October 10, 2023

Jericho Water District
PWS ID No. NY2902831
MCL Deferral for 1,4-Dioxane
Quarterly Report – Third Quarter 2023

Introduction

On behalf of the Jericho Water District (JWD or District), D&B Engineers and Architects (D&B) has prepared this document in accordance with the requirements of the New York State Department of Health (NYSDOH) for public water suppliers who have been granted deferrals from maximum contaminant level (MCL) violations for 1,4-dioxane. The District was granted an MCL deferral for 1,4-dioxane in 2020. JWD was granted a deferral because it has been proactive in its efforts to establish and implement an action plan for managing the above-referenced compounds.

The last three years have been a time of unprecedented disruption in the supply chain of chemical supplies, equipment, infrastructure components, pipe and materials (e.g., steel), and treatment systems. Contractors and water suppliers, locally and nationwide, have been impacted by these issues in completing both small-scale and large-scale projects. Shortages of necessary items have significantly impacted the District, primarily in terms of price increases, decreased availability, and longer lead times. In addition, due to the rapidly changing regulatory environment through an expanded list of contaminants with lower regulatory advisory levels or MCLs, local and state regulators are experiencing a large number of capital project submissions, in addition to their regular responsibilities. This increased workload has led to longer regulatory review times of engineering reports, detailed design plans, and specifications. In many cases, these factors, which are out of the District's control, have caused delays in obtaining final regulatory approval, commencing construction, procuring equipment and necessary components, and conforming to the construction schedules proposed in the District's original application for a deferral.

The District has done everything within its power to adhere to the project schedules approved in the original deferral request, as described in the previous quarterly deferral reports. The wide reach of the impact of supply chain issues and delays was not known at the time of the original compliance deferrals and, as such, these delays were expected to become worse before improving because of increased national demand. Recognizing these exceptional circumstances, the District requested and received a 12-month deferral renewal, which extended our MCL compliance deadline to August 25, 2023. However, the supply chain issues and delays have not lessened and, therefore, additional time is necessary to achieve compliance. As such, the District was granted a 12-month MCL exemption, extending its compliance deadline to August 25, 2024.

Despite the challenges of the current supply chain along with the ever-changing regulatory environment, the District has worked tirelessly to preserve the quality of its drinking water. There are currently four different treatment plants being constructed specifically for the removal of 1,4-dioxane from seven District wells. The combined cost of these projects is greater than $50 million and this does not include the other construction projects that the District currently has ongoing to enhance other components of its water infrastructure.

The District's goal, as always, is to provide an adequate supply of potable water to its community and will continue to move forward on these projects to further that goal.

The following is a report describing JWD's progress towards maintaining the highest quality of water for our customers and meeting the deadlines set forth in the deferral approval. Updated schedules for each project are contained in Attachment A.

Corrective Action Plan Milestones

Wells 9 and 14

Startup and testing of the new treatment systems are complete. Following receipt of all water quality sample results, the performance test reports and completed works application will be sent to the Health Department. Contractors continue to work on items such as building finishes and site paving.

Although it has been granted a deferral, JWD has been able to minimize the usage of these wells during the period of this report.

Wells 20 and 21

This project is currently in the construction phase. The NCDH and NYSDOH issued approval of the engineering report during August and September 2022 and of the design plans in June and July 2023. Site work has commenced and the granular activated carbon (GAC) equipment has been installed. The existing facility with GAC operated throughout the summer. The electrical equipment and service gear delivery is scheduled for February 2024. The best case timeline for the site to be operational would be early pumping season 2024, without the use of the automatic transfer switch that is on order. Even though the District is working with its contractor, vendors, and manufacturers to bring the project to completion as quickly as possible, it may not be able to return the site to operation until summer of 2024.

Even though it has been granted a deferral, the JWD continues to monitor and minimize the usage of these wells to the greatest extent practicable while meeting system demands. JWD will continue to monitor the 1,4-dioxane concentrations and work to minimize future run times of the wells where the concentration exceeds the MCL.

Well 22

This project is currently in the construction phase. The NCDH and NYSDOH issued approval of the engineering report in October 2022. The District is currently responding to comments on the contract documents from the NCDH and NYSDOH. The on-site construction of the AOP facility is underway and the well is now removed from service for the duration of construction throughout the 2024 pumping season. The well, with treatment installed, is anticipated to be returned to service prior to the 2025 pumping season.

Although it has been granted a deferral, JWD continues to monitor and minimize the usage of this well to the greatest extent practicable while meeting system demands.

Wells 25 and 26 (Kirby Lane Facility)

This project is currently in the construction phase. The District received NCDH approval of the engineering report in September 2021. The District received NCDH approval of the detailed design documents on July 12, 2022 and NYSDOH approval of the engineering report and detailed design documents on July 25, 2022. Construction has been progressing on-site. The AOP and GAC systems are fully installed, where initial testing of the systems is anticipated to be completed in October 2023. Performance testing and sampling will then follow where approval to operate is expected prior to the end of 2023.

Although it has been granted a deferral, JWD continues to monitor and minimize the usage of these wells to the greatest extent practicable while meeting system demands. JWD will continue to monitor the 1,4-dioxane concentrations and work to minimize future run times of the wells where the concentration exceeds the MCL.

Public Notification

In accordance with the terms of the deferral, JWD has maintained an open line of communication with the public regarding its deferral. The deferral public notification documentation and the previous quarterly reports are still featured prominently on the District website.

Analytical Sampling

Sample results for the wells for which deferrals were granted (Wells 9, 14, 20, 21, 22, 25, and 26) taken during the third quarter of 2023 are contained in the below table. Full laboratory reports for each sample are contained in Attachment B.

1,4-Dioxane (parts per billion, ppb)

Well	Date		
	July 2023	**August 2023**	**September 2023**
Well 9 (N-04245)	1.1	NS	NS
Well 14 (N-06651)	3.1	NS	NS
Well 20 (N-10149)	0.87	NS	NS
Well 21 (N-12795)	1.1	NS	NS
Well 22 (N-07781)	0.4	NS	NS
Well 25 (N-08355)	10.5	NS	NS
Well 26 (N-13119)	4.9	NS	NS

NS – Not Sampled

Conclusion

As demonstrated above, JWD is actively working to preserve the quality of water for its customers and comply with the requirements put forth by the NYSDOH. The District looks forward to continuing to work towards completion of its treatment facilities.

Should you have any questions, please contact Superintendent Peter Logan at 516-921-8280 or visit the website, www.jerichowater.org.

Very truly yours,

Board of Commissioners
Jericho Water District

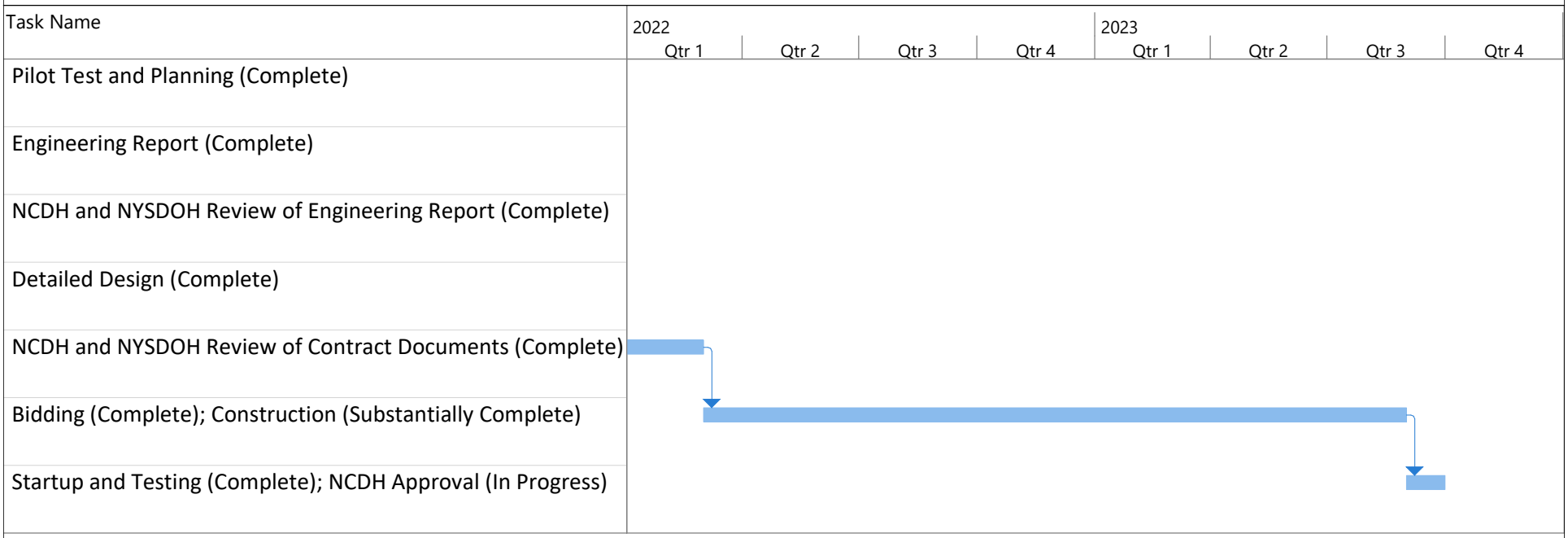
Enclosures
cc: K. Wheeler (NYSDOH)
B. Rogers (NYSDOH)
W. Provoncha (NCDH)
P. Young (NCDH)
R. Putnam (NCDH)
P. Logan (JWD)
W. Merklin (D&B)
M. Savarese (D&B)
L. Ortiz (D&B)
P. Connell (D&B)

ATTACHMENT A

Project Schedules Associated with MCL Deferral

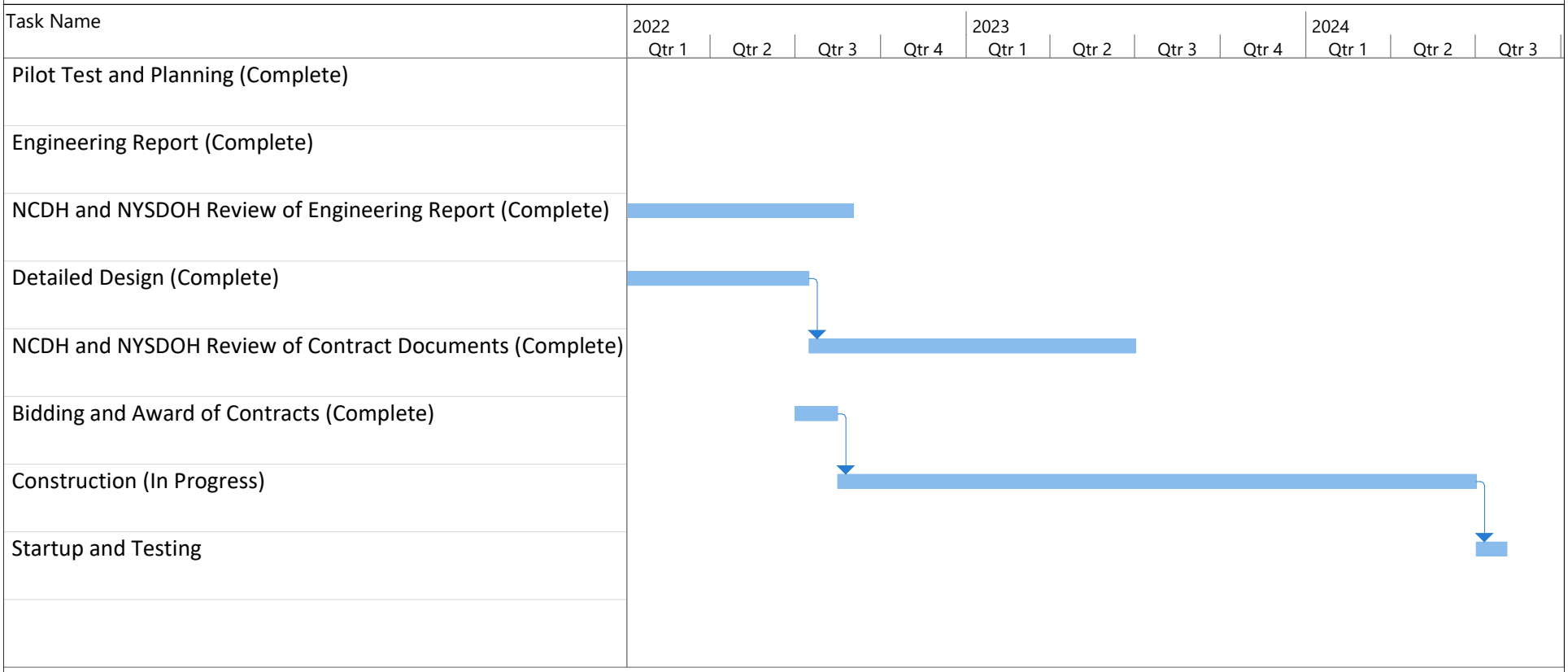
Jericho Water District
MCL Deferral
Quarterly Report - Q3 2023

Wells 9 and 14
AOP Project Schedule



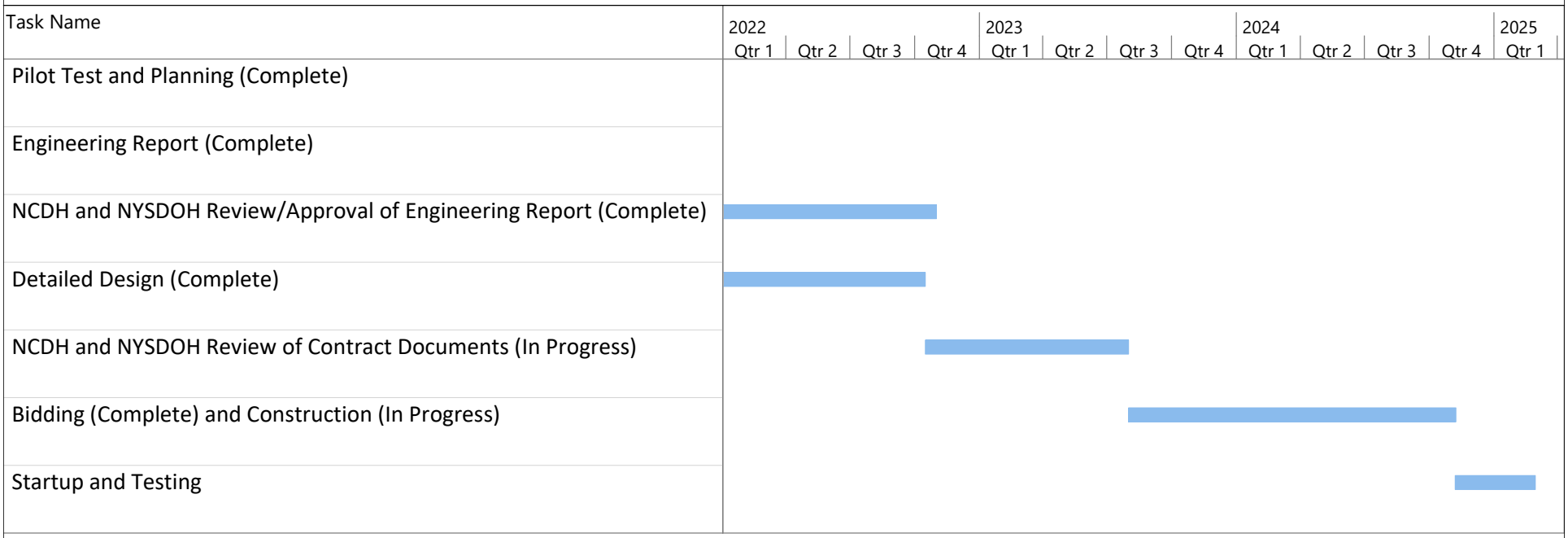
Jericho Water District
MCL Deferral
Quarterly Report - Q3 2023

Wells 20 and 21
AOP Project Schedule



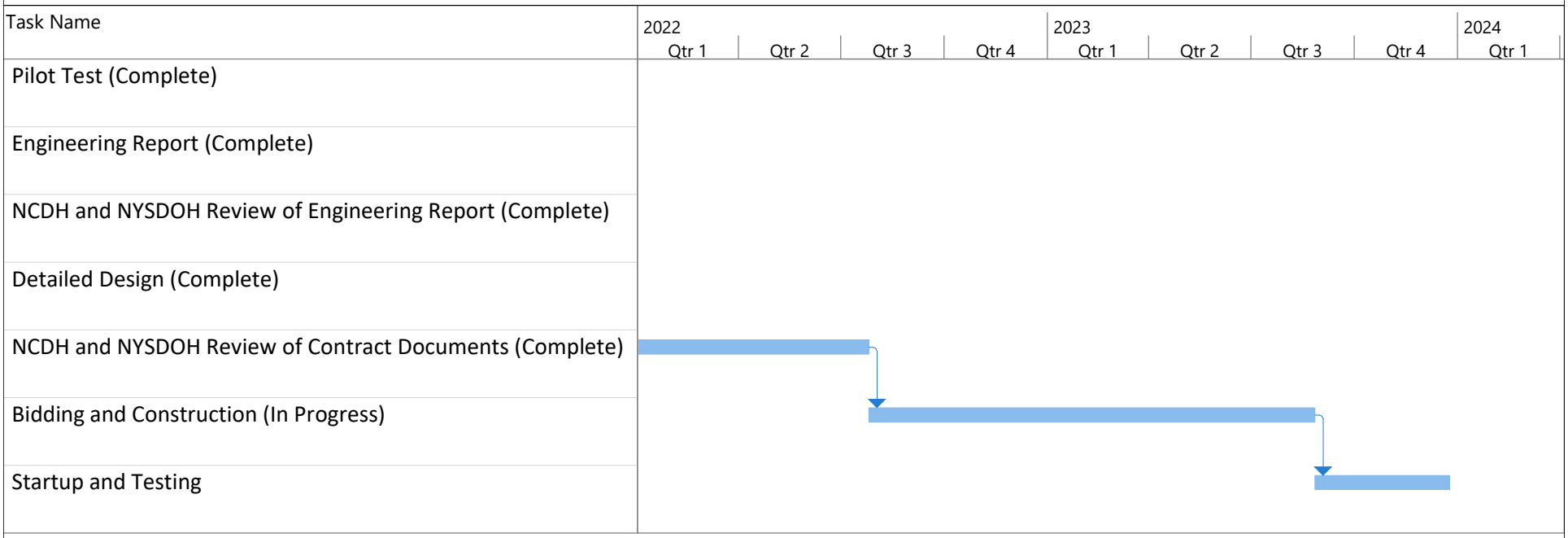
Jericho Water District
MCL Deferral
Quarterly Report - Q3 2023

Well 22
AOP Project Schedule



Jericho Water District
MCL Deferral
Quarterly Report - Q3 2023

Wells 25 and 26
AOP Project Schedule



ATTACHMENT B

Water Quality Data

Laboratory Results

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests

575 Broad Hollow Road, Melville, NY 11747
TEL: (516) 370-6000 FAX: (516) 886-5526
www.pacelabs.com

Sample Information:
Type: Drinking Water
Origin: Raw Well
Routine

Jericho Water District
125 Convent Rd.
Syosset, NY 11791
Attn To : Peter Logan
Federal ID : 2902831
Collected : 07/25/2023 12:20 PM Point N-07781
Received : 07/25/2023 02:11 PM Location Well 22
Collected By CLIENT

Lab No. : 70264473005
Client Sample ID.: N-07781

Analytical Method: EPA 522 Prep Method: EPA 522 Prep Date: 07/27/2023 9:11 AM

Parameter(s)	Results	Qualifier	D.F.	Units	Limit	Analyzed:	Container:
1,4-Dioxane (p-Dioxane)	0.40		1	ug/L	1	07/27/2023 9:03 PM	005 AG2R1/2
Surr: 1,4-Dioxane-d8 (S)	95%		1	%REC		07/27/2023 9:03 PM	005 AG2R1/2

Qualifiers:
DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.
ND - Not Detected at or above adjusted reporting limit.
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.Estimated value - below calibration range
U - Indicates the compound was analyzed for, but not detected

Result(s) reported meet(s) NYS Regulatory Limit(s).
Result(s) flagged with * Exceed NYS Regulatory Limit(s). Limit Noted.

Date Reported: 08/24/2023

Jennifer Aracri

Test results meet the requirements of NELAC unless otherwise noted.

