Water	Industrial Monitoring Well
Industrial 1 AB	Water	Industrial Monitoring Well
Industrial 1H	Water	Industrial Monitoring Well
Industrial 1I	Water	Industrial Monitoring Well
Industrial 2A	Water	Treated, Industrial Water
Landfill 1A	Water	Landfill Monitoring Well
Landfill 1B	Water	Landfill Monitoring Well
Landfill 2A	Leachate	Landfill Leachate
Landfill 2B	Water	Landfill Monitoring Well
Landfill 2C	Water	Landfill Monitoring Well
Landfill 3A	Leachate	Landfill Leachate
Landfill 3B	Water	Landfill Monitoring Well
DW 1	Drinking Water	Abercrombie, City of
DW Drinking Water	Drinking Water	Alexander DW
DW Drinking Water	Drinking Water	All Seasons DW

DW Drinking Water	Drinking Water	Ashley DW 1
DW Drinking Water	Drinking Water	Badlands Dev Long x T DW
DW Drinking Water	Drinking Water	Cass Rural WD Phase III
DW Drinking Water	Drinking Water	Cass Rural WD-Phase 1
DW Drinking Water	Drinking Water	Cooperstown DW
DW Drinking Water	Drinking Water	Dakota Rural WD North DW
DW Drinking Water	Drinking Water	Dunseith DW
DW Drinking Water	Drinking Water	East Central Reg WD Trail
DW Drinking Water	Drinking Water	East Central Reg WD DW
DW Drinking Water	Drinking Water	Enderlin, City of
DW Drinking Water	Drinking Water	Fairmount, City of
DW Drinking Water	Drinking Water	Fairview Colony DW 1
DW Drinking Water	Drinking Water	Fargo DW
DW Drinking Water	Drinking Water	Forman, City of
DW Drinking Water	Drinking Water	Grafton DW
DW Drinking Water	Drinking Water	Grand Forks DW
DW Drinking Water	Drinking Water	Grant Colony
DW Drinking Water	Drinking Water	Greater Ramsey WD DW
DW Drinking Water	Drinking Water	Grenora DW
DW Drinking Water	Drinking Water	Gwinner, City of
DW Drinking Water	Drinking Water	Hannaford DW
DW Drinking Water	Drinking Water	City of Harvey DW
DW Drinking Water	Drinking Water	Horace DW
DW Drinking Water	Drinking Water	Jamestown DW
DW Drinking Water	Drinking Water	Karlsruhe DW
DW Drinking Water	Drinking Water	Lakota DW
DW Drinking Water	Drinking Water	Lehr DW 1
DW Drinking Water	Drinking Water	Lignite DW
DW Drinking Water	Drinking Water	Maddock DW
DW Drinking Water	Drinking Water	Makoti DW
DW Drinking Water	Drinking Water	Maple River
DW Drinking Water	Drinking Water	Maxbass DW
DW Drinking Water	Drinking Water	McLean-Sheridan DW
DW Drinking Water	Drinking Water	McVille DW
DW Drinking Water	Drinking Water	Medina DW
DW Drinking Water	Drinking Water	Michigan DW
DW Drinking Water	Drinking Water	Minnewaukan DW
DW Drinking Water	Drinking Water	Minot DW
DW Drinking Water	Drinking Water	Oakes DW 1

DW Drinking Water	Drinking Water	Oberon DW
DW Drinking Water	Drinking Water	Portal DW
DW Drinking Water	Drinking Water	R&R Trailer Park DW
DW Drinking Water	Drinking Water	Riverdale DW
DW Drinking Water	Drinking Water	Riverdale Subdivision DW
DW Drinking Water	Drinking Water	Rolette DW
DW Drinking Water	Drinking Water	Selz DW
DW Drinking Water	Drinking Water	Sheyenne DW
DW Drinking Water	Drinking Water	Souris DW
DW Drinking Water	Drinking Water	South Central RWD DW
DW Drinking Water	Drinking Water	Southeast WUD (East)
DW Drinking Water	Drinking Water	Southeast WUD (West) DW 1
DW Drinking Water	Drinking Water	St. John DW
DW Drinking Water	Drinking Water	City of Steele DW
DW Drinking Water	Drinking Water	City of Tuttle DW
DW Drinking Water	Drinking Water	Upper Souris System 1 DW
DW Drinking Water	Drinking Water	Valley City DW
DW Drinking Water	Drinking Water	Velva DW
DW Drinking Water	Drinking Water	Washburn DW
DW Drinking Water	Drinking Water	Westhope DW
DW Drinking Water	Drinking Water	Willowbank DW 1
WWTP 1A	Water	Bismarck Influent
WWTP 1B	Slurry	Bismarck Biosolids
WWTP 1C	Water	Bismarck Effluent
WWTP 1D	Leachate	Bismarck Leachate
WWTP 2A	Water	Williston Influent
WWTP 2B	Water	Williston Effluent
WWTP 2C	Solid	Williston Biosolids
WWTP 2D	Leachate	Williston Leachate