575 Broad Hollow Road, Melville, NY 11747
TEL: (516) 370-6000 FAX: (516) 886-5526
www.pacelabs.com

Laboratory Results

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests

Sample Information:
Type: Drinking Water
Origin: Raw Well
Routine

Jericho Water District
125 Convent Rd.
Syosset, NY 11791
Attn To : Peter Logan
Federal ID : 2902831
Collected : 07/25/2023 12:35 PM Point N-04245
Received : 07/25/2023 02:11 PM Location Well 9
Collected By CLIENT

Lab No. : 70264473007
Client Sample ID.: N-04245

Analytical Method: EPA 522 Prep Method: EPA 522 Prep Date: 07/27/2023 9:11 AM

Parameter(s)	Results	Qualifier	D.F.	Units	Limit	Analyzed:	Container:
1,4-Dioxane (p-Dioxane)	**1.1***		1	ug/L	1	07/27/2023 9:20 PM	007 AG2R1/2
Surr: 1,4-Dioxane-d8 (S)	103%		1	%REC		07/27/2023 9:20 PM	007 AG2R1/2

Qualifiers:
DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.
ND - Not Detected at or above adjusted reporting limit.
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.Estimated value - below calibration range
U - Indicates the compound was analyzed for, but not detected

Result(s) reported meet(s) NYS Regulatory Limit(s).
Result(s) flagged with * Exceed NYS Regulatory Limit(s). Limit Noted.

Date Reported: 08/24/2023

Jennifer Aracri

Test results meet the requirements of NELAC unless otherwise noted.

Laboratory Results

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests

Sample Information:

Type: Drinking Water
Origin: Raw Well
Routine

575 Broad Hollow Road, Melville, NY 11747
TEL: (516) 370-6000 FAX: (516) 886-5526
www.pacelabs.com

Jericho Water District
125 Convent Rd.
Syosset, NY 11791
Attn To : Peter Logan
Federal ID : 2902831
Collected : 07/25/2023 12:50 PM Point N-06651
Received : 07/25/2023 02:11 PM Location Well 14
Collected By CLIENT

Lab No. : 70264473009
Client Sample ID.: N-06651

Analytical Method: EPA 522 Prep Method: EPA 522 Prep Date: 07/27/2023 9:11 AM

Parameter(s)	Results	Qualifier	D.F.	Units	Limit	Analyzed:	Container:
1,4-Dioxane (p-Dioxane)	**3.1***		1	ug/L	1	07/27/2023 9:36 PM	009 AG2R1/2
Surr: 1,4-Dioxane-d8 (S)	115%		1	%REC		07/27/2023 9:36 PM	009 AG2R1/2

Qualifiers:
DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.
ND - Not Detected at or above adjusted reporting limit.
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.Estimated value - below calibration range
U - Indicates the compound was analyzed for, but not detected

Result(s) reported meet(s) NYS Regulatory Limit(s).
Result(s) flagged with * Exceed NYS Regulatory Limit(s). Limit Noted.

Date Reported: 08/24/2023

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Laboratory Results

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests

Sample Information:
Type: Drinking Water
Origin: Raw Well
Routine

Jericho Water District
125 Convent Rd.
Syosset, NY 11791
Attn To : Peter Logan
Federal ID : 2902831
Collected : 07/25/2023 01:15 PM Point N-08355
Received : 07/25/2023 02:11 PM Location Well 25
Collected By CLIENT

Lab No. : 70264473011
Client Sample ID.: N-08355

Analytical Method: EPA 522 Prep Method: EPA 522 Prep Date: 07/27/2023 9:11 AM

Parameter(s)	Results	Qualifier	D.F.	Units	Limit	Analyzed:	Container:
1,4-Dioxane (p-Dioxane)	**10.5***		5	ug/L	1	07/28/2023 10:57	011 AG2R1/2
Surr: 1,4-Dioxane-d8 (S)	105%		5	%REC		07/28/2023 10:57	011 AG2R1/2

Qualifiers:
DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.
ND - Not Detected at or above adjusted reporting limit.
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.Estimated value - below calibration range
U - Indicates the compound was analyzed for, but not detected

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Result(s) flagged with * Exceed NYS Regulatory Limit(s). Limit Noted.

Date Reported: 08/24/2023

Jennifer Aracri

Test results meet the requirements of NELAC unless otherwise noted.

Laboratory Results

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests

Sample Information:

Type: Drinking Water
Origin: Raw Well
Routine

575 Broad Hollow Road, Melville, NY 11747
TEL: (516) 370-6000 FAX: (516) 886-5526
www.pacelabs.com

Jericho Water District
125 Convent Rd.
Syosset, NY 11791
Attn To : Peter Logan
Federal ID : 2902831
Collected : 07/25/2023 01:25 PM Point N-13119
Received : 07/25/2023 02:11 PM Location Well 26
Collected By CLIENT

Lab No. : 70264473013
Client Sample ID.: N-13119

Analytical Method: EPA 522 Prep Method: EPA 522 Prep Date: 07/27/2023 9:11 AM

Parameter(s)	Results	Qualifier	D.F.	Units	Limit	Analyzed:	Container:
1,4-Dioxane (p-Dioxane)	**4.9***		5	ug/L	1	07/28/2023 11:13	013 AG2R1/2
Surr: 1,4-Dioxane-d8 (S)	118%		5	%REC		07/28/2023 11:13	013 AG2R1/2

Qualifiers:
DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.
ND - Not Detected at or above adjusted reporting limit.
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.Estimated value - below calibration range
U - Indicates the compound was analyzed for, but not detected

Result(s) reported meet(s) NYS Regulatory Limit(s).
Result(s) flagged with * Exceed NYS Regulatory Limit(s). Limit Noted.

Date Reported: 08/24/2023

Jennifer Aracri

Test results meet the requirements of NELAC unless otherwise noted.

575 Broad Hollow Road, Melville, NY 11747
TEL: (516) 370-6000 FAX: (516) 886-5526
www.pacelabs.com

WorkOrder :
70264473

Laboratory Certifications

Pace Analytical Services Long Island
575 Broad Hollow Rd, Melville, NY 11747
Connecticut Certification #: PH-0435
Delaware Certification # NY 10478
Maryland Certification #: 208
Massachusetts Certification #: M-NY026
New Hampshire Certification #: 2987
New Jersey Certification #: NY158
New York Certification #: 10478 Primary Accrediting Body
Pennsylvania Certification #: 68-00350
Rhode Island Certification #: LAO00340
Virginia Certification # 460302

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

August 24, 2023

Jennifer Aracri
Pace Analytical Services - Long Island, NY
575 Broad Hollow Road
Melville, NY 11747

Project Location: 1,4 Dioxane/PFAS 7/25
Client Job Number:
Project Number: 70264473
Laboratory Work Order Number: 23G3739

Enclosed are results of analyses for samples as received by the laboratory on July 27, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kaitlyn A. Feliciano
Project Manager

Table of Contents

Table of Contents (continued)

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Pace Analytical Services - Long Island, NY
575 Broad Hollow Road
Melville, NY 11747
ATTN: Jennifer Aracri

REPORT DATE: 8/24/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 70264473

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23G3739

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: 1,4 Dioxane/PFAS 7/25

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
N-11295	23G3739-01	Drinking Water		EPA 533	
N-11295 FB	23G3739-02	Field Blank		EPA 533	
N-11107	23G3739-03	Drinking Water		EPA 533	
N-11107 FB	23G3739-04	Field Blank		EPA 533	
N-07781	23G3739-05	Drinking Water		EPA 533	
N-07781 FB	23G3739-06	Field Blank		EPA 533	
N-04245	23G3739-07	Drinking Water		EPA 533	
N-04245 FB	23G3739-08	Field Blank		EPA 533	
N-06651	23G3739-09	Drinking Water		EPA 533	
N-06651 FB	23G3739-10	Field Blank		EPA 533	
N-08355	23G3739-11	Drinking Water		EPA 533	
N-08355 FB	23G3739-12	Field Blank		EPA 533	
N-13119	23G3739-13	Drinking Water		EPA 533	
N-13119 FB	23G3739-14	Field Blank		EPA 533	
N-13268	23G3739-15	Drinking Water		EPA 533	
N-13268 FB	23G3739-16	Field Blank		EPA 533	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

EPA 533

Qualifications:

L-07

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:

Perfluoroheptanesulfonic acid (PFHpS)
B347263-BSD1

PF-03

Internal standard area >150% of associated calibration standard internal standard area. Re-analysis reported since it yielded similar internal standard non-conformace.

Analyte & Samples(s) Qualified:

MPFOS
23G3739-10[N-06651 FB]

PF-17

Extracted Internal Standard recovery is outside of control limits. Data is not significantly affected since associated analyte is not detected and bias is on the high side.

Analyte & Samples(s) Qualified:

M2-8:2FTS
23G3739-01RE1[N-11295], 23G3739-03RE1[N-11107], 23G3739-11RE1[N-08355], 23G3739-13RE1[N-13119]

PF-18

Duplicate analysis confirmed Extracted Internal Standard failure due to matrix effects.

Analyte & Samples(s) Qualified:

M3HFPO-DA
23G3739-03RE1[N-11107]

M5PFHxA
23G3739-03RE1[N-11107]

M5PFPeA
23G3739-03RE1[N-11107]

MPFBA
23G3739-03RE1[N-11107]

S-29

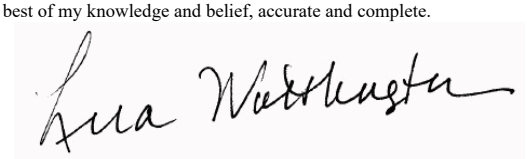
Extracted Internal Standard is outside of control limits.

Analyte & Samples(s) Qualified:

M2-8:2FTS
B349448-BSD1, S092111-CCV1, S092111-CCV2, S092111-CCV3, S092377-CCV1, S092377-CCV2, S092377-CCV3

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 1,4 Dioxane/PFAS 7/25 | Sample Description: | Work Order: 23G3739

Date Received: 7/27/2023

Field Sample #: N-11295 | Sampled: 7/25/2023 11:45

Sample ID: 23G3739-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL MA ORSG	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	3.8	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 9:52	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 9:52	AMS
Perfluoropentanoic acid (PFPeA)	2.8	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 9:52	AMS
Perfluorohexanoic acid (PFHxA)	2.3	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 9:52	AMS
11Cl-PF3OUdS (F53B Major)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 9:52	AMS
9Cl-PF3ONS (F53B Minor)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 9:52	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 9:52	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 9:52	AMS
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 9:52	AMS
Perfluorodecanoic acid (PFDA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 9:52	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 9:52	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 9:52	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 9:52	AMS
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 9:52	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 9:52	AMS
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 9:52	AMS
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 9:52	AMS
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 9:52	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 9:52	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 9:52	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 9:52	AMS
Perfluoroheptanoic acid (PFHpA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 9:52	AMS
Perfluorooctanoic acid (PFOA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 9:52	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 9:52	AMS
Perfluorononanoic acid (PFNA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 9:52	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
M2-4:2FTS	85.9		50-200		8/22/23 9:52
M2-8:2FTS	**240**	*	50-200	PF-17	8/22/23 9:52
MPFBA	64.0		50-200		8/22/23 9:52
M3HFPO-DA	51.9		50-200		8/22/23 9:52
M6PFDA	66.4		50-200		8/22/23 9:52
M3PFBS	88.0		50-200		8/22/23 9:52
M7PFUnA	64.4		50-200		8/22/23 9:52
M2-6:2FTS	131		50-200		8/22/23 9:52
M5PFPeA	65.3		50-200		8/22/23 9:52
M5PFHxA	62.3		50-200		8/22/23 9:52
M3PFHxS	87.7		50-200		8/22/23 9:52
M4PFHpA	60.9		50-200		8/22/23 9:52
M8PFOA	62.7		50-200		8/22/23 9:52
M8PFOS	85.9		50-200		8/22/23 9:52
M9PFNA	62.0		50-200		8/22/23 9:52
MPFDoA	63.7		50-200		8/22/23 9:52

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Project Location: 1,4 Dioxane/PFAS 7/25 Sample Description: Work Order: 23G3739

Date Received: 7/27/2023

Field Sample #: N-11295 FB Sampled: 7/25/2023 11:45

Sample ID: 23G3739-02

Sample Matrix: Field Blank

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL MA ORSG	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:44	JR2
Perfluorobutanesulfonic acid (PFBS)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:44	JR2
Perfluoropentanoic acid (PFPeA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:44	JR2
Perfluorohexanoic acid (PFHxA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:44	JR2
11Cl-PF3OUdS (F53B Major)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:44	JR2
9Cl-PF3ONS (F53B Minor)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:44	JR2
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:44	JR2
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:44	JR2
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:44	JR2
Perfluorodecanoic acid (PFDA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:44	JR2
Perfluorododecanoic acid (PFDoA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:44	JR2
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:44	JR2
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:44	JR2
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:44	JR2
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:44	JR2
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:44	JR2
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:44	JR2
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:44	JR2
Perfluoropentanesulfonic acid (PFPeS)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:44	JR2
Perfluoroundecanoic acid (PFUnA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:44	JR2
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:44	JR2
Perfluoroheptanoic acid (PFHpA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:44	JR2
Perfluorooctanoic acid (PFOA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:44	JR2
Perfluorooctanesulfonic acid (PFOS)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:44	JR2
Perfluorononanoic acid (PFNA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:44	JR2

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
M2-4:2FTS	72.5	50-200		8/16/23 11:44
M2-8:2FTS	162	50-200		8/16/23 11:44
MPFBA	78.8	50-200		8/16/23 11:44
M3HFPO-DA	73.2	50-200		8/16/23 11:44
M6PFDA	74.5	50-200		8/16/23 11:44
M3PFBS	71.0	50-200		8/16/23 11:44
M7PFUnA	77.0	50-200		8/16/23 11:44
M2-6:2FTS	81.7	50-200		8/16/23 11:44
M5PFPeA	75.4	50-200		8/16/23 11:44
M5PFHxA	71.7	50-200		8/16/23 11:44
M3PFHxS	70.4	50-200		8/16/23 11:44
M4PFHpA	71.6	50-200		8/16/23 11:44
M8PFOA	70.7	50-200		8/16/23 11:44
M8PFOS	63.5	50-200		8/16/23 11:44
M9PFNA	66.3	50-200		8/16/23 11:44
MPFDoA	73.1	50-200		8/16/23 11:44

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Project Location: 1,4 Dioxane/PFAS 7/25 Sample Description: Work Order: 23G3739

Date Received: 7/27/2023

Field Sample #: N-11107 Sampled: 7/25/2023 11:55

Sample ID: 23G3739-03

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL MA ORSG	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	9.6	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:07	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:07	AMS
Perfluoropentanoic acid (PFPeA)	7.4	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:07	AMS
Perfluorohexanoic acid (PFHxA)	6.2	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:07	AMS
11Cl-PF3OUdS (F53B Major)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:07	AMS
9Cl-PF3ONS (F53B Minor)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:07	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:07	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:07	AMS
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:07	AMS
Perfluorodecanoic acid (PFDA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:07	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:07	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:07	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:07	AMS
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:07	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:07	AMS
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:07	AMS
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:07	AMS
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:07	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:07	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:07	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:07	AMS
Perfluoroheptanoic acid (PFHpA)	3.1	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:07	AMS
Perfluorooctanoic acid (PFOA)	2.5	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:07	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:07	AMS
Perfluorononanoic acid (PFNA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:07	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
M2-4:2FTS	89.0		50-200		8/22/23 10:07
M2-8:2FTS	**334**	*	50-200	PF-17	8/22/23 10:07
MPFBA	**20.7**	*	50-200	PF-18	8/22/23 10:07
M3HFPO-DA	**42.3**	*	50-200	PF-18	8/22/23 10:07
M6PFDA	55.2		50-200		8/22/23 10:07
M3PFBS	93.0		50-200		8/22/23 10:07
M7PFUnA	53.4		50-200		8/22/23 10:07
M2-6:2FTS	147		50-200		8/22/23 10:07
M5PFPeA	**36.4**	*	50-200	PF-18	8/22/23 10:07
M5PFHxA	**48.1**	*	50-200	PF-18	8/22/23 10:07
M3PFHxS	94.1		50-200		8/22/23 10:07
M4PFHpA	55.3		50-200		8/22/23 10:07
M8PFOA	56.7		50-200		8/22/23 10:07
M8PFOS	90.8		50-200		8/22/23 10:07
M9PFNA	54.1		50-200		8/22/23 10:07
MPFDoA	54.1		50-200		8/22/23 10:07

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Project Location: 1,4 Dioxane/PFAS 7/25 | Sample Description: | Work Order: 23G3739

Date Received: 7/27/2023

Field Sample #: N-11107 FB | Sampled: 7/25/2023 01:55

Sample ID: 23G3739-04

Sample Matrix: Field Blank

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL MA ORSG	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:59	JR2
Perfluorobutanesulfonic acid (PFBS)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:59	JR2
Perfluoropentanoic acid (PFPeA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:59	JR2
Perfluorohexanoic acid (PFHxA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:59	JR2
11Cl-PF3OUdS (F53B Major)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:59	JR2
9Cl-PF3ONS (F53B Minor)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:59	JR2
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:59	JR2
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:59	JR2
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:59	JR2
Perfluorodecanoic acid (PFDA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:59	JR2
Perfluorododecanoic acid (PFDoA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:59	JR2
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:59	JR2
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:59	JR2
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:59	JR2
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:59	JR2
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:59	JR2
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:59	JR2
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:59	JR2
Perfluoropentanesulfonic acid (PFPeS)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:59	JR2
Perfluoroundecanoic acid (PFUnA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:59	JR2
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:59	JR2
Perfluoroheptanoic acid (PFHpA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:59	JR2
Perfluorooctanoic acid (PFOA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:59	JR2
Perfluorooctanesulfonic acid (PFOS)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:59	JR2
Perfluorononanoic acid (PFNA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 11:59	JR2

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
M2-4:2FTS	76.1	50-200		8/16/23 11:59
M2-8:2FTS	120	50-200		8/16/23 11:59
MPFBA	79.4	50-200		8/16/23 11:59
M3HFPO-DA	72.9	50-200		8/16/23 11:59
M6PFDA	75.3	50-200		8/16/23 11:59
M3PFBS	76.3	50-200		8/16/23 11:59
M7PFUnA	73.8	50-200		8/16/23 11:59
M2-6:2FTS	87.9	50-200		8/16/23 11:59
M5PFPeA	76.6	50-200		8/16/23 11:59
M5PFHxA	72.2	50-200		8/16/23 11:59
M3PFHxS	78.9	50-200		8/16/23 11:59
M4PFHpA	73.9	50-200		8/16/23 11:59
M8PFOA	81.9	50-200		8/16/23 11:59
M8PFOS	79.8	50-200		8/16/23 11:59
M9PFNA	73.7	50-200		8/16/23 11:59
MPFDoA	74.1	50-200		8/16/23 11:59

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Project Location: 1,4 Dioxane/PFAS 7/25 Sample Description: Work Order: 23G3739

Date Received: 7/27/2023

Field Sample #: N-07781 Sampled: 7/25/2023 12:20

Sample ID: 23G3739-05

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL MA ORSG	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	6.3	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:06	JR2
Perfluorobutanesulfonic acid (PFBS)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:06	JR2
Perfluoropentanoic acid (PFPeA)	6.6	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:06	JR2
Perfluorohexanoic acid (PFHxA)	5.2	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:06	JR2
11Cl-PF3OUdS (F53B Major)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:06	JR2
9Cl-PF3ONS (F53B Minor)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:06	JR2
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:06	JR2
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:06	JR2
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:06	JR2
Perfluorodecanoic acid (PFDA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:06	JR2
Perfluorododecanoic acid (PFDoA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:06	JR2
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:06	JR2
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:06	JR2
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:06	JR2
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:06	JR2
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:06	JR2
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:06	JR2
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:06	JR2
Perfluoropentanesulfonic acid (PFPeS)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:06	JR2
Perfluoroundecanoic acid (PFUnA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:06	JR2
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:06	JR2
Perfluoroheptanoic acid (PFHpA)	3.4	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:06	JR2
Perfluorooctanoic acid (PFOA)	3.1	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:06	JR2
Perfluorooctanesulfonic acid (PFOS)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:06	JR2
Perfluorononanoic acid (PFNA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:06	JR2

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
M2-4:2FTS	76.8	50-200		8/16/23 12:06
M2-8:2FTS	123	50-200		8/16/23 12:06
MPFBA	62.9	50-200		8/16/23 12:06
M3HFPO-DA	55.8	50-200		8/16/23 12:06
M6PFDA	55.8	50-200		8/16/23 12:06
M3PFBS	75.7	50-200		8/16/23 12:06
M7PFUnA	57.0	50-200		8/16/23 12:06
M2-6:2FTS	87.5	50-200		8/16/23 12:06
M5PFPeA	61.5	50-200		8/16/23 12:06
M5PFHxA	56.6	50-200		8/16/23 12:06
M3PFHxS	79.1	50-200		8/16/23 12:06
M4PFHpA	55.8	50-200		8/16/23 12:06
M8PFOA	60.4	50-200		8/16/23 12:06
M8PFOS	82.1	50-200		8/16/23 12:06
M9PFNA	56.3	50-200		8/16/23 12:06
MPFDoA	62.3	50-200		8/16/23 12:06

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Project Location: 1,4 Dioxane/PFAS 7/25 Sample Description: Work Order: 23G3739

Date Received: 7/27/2023

Field Sample #: N-07781 FB Sampled: 7/25/2023 12:20

Sample ID: 23G3739-06

Sample Matrix: Field Blank

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL MA ORSG	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:13	JR2
Perfluorobutanesulfonic acid (PFBS)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:13	JR2
Perfluoropentanoic acid (PFPeA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:13	JR2
Perfluorohexanoic acid (PFHxA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:13	JR2
11Cl-PF3OUdS (F53B Major)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:13	JR2
9Cl-PF3ONS (F53B Minor)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:13	JR2
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:13	JR2
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:13	JR2
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:13	JR2
Perfluorodecanoic acid (PFDA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:13	JR2
Perfluorododecanoic acid (PFDoA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:13	JR2
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:13	JR2
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:13	JR2
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:13	JR2
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:13	JR2
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:13	JR2
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:13	JR2
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:13	JR2
Perfluoropentanesulfonic acid (PFPeS)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:13	JR2
Perfluoroundecanoic acid (PFUnA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:13	JR2
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:13	JR2
Perfluoroheptanoic acid (PFHpA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:13	JR2
Perfluorooctanoic acid (PFOA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:13	JR2
Perfluorooctanesulfonic acid (PFOS)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:13	JR2
Perfluorononanoic acid (PFNA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:13	JR2

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
M2-4:2FTS	70.7	50-200		8/16/23 12:13
M2-8:2FTS	124	50-200		8/16/23 12:13
MPFBA	76.2	50-200		8/16/23 12:13
M3HFPO-DA	78.2	50-200		8/16/23 12:13
M6PFDA	80.5	50-200		8/16/23 12:13
M3PFBS	72.6	50-200		8/16/23 12:13
M7PFUnA	73.8	50-200		8/16/23 12:13
M2-6:2FTS	92.4	50-200		8/16/23 12:13
M5PFPeA	73.1	50-200		8/16/23 12:13
M5PFHxA	72.1	50-200		8/16/23 12:13
M3PFHxS	70.9	50-200		8/16/23 12:13
M4PFHpA	73.0	50-200		8/16/23 12:13
M8PFOA	77.8	50-200		8/16/23 12:13
M8PFOS	67.7	50-200		8/16/23 12:13
M9PFNA	74.5	50-200		8/16/23 12:13
MPFDoA	68.2	50-200		8/16/23 12:13

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Project Location: 1,4 Dioxane/PFAS 7/25 Sample Description: Work Order: 23G3739

Date Received: 7/27/2023

Field Sample #: N-04245 Sampled: 7/25/2023 12:35

Sample ID: 23G3739-07

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL MA ORSG	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	6.1	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:21	JR2
Perfluorobutanesulfonic acid (PFBS)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:21	JR2
Perfluoropentanoic acid (PFPeA)	12	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:21	JR2
Perfluorohexanoic acid (PFHxA)	7.4	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:21	JR2
11Cl-PF3OUdS (F53B Major)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:21	JR2
9Cl-PF3ONS (F53B Minor)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:21	JR2
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:21	JR2
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:21	JR2
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:21	JR2
Perfluorodecanoic acid (PFDA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:21	JR2
Perfluorododecanoic acid (PFDoA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:21	JR2
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:21	JR2
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:21	JR2
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:21	JR2
Perfluorohexanesulfonic acid (PFHxS)	5.5	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:21	JR2
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:21	JR2
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:21	JR2
6:2 Fluorotelomersulfonic acid (6:2FTS A)	4.9	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:21	JR2
Perfluoropentanesulfonic acid (PFPeS)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:21	JR2
Perfluoroundecanoic acid (PFUnA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:21	JR2
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:21	JR2
Perfluoroheptanoic acid (PFHpA)	3.7	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:21	JR2
Perfluorooctanoic acid (PFOA)	4.5	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:21	JR2
Perfluorooctanesulfonic acid (PFOS)	3.2	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:21	JR2
Perfluorononanoic acid (PFNA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 12:21	JR2

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
M2-4:2FTS	65.8	50-200		8/16/23 12:21
M2-8:2FTS	123	50-200		8/16/23 12:21
MPFBA	63.4	50-200		8/16/23 12:21
M3HFPO-DA	51.4	50-200		8/16/23 12:21
M6PFDA	55.8	50-200		8/16/23 12:21
M3PFBS	77.5	50-200		8/16/23 12:21
M7PFUnA	50.1	50-200		8/16/23 12:21
M2-6:2FTS	81.1	50-200		8/16/23 12:21
M5PFPeA	61.1	50-200		8/16/23 12:21
M5PFHxA	56.7	50-200		8/16/23 12:21
M3PFHxS	79.1	50-200		8/16/23 12:21
M4PFHpA	55.1	50-200		8/16/23 12:21
M8PFOA	56.9	50-200		8/16/23 12:21
M8PFOS	74.5	50-200		8/16/23 12:21
M9PFNA	55.5	50-200		8/16/23 12:21
MPFDoA	51.4	50-200		8/16/23 12:21

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Project Location: 1,4 Dioxane/PFAS 7/25 Sample Description: Work Order: 23G3739

Date Received: 7/27/2023

Field Sample #: N-04245 FB Sampled: 7/25/2023 12:35

Sample ID: 23G3739-08

Sample Matrix: Field Blank

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL MA ORSG	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:28	JR2
Perfluorobutanesulfonic acid (PFBS)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:28	JR2
Perfluoropentanoic acid (PFPeA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:28	JR2
Perfluorohexanoic acid (PFHxA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:28	JR2
11Cl-PF3OUdS (F53B Major)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:28	JR2
9Cl-PF3ONS (F53B Minor)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:28	JR2
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:28	JR2
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:28	JR2
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:28	JR2
Perfluorodecanoic acid (PFDA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:28	JR2
Perfluorododecanoic acid (PFDoA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:28	JR2
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:28	JR2
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:28	JR2
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:28	JR2
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:28	JR2
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:28	JR2
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:28	JR2
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:28	JR2
Perfluoropentanesulfonic acid (PFPeS)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:28	JR2
Perfluoroundecanoic acid (PFUnA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:28	JR2
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:28	JR2
Perfluoroheptanoic acid (PFHpA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:28	JR2
Perfluorooctanoic acid (PFOA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:28	JR2
Perfluorooctanesulfonic acid (PFOS)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:28	JR2
Perfluorononanoic acid (PFNA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 12:28	JR2

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
M2-4:2FTS	72.3	50-200		8/16/23 12:28
M2-8:2FTS	137	50-200		8/16/23 12:28
MPFBA	79.0	50-200		8/16/23 12:28
M3HFPO-DA	75.7	50-200		8/16/23 12:28
M6PFDA	71.3	50-200		8/16/23 12:28
M3PFBS	77.3	50-200		8/16/23 12:28
M7PFUnA	68.2	50-200		8/16/23 12:28
M2-6:2FTS	81.9	50-200		8/16/23 12:28
M5PFPeA	75.9	50-200		8/16/23 12:28
M5PFHxA	69.6	50-200		8/16/23 12:28
M3PFHxS	78.3	50-200		8/16/23 12:28
M4PFHpA	69.0	50-200		8/16/23 12:28
M8PFOA	73.7	50-200		8/16/23 12:28
M8PFOS	83.5	50-200		8/16/23 12:28
M9PFNA	72.9	50-200		8/16/23 12:28
MPFDoA	68.8	50-200		8/16/23 12:28

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Project Location: 1,4 Dioxane/PFAS 7/25 | Sample Description: | Work Order: 23G3739

Date Received: 7/27/2023

Field Sample #: N-06651 | Sampled: 7/25/2023 12:50

Sample ID: 23G3739-09

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL MA ORSG	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	6.5	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:14	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:14	AMS
Perfluoropentanoic acid (PFPeA)	5.5	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:14	AMS
Perfluorohexanoic acid (PFHxA)	5.2	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:14	AMS
11Cl-PF3OUdS (F53B Major)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:14	AMS
9Cl-PF3ONS (F53B Minor)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:14	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:14	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:14	AMS
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:14	AMS
Perfluorodecanoic acid (PFDA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:14	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:14	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:14	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:14	AMS
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:14	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:14	AMS
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:14	AMS
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:14	AMS
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:14	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:14	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:14	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:14	AMS
Perfluoroheptanoic acid (PFHpA)	3.0	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:14	AMS
Perfluorooctanoic acid (PFOA)	4.0	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:14	AMS
Perfluorooctanesulfonic acid (PFOS)	2.1	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:14	AMS
Perfluorononanoic acid (PFNA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:14	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
M2-4:2FTS	78.4	50-200		8/22/23 10:14
M2-8:2FTS	197	50-200		8/22/23 10:14
MPFBA	70.3	50-200		8/22/23 10:14
M3HFPO-DA	53.4	50-200		8/22/23 10:14
M6PFDA	64.2	50-200		8/22/23 10:14
M3PFBS	88.9	50-200		8/22/23 10:14
M7PFUnA	65.7	50-200		8/22/23 10:14
M2-6:2FTS	122	50-200		8/22/23 10:14
M5PFPeA	68.6	50-200		8/22/23 10:14
M5PFHxA	62.7	50-200		8/22/23 10:14
M3PFHxS	93.1	50-200		8/22/23 10:14
M4PFHpA	63.1	50-200		8/22/23 10:14
M8PFOA	62.6	50-200		8/22/23 10:14
M8PFOS	86.2	50-200		8/22/23 10:14
M9PFNA	59.9	50-200		8/22/23 10:14
MPFDoA	66.0	50-200		8/22/23 10:14

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Project Location: 1,4 Dioxane/PFAS 7/25 Sample Description: Work Order: 23G3739

Date Received: 7/27/2023

Field Sample #: N-06651 FB Sampled: 7/25/2023 12:50

Sample ID: 23G3739-10

Sample Matrix: Field Blank

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL MA ORSG	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	2.0		ng/L	1		EPA 533	8/15/23	8/16/23 12:42	JR2
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 533	8/15/23	8/16/23 12:42	JR2
Perfluoropentanoic acid (PFPeA)	ND	2.0		ng/L	1		EPA 533	8/15/23	8/16/23 12:42	JR2
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 533	8/15/23	8/16/23 12:42	JR2
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 533	8/15/23	8/16/23 12:42	JR2
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 533	8/15/23	8/16/23 12:42	JR2
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 533	8/15/23	8/16/23 12:42	JR2
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 533	8/15/23	8/16/23 12:42	JR2
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	2.0		ng/L	1		EPA 533	8/15/23	8/16/23 12:42	JR2
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 533	8/15/23	8/16/23 12:42	JR2
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 533	8/15/23	8/16/23 12:42	JR2
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0		ng/L	1		EPA 533	8/15/23	8/16/23 12:42	JR2
Perfluoroheptanesulfonic acid (PFHpS)	ND	2.0		ng/L	1		EPA 533	8/15/23	8/16/23 12:42	JR2
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	2.0		ng/L	1		EPA 533	8/15/23	8/16/23 12:42	JR2
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 533	8/15/23	8/16/23 12:42	JR2
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	2.0		ng/L	1		EPA 533	8/15/23	8/16/23 12:42	JR2
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	2.0		ng/L	1		EPA 533	8/15/23	8/16/23 12:42	JR2
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	2.0		ng/L	1		EPA 533	8/15/23	8/16/23 12:42	JR2
Perfluoropentanesulfonic acid (PFPeS)	ND	2.0		ng/L	1		EPA 533	8/15/23	8/16/23 12:42	JR2
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 533	8/15/23	8/16/23 12:42	JR2
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0		ng/L	1		EPA 533	8/15/23	8/16/23 12:42	JR2
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 533	8/15/23	8/16/23 12:42	JR2
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 533	8/15/23	8/16/23 12:42	JR2
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 533	8/15/23	8/16/23 12:42	JR2
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 533	8/15/23	8/16/23 12:42	JR2

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
M2-4:2FTS	65.2	50-200		8/16/23 12:42
M2-8:2FTS	117	50-200		8/16/23 12:42
MPFBA	79.4	50-200		8/16/23 12:42
M3HFPO-DA	72.0	50-200		8/16/23 12:42
M6PFDA	84.7	50-200		8/16/23 12:42
M3PFBS	72.7	50-200		8/16/23 12:42
M7PFUnA	79.5	50-200		8/16/23 12:42
M2-6:2FTS	82.8	50-200		8/16/23 12:42
M5PFPeA	77.2	50-200		8/16/23 12:42
M5PFHxA	78.5	50-200		8/16/23 12:42
M3PFHxS	73.0	50-200		8/16/23 12:42
M4PFHpA	79.5	50-200		8/16/23 12:42
M8PFOA	78.7	50-200		8/16/23 12:42
M8PFOS	68.8	50-200		8/16/23 12:42
M9PFNA	77.7	50-200		8/16/23 12:42
MPFDoA	77.9	50-200		8/16/23 12:42

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Project Location: 1,4 Dioxane/PFAS 7/25 | Sample Description: | Work Order: 23G3739

Date Received: 7/27/2023

Field Sample #: N-08355 | Sampled: 7/25/2023 13:15

Sample ID: 23G3739-11

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL MA ORSG	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	14	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:21	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:21	AMS
Perfluoropentanoic acid (PFPeA)	11	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:21	AMS
Perfluorohexanoic acid (PFHxA)	10	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:21	AMS
11Cl-PF3OUdS (F53B Major)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:21	AMS
9Cl-PF3ONS (F53B Minor)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:21	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:21	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:21	AMS
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:21	AMS
Perfluorodecanoic acid (PFDA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:21	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:21	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:21	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:21	AMS
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:21	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:21	AMS
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:21	AMS
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:21	AMS
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:21	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:21	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:21	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:21	AMS
Perfluoroheptanoic acid (PFHpA)	7.1	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:21	AMS
Perfluorooctanoic acid (PFOA)	4.6	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:21	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:21	AMS
Perfluorononanoic acid (PFNA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:21	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
M2-4:2FTS	88.1		50-200		8/22/23 10:21
M2-8:2FTS	**227**	*	50-200	PF-17	8/22/23 10:21
MPFBA	90.7		50-200		8/22/23 10:21
M3HFPO-DA	59.4		50-200		8/22/23 10:21
M6PFDA	83.4		50-200		8/22/23 10:21
M3PFBS	100		50-200		8/22/23 10:21
M7PFUnA	75.9		50-200		8/22/23 10:21
M2-6:2FTS	146		50-200		8/22/23 10:21
M5PFPeA	89.7		50-200		8/22/23 10:21
M5PFHxA	79.9		50-200		8/22/23 10:21
M3PFHxS	103		50-200		8/22/23 10:21
M4PFHpA	78.6		50-200		8/22/23 10:21
M8PFOA	76.4		50-200		8/22/23 10:21
M8PFOS	95.9		50-200		8/22/23 10:21
M9PFNA	73.5		50-200		8/22/23 10:21
MPFDoA	72.7		50-200		8/22/23 10:21

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Project Location: 1,4 Dioxane/PFAS 7/25 | Sample Description: | Work Order: 23G3739

Date Received: 7/27/2023

Field Sample #: N-08355 FB | Sampled: 7/25/2023 13:15

Sample ID: 23G3739-12

Sample Matrix: Field Blank

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL MA ORSG	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:12	JR2
Perfluorobutanesulfonic acid (PFBS)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:12	JR2
Perfluoropentanoic acid (PFPeA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:12	JR2
Perfluorohexanoic acid (PFHxA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:12	JR2
11Cl-PF3OUdS (F53B Major)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:12	JR2
9Cl-PF3ONS (F53B Minor)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:12	JR2
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:12	JR2
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:12	JR2
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:12	JR2
Perfluorodecanoic acid (PFDA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:12	JR2
Perfluorododecanoic acid (PFDoA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:12	JR2
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:12	JR2
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:12	JR2
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:12	JR2
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:12	JR2
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:12	JR2
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:12	JR2
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:12	JR2
Perfluoropentanesulfonic acid (PFPeS)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:12	JR2
Perfluoroundecanoic acid (PFUnA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:12	JR2
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:12	JR2
Perfluoroheptanoic acid (PFHpA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:12	JR2
Perfluorooctanoic acid (PFOA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:12	JR2
Perfluorooctanesulfonic acid (PFOS)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:12	JR2
Perfluorononanoic acid (PFNA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:12	JR2

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
M2-4:2FTS	75.7	50-200		8/16/23 13:12
M2-8:2FTS	124	50-200		8/16/23 13:12
MPFBA	86.0	50-200		8/16/23 13:12
M3HFPO-DA	70.9	50-200		8/16/23 13:12
M6PFDA	84.7	50-200		8/16/23 13:12
M3PFBS	81.1	50-200		8/16/23 13:12
M7PFUnA	87.2	50-200		8/16/23 13:12
M2-6:2FTS	86.9	50-200		8/16/23 13:12
M5PFPeA	81.9	50-200		8/16/23 13:12
M5PFHxA	82.7	50-200		8/16/23 13:12
M3PFHxS	81.3	50-200		8/16/23 13:12
M4PFHpA	83.6	50-200		8/16/23 13:12
M8PFOA	82.6	50-200		8/16/23 13:12
M8PFOS	77.4	50-200		8/16/23 13:12
M9PFNA	77.4	50-200		8/16/23 13:12
MPFDoA	85.2	50-200		8/16/23 13:12

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Project Location: 1,4 Dioxane/PFAS 7/25 Sample Description: Work Order: 23G3739

Date Received: 7/27/2023

Field Sample #: N-13119 Sampled: 7/25/2023 13:25

Sample ID: 23G3739-13

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL MA ORSG	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	7.3	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:29	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:29	AMS
Perfluoropentanoic acid (PFPeA)	5.6	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:29	AMS
Perfluorohexanoic acid (PFHxA)	5.2	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:29	AMS
11Cl-PF3OUdS (F53B Major)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:29	AMS
9Cl-PF3ONS (F53B Minor)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:29	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:29	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:29	AMS
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:29	AMS
Perfluorodecanoic acid (PFDA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:29	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:29	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:29	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:29	AMS
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:29	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:29	AMS
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:29	AMS
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:29	AMS
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:29	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:29	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:29	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:29	AMS
Perfluoroheptanoic acid (PFHpA)	3.3	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:29	AMS
Perfluorooctanoic acid (PFOA)	3.6	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:29	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:29	AMS
Perfluorononanoic acid (PFNA)	ND	1.8		ng/L	1		EPA 533	8/21/23	8/22/23 10:29	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
M2-4:2FTS	79.5		50-200		8/22/23 10:29
M2-8:2FTS	**350**	*	50-200	PF-17	8/22/23 10:29
MPFBA	80.6		50-200		8/22/23 10:29
M3HFPO-DA	53.9		50-200		8/22/23 10:29
M6PFDA	84.1		50-200		8/22/23 10:29
M3PFBS	98.7		50-200		8/22/23 10:29
M7PFUnA	78.7		50-200		8/22/23 10:29
M2-6:2FTS	126		50-200		8/22/23 10:29
M5PFPeA	78.5		50-200		8/22/23 10:29
M5PFHxA	68.3		50-200		8/22/23 10:29
M3PFHxS	101		50-200		8/22/23 10:29
M4PFHpA	70.2		50-200		8/22/23 10:29
M8PFOA	73.4		50-200		8/22/23 10:29
M8PFOS	102		50-200		8/22/23 10:29
M9PFNA	71.5		50-200		8/22/23 10:29
MPFDoA	77.3		50-200		8/22/23 10:29

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Project Location: 1,4 Dioxane/PFAS 7/25 Sample Description: Work Order: 23G3739

Date Received: 7/27/2023

Field Sample #: N-13119 FB Sampled: 7/25/2023 13:25

Sample ID: 23G3739-14

Sample Matrix: Field Blank

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL MA ORSG	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:26	JR2
Perfluorobutanesulfonic acid (PFBS)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:26	JR2
Perfluoropentanoic acid (PFPeA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:26	JR2
Perfluorohexanoic acid (PFHxA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:26	JR2
11Cl-PF3OUdS (F53B Major)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:26	JR2
9Cl-PF3ONS (F53B Minor)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:26	JR2
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:26	JR2
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:26	JR2
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:26	JR2
Perfluorodecanoic acid (PFDA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:26	JR2
Perfluorododecanoic acid (PFDoA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:26	JR2
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:26	JR2
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:26	JR2
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:26	JR2
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:26	JR2
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:26	JR2
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:26	JR2
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:26	JR2
Perfluoropentanesulfonic acid (PFPeS)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:26	JR2
Perfluoroundecanoic acid (PFUnA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:26	JR2
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:26	JR2
Perfluoroheptanoic acid (PFHpA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:26	JR2
Perfluorooctanoic acid (PFOA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:26	JR2
Perfluorooctanesulfonic acid (PFOS)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:26	JR2
Perfluorononanoic acid (PFNA)	ND	1.9		ng/L	1		EPA 533	8/15/23	8/16/23 13:26	JR2

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
M2-4:2FTS	66.9	50-200		8/16/23 13:26
M2-8:2FTS	115	50-200		8/16/23 13:26
MPFBA	80.4	50-200		8/16/23 13:26
M3HFPO-DA	82.2	50-200		8/16/23 13:26
M6PFDA	85.7	50-200		8/16/23 13:26
M3PFBS	72.1	50-200		8/16/23 13:26
M7PFUnA	78.6	50-200		8/16/23 13:26
M2-6:2FTS	78.2	50-200		8/16/23 13:26
M5PFPeA	78.7	50-200		8/16/23 13:26
M5PFHxA	76.7	50-200		8/16/23 13:26
M3PFHxS	71.3	50-200		8/16/23 13:26
M4PFHpA	77.1	50-200		8/16/23 13:26
M8PFOA	80.0	50-200		8/16/23 13:26
M8PFOS	66.0	50-200		8/16/23 13:26
M9PFNA	76.2	50-200		8/16/23 13:26
MPFDoA	77.3	50-200		8/16/23 13:26

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Project Location: 1,4 Dioxane/PFAS 7/25 Sample Description: Work Order: 23G3739

Date Received: 7/27/2023

Field Sample #: N-13268 Sampled: 7/25/2023 13:40

Sample ID: 23G3739-15

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL MA ORSG	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	4.7	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 13:34	JR2
Perfluorobutanesulfonic acid (PFBS)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 13:34	JR2
Perfluoropentanoic acid (PFPeA)	3.6	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 13:34	JR2
Perfluorohexanoic acid (PFHxA)	3.3	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 13:34	JR2
11Cl-PF3OUdS (F53B Major)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 13:34	JR2
9Cl-PF3ONS (F53B Minor)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 13:34	JR2
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 13:34	JR2
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 13:34	JR2
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 13:34	JR2
Perfluorodecanoic acid (PFDA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 13:34	JR2
Perfluorododecanoic acid (PFDoA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 13:34	JR2
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 13:34	JR2
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 13:34	JR2
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 13:34	JR2
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 13:34	JR2
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 13:34	JR2
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 13:34	JR2
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 13:34	JR2
Perfluoropentanesulfonic acid (PFPeS)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 13:34	JR2
Perfluoroundecanoic acid (PFUnA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 13:34	JR2
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 13:34	JR2
Perfluoroheptanoic acid (PFHpA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 13:34	JR2
Perfluorooctanoic acid (PFOA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 13:34	JR2
Perfluorooctanesulfonic acid (PFOS)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 13:34	JR2
Perfluorononanoic acid (PFNA)	ND	1.8		ng/L	1		EPA 533	8/15/23	8/16/23 13:34	JR2

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
M2-4:2FTS	70.9	50-200		8/16/23 13:34
M2-8:2FTS	125	50-200		8/16/23 13:34
MPFBA	60.3	50-200		8/16/23 13:34
M3HFPO-DA	53.6	50-200		8/16/23 13:34
M6PFDA	63.0	50-200		8/16/23 13:34
M3PFBS	80.8	50-200		8/16/23 13:34
M7PFUnA	56.8	50-200		8/16/23 13:34
M2-6:2FTS	82.7	50-200		8/16/23 13:34
M5PFPeA	59.1	50-200		8/16/23 13:34
M5PFHxA	55.3	50-200		8/16/23 13:34
M3PFHxS	81.3	50-200		8/16/23 13:34
M4PFHpA	56.2	50-200		8/16/23 13:34
M8PFOA	59.4	50-200		8/16/23 13:34
M8PFOS	84.6	50-200		8/16/23 13:34
M9PFNA	61.4	50-200		8/16/23 13:34
MPFDoA	61.5	50-200		8/16/23 13:34

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Project Location: 1,4 Dioxane/PFAS 7/25 Sample Description: Work Order: 23G3739

Date Received: 7/27/2023

Field Sample #: N-13268 FB Sampled: 7/25/2023 13:40

Sample ID: 23G3739-16

Sample Matrix: Field Blank

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL MA ORSG	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	2.1		ng/L	1		EPA 533	8/15/23	8/16/23 13:41	JR2
Perfluorobutanesulfonic acid (PFBS)	ND	2.1		ng/L	1		EPA 533	8/15/23	8/16/23 13:41	JR2
Perfluoropentanoic acid (PFPeA)	ND	2.1		ng/L	1		EPA 533	8/15/23	8/16/23 13:41	JR2
Perfluorohexanoic acid (PFHxA)	ND	2.1		ng/L	1		EPA 533	8/15/23	8/16/23 13:41	JR2
11Cl-PF3OUdS (F53B Major)	ND	2.1		ng/L	1		EPA 533	8/15/23	8/16/23 13:41	JR2
9Cl-PF3ONS (F53B Minor)	ND	2.1		ng/L	1		EPA 533	8/15/23	8/16/23 13:41	JR2
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.1		ng/L	1		EPA 533	8/15/23	8/16/23 13:41	JR2
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.1		ng/L	1		EPA 533	8/15/23	8/16/23 13:41	JR2
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	2.1		ng/L	1		EPA 533	8/15/23	8/16/23 13:41	JR2
Perfluorodecanoic acid (PFDA)	ND	2.1		ng/L	1		EPA 533	8/15/23	8/16/23 13:41	JR2
Perfluorododecanoic acid (PFDoA)	ND	2.1		ng/L	1		EPA 533	8/15/23	8/16/23 13:41	JR2
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.1		ng/L	1		EPA 533	8/15/23	8/16/23 13:41	JR2
Perfluoroheptanesulfonic acid (PFHpS)	ND	2.1		ng/L	1		EPA 533	8/15/23	8/16/23 13:41	JR2
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	2.1		ng/L	1		EPA 533	8/15/23	8/16/23 13:41	JR2
Perfluorohexanesulfonic acid (PFHxS)	ND	2.1		ng/L	1		EPA 533	8/15/23	8/16/23 13:41	JR2
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	2.1		ng/L	1		EPA 533	8/15/23	8/16/23 13:41	JR2
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	2.1		ng/L	1		EPA 533	8/15/23	8/16/23 13:41	JR2
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	2.1		ng/L	1		EPA 533	8/15/23	8/16/23 13:41	JR2
Perfluoropentanesulfonic acid (PFPeS)	ND	2.1		ng/L	1		EPA 533	8/15/23	8/16/23 13:41	JR2
Perfluoroundecanoic acid (PFUnA)	ND	2.1		ng/L	1		EPA 533	8/15/23	8/16/23 13:41	JR2
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.1		ng/L	1		EPA 533	8/15/23	8/16/23 13:41	JR2
Perfluoroheptanoic acid (PFHpA)	ND	2.1		ng/L	1		EPA 533	8/15/23	8/16/23 13:41	JR2
Perfluorooctanoic acid (PFOA)	ND	2.1		ng/L	1		EPA 533	8/15/23	8/16/23 13:41	JR2
Perfluorooctanesulfonic acid (PFOS)	ND	2.1		ng/L	1		EPA 533	8/15/23	8/16/23 13:41	JR2
Perfluorononanoic acid (PFNA)	ND	2.1		ng/L	1		EPA 533	8/15/23	8/16/23 13:41	JR2

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
M2-4:2FTS	65.2	50-200		8/16/23 13:41
M2-8:2FTS	128	50-200		8/16/23 13:41
MPFBA	75.3	50-200		8/16/23 13:41
M3HFPO-DA	71.7	50-200		8/16/23 13:41
M6PFDA	70.6	50-200		8/16/23 13:41
M3PFBS	72.1	50-200		8/16/23 13:41
M7PFUnA	69.2	50-200		8/16/23 13:41
M2-6:2FTS	73.0	50-200		8/16/23 13:41
M5PFPeA	73.1	50-200		8/16/23 13:41
M5PFHxA	68.8	50-200		8/16/23 13:41
M3PFHxS	73.9	50-200		8/16/23 13:41
M4PFHpA	69.2	50-200		8/16/23 13:41
M8PFOA	71.7	50-200		8/16/23 13:41
M8PFOS	72.3	50-200		8/16/23 13:41
M9PFNA	68.8	50-200		8/16/23 13:41
MPFDoA	69.2	50-200		8/16/23 13:41

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Sample Extraction Data

Prep Method:EPA 533 **Analytical Method:EPA 533**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23G3739-02 [N-11295 FB]	B347263	275	1.00	08/15/23
23G3739-04 [N-11107 FB]	B347263	274	1.00	08/15/23
23G3739-05 [N-07781]	B347263	278	1.00	08/15/23
23G3739-06 [N-07781 FB]	B347263	268	1.00	08/15/23
23G3739-07 [N-04245]	B347263	283	1.00	08/15/23
23G3739-08 [N-04245 FB]	B347263	267	1.00	08/15/23
23G3739-10 [N-06651 FB]	B347263	253	1.00	08/15/23
23G3739-12 [N-08355 FB]	B347263	258	1.00	08/15/23
23G3739-14 [N-13119 FB]	B347263	267	1.00	08/15/23
23G3739-15 [N-13268]	B347263	275	1.00	08/15/23
23G3739-16 [N-13268 FB]	B347263	240	1.00	08/15/23

Prep Method:EPA 533 **Analytical Method:EPA 533**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23G3739-01RE1 [N-11295]	B349448	278	1.00	08/21/23
23G3739-03RE1 [N-11107]	B349448	273	1.00	08/21/23
23G3739-09RE1 [N-06651]	B349448	281	1.00	08/21/23
23G3739-11RE1 [N-08355]	B349448	275	1.00	08/21/23
23G3739-13RE1 [N-13119]	B349448	284	1.00	08/21/23

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B347263 - EPA 533										
Blank (B347263-BLK1)				Prepared: 08/15/23 Analyzed: 08/16/23						
Perfluorobutanoic acid (PFBA)	ND	1.9	ng/L							
Perfluorobutanesulfonic acid (PFBS)	ND	1.9	ng/L							
Perfluoropentanoic acid (PFPeA)	ND	1.9	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	1.9	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	1.9	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	1.9	ng/L							
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.9	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.9	ng/L							
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.9	ng/L							
Perfluorodecanoic acid (PFDA)	ND	1.9	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	1.9	ng/L							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9	ng/L							
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.9	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9	ng/L							
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.9	ng/L							
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.9	ng/L							
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.9	ng/L							
Perfluoropentanesulfonic acid (PFPeS)	ND	1.9	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	1.9	ng/L							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	1.9	ng/L							
Perfluorooctanoic acid (PFOA)	ND	1.9	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	1.9	ng/L							
Perfluorononanoic acid (PFNA)	ND	1.9	ng/L							
Surrogate: M2-4:2FTS	*29.9*		ng/L	35.2		85.0	50-200			
Surrogate: M2-8:2FTS	*50.6*		ng/L	36.0		141	50-200			
Surrogate: MPFBA	*31.9*		ng/L	37.5		85.1	50-200			
Surrogate: M3HFPO-DA	*29.6*		ng/L	37.5		78.8	50-200			
Surrogate: M6PFDA	*29.5*		ng/L	37.5		78.8	50-200			
Surrogate: M3PFBS	*29.3*		ng/L	35.0		83.7	50-200			
Surrogate: M7PFUnA	*30.6*		ng/L	37.5		81.5	50-200			
Surrogate: M2-6:2FTS	*33.9*		ng/L	35.7		95.0	50-200			
Surrogate: M5PFPeA	*30.5*		ng/L	37.5		81.2	50-200			
Surrogate: M5PFHxA	*29.1*		ng/L	37.5		77.7	50-200			
Surrogate: M3PFHxS	*29.9*		ng/L	35.6		84.0	50-200			
Surrogate: M4PFHpA	*29.1*		ng/L	37.5		77.6	50-200			
Surrogate: M8PFOA	*30.4*		ng/L	37.5		81.0	50-200			
Surrogate: M8PFOS	*31.1*		ng/L	36.0		86.6	50-200			
Surrogate: M9PFNA	*28.6*		ng/L	37.5		76.2	50-200			
Surrogate: MPFDoA	*30.7*		ng/L	37.5		81.8	50-200			
LCS (B347263-BS1)				Prepared: 08/15/23 Analyzed: 08/16/23						
Perfluorobutanoic acid (PFBA)	10.1	1.9	ng/L	9.51		107	70-130			
Perfluorobutanesulfonic acid (PFBS)	9.06	1.9	ng/L	8.42		108	70-130			
Perfluoropentanoic acid (PFPeA)	10.2	1.9	ng/L	9.51		107	70-130			
Perfluorohexanoic acid (PFHxA)	10.1	1.9	ng/L	9.51		106	70-130			
11Cl-PF3OUdS (F53B Major)	9.93	1.9	ng/L	8.96		111	70-130			
9Cl-PF3ONS (F53B Minor)	8.99	1.9	ng/L	8.87		101	70-130			

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B347263 - EPA 533										
LCS (B347263-BS1)				Prepared: 08/15/23 Analyzed: 08/16/23						
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	9.07	1.9	ng/L	8.96		101	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	9.19	1.9	ng/L	9.51		96.6	70-130			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	10.1	1.9	ng/L	9.13		111	70-130			
Perfluorodecanoic acid (PFDA)	10.0	1.9	ng/L	9.51		106	70-130			
Perfluorododecanoic acid (PFDoA)	9.83	1.9	ng/L	9.51		103	70-130			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	9.85	1.9	ng/L	8.47		116	70-130			
Perfluoroheptanesulfonic acid (PFHpS)	10.7	1.9	ng/L	9.09		118	70-130			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	9.48	1.9	ng/L	8.89		107	70-130			
Perfluorohexanesulfonic acid (PFHxS)	9.13	1.9	ng/L	8.70		105	70-130			
Perfluoro-4-oxapentanoic acid (PFMPA)	9.78	1.9	ng/L	9.51		103	70-130			
Perfluoro-5-oxahexanoic acid (PFMBA)	9.74	1.9	ng/L	9.51		102	70-130			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	8.99	1.9	ng/L	9.04		99.4	70-130			
Perfluoropentanesulfonic acid (PFPeS)	9.59	1.9	ng/L	8.94		107	70-130			
Perfluoroundecanoic acid (PFUnA)	11.0	1.9	ng/L	9.51		116	70-130			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	11.3	1.9	ng/L	9.51		118	70-130			
Perfluoroheptanoic acid (PFHpA)	10.1	1.9	ng/L	9.51		106	70-130			
Perfluorooctanoic acid (PFOA)	9.71	1.9	ng/L	9.51		102	70-130			
Perfluorooctanesulfonic acid (PFOS)	9.56	1.9	ng/L	8.80		109	70-130			
Perfluorononanoic acid (PFNA)	9.58	1.9	ng/L	9.51		101	70-130			
Surrogate: M2-4:2FTS	*30.5*		ng/L	35.7		85.4	50-200			
Surrogate: M2-8:2FTS	*54.6*		ng/L	36.5		150	50-200			
Surrogate: MPFBA	*31.5*		ng/L	38.1		82.9	50-200			
Surrogate: M3HFPO-DA	*33.2*		ng/L	38.1		87.3	50-200			
Surrogate: M6PFDA	*34.7*		ng/L	38.1		91.2	50-200			
Surrogate: M3PFBS	*29.1*		ng/L	35.5		82.0	50-200			
Surrogate: M7PFUnA	*30.0*		ng/L	38.1		78.9	50-200			
Surrogate: M2-6:2FTS	*36.0*		ng/L	36.2		99.4	50-200			
Surrogate: M5PFPeA	*30.2*		ng/L	38.1		79.3	50-200			
Surrogate: M5PFHxA	*30.8*		ng/L	38.1		81.1	50-200			
Surrogate: M3PFHxS	*29.9*		ng/L	36.1		82.8	50-200			
Surrogate: M4PFHpA	*32.2*		ng/L	38.1		84.6	50-200			
Surrogate: M8PFOA	*32.0*		ng/L	38.1		84.2	50-200			
Surrogate: M8PFOS	*28.3*		ng/L	36.5		77.5	50-200			
Surrogate: M9PFNA	*31.9*		ng/L	38.1		83.9	50-200			
Surrogate: MPFDoA	*30.2*		ng/L	38.1		79.5	50-200			
LCS Dup (B347263-BSD1)				Prepared: 08/15/23 Analyzed: 08/16/23						
Perfluorobutanoic acid (PFBA)	10.7	1.9	ng/L	9.33		114	70-130	5.07	30	
Perfluorobutanesulfonic acid (PFBS)	9.69	1.9	ng/L	8.25		117	70-130	6.74	30	
Perfluoropentanoic acid (PFPeA)	10.6	1.9	ng/L	9.33		113	70-130	3.45	30	
Perfluorohexanoic acid (PFHxA)	10.5	1.9	ng/L	9.33		113	70-130	4.44	30	
11Cl-PF3OUdS (F53B Major)	10.3	1.9	ng/L	8.78		118	70-130	4.13	30	
9Cl-PF3ONS (F53B Minor)	9.40	1.9	ng/L	8.69		108	70-130	4.44	30	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	9.83	1.9	ng/L	8.78		112	70-130	8.09	30	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	9.39	1.9	ng/L	9.33		101	70-130	2.09	30	
8:2 Fluorotelomersulfonic acid (8:2FTS A)	11.3	1.9	ng/L	8.95		126	70-130	10.7	30	
Perfluorodecanoic acid (PFDA)	11.6	1.9	ng/L	9.33		125	70-130	14.7	30	
Perfluorododecanoic acid (PFDoA)	10.2	1.9	ng/L	9.33		110	70-130	3.91	30	

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B347263 - EPA 533											
LCS Dup (B347263-BSD1)				Prepared: 08/15/23 Analyzed: 08/16/23							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	10.4	1.9	ng/L	8.30		126		70-130	5.66	30	
Perfluoroheptanesulfonic acid (PFHpS)	12.5	1.9	ng/L	8.91		**140**	*	70-130	15.1	30	L-07
4:2 Fluorotelomersulfonic acid (4:2FTS A)	9.88	1.9	ng/L	8.72		113		70-130	4.07	30	
Perfluorohexanesulfonic acid (PFHxS)	9.75	1.9	ng/L	8.53		114		70-130	6.57	30	
Perfluoro-4-oxapentanoic acid (PFMPA)	10.1	1.9	ng/L	9.33		109		70-130	3.56	30	
Perfluoro-5-oxahexanoic acid (PFMBA)	10.1	1.9	ng/L	9.33		108		70-130	3.30	30	
6:2 Fluorotelomersulfonic acid (6:2FTS A)	9.37	1.9	ng/L	8.86		106		70-130	4.19	30	
Perfluoropentanesulfonic acid (PFPeS)	10.4	1.9	ng/L	8.77		118		70-130	7.70	30	
Perfluoroundecanoic acid (PFUnA)	10.2	1.9	ng/L	9.33		110		70-130	7.30	30	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	11.7	1.9	ng/L	9.33		126		70-130	3.99	30	
Perfluoroheptanoic acid (PFHpA)	10.6	1.9	ng/L	9.33		114		70-130	5.04	30	
Perfluorooctanoic acid (PFOA)	10.4	1.9	ng/L	9.33		112		70-130	7.15	30	
Perfluorooctanesulfonic acid (PFOS)	10.8	1.9	ng/L	8.63		125		70-130	12.3	30	
Perfluorononanoic acid (PFNA)	11.2	1.9	ng/L	9.33		120		70-130	15.6	30	
Surrogate: M2-4:2FTS	*26.4*		ng/L	35.0		75.3		50-200			
Surrogate: M2-8:2FTS	*48.4*		ng/L	35.8		135		50-200			
Surrogate: MPFBA	*29.4*		ng/L	37.3		78.9		50-200			
Surrogate: M3HFPO-DA	*29.8*		ng/L	37.3		79.8		50-200			
Surrogate: M6PFDA	*30.0*		ng/L	37.3		80.5		50-200			
Surrogate: M3PFBS	*24.7*		ng/L	34.8		71.2		50-200			
Surrogate: M7PFUnA	*28.9*		ng/L	37.3		77.4		50-200			
Surrogate: M2-6:2FTS	*28.1*		ng/L	35.5		79.3		50-200			
Surrogate: M5PFPeA	*28.2*		ng/L	37.3		75.6		50-200			
Surrogate: M5PFHxA	*27.8*		ng/L	37.3		74.5		50-200			
Surrogate: M3PFHxS	*25.4*		ng/L	35.4		71.7		50-200			
Surrogate: M4PFHpA	*28.3*		ng/L	37.3		75.8		50-200			
Surrogate: M8PFOA	*28.0*		ng/L	37.3		75.0		50-200			
Surrogate: M8PFOS	*23.5*		ng/L	35.8		65.8		50-200			
Surrogate: M9PFNA	*27.1*		ng/L	37.3		72.7		50-200			
Surrogate: MPFDoA	*28.2*		ng/L	37.3		75.6		50-200			
Batch B349448 - EPA 533											
Blank (B349448-BLK1)				Prepared: 08/21/23 Analyzed: 08/22/23							
Perfluorobutanoic acid (PFBA)	ND	1.9	ng/L								
Perfluorobutanesulfonic acid (PFBS)	ND	1.9	ng/L								
Perfluoropentanoic acid (PFPeA)	ND	1.9	ng/L								
Perfluorohexanoic acid (PFHxA)	ND	1.9	ng/L								
11Cl-PF3OUdS (F53B Major)	ND	1.9	ng/L								
9Cl-PF3ONS (F53B Minor)	ND	1.9	ng/L								
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.9	ng/L								
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.9	ng/L								
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.9	ng/L								
Perfluorodecanoic acid (PFDA)	ND	1.9	ng/L								
Perfluorododecanoic acid (PFDoA)	ND	1.9	ng/L								
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	ng/L								
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9	ng/L								
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.9	ng/L								
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9	ng/L								

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B349448 - EPA 533										
Blank (B349448-BLK1)				Prepared: 08/21/23 Analyzed: 08/22/23						
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.9	ng/L							
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.9	ng/L							
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.9	ng/L							
Perfluoropentanesulfonic acid (PFPeS)	ND	1.9	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	1.9	ng/L							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	1.9	ng/L							
Perfluorooctanoic acid (PFOA)	ND	1.9	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	1.9	ng/L							
Perfluorononanoic acid (PFNA)	ND	1.9	ng/L							
Surrogate: M2-4:2FTS	*39.5*		ng/L	35.6		111	50-200			
Surrogate: M2-8:2FTS	*70.6*		ng/L	36.4		194	50-200			
Surrogate: MPFBA	*41.7*		ng/L	37.9		110	50-200			
Surrogate: M3HFPO-DA	*33.9*		ng/L	37.9		89.4	50-200			
Surrogate: M6PFDA	*41.9*		ng/L	37.9		110	50-200			
Surrogate: M3PFBS	*34.3*		ng/L	35.3		97.1	50-200			
Surrogate: M7PFUnA	*42.0*		ng/L	37.9		111	50-200			
Surrogate: M2-6:2FTS	*55.4*		ng/L	36.1		153	50-200			
Surrogate: M5PFPeA	*41.3*		ng/L	37.9		109	50-200			
Surrogate: M5PFHxA	*38.4*		ng/L	37.9		101	50-200			
Surrogate: M3PFHxS	*34.1*		ng/L	36.0		94.9	50-200			
Surrogate: M4PFHpA	*39.1*		ng/L	37.9		103	50-200			
Surrogate: M8PFOA	*40.4*		ng/L	37.9		106	50-200			
Surrogate: M8PFOS	*35.0*		ng/L	36.4		96.1	50-200			
Surrogate: M9PFNA	*38.7*		ng/L	37.9		102	50-200			
Surrogate: MPFDoA	*41.3*		ng/L	37.9		109	50-200			
LCS (B349448-BS1)				Prepared: 08/21/23 Analyzed: 08/22/23						
Perfluorobutanoic acid (PFBA)	18.6	1.9	ng/L	19.3		96.3	70-130			
Perfluorobutanesulfonic acid (PFBS)	16.9	1.9	ng/L	17.1		99.0	70-130			
Perfluoropentanoic acid (PFPeA)	18.7	1.9	ng/L	19.3		96.7	70-130			
Perfluorohexanoic acid (PFHxA)	18.7	1.9	ng/L	19.3		96.9	70-130			
11Cl-PF3OUdS (F53B Major)	15.2	1.9	ng/L	18.2		83.8	70-130			
9Cl-PF3ONS (F53B Minor)	15.1	1.9	ng/L	18.0		83.8	70-130			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	16.0	1.9	ng/L	18.2		87.9	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	18.6	1.9	ng/L	19.3		96.6	70-130			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	18.5	1.9	ng/L	18.5		99.8	70-130			
Perfluorodecanoic acid (PFDA)	19.2	1.9	ng/L	19.3		99.6	70-130			
Perfluorododecanoic acid (PFDoA)	17.0	1.9	ng/L	19.3		87.9	70-130			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	17.9	1.9	ng/L	17.2		104	70-130			
Perfluoroheptanesulfonic acid (PFHpS)	17.6	1.9	ng/L	18.4		95.5	70-130			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	17.9	1.9	ng/L	18.0		99.1	70-130			
Perfluorohexanesulfonic acid (PFHxS)	17.8	1.9	ng/L	17.7		101	70-130			
Perfluoro-4-oxapentanoic acid (PFMPA)	18.2	1.9	ng/L	19.3		94.4	70-130			
Perfluoro-5-oxahexanoic acid (PFMBA)	17.0	1.9	ng/L	19.3		88.3	70-130			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	18.3	1.9	ng/L	18.3		99.6	70-130			
Perfluoropentanesulfonic acid (PFPeS)	18.5	1.9	ng/L	18.1		102	70-130			
Perfluoroundecanoic acid (PFUnA)	20.1	1.9	ng/L	19.3		104	70-130			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	19.3	1.9	ng/L	19.3		100	70-130			

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B349448 - EPA 533										
LCS (B349448-BS1)				Prepared: 08/21/23 Analyzed: 08/22/23						
Perfluoroheptanoic acid (PFHpA)	19.9	1.9	ng/L	19.3		103	70-130			
Perfluorooctanoic acid (PFOA)	17.1	1.9	ng/L	19.3		88.6	70-130			
Perfluorooctanesulfonic acid (PFOS)	18.5	1.9	ng/L	17.8		103	70-130			
Perfluorononanoic acid (PFNA)	19.5	1.9	ng/L	19.3		101	70-130			
Surrogate: M2-4:2FTS	*39.3*		ng/L	36.2		109	50-200			
Surrogate: M2-8:2FTS	*69.8*		ng/L	37.0		188	50-200			
Surrogate: MPFBA	*26.2*		ng/L	38.6		67.9	50-200			
Surrogate: M3HFPO-DA	*20.6*		ng/L	38.6		53.5	50-200			
Surrogate: M6PFDA	*28.2*		ng/L	38.6		73.0	50-200			
Surrogate: M3PFBS	*33.4*		ng/L	36.0		92.8	50-200			
Surrogate: M7PFUnA	*28.8*		ng/L	38.6		74.8	50-200			
Surrogate: M2-6:2FTS	*48.6*		ng/L	36.7		132	50-200			
Surrogate: M5PFPeA	*26.0*		ng/L	38.6		67.3	50-200			
Surrogate: M5PFHxA	*24.9*		ng/L	38.6		64.5	50-200			
Surrogate: M3PFHxS	*34.0*		ng/L	36.6		92.9	50-200			
Surrogate: M4PFHpA	*25.2*		ng/L	38.6		65.3	50-200			
Surrogate: M8PFOA	*27.3*		ng/L	38.6		70.7	50-200			
Surrogate: M8PFOS	*36.5*		ng/L	37.0		98.6	50-200			
Surrogate: M9PFNA	*26.8*		ng/L	38.6		69.5	50-200			
Surrogate: MPFDoA	*29.2*		ng/L	38.6		75.7	50-200			
LCS Dup (B349448-BSD1)				Prepared: 08/21/23 Analyzed: 08/22/23						
Perfluorobutanoic acid (PFBA)	18.0	1.9	ng/L	19.0		95.0	70-130	3.09	30	
Perfluorobutanesulfonic acid (PFBS)	16.4	1.9	ng/L	16.8		97.9	70-130	2.89	30	
Perfluoropentanoic acid (PFPeA)	18.0	1.9	ng/L	19.0		94.7	70-130	3.78	30	
Perfluorohexanoic acid (PFHxA)	18.4	1.9	ng/L	19.0		96.7	70-130	1.88	30	
11Cl-PF3OUdS (F53B Major)	15.6	1.9	ng/L	17.9		87.0	70-130	2.12	30	
9Cl-PF3ONS (F53B Minor)	13.9	1.9	ng/L	17.7		78.3	70-130	8.40	30	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	15.8	1.9	ng/L	17.9		88.2	70-130	1.33	30	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	18.3	1.9	ng/L	19.0		96.7	70-130	1.60	30	
8:2 Fluorotelomersulfonic acid (8:2FTS A)	17.3	1.9	ng/L	18.2		95.0	70-130	6.56	30	
Perfluorodecanoic acid (PFDA)	19.1	1.9	ng/L	19.0		101	70-130	0.539	30	
Perfluorododecanoic acid (PFDoA)	16.5	1.9	ng/L	19.0		87.1	70-130	2.56	30	
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	17.0	1.9	ng/L	16.9		101	70-130	5.27	30	
Perfluoroheptanesulfonic acid (PFHpS)	17.2	1.9	ng/L	18.1		94.8	70-130	2.43	30	
4:2 Fluorotelomersulfonic acid (4:2FTS A)	17.0	1.9	ng/L	17.7		95.6	70-130	5.24	30	
Perfluorohexanesulfonic acid (PFHxS)	17.4	1.9	ng/L	17.4		100	70-130	2.41	30	
Perfluoro-4-oxapentanoic acid (PFMPA)	18.1	1.9	ng/L	19.0		95.4	70-130	0.681	30	
Perfluoro-5-oxahexanoic acid (PFMBA)	16.8	1.9	ng/L	19.0		88.8	70-130	1.07	30	
6:2 Fluorotelomersulfonic acid (6:2FTS A)	16.4	1.9	ng/L	18.0		91.1	70-130	10.6	30	
Perfluoropentanesulfonic acid (PFPeS)	17.5	1.9	ng/L	17.8		98.2	70-130	5.65	30	
Perfluoroundecanoic acid (PFUnA)	20.0	1.9	ng/L	19.0		106	70-130	0.195	30	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	19.8	1.9	ng/L	19.0		105	70-130	2.61	30	
Perfluoroheptanoic acid (PFHpA)	18.1	1.9	ng/L	19.0		95.3	70-130	9.42	30	
Perfluorooctanoic acid (PFOA)	16.4	1.9	ng/L	19.0		86.7	70-130	3.86	30	
Perfluorooctanesulfonic acid (PFOS)	17.5	1.9	ng/L	17.5		99.7	70-130	5.37	30	
Perfluorononanoic acid (PFNA)	17.8	1.9	ng/L	19.0		93.9	70-130	9.20	30	
Surrogate: M2-4:2FTS	*43.7*		ng/L	35.6		123	50-200			
Surrogate: M2-8:2FTS	*79.3*		ng/L	36.4		**218** *	50-200			S-29
Surrogate: MPFBA	*41.8*		ng/L	37.9		110	50-200			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B349448 - EPA 533										
LCS Dup (B349448-BSD1)				Prepared: 08/21/23 Analyzed: 08/22/23						
Surrogate: M3HFPO-DA	*32.5*		ng/L	37.9		85.6	50-200			
Surrogate: M6PFDA	*44.3*		ng/L	37.9		117	50-200			
Surrogate: M3PFBS	*37.7*		ng/L	35.4		107	50-200			
Surrogate: M7PFUnA	*41.3*		ng/L	37.9		109	50-200			
Surrogate: M2-6:2FTS	*60.3*		ng/L	36.1		167	50-200			
Surrogate: M5PFPeA	*41.5*		ng/L	37.9		109	50-200			
Surrogate: M5PFHxA	*40.2*		ng/L	37.9		106	50-200			
Surrogate: M3PFHxS	*38.1*		ng/L	36.0		106	50-200			
Surrogate: M4PFHpA	*41.4*		ng/L	37.9		109	50-200			
Surrogate: M8PFOA	*44.0*		ng/L	37.9		116	50-200			
Surrogate: M8PFOS	*41.8*		ng/L	36.4		115	50-200			
Surrogate: M9PFNA	*42.9*		ng/L	37.9		113	50-200			
Surrogate: MPFDoA	*41.7*		ng/L	37.9		110	50-200			

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
L-07	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
PF-03	Internal standard area >150% of associated calibration standard internal standard area. Re-analysis reported since it yielded similar internal standard non-conformace.
PF-17	Extracted Internal Standard recovery is outside of control limits. Data is not significantly affected since associated analyte is not detected and bias is on the high side.
PF-18	Duplicate analysis confirmed Extracted Internal Standard failure due to matrix effects.
S-29	Extracted Internal Standard is outside of control limits.

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA 533 in Drinking Water	
Perfluorobutanoic acid (PFBA)	NH,NY,VT-DW,ME,NJ,PA,CT
Perfluorobutanesulfonic acid (PFBS)	NH,NY,VT-DW,ME,NJ,PA,CT
Perfluoropentanoic acid (PFPeA)	NH,NY,VT-DW,ME,NJ,PA,CT
Perfluorohexanoic acid (PFHxA)	NH,NY,VT-DW,ME,NJ,PA,CT
11Cl-PF3OUdS (F53B Major)	NH,NY,VT-DW,ME,NJ,PA,CT
9Cl-PF3ONS (F53B Minor)	NH,NY,VT-DW,ME,NJ,PA,CT
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NH,NY,VT-DW,ME,NJ,PA,CT
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH,NY,VT-DW,ME,NJ,PA,CT
8:2 Fluorotelomersulfonic acid (8:2FTS A)	NH,NY,VT-DW,ME,NJ,PA,CT
Perfluorodecanoic acid (PFDA)	NH,NY,VT-DW,ME,NJ,PA,CT
Perfluorododecanoic acid (PFDoA)	NH,NY,VT-DW,ME,NJ,PA,CT
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NH,NY,VT-DW,ME,NJ,PA,CT
Perfluoroheptanesulfonic acid (PFHpS)	NH,NY,VT-DW,ME,NJ,PA,CT
4:2 Fluorotelomersulfonic acid (4:2FTS A)	NH,NY,VT-DW,ME,NJ,PA,CT
Perfluorohexanesulfonic acid (PFHxS)	NH,NY,VT-DW,ME,NJ,PA,CT
Perfluoro-4-oxapentanoic acid (PFMPA)	NH,NY,VT-DW,ME,NJ,PA,CT
Perfluoro-5-oxahexanoic acid (PFMBA)	NH,NY,VT-DW,ME,NJ,PA,CT
6:2 Fluorotelomersulfonic acid (6:2FTS A)	NH,NY,VT-DW,ME,NJ,PA,CT
Perfluoropentanesulfonic acid (PFPeS)	NH,NY,VT-DW,ME,NJ,PA,CT
Perfluoroundecanoic acid (PFUnA)	NH,NY,VT-DW,ME,NJ,PA,CT
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH,NY,VT-DW,ME,NJ,PA,CT
Perfluoroheptanoic acid (PFHpA)	NH,NY,VT-DW,ME,NJ,PA,CT
Perfluorooctanoic acid (PFOA)	NH,NY,VT-DW,ME,NJ,PA,CT
Perfluorooctanesulfonic acid (PFOS)	NH,NY,VT-DW,ME,NJ,PA,CT
Perfluorononanoic acid (PFNA)	NH,NY,VT-DW,ME,NJ,PA,CT

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NJ	New Jersey DEP	MA007 NELAP	06/30/2024
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2024
ME	State of Maine	MA00100	06/9/2025
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024

2363739 1F

Internal Transfer Chain of Custody

☐ Samples Pre-Logged into eCOC.

State Of Origin: NY

Cert. Needed: [X] Yes [ ] No

Owner Received Date: 7/25/2023 Results Requested By: 8/9/2023

Workorder: 70264473 **Workorder Name:** 1,4 DIOXANE/PFAS 7/25

Report To	Subcontract To
Jennifer Aracri Pace Analytical Melville 575 Broad Hollow Road Melville, NY 11747 Phone (631)694-3040	Pace New England 39 Spruce St. East Longmeadow, MA 01028 Phone (413)525-2332

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Other	Requested Analysis: PFAS by 533	LAB USE ONLY
1	N-11295	PS	7/25/2023 11:45	70264473001	Drinking	1	X	
2	N-11295 FB	PS	7/25/2023 11:45	70264473002	Drinking	1	X	
3	N-11107	PS	7/25/2023 11:55	70264473003	Drinking	1	X	
4	N-11107 FB	PS	7/25/2023 11:55	70264473004	Drinking	1	X	
5	N-07781	PS	7/25/2023 12:20	70264473005	Drinking	1	X	
6	N-07781 FB	PS	7/25/2023 12:20	70264473006	Drinking	1	X	
7	N-04245	PS	7/25/2023 12:35	70264473007	Drinking	1	X	
8	N-04245 FB	PS	7/25/2023 12:35	70264473008	Drinking	1	X	
9	N-06651	PS	7/25/2023 12:50	70264473009	Drinking	1	X	
10	N-06651 FB	PS	7/25/2023 12:50	70264473010	Drinking	1	X	
11	N-08355	PS	7/25/2023 13:15	70264473011	Drinking	1	X	
12	N-08355 FB	PS	7/25/2023 13:15	70264473012	Drinking	1	X	
13	N-13119	PS	7/25/2023 13:25	70264473013	Drinking	1	X	
14	N-13119 FB	PS	7/25/2023 13:25	70264473014	Drinking	1	X	
15	N-13268	PS	7/25/2023 13:40	70264473015	Drinking	1	X	
16	N-13268 FB	PS	7/25/2023 13:40	70264473016	Drinking	1	X	

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	Courtney Bartholomew PaceLI	7/26/23 1800	MSMA(AN)	7/26 1736	25 Compound List
2	MSMA(AN)	7/26 2030		7/27 0100	
3		7/27 0400		7-27-23 0400	

Cooler Temperature on Receipt 3.7 °C	Custody Seal Y or (N)	Received on Ice (Y) or N	Samples Intact (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F:413-525-6405
www.pacelabs.com

Log In Back-Sheet

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

Pace
PEOPLE ADVANCING SCIENCE

Client Pace

Project 1,4 Dioxane PFAS 7/25

MCP/RCP Required N/A

Deliverable Package Requirement N/A

Location 1,4 Dioxane PFAS 7/25

PWSID# (When Applicable) N/A

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐ //

Received By / Date / Time A.M 7/27/12 900

Back-Sheet By / Date / Time J.A 7/27/23 1226

Temperature Method GUN # 5

Temp ☑ < 6° C Actual Temperature 3.7

Rush Samples: Yes / (No) Notify

Short Hold: Yes / (No) Notify

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☐	☑
MS/MSD	☐	☑
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client	☑	Analysis	☑	Sampler Name	☐
Project	☑	IDs	☑	Collection Date/Time	☑

All Samples Proper pH: (N/A) ☐ ☐

Notes regarding Samples/COC outside of SOP:

Additional Container Notes

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Sample			
		16oz Amb/Clear	Soils Jars (Circle Amb/Clear)
		8oz Amb/Clear	
		4oz Amb/Clear	
		2oz Amb/Clear	
		Unpreserved	Ambers 1 Liter
		HCL	
		Sulfuric	
		Sulfuric	Ambers 250mL
		Phosphoric	
		HCl	
		Unpreserved	Ambers 100mL
		Unpreserved	Plastics 1 Liter
		Sulfuric	
		Unpreserved	Plastics 500mL
		Sulfuric	
		Unpreserved	Plastics 250mL
		Trizma	
		Sulfuric	
		Nitric	
		NaOH	
1	2	Ammonium Acetate	
		NaOH/Zinc	
		Unpreserved	VOA Vials
		HCl	
		MeOH	
		D.I. Water	
		BiSulfate	
		Col/Bact	Other / Fill in

Qualtrax ID: 120836

Eurofins Analytical

WO#: 70264473

70264473

Sample Request Form
PUBLIC WATER SUPPLIER

Date: 7/25/23

Collected By: A.L

Accepted By: [signature] 1431

Cooler Temp: 5/8 °C (B)

☐ WELL OFF LINE _____

☑ WELL RUN TO SYSTEM 30, 29, 22, 9, 14

☐ YES ☐ NO VOC'S PRESERVED WITH HCl

Client Info:

Name or Code: JWD

Address: 125 Convent Rd Syosset

Phone #: 516-921-8280

Attn: _____

Proj. # or (Name): _____

Bill To: _____

Copies To: _____

Sample Types	Purpose	Origin	Treatment Types
PW - Potable Water	RO - Routine	D - Distribution	AST - Air Stripper
GW - Groundwater	RE - Resample	RW - Raw Well	GAC - Granular Activated Charcoal
SW - Surface Water	S - Special	TW - Treated Well	N - Nitrate Removal Plant
WW - Waste Water		T - Tank	FE - Iron Removal Plant
AQ - Aqueous		MW - Monitoring Well	O - Other
S - Soil		I - Influent	
		E - Effluent	

Sample Info:

Date/Time Collected:	Sample Type	Location	Origin	Treatment Type	Purpose	Field Readings Cl_2	Field Readings pH/Temp	Analysis	Lab No.
7/25/23 11:45	PW	well 30 N-11295	RW		RO			1,4 Dioxane	
7/25/23 11:45	↓	well 30 N-11295	↓		↓			533 Method Pfoa/Pfos w/FB	001
7/25/23 11:55		well 29 N-11107						1,4 Dioxane	
7/25/23 11:55		well 29 N-11107						Pfoa/Pfos 533 Method w/FB	002
7/25/23 12:20		well 22 N-07781						1,4 Dioxane	
7/25/23 12:20		well 22 N-07781						Pfoa/Pfos 533 Method w/FB	003
7/25/23 12:35		well 9 N-04245						1,4 Dioxane	
7/25/23 12:35		well 9 N-04245						Pfoa/Pfos 533 w/FB	004
7/25/23 12:50		well 14 N-06651						1,4 Dioxane	
7/25/23 12:50	↓	well 14 N-06651	↓		↓			Pfoa/Pfos 533 w/FB	005

Remarks:

WO#: 70264473

PM: JSA Due Date: 08/07/23

CLIENT: JWD

Sample Request Form
PUBLIC WATER SUPPLIER

Date: 7/25/23

Collected By: A.L

Accepted By: [illegible] Pacli PM. 11

Cooler Temp: 5.8 °C (B)

☐ WELL OFF LINE _____

☑ WELL RUN TO SYSTEM 25, 26, 31

☐ YES ☐ NO VOC'S PRESERVED WITH HCl

Client Info:

Name or Code: Jericho Water

Address: 125 Convent Rd, Syosset

Phone #: 516-921-8280

Attn: _____

Proj. # or (Name): _____

Bill To: _____

Copies To: _____

Sample Types	Purpose	Origin	Treatment Types
PW - Potable Water	RO - Routine	D - Distribution	AST - Air Stripper
GW - Groundwater	RE - Resample	RW - Raw Well	GAC - Granular Activated Charcoal
SW - Surface Water	S - Special	TW - Treated Well	N - Nitrate Removal Plant
WW - Waste Water		T - Tank	FE - Iron Removal Plant
AQ - Aqueous		MW - Monitoring Well	O - Other
S - Soil		I - Influent	
		E - Effluent	

Sample Info:

Date/Time Collected:	Sample Type	Location	Origin	Treatment Type	Purpose	Field Readings Cl_2	Field Readings pH/Temp	Analysis	Lab No.
7/25/23 1:15	PW	well 25 N-08355	RW		RO			1,4 Dioxane	
7/25/23 1:15	↓	well 25 N-08355	↓		↓			Pfos/Pfoa 533 w/FB	006
7/25/23 1:25		well 26 N-13119						1,4 Dioxane	
7/25/23 1:25		well 26 N-13119						Pfoa/Pfos 533 w/FB	007
7/25/23 1:40		well 31 N-13268						1,4 Dioxane	
7/25/23 1:40	↓	well 31 N-13268	↓		↓			Pfoa/Pfos 533 w/FB	008

Remarks:

WO#: 70264473

PM: JSA **Due Date: 08/07/23**

CLIENT: JWD

Client Name: JWD Project #

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #:

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No Seals intact: ☐ Yes ☑ No Temperature Blank Present: ☐ Yes ☐ No

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ Ziploc ☐ None ☐ Other Type of Ice: Wet (Blue) None

Thermometer Used: TH188 Correction Factor: -0.3 ☐ Samples on ice, cooling process has begun

Cooler Temperature(°C): 5.8 Cooler Temperature Corrected(°C): 5.5 Date/Time 5035A kits placed in freezer

Temp should be above freezing to 6.0°C

USDA Regulated Soil (☑ N/A, water sample)

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? ☐ Yes ☑ No

Did samples orignate from a foreign source including Hawaii and Puerto Rico)? ☐ Yes ☑ No

If Yes to either question, fill out a Regulated Soil Checklist (ENV-FRM-MELV-0076) and include with SCUR/COC paperwork.

Date and Initials of person examining contents: VSS 7/25/23

				COMMENTS:
Chain of Custody Present:	☑Yes	☐No		1.
Chain of Custody Filled Out:	☑Yes	☐No		2.
Chain of Custody Relinquished:	☑Yes	☐No		3.
Sampler Name & Signature on COC:	☐Yes	☐No	☑N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No		5.
Short Hold Time Analysis (<72hr):	☐Yes	☑No		6.
Rush Turn Around Time Requested	☐Yes	☑No		7.
Sufficient Volume: (Triple volume provided for MS/MSD)	☑Yes	☐No		8.
Correct Containers Used:	☑Yes	☐No		9.
-Pace Containers Used:	☑Yes	☐No		
Containers Intact:	☑Yes	☐No		10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A	11. Note: if sediment is visible in the dissolved container.
Sample Labels match COC: -Includes date/time/ID/Analysis	☑Yes	☐No		12.
	Matrix:	SL	WT (O) OIL	OTHER

Date and Initials of person checking preservation:

All containers needing preservation have been pH paper Lot #	☐Yes	☐No	☑N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl Sample #
All containers needing preservation are found to be in compliance with method recommendation? (HNO_3, H_2SO_4, HCl, NaOH>9 Sulfide, NAOH>12 Cyanide) Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water). Per Method, VOA pH is checked after analysis	☐Yes	☐No	☑N/A	Initial when completed: / Lot # of added preservative: / Date/Time preservative added:
Samples checked for dechlorination: KI starch test strips Lot # Residual chlorine strips Lot #	☐Yes	☐No	☑N/A	14. Positive for Res. Chlorine? Y N
SM 4500 CN samples checked for sul Lead Acetate Strips Lot #	☐Yes	☐No	☑N/A	15. Positive for Sulfide? Y N
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	16.
Trip Blank Present:	☐Yes	☐No	☑N/A	17.
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

* PM (Project Manager) review is documented electronically in LIMS.

Laboratory Results

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests

575 Broad Hollow Road, Melville, NY 11747
TEL: (516) 370-6000 FAX: (516) 886-5526
www.pacelabs.com

Sample Information:
Type: Drinking Water
Origin: Raw Well
Routine

Jericho Water District
125 Convent Rd.
Syosset, NY 11791
Attn To : Peter Logan
Federal ID : 2902831
Collected : 07/25/2023 11:00 AM Point N-12795
Received : 07/25/2023 01:30 PM Location Well 21
Collected By CLIENT

Lab No. : 70264400001
Client Sample ID.: N-12795

Sample Comments:
Samples were received on the same day of collection on ice and are above 6 degrees Celcius. Samples were placed on ice by the lab and the cooling process has begun.

Analytical Method: EPA 522 Prep Method: EPA 522 Prep Date: 07/27/2023 9:11 AM

Parameter(s)	Results	Qualifier	D.F.	Units	Limit	Analyzed:	Container:
1,4-Dioxane (p-Dioxane)	**1.1***		1	ug/L	1	07/27/2023 6:35 PM	001 AG2R1/2
Surr: 1,4-Dioxane-d8 (S)	122%		1	%REC		07/27/2023 6:35 PM	001 AG2R1/2

Qualifiers:
DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.
ND - Not Detected at or above adjusted reporting limit.
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.Estimated value - below calibration range
U - Indicates the compound was analyzed for, but not detected

Result(s) reported meet(s) NYS Regulatory Limit(s).
Result(s) flagged with * Exceed NYS Regulatory Limit(s). Limit Noted.

Date Reported: 08/08/2023

Jennifer Aracri

Test results meet the requirements of NELAC unless otherwise noted.

575 Broad Hollow Road, Melville, NY 11747
TEL: (516) 370-6000 FAX: (516) 886-5526
www.pacelabs.com

Laboratory Results

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests

Sample Information:
Type: Drinking Water
Origin: Raw Well
Routine

Jericho Water District
125 Convent Rd.
Syosset, NY 11791
Attn To : Peter Logan
Federal ID : 2902831
Collected : 07/25/2023 12:05 PM Point N-10149
Received : 07/25/2023 01:30 PM Location Well 20
Collected By CLIENT

Lab No. : 70264400003
Client Sample ID.: N-10149

Analytical Method: EPA 522 Prep Method: EPA 522 Prep Date: 07/27/2023 9:11 AM

Parameter(s)	Results	Qualifier	D.F.	Units	Limit	Analyzed:	Container:
1,4-Dioxane (p-Dioxane)	0.87		1	ug/L	1	07/27/2023 7:09 PM	003 AG2R1/2
Surr: 1,4-Dioxane-d8 (S)	110%		1	%REC		07/27/2023 7:09 PM	003 AG2R1/2

Qualifiers:
DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.
ND - Not Detected at or above adjusted reporting limit.
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.Estimated value - below calibration range
U - Indicates the compound was analyzed for, but not detected

Result(s) reported meet(s) NYS Regulatory Limit(s).
Result(s) flagged with * Exceed NYS Regulatory Limit(s). Limit Noted.

Date Reported: 08/08/2023

Jennifer Aracri

Test results meet the requirements of NELAC unless otherwise noted.

575 Broad Hollow Road, Melville, NY 11747
TEL: (516) 370-6000 FAX: (516) 886-5526
www.pacelabs.com

WorkOrder :
70264400

Laboratory Certifications

Pace Analytical Services Long Island
575 Broad Hollow Rd, Melville, NY 11747
Connecticut Certification #: PH-0435
Delaware Certification # NY 10478
Maryland Certification #: 208
Massachusetts Certification #: M-NY026
New Hampshire Certification #: 2987
New Jersey Certification #: NY158
New York Certification #: 10478 Primary Accrediting Body
Pennsylvania Certification #: 68-00350
Rhode Island Certification #: LAO00340
Virginia Certification # 460302

WO# : 70264400

70264400

Sample Request Form
PUBLIC WATER SUPPLIER

Date: 7-25-23

Collected By: J.

Accepted By: Dyal PZE, 13:30

Cooler Temp: 15.4 °C (B)

❑ WELL OFF LINE _____

❑ WELL RUN TO SYSTEM _____

❑ YES ❑ NO VOC'S PRESERVED WITH HCl

Client Info:

Name or Code: Jacko Lake

Address: 125 Comal Rd

Phone #:

Attn:

Proj. # or (Name):

Bill To:

Copies To:

Sample Types	Purpose	Origin	Treatment Types
PW - Potable Water	RO - Routine	D - Distribution	AST - Air Stripper
GW - Groundwater	RE - Resample	RW - Raw Well	GAC - Granular Activated Charcoal
SW - Surface Water	S - Special	TW - Treated Well	N - Nitrate Removal Plant
WW - Waste Water		T - Tank	FE - Iron Removal Plant
AQ - Aqueous		MW - Monitoring Well	O - Other
S - Soil		I - Influent	
		E - Effluent	

Sample Info:

Date/Time Collected:	Sample Type	Location	Origin	Treatment Type	Purpose	Field Readings Cl_2	Field Readings pH/Temp	Analysis	Lab No.
7-25-23 11:00	PW	W-12795 well 18	RW		RO			1,4 Dioxane	
1		1			1			PFOS/PFOA	
12:05		W-10149 well 20						1,4 Dioxane	
1		1						PFOS/PFOA	
12:20		W-07593 well 17						1,4 Dioxane	
1		1						PFOS/PFOA	
12:34		W-07772 well 19						1,4 Dioxane	
1		1						PFOS/PFOA	
12:51		W-07773 well 19						1,4 Dioxane	
1		1			1			PFOS/PFOA	

Remarks:

WO#: 70264400
PM: JSA Due Date: 08/08/23
CLIENT: JWD

Client Name: JWD Project

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #:

Custody Seal on Cooler/Box Present: ☐ Yes ☐ No Seals intact: ☐ Yes ☐ No Temperature Blank Present: ☐ Yes ☑ No
Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ Ziploc ☐ None ☐ Other Type of Ice: Wet Blue None

Thermometer Used: TH188 Correction Factor: -.3 ☐ Samples on ice, cooling process has begun
Cooler Temperature(°C): 15.4 Cooler Temperature Corrected(°C): 15.1 Date/Time 5035A kits placed in freezer
Temp should be above freezing to 6.0°C

USDA Regulated Soil (☐ N/A, water sample)

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? ☐ Yes ☐ No

Did samples orignate from a foreign source including Hawaii and Puerto Rico)? ☐ Yes ☐ No

If Yes to either question, fill out a Regulated Soil Checklist (ENV-FRM-MELV-0076) and include with SCUR/COC paperwork.

Date and Initials of person examining contents:

				COMMENTS:
Chain of Custody Present:	☑Yes	☐No		1.
Chain of Custody Filled Out:	☑Yes	☐No		2.
Chain of Custody Relinquished:	☑Yes	☐No		3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No		5.
Short Hold Time Analysis (<72hr):	☐Yes	☑No		6.
Rush Turn Around Time Requested	☐Yes	☑No		7.
Sufficient Volume: (Triple volume provided for MS/MSD)	☑Yes	☐No		8.
Correct Containers Used:	☑Yes	☐No		9.
-Pace Containers Used:	☑Yes	☐No		
Containers Intact:	☑Yes	☐No		10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A	11. Note: if sediment is visible in the dissolved container.
Sample Labels match COC: -Includes date/time/ID/Analysis	☑Yes	☐No		12.
Matrix:	SL	WT	OIL OTHER	

Date and Initials of person checking preservation:

All containers needing preservation have been checked.	☐Yes	☐No	☑N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl
pH paper Lot #				Sample #
All containers needing preservation are found to be in compliance with method recommendation? (HNO_3, H_2SO_4, HCl, NaOH>9 Sulfide, NAOH>12 Cyanide)	☐Yes	☐No	☑N/A	
Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water). Per Method, VOA pH is checked after analysis				Initial when completed: / Lot # of added preservative: / Date/Time preservative added:
Samples checked for dechlorination:	☐Yes	☐No	☑N/A	14.
KI starch test strips Lot #				
Residual chlorine strips Lot #				Positive for Res. Chlorine? Y N
SM 4500 CN samples checked for sul	☐Yes	☐No	☑N/A	15.
Lead Acetate Strips Lot #				Positive for Sulfide? Y N
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	16.
Trip Blank Present:	☐Yes	☐No	☑N/A	17.
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	

Client Notification/ Resolution: Field Data Required? Y / N
Person Contacted: Date/Time:
Comments/ Resolution:

* PM (Project Manager) review is documented electronically in LIMS.

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August 7, 2023

Jennifer Aracri
Pace Analytical Services - Long Island, NY
575 Broad Hollow Road
Melville, NY 11747

Project Location: 1,4 Dioxane/PFAS 7/25
Client Job Number:
Project Number: 70264400
Laboratory Work Order Number: 23G3740

Enclosed are results of analyses for samples as received by the laboratory on July 27, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kaitlyn A. Feliciano
Project Manager

Table of Contents

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Pace Analytical Services - Long Island, NY
575 Broad Hollow Road
Melville, NY 11747
ATTN: Jennifer Aracri

REPORT DATE: 8/7/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 70264400

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23G3740

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: 1,4 Dioxane/PFAS 7/25

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
N-12795	23G3740-01	Drinking Water		EPA 533	
N-12795 FB	23G3740-02	Field Blank		EPA 533	
N-10149	23G3740-03	Drinking Water		EPA 533	
N-10149 FB	23G3740-04	Field Blank		EPA 533	
N-07593	23G3740-05	Drinking Water		EPA 533	
N-07593 FB	23G3740-06	Field Blank		EPA 533	
N-07772	23G3740-07	Drinking Water		EPA 533	
N-07772 FB	23G3740-08	Field Blank		EPA 533	
N-07773	23G3740-09	Drinking Water		EPA 533	
N-07773 FB	23G3740-10	Field Blank		EPA 533	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

EPA 533

Qualifications:

PF-17

Extracted Internal Standard recovery is outside of control limits. Data is not significantly affected since associated analyte is not detected and bias is on the high side.

Analyte & Samples(s) Qualified:

M2-8:2FTS
23G3740-01RE1[N-12795], 23G3740-05RE1[N-07593], 23G3740-09RE1[N-07773], B347868-BLK1

PF-18

Duplicate analysis confirmed Extracted Internal Standard failure due to matrix effects.

Analyte & Samples(s) Qualified:

M4PFHpA
23G3740-01RE1[N-12795]

M6PFDA
23G3740-01RE1[N-12795]

M7PFUnA
23G3740-01RE1[N-12795]

M8PFOA
23G3740-01RE1[N-12795]

M9PFNA
23G3740-01RE1[N-12795]

S-29

Extracted Internal Standard is outside of control limits.

Analyte & Samples(s) Qualified:

M2-8:2FTS
B347868-BS1, B347868-BSD1, S091605-CCV1, S091605-CCV2, S091605-CCV3

M3HFPO-DA
23G3740-01RE1[N-12795]

MPFDoA
23G3740-01RE1[N-12795]

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Lisa A. Worthington
Technical Representative

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 1,4 Dioxane/PFAS 7/25 | Sample Description: | Work Order: 23G3740

Date Received: 7/27/2023

Field Sample #: N-12795 | Sampled: 7/25/2023 11:00

Sample ID: 23G3740-01

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL MA ORSG	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 11:53	QNW
Perfluorobutanesulfonic acid (PFBS)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 11:53	QNW
Perfluoropentanoic acid (PFPeA)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 11:53	QNW
Perfluorohexanoic acid (PFHxA)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 11:53	QNW
11Cl-PF3OUdS (F53B Major)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 11:53	QNW
9Cl-PF3ONS (F53B Minor)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 11:53	QNW
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 11:53	QNW
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 11:53	QNW
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 11:53	QNW
Perfluorodecanoic acid (PFDA)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 11:53	QNW
Perfluorododecanoic acid (PFDoA)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 11:53	QNW
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 11:53	QNW
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 11:53	QNW
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 11:53	QNW
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 11:53	QNW
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 11:53	QNW
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 11:53	QNW
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 11:53	QNW
Perfluoropentanesulfonic acid (PFPeS)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 11:53	QNW
Perfluoroundecanoic acid (PFUnA)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 11:53	QNW
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 11:53	QNW
Perfluoroheptanoic acid (PFHpA)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 11:53	QNW
Perfluorooctanoic acid (PFOA)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 11:53	QNW
Perfluorooctanesulfonic acid (PFOS)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 11:53	QNW
Perfluorononanoic acid (PFNA)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 11:53	QNW

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
M2-4:2FTS	102		50-200		8/4/23 11:53
M2-8:2FTS	**216**	*	50-200	PF-17	8/4/23 11:53
MPFBA	57.5		50-200		8/4/23 11:53
M3HFPO-DA	**37.8**	*	50-200	S-29	8/4/23 11:53
M6PFDA	**47.8**	*	50-200	PF-18	8/4/23 11:53
M3PFBS	96.3		50-200		8/4/23 11:53
M7PFUnA	**46.4**	*	50-200	PF-18	8/4/23 11:53
M2-6:2FTS	111		50-200		8/4/23 11:53
M5PFPeA	54.6		50-200		8/4/23 11:53
M5PFHxA	51.0		50-200		8/4/23 11:53
M3PFHxS	96.9		50-200		8/4/23 11:53
M4PFHpA	**47.2**	*	50-200	PF-18	8/4/23 11:53
M8PFOA	**45.1**	*	50-200	PF-18	8/4/23 11:53
M8PFOS	90.1		50-200		8/4/23 11:53
M9PFNA	**47.6**	*	50-200	PF-18	8/4/23 11:53
MPFDoA	**47.7**	*	50-200	S-29	8/4/23 11:53

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Project Location: 1,4 Dioxane/PFAS 7/25 Sample Description: Work Order: 23G3740

Date Received: 7/27/2023

Field Sample #: N-12795 FB Sampled: 7/25/2023 11:00

Sample ID: 23G3740-02

Sample Matrix: Field Blank

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL MA ORSG	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:19	JR2
Perfluorobutanesulfonic acid (PFBS)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:19	JR2
Perfluoropentanoic acid (PFPeA)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:19	JR2
Perfluorohexanoic acid (PFHxA)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:19	JR2
11Cl-PF3OUdS (F53B Major)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:19	JR2
9Cl-PF3ONS (F53B Minor)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:19	JR2
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:19	JR2
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:19	JR2
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:19	JR2
Perfluorodecanoic acid (PFDA)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:19	JR2
Perfluorododecanoic acid (PFDoA)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:19	JR2
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:19	JR2
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:19	JR2
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:19	JR2
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:19	JR2
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:19	JR2
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:19	JR2
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:19	JR2
Perfluoropentanesulfonic acid (PFPeS)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:19	JR2
Perfluoroundecanoic acid (PFUnA)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:19	JR2
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:19	JR2
Perfluoroheptanoic acid (PFHpA)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:19	JR2
Perfluorooctanoic acid (PFOA)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:19	JR2
Perfluorooctanesulfonic acid (PFOS)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:19	JR2
Perfluorononanoic acid (PFNA)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:19	JR2

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
M2-4:2FTS	90.7	50-200		8/1/23 18:19
M2-8:2FTS	130	50-200		8/1/23 18:19
MPFBA	98.4	50-200		8/1/23 18:19
M3HFPO-DA	113	50-200		8/1/23 18:19
M6PFDA	96.7	50-200		8/1/23 18:19
M3PFBS	98.7	50-200		8/1/23 18:19
M7PFUnA	92.0	50-200		8/1/23 18:19
M2-6:2FTS	114	50-200		8/1/23 18:19
M5PFPeA	95.8	50-200		8/1/23 18:19
M5PFHxA	94.1	50-200		8/1/23 18:19
M3PFHxS	100	50-200		8/1/23 18:19
M4PFHpA	93.0	50-200		8/1/23 18:19
M8PFOA	98.3	50-200		8/1/23 18:19
M8PFOS	94.9	50-200		8/1/23 18:19
M9PFNA	99.7	50-200		8/1/23 18:19
MPFDoA	90.4	50-200		8/1/23 18:19

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Project Location: 1,4 Dioxane/PFAS 7/25 Sample Description: Work Order: 23G3740

Date Received: 7/27/2023

Field Sample #: N-10149 Sampled: 7/25/2023 12:05

Sample ID: 23G3740-03

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL MA ORSG	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	3.8	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:27	JR2
Perfluorobutanesulfonic acid (PFBS)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:27	JR2
Perfluoropentanoic acid (PFPeA)	2.6	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:27	JR2
Perfluorohexanoic acid (PFHxA)	2.2	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:27	JR2
11Cl-PF3OUdS (F53B Major)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:27	JR2
9Cl-PF3ONS (F53B Minor)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:27	JR2
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:27	JR2
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:27	JR2
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:27	JR2
Perfluorodecanoic acid (PFDA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:27	JR2
Perfluorododecanoic acid (PFDoA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:27	JR2
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:27	JR2
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:27	JR2
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:27	JR2
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:27	JR2
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:27	JR2
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:27	JR2
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:27	JR2
Perfluoropentanesulfonic acid (PFPeS)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:27	JR2
Perfluoroundecanoic acid (PFUnA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:27	JR2
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:27	JR2
Perfluoroheptanoic acid (PFHpA)	1.9	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:27	JR2
Perfluorooctanoic acid (PFOA)	2.4	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:27	JR2
Perfluorooctanesulfonic acid (PFOS)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:27	JR2
Perfluorononanoic acid (PFNA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:27	JR2

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
M2-4:2FTS	107	50-200		8/1/23 18:27
M2-8:2FTS	108	50-200		8/1/23 18:27
MPFBA	93.0	50-200		8/1/23 18:27
M3HFPO-DA	98.1	50-200		8/1/23 18:27
M6PFDA	96.8	50-200		8/1/23 18:27
M3PFBS	103	50-200		8/1/23 18:27
M7PFUnA	99.3	50-200		8/1/23 18:27
M2-6:2FTS	101	50-200		8/1/23 18:27
M5PFPeA	93.0	50-200		8/1/23 18:27
M5PFHxA	98.8	50-200		8/1/23 18:27
M3PFHxS	104	50-200		8/1/23 18:27
M4PFHpA	98.2	50-200		8/1/23 18:27
M8PFOA	95.6	50-200		8/1/23 18:27
M8PFOS	96.3	50-200		8/1/23 18:27
M9PFNA	93.8	50-200		8/1/23 18:27
MPFDoA	98.2	50-200		8/1/23 18:27

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Project Location: 1,4 Dioxane/PFAS 7/25 | Sample Description: | Work Order: 23G3740

Date Received: 7/27/2023

Field Sample #: N-10149 FB | Sampled: 7/25/2023 12:05

Sample ID: 23G3740-04

Sample Matrix: Field Blank

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL MA ORSG	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:34	JR2
Perfluorobutanesulfonic acid (PFBS)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:34	JR2
Perfluoropentanoic acid (PFPeA)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:34	JR2
Perfluorohexanoic acid (PFHxA)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:34	JR2
11Cl-PF3OUdS (F53B Major)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:34	JR2
9Cl-PF3ONS (F53B Minor)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:34	JR2
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:34	JR2
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:34	JR2
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:34	JR2
Perfluorodecanoic acid (PFDA)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:34	JR2
Perfluorododecanoic acid (PFDoA)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:34	JR2
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:34	JR2
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:34	JR2
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:34	JR2
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:34	JR2
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:34	JR2
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:34	JR2
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:34	JR2
Perfluoropentanesulfonic acid (PFPeS)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:34	JR2
Perfluoroundecanoic acid (PFUnA)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:34	JR2
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:34	JR2
Perfluoroheptanoic acid (PFHpA)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:34	JR2
Perfluorooctanoic acid (PFOA)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:34	JR2
Perfluorooctanesulfonic acid (PFOS)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:34	JR2
Perfluorononanoic acid (PFNA)	ND	1.9		ng/L	1		EPA 533	7/31/23	8/1/23 18:34	JR2

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
M2-4:2FTS	94.2	50-200		8/1/23 18:34
M2-8:2FTS	132	50-200		8/1/23 18:34
MPFBA	102	50-200		8/1/23 18:34
M3HFPO-DA	111	50-200		8/1/23 18:34
M6PFDA	105	50-200		8/1/23 18:34
M3PFBS	98.7	50-200		8/1/23 18:34
M7PFUnA	105	50-200		8/1/23 18:34
M2-6:2FTS	110	50-200		8/1/23 18:34
M5PFPeA	99.0	50-200		8/1/23 18:34
M5PFHxA	105	50-200		8/1/23 18:34
M3PFHxS	98.9	50-200		8/1/23 18:34
M4PFHpA	101	50-200		8/1/23 18:34
M8PFOA	103	50-200		8/1/23 18:34
M8PFOS	88.4	50-200		8/1/23 18:34
M9PFNA	102	50-200		8/1/23 18:34
MPFDoA	109	50-200		8/1/23 18:34

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Project Location: 1,4 Dioxane/PFAS 7/25 Sample Description: Work Order: 23G3740

Date Received: 7/27/2023

Field Sample #: N-07593 Sampled: 7/25/2023 12:20

Sample ID: 23G3740-05

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL MA ORSG	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	10	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 12:01	QNW
Perfluorobutanesulfonic acid (PFBS)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 12:01	QNW
Perfluoropentanoic acid (PFPeA)	7.5	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 12:01	QNW
Perfluorohexanoic acid (PFHxA)	7.2	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 12:01	QNW
11Cl-PF3OUdS (F53B Major)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 12:01	QNW
9Cl-PF3ONS (F53B Minor)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 12:01	QNW
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 12:01	QNW
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 12:01	QNW
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 12:01	QNW
Perfluorodecanoic acid (PFDA)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 12:01	QNW
Perfluorododecanoic acid (PFDoA)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 12:01	QNW
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 12:01	QNW
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 12:01	QNW
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 12:01	QNW
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 12:01	QNW
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 12:01	QNW
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 12:01	QNW
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 12:01	QNW
Perfluoropentanesulfonic acid (PFPeS)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 12:01	QNW
Perfluoroundecanoic acid (PFUnA)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 12:01	QNW
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 12:01	QNW
Perfluoroheptanoic acid (PFHpA)	4.1	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 12:01	QNW
Perfluorooctanoic acid (PFOA)	3.0	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 12:01	QNW
Perfluorooctanesulfonic acid (PFOS)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 12:01	QNW
Perfluorononanoic acid (PFNA)	ND	1.8		ng/L	1		EPA 533	8/3/23	8/4/23 12:01	QNW

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
M2-4:2FTS	122		50-200		8/4/23 12:01
M2-8:2FTS	**237**	*	50-200	PF-17	8/4/23 12:01
MPFBA	87.9		50-200		8/4/23 12:01
M3HFPO-DA	62.3		50-200		8/4/23 12:01
M6PFDA	64.0		50-200		8/4/23 12:01
M3PFBS	119		50-200		8/4/23 12:01
M7PFUnA	63.6		50-200		8/4/23 12:01
M2-6:2FTS	133		50-200		8/4/23 12:01
M5PFPeA	83.3		50-200		8/4/23 12:01
M5PFHxA	76.2		50-200		8/4/23 12:01
M3PFHxS	117		50-200		8/4/23 12:01
M4PFHpA	68.8		50-200		8/4/23 12:01
M8PFOA	64.7		50-200		8/4/23 12:01
M8PFOS	119		50-200		8/4/23 12:01
M9PFNA	60.0		50-200		8/4/23 12:01
MPFDoA	66.4		50-200		8/4/23 12:01

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Project Location: 1,4 Dioxane/PFAS 7/25 Sample Description: Work Order: 23G3740

Date Received: 7/27/2023

Field Sample #: N-07593 FB Sampled: 7/25/2023 12:20

Sample ID: 23G3740-06

Sample Matrix: Field Blank

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL MA ORSG	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	2.0		ng/L	1		EPA 533	7/31/23	8/1/23 18:49	JR2
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 533	7/31/23	8/1/23 18:49	JR2
Perfluoropentanoic acid (PFPeA)	ND	2.0		ng/L	1		EPA 533	7/31/23	8/1/23 18:49	JR2
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 533	7/31/23	8/1/23 18:49	JR2
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 533	7/31/23	8/1/23 18:49	JR2
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 533	7/31/23	8/1/23 18:49	JR2
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 533	7/31/23	8/1/23 18:49	JR2
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 533	7/31/23	8/1/23 18:49	JR2
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	2.0		ng/L	1		EPA 533	7/31/23	8/1/23 18:49	JR2
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 533	7/31/23	8/1/23 18:49	JR2
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 533	7/31/23	8/1/23 18:49	JR2
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0		ng/L	1		EPA 533	7/31/23	8/1/23 18:49	JR2
Perfluoroheptanesulfonic acid (PFHpS)	ND	2.0		ng/L	1		EPA 533	7/31/23	8/1/23 18:49	JR2
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	2.0		ng/L	1		EPA 533	7/31/23	8/1/23 18:49	JR2
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 533	7/31/23	8/1/23 18:49	JR2
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	2.0		ng/L	1		EPA 533	7/31/23	8/1/23 18:49	JR2
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	2.0		ng/L	1		EPA 533	7/31/23	8/1/23 18:49	JR2
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	2.0		ng/L	1		EPA 533	7/31/23	8/1/23 18:49	JR2
Perfluoropentanesulfonic acid (PFPeS)	ND	2.0		ng/L	1		EPA 533	7/31/23	8/1/23 18:49	JR2
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 533	7/31/23	8/1/23 18:49	JR2
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0		ng/L	1		EPA 533	7/31/23	8/1/23 18:49	JR2
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 533	7/31/23	8/1/23 18:49	JR2
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 533	7/31/23	8/1/23 18:49	JR2
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 533	7/31/23	8/1/23 18:49	JR2
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 533	7/31/23	8/1/23 18:49	JR2

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
M2-4:2FTS	102	50-200		8/1/23 18:49
M2-8:2FTS	139	50-200		8/1/23 18:49
MPFBA	109	50-200		8/1/23 18:49
M3HFPO-DA	104	50-200		8/1/23 18:49
M6PFDA	101	50-200		8/1/23 18:49
M3PFBS	104	50-200		8/1/23 18:49
M7PFUnA	101	50-200		8/1/23 18:49
M2-6:2FTS	112	50-200		8/1/23 18:49
M5PFPeA	106	50-200		8/1/23 18:49
M5PFHxA	105	50-200		8/1/23 18:49
M3PFHxS	105	50-200		8/1/23 18:49
M4PFHpA	103	50-200		8/1/23 18:49
M8PFOA	104	50-200		8/1/23 18:49
M8PFOS	102	50-200		8/1/23 18:49
M9PFNA	101	50-200		8/1/23 18:49
MPFDoA	106	50-200		8/1/23 18:49

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Project Location: 1,4 Dioxane/PFAS 7/25 Sample Description: Work Order: 23G3740

Date Received: 7/27/2023

Field Sample #: N-07772 Sampled: 7/25/2023 12:39

Sample ID: 23G3740-07

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL MA ORSG	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	48	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:56	JR2
Perfluorobutanesulfonic acid (PFBS)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:56	JR2
Perfluoropentanoic acid (PFPeA)	42	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:56	JR2
Perfluorohexanoic acid (PFHxA)	39	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:56	JR2
11Cl-PF3OUdS (F53B Major)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:56	JR2
9Cl-PF3ONS (F53B Minor)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:56	JR2
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:56	JR2
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:56	JR2
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:56	JR2
Perfluorodecanoic acid (PFDA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:56	JR2
Perfluorododecanoic acid (PFDoA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:56	JR2
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:56	JR2
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:56	JR2
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:56	JR2
Perfluorohexanesulfonic acid (PFHxS)	2.2	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:56	JR2
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:56	JR2
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:56	JR2
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:56	JR2
Perfluoropentanesulfonic acid (PFPeS)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:56	JR2
Perfluoroundecanoic acid (PFUnA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:56	JR2
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:56	JR2
Perfluoroheptanoic acid (PFHpA)	24	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:56	JR2
Perfluorooctanoic acid (PFOA)	9.0	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:56	JR2
Perfluorooctanesulfonic acid (PFOS)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:56	JR2
Perfluorononanoic acid (PFNA)	2.6	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 18:56	JR2

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
M2-4:2FTS	103	50-200		8/1/23 18:56
M2-8:2FTS	131	50-200		8/1/23 18:56
MPFBA	87.6	50-200		8/1/23 18:56
M3HFPO-DA	88.6	50-200		8/1/23 18:56
M6PFDA	79.2	50-200		8/1/23 18:56
M3PFBS	99.1	50-200		8/1/23 18:56
M7PFUnA	79.8	50-200		8/1/23 18:56
M2-6:2FTS	116	50-200		8/1/23 18:56
M5PFPeA	87.4	50-200		8/1/23 18:56
M5PFHxA	89.3	50-200		8/1/23 18:56
M3PFHxS	101	50-200		8/1/23 18:56
M4PFHpA	86.1	50-200		8/1/23 18:56
M8PFOA	84.7	50-200		8/1/23 18:56
M8PFOS	89.9	50-200		8/1/23 18:56
M9PFNA	77.1	50-200		8/1/23 18:56
MPFDoA	81.9	50-200		8/1/23 18:56

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Project Location: 1,4 Dioxane/PFAS 7/25 Sample Description: Work Order: 23G3740

Date Received: 7/27/2023

Field Sample #: N-07772 FB Sampled: 7/25/2023 12:39

Sample ID: 23G3740-08

Sample Matrix: Field Blank

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL MA ORSG	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:03	JR2
Perfluorobutanesulfonic acid (PFBS)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:03	JR2
Perfluoropentanoic acid (PFPeA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:03	JR2
Perfluorohexanoic acid (PFHxA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:03	JR2
11Cl-PF3OUdS (F53B Major)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:03	JR2
9Cl-PF3ONS (F53B Minor)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:03	JR2
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:03	JR2
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:03	JR2
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:03	JR2
Perfluorodecanoic acid (PFDA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:03	JR2
Perfluorododecanoic acid (PFDoA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:03	JR2
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:03	JR2
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:03	JR2
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:03	JR2
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:03	JR2
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:03	JR2
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:03	JR2
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:03	JR2
Perfluoropentanesulfonic acid (PFPeS)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:03	JR2
Perfluoroundecanoic acid (PFUnA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:03	JR2
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:03	JR2
Perfluoroheptanoic acid (PFHpA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:03	JR2
Perfluorooctanoic acid (PFOA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:03	JR2
Perfluorooctanesulfonic acid (PFOS)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:03	JR2
Perfluorononanoic acid (PFNA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:03	JR2

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
M2-4:2FTS	104	50-200		8/1/23 19:03
M2-8:2FTS	133	50-200		8/1/23 19:03
MPFBA	102	50-200		8/1/23 19:03
M3HFPO-DA	108	50-200		8/1/23 19:03
M6PFDA	102	50-200		8/1/23 19:03
M3PFBS	104	50-200		8/1/23 19:03
M7PFUnA	94.0	50-200		8/1/23 19:03
M2-6:2FTS	112	50-200		8/1/23 19:03
M5PFPeA	99.3	50-200		8/1/23 19:03
M5PFHxA	98.3	50-200		8/1/23 19:03
M3PFHxS	103	50-200		8/1/23 19:03
M4PFHpA	96.0	50-200		8/1/23 19:03
M8PFOA	105	50-200		8/1/23 19:03
M8PFOS	104	50-200		8/1/23 19:03
M9PFNA	102	50-200		8/1/23 19:03
MPFDoA	96.8	50-200		8/1/23 19:03

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Project Location: 1,4 Dioxane/PFAS 7/25 Sample Description: Work Order: 23G3740

Date Received: 7/27/2023

Field Sample #: N-07773 Sampled: 7/25/2023 12:59

Sample ID: 23G3740-09

Sample Matrix: Drinking Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL MA ORSG	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	52	2.0		ng/L	1		EPA 533	8/3/23	8/4/23 12:08	QNW
Perfluorobutanesulfonic acid (PFBS)	ND	2.0		ng/L	1		EPA 533	8/3/23	8/4/23 12:08	QNW
Perfluoropentanoic acid (PFPeA)	49	2.0		ng/L	1		EPA 533	8/3/23	8/4/23 12:08	QNW
Perfluorohexanoic acid (PFHxA)	49	2.0		ng/L	1		EPA 533	8/3/23	8/4/23 12:08	QNW
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 533	8/3/23	8/4/23 12:08	QNW
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 533	8/3/23	8/4/23 12:08	QNW
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 533	8/3/23	8/4/23 12:08	QNW
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 533	8/3/23	8/4/23 12:08	QNW
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	2.0		ng/L	1		EPA 533	8/3/23	8/4/23 12:08	QNW
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 533	8/3/23	8/4/23 12:08	QNW
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 533	8/3/23	8/4/23 12:08	QNW
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0		ng/L	1		EPA 533	8/3/23	8/4/23 12:08	QNW
Perfluoroheptanesulfonic acid (PFHpS)	ND	2.0		ng/L	1		EPA 533	8/3/23	8/4/23 12:08	QNW
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	2.0		ng/L	1		EPA 533	8/3/23	8/4/23 12:08	QNW
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 533	8/3/23	8/4/23 12:08	QNW
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	2.0		ng/L	1		EPA 533	8/3/23	8/4/23 12:08	QNW
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	2.0		ng/L	1		EPA 533	8/3/23	8/4/23 12:08	QNW
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	2.0		ng/L	1		EPA 533	8/3/23	8/4/23 12:08	QNW
Perfluoropentanesulfonic acid (PFPeS)	ND	2.0		ng/L	1		EPA 533	8/3/23	8/4/23 12:08	QNW
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 533	8/3/23	8/4/23 12:08	QNW
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0		ng/L	1		EPA 533	8/3/23	8/4/23 12:08	QNW
Perfluoroheptanoic acid (PFHpA)	28	2.0		ng/L	1		EPA 533	8/3/23	8/4/23 12:08	QNW
Perfluorooctanoic acid (PFOA)	9.5	2.0		ng/L	1		EPA 533	8/3/23	8/4/23 12:08	QNW
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 533	8/3/23	8/4/23 12:08	QNW
Perfluorononanoic acid (PFNA)	2.1	2.0		ng/L	1		EPA 533	8/3/23	8/4/23 12:08	QNW

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
M2-4:2FTS	115		50-200		8/4/23 12:08
M2-8:2FTS	**244**	*	50-200	PF-17	8/4/23 12:08
MPFBA	73.3		50-200		8/4/23 12:08
M3HFPO-DA	54.0		50-200		8/4/23 12:08
M6PFDA	65.2		50-200		8/4/23 12:08
M3PFBS	106		50-200		8/4/23 12:08
M7PFUnA	67.8		50-200		8/4/23 12:08
M2-6:2FTS	132		50-200		8/4/23 12:08
M5PFPeA	74.3		50-200		8/4/23 12:08
M5PFHxA	71.1		50-200		8/4/23 12:08
M3PFHxS	106		50-200		8/4/23 12:08
M4PFHpA	68.7		50-200		8/4/23 12:08
M8PFOA	64.7		50-200		8/4/23 12:08
M8PFOS	103		50-200		8/4/23 12:08
M9PFNA	63.8		50-200		8/4/23 12:08
MPFDoA	74.0		50-200		8/4/23 12:08

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Project Location: 1,4 Dioxane/PFAS 7/25 | Sample Description: | Work Order: 23G3740

Date Received: 7/27/2023

Field Sample #: N-07773 FB | Sampled: 7/25/2023 12:59

Sample ID: 23G3740-10

Sample Matrix: Field Blank

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL MA ORSG	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:18	JR2
Perfluorobutanesulfonic acid (PFBS)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:18	JR2
Perfluoropentanoic acid (PFPeA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:18	JR2
Perfluorohexanoic acid (PFHxA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:18	JR2
11Cl-PF3OUdS (F53B Major)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:18	JR2
9Cl-PF3ONS (F53B Minor)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:18	JR2
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:18	JR2
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:18	JR2
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:18	JR2
Perfluorodecanoic acid (PFDA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:18	JR2
Perfluorododecanoic acid (PFDoA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:18	JR2
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:18	JR2
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:18	JR2
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:18	JR2
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:18	JR2
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:18	JR2
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:18	JR2
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:18	JR2
Perfluoropentanesulfonic acid (PFPeS)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:18	JR2
Perfluoroundecanoic acid (PFUnA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:18	JR2
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:18	JR2
Perfluoroheptanoic acid (PFHpA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:18	JR2
Perfluorooctanoic acid (PFOA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:18	JR2
Perfluorooctanesulfonic acid (PFOS)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:18	JR2
Perfluorononanoic acid (PFNA)	ND	1.8		ng/L	1		EPA 533	7/31/23	8/1/23 19:18	JR2

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
M2-4:2FTS	93.5	50-200		8/1/23 19:18
M2-8:2FTS	136	50-200		8/1/23 19:18
MPFBA	108	50-200		8/1/23 19:18
M3HFPO-DA	101	50-200		8/1/23 19:18
M6PFDA	103	50-200		8/1/23 19:18
M3PFBS	106	50-200		8/1/23 19:18
M7PFUnA	104	50-200		8/1/23 19:18
M2-6:2FTS	117	50-200		8/1/23 19:18
M5PFPeA	104	50-200		8/1/23 19:18
M5PFHxA	106	50-200		8/1/23 19:18
M3PFHxS	107	50-200		8/1/23 19:18
M4PFHpA	107	50-200		8/1/23 19:18
M8PFOA	107	50-200		8/1/23 19:18
M8PFOS	102	50-200		8/1/23 19:18
M9PFNA	105	50-200		8/1/23 19:18
MPFDoA	102	50-200		8/1/23 19:18

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Sample Extraction Data

Prep Method:EPA 533 **Analytical Method:EPA 533**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23G3740-02 [N-12795 FB]	B347265	258	1.00	07/31/23
23G3740-03 [N-10149]	B347265	276	1.00	07/31/23
23G3740-04 [N-10149 FB]	B347265	260	1.00	07/31/23
23G3740-06 [N-07593 FB]	B347265	253	1.00	07/31/23
23G3740-07 [N-07772]	B347265	277	1.00	07/31/23
23G3740-08 [N-07772 FB]	B347265	273	1.00	07/31/23
23G3740-10 [N-07773 FB]	B347265	274	1.00	07/31/23

Prep Method:EPA 533 **Analytical Method:EPA 533**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23G3740-01RE1 [N-12795]	B347868	272	1.00	08/03/23
23G3740-05RE1 [N-07593]	B347868	283	1.00	08/03/23
23G3740-09RE1 [N-07773]	B347868	255	1.00	08/03/23

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B347265 - EPA 533										
Blank (B347265-BLK1)				Prepared: 07/31/23 Analyzed: 08/01/23						
Perfluorobutanoic acid (PFBA)	ND	1.9	ng/L							
Perfluorobutanesulfonic acid (PFBS)	ND	1.9	ng/L							
Perfluoropentanoic acid (PFPeA)	ND	1.9	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	1.9	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	1.9	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	1.9	ng/L							
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.9	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.9	ng/L							
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.9	ng/L							
Perfluorodecanoic acid (PFDA)	ND	1.9	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	1.9	ng/L							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9	ng/L							
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.9	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9	ng/L							
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.9	ng/L							
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.9	ng/L							
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.9	ng/L							
Perfluoropentanesulfonic acid (PFPeS)	ND	1.9	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	1.9	ng/L							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	1.9	ng/L							
Perfluorooctanoic acid (PFOA)	ND	1.9	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	1.9	ng/L							
Perfluorononanoic acid (PFNA)	ND	1.9	ng/L							
Surrogate: M2-4:2FTS	*31.6*		ng/L	36.4		86.8	50-200			
Surrogate: M2-8:2FTS	*45.7*		ng/L	37.3		123	50-200			
Surrogate: MPFBA	*37.8*		ng/L	38.9		97.4	50-200			
Surrogate: M3HFPO-DA	*42.1*		ng/L	38.9		108	50-200			
Surrogate: M6PFDA	*37.9*		ng/L	38.9		97.6	50-200			
Surrogate: M3PFBS	*33.8*		ng/L	36.2		93.4	50-200			
Surrogate: M7PFUnA	*39.1*		ng/L	38.9		101	50-200			
Surrogate: M2-6:2FTS	*36.9*		ng/L	37.0		99.8	50-200			
Surrogate: M5PFPeA	*36.4*		ng/L	38.9		93.7	50-200			
Surrogate: M5PFHxA	*38.9*		ng/L	38.9		100	50-200			
Surrogate: M3PFHxS	*34.9*		ng/L	36.8		94.8	50-200			
Surrogate: M4PFHpA	*38.7*		ng/L	38.9		99.5	50-200			
Surrogate: M8PFOA	*39.2*		ng/L	38.9		101	50-200			
Surrogate: M8PFOS	*31.2*		ng/L	37.3		83.7	50-200			
Surrogate: M9PFNA	*38.6*		ng/L	38.9		99.3	50-200			
Surrogate: MPFDoA	*37.2*		ng/L	38.9		95.8	50-200			
LCS (B347265-BS1)				Prepared: 07/31/23 Analyzed: 08/01/23						
Perfluorobutanoic acid (PFBA)	22.3	1.9	ng/L	19.4		115	70-130			
Perfluorobutanesulfonic acid (PFBS)	19.5	1.9	ng/L	17.2		113	70-130			
Perfluoropentanoic acid (PFPeA)	22.0	1.9	ng/L	19.4		113	70-130			
Perfluorohexanoic acid (PFHxA)	22.0	1.9	ng/L	19.4		113	70-130			
11Cl-PF3OUdS (F53B Major)	18.2	1.9	ng/L	18.3		99.6	70-130			
9Cl-PF3ONS (F53B Minor)	15.8	1.9	ng/L	18.1		87.2	70-130			

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B347265 - EPA 533										
LCS (B347265-BS1)				Prepared: 07/31/23 Analyzed: 08/01/23						
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	18.9	1.9	ng/L	18.3		104	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	17.7	1.9	ng/L	19.4		91.4	70-130			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	22.7	1.9	ng/L	18.6		122	70-130			
Perfluorodecanoic acid (PFDA)	21.5	1.9	ng/L	19.4		111	70-130			
Perfluorododecanoic acid (PFDoA)	25.1	1.9	ng/L	19.4		129	70-130			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	19.5	1.9	ng/L	17.3		113	70-130			
Perfluoroheptanesulfonic acid (PFHpS)	19.3	1.9	ng/L	18.5		104	70-130			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	20.7	1.9	ng/L	18.2		114	70-130			
Perfluorohexanesulfonic acid (PFHxS)	19.3	1.9	ng/L	17.8		109	70-130			
Perfluoro-4-oxapentanoic acid (PFMPA)	20.2	1.9	ng/L	19.4		104	70-130			
Perfluoro-5-oxahexanoic acid (PFMBA)	20.8	1.9	ng/L	19.4		107	70-130			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	21.7	1.9	ng/L	18.4		117	70-130			
Perfluoropentanesulfonic acid (PFPeS)	20.1	1.9	ng/L	18.2		110	70-130			
Perfluoroundecanoic acid (PFUnA)	21.8	1.9	ng/L	19.4		112	70-130			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	20.4	1.9	ng/L	19.4		105	70-130			
Perfluoroheptanoic acid (PFHpA)	22.2	1.9	ng/L	19.4		114	70-130			
Perfluorooctanoic acid (PFOA)	20.6	1.9	ng/L	19.4		106	70-130			
Perfluorooctanesulfonic acid (PFOS)	18.9	1.9	ng/L	18.0		105	70-130			
Perfluorononanoic acid (PFNA)	20.9	1.9	ng/L	19.4		108	70-130			
Surrogate: M2-4:2FTS	*36.5*		ng/L	36.4		100	50-200			
Surrogate: M2-8:2FTS	*48.5*		ng/L	37.3		130	50-200			
Surrogate: MPFBA	*38.3*		ng/L	38.8		98.6	50-200			
Surrogate: M3HFPO-DA	*40.7*		ng/L	38.8		105	50-200			
Surrogate: M6PFDA	*38.1*		ng/L	38.8		98.0	50-200			
Surrogate: M3PFBS	*35.5*		ng/L	36.2		98.2	50-200			
Surrogate: M7PFUnA	*35.3*		ng/L	38.8		91.0	50-200			
Surrogate: M2-6:2FTS	*41.3*		ng/L	36.9		112	50-200			
Surrogate: M5PFPeA	*36.9*		ng/L	38.8		95.2	50-200			
Surrogate: M5PFHxA	*37.7*		ng/L	38.8		97.2	50-200			
Surrogate: M3PFHxS	*37.4*		ng/L	36.8		102	50-200			
Surrogate: M4PFHpA	*37.0*		ng/L	38.8		95.3	50-200			
Surrogate: M8PFOA	*38.3*		ng/L	38.8		98.7	50-200			
Surrogate: M8PFOS	*35.3*		ng/L	37.2		94.9	50-200			
Surrogate: M9PFNA	*37.8*		ng/L	38.8		97.4	50-200			
Surrogate: MPFDoA	*33.0*		ng/L	38.8		85.0	50-200			
LCS Dup (B347265-BSD1)				Prepared: 07/31/23 Analyzed: 08/01/23						
Perfluorobutanoic acid (PFBA)	21.3	1.9	ng/L	18.9		113	70-130	4.89	30	
Perfluorobutanesulfonic acid (PFBS)	18.8	1.9	ng/L	16.7		112	70-130	3.77	30	
Perfluoropentanoic acid (PFPeA)	20.9	1.9	ng/L	18.9		111	70-130	5.03	30	
Perfluorohexanoic acid (PFHxA)	20.6	1.9	ng/L	18.9		109	70-130	6.48	30	
11Cl-PF3OUdS (F53B Major)	17.8	1.9	ng/L	17.8		100	70-130	2.38	30	
9Cl-PF3ONS (F53B Minor)	16.1	1.9	ng/L	17.6		91.5	70-130	1.86	30	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	17.8	1.9	ng/L	17.8		100	70-130	6.42	30	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	16.6	1.9	ng/L	18.9		88.2	70-130	6.45	30	
8:2 Fluorotelomersulfonic acid (8:2FTS A)	21.8	1.9	ng/L	18.1		121	70-130	3.69	30	
Perfluorodecanoic acid (PFDA)	20.7	1.9	ng/L	18.9		110	70-130	3.90	30	
Perfluorododecanoic acid (PFDoA)	22.8	1.9	ng/L	18.9		121	70-130	9.36	30	

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B347265 - EPA 533										
LCS Dup (B347265-BSD1)				Prepared: 07/31/23 Analyzed: 08/01/23						
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	18.7	1.9	ng/L	16.8		112	70-130	4.18	30	
Perfluoroheptanesulfonic acid (PFHpS)	18.6	1.9	ng/L	18.0		103	70-130	3.88	30	
4:2 Fluorotelomersulfonic acid (4:2FTS A)	19.6	1.9	ng/L	17.6		111	70-130	5.20	30	
Perfluorohexanesulfonic acid (PFHxS)	18.7	1.9	ng/L	17.3		108	70-130	3.40	30	
Perfluoro-4-oxapentanoic acid (PFMPA)	19.3	1.9	ng/L	18.9		102	70-130	4.52	30	
Perfluoro-5-oxahexanoic acid (PFMBA)	20.0	1.9	ng/L	18.9		106	70-130	4.10	30	
6:2 Fluorotelomersulfonic acid (6:2FTS A)	20.6	1.9	ng/L	17.9		115	70-130	5.15	30	
Perfluoropentanesulfonic acid (PFPeS)	19.2	1.9	ng/L	17.7		108	70-130	4.34	30	
Perfluoroundecanoic acid (PFUnA)	21.4	1.9	ng/L	18.9		114	70-130	1.70	30	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	19.2	1.9	ng/L	18.9		102	70-130	5.65	30	
Perfluoroheptanoic acid (PFHpA)	20.9	1.9	ng/L	18.9		111	70-130	6.13	30	
Perfluorooctanoic acid (PFOA)	19.6	1.9	ng/L	18.9		104	70-130	5.18	30	
Perfluorooctanesulfonic acid (PFOS)	19.1	1.9	ng/L	17.4		109	70-130	0.759	30	
Perfluorononanoic acid (PFNA)	18.9	1.9	ng/L	18.9		100	70-130	10.2	30	
Surrogate: M2-4:2FTS	*37.7*		ng/L	35.4		107	50-200			
Surrogate: M2-8:2FTS	*47.1*		ng/L	36.2		130	50-200			
Surrogate: MPFBA	*39.4*		ng/L	37.7		105	50-200			
Surrogate: M3HFPO-DA	*42.2*		ng/L	37.7		112	50-200			
Surrogate: M6PFDA	*39.9*		ng/L	37.7		106	50-200			
Surrogate: M3PFBS	*36.5*		ng/L	35.2		104	50-200			
Surrogate: M7PFUnA	*35.7*		ng/L	37.7		94.6	50-200			
Surrogate: M2-6:2FTS	*41.4*		ng/L	35.9		115	50-200			
Surrogate: M5PFPeA	*38.6*		ng/L	37.7		102	50-200			
Surrogate: M5PFHxA	*39.6*		ng/L	37.7		105	50-200			
Surrogate: M3PFHxS	*38.3*		ng/L	35.8		107	50-200			
Surrogate: M4PFHpA	*38.4*		ng/L	37.7		102	50-200			
Surrogate: M8PFOA	*39.9*		ng/L	37.7		106	50-200			
Surrogate: M8PFOS	*35.6*		ng/L	36.2		98.5	50-200			
Surrogate: M9PFNA	*40.9*		ng/L	37.7		108	50-200			
Surrogate: MPFDoA	*35.6*		ng/L	37.7		94.3	50-200			
Batch B347868 - EPA 533										
Blank (B347868-BLK1)				Prepared: 08/03/23 Analyzed: 08/04/23						
Perfluorobutanoic acid (PFBA)	ND	2.0	ng/L							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluoropentanoic acid (PFPeA)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	2.0	ng/L							
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B347868 - EPA 533											
Blank (B347868-BLK1)				Prepared: 08/03/23 Analyzed: 08/04/23							
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	2.0	ng/L								
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	2.0	ng/L								
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	2.0	ng/L								
Perfluoropentanesulfonic acid (PFPeS)	ND	2.0	ng/L								
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L								
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	ng/L								
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L								
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L								
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L								
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L								
Surrogate: M2-4:2FTS	*51.2*		ng/L	37.3		137		50-200			
Surrogate: M2-8:2FTS	*86.2*		ng/L	38.2		**225**	*	50-200			PF-17
Surrogate: MPFBA	*42.0*		ng/L	39.8		106		50-200			
Surrogate: M3HFPO-DA	*31.9*		ng/L	39.8		80.0		50-200			
Surrogate: M6PFDA	*44.9*		ng/L	39.8		113		50-200			
Surrogate: M3PFBS	*41.4*		ng/L	37.1		111		50-200			
Surrogate: M7PFUnA	*43.3*		ng/L	39.8		109		50-200			
Surrogate: M2-6:2FTS	*52.0*		ng/L	37.9		137		50-200			
Surrogate: M5PFPeA	*42.2*		ng/L	39.8		106		50-200			
Surrogate: M5PFHxA	*41.8*		ng/L	39.8		105		50-200			
Surrogate: M3PFHxS	*42.0*		ng/L	37.7		111		50-200			
Surrogate: M4PFHpA	*41.9*		ng/L	39.8		105		50-200			
Surrogate: M8PFOA	*42.5*		ng/L	39.8		107		50-200			
Surrogate: M8PFOS	*39.4*		ng/L	38.2		103		50-200			
Surrogate: M9PFNA	*43.9*		ng/L	39.8		110		50-200			
Surrogate: MPFDoA	*44.6*		ng/L	39.8		112		50-200			
LCS (B347868-BS1)				Prepared: 08/03/23 Analyzed: 08/04/23							
Perfluorobutanoic acid (PFBA)	19.4	1.9	ng/L	19.2		101		70-130			
Perfluorobutanesulfonic acid (PFBS)	17.1	1.9	ng/L	17.0		100		70-130			
Perfluoropentanoic acid (PFPeA)	19.4	1.9	ng/L	19.2		101		70-130			
Perfluorohexanoic acid (PFHxA)	19.2	1.9	ng/L	19.2		99.7		70-130			
11Cl-PF3OUdS (F53B Major)	19.4	1.9	ng/L	18.1		107		70-130			
9Cl-PF3ONS (F53B Minor)	17.1	1.9	ng/L	17.9		95.3		70-130			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	15.1	1.9	ng/L	18.1		83.3		70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	15.9	1.9	ng/L	19.2		82.9		70-130			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	18.7	1.9	ng/L	18.4		102		70-130			
Perfluorodecanoic acid (PFDA)	21.6	1.9	ng/L	19.2		112		70-130			
Perfluorododecanoic acid (PFDoA)	20.9	1.9	ng/L	19.2		109		70-130			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	18.3	1.9	ng/L	17.1		107		70-130			
Perfluoroheptanesulfonic acid (PFHpS)	18.5	1.9	ng/L	18.3		101		70-130			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	18.6	1.9	ng/L	18.0		103		70-130			
Perfluorohexanesulfonic acid (PFHxS)	17.5	1.9	ng/L	17.6		99.4		70-130			
Perfluoro-4-oxapentanoic acid (PFMPA)	15.9	1.9	ng/L	19.2		82.8		70-130			
Perfluoro-5-oxahexanoic acid (PFMBA)	15.0	1.9	ng/L	19.2		78.3		70-130			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	19.4	1.9	ng/L	18.2		106		70-130			
Perfluoropentanesulfonic acid (PFPeS)	18.0	1.9	ng/L	18.0		99.7		70-130			
Perfluoroundecanoic acid (PFUnA)	20.1	1.9	ng/L	19.2		105		70-130			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	15.2	1.9	ng/L	19.2		79.4		70-130			

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B347868 - EPA 533											
LCS (B347868-BS1)				Prepared: 08/03/23 Analyzed: 08/04/23							
Perfluoroheptanoic acid (PFHpA)	19.0	1.9	ng/L	19.2		99.1		70-130			
Perfluorooctanoic acid (PFOA)	18.4	1.9	ng/L	19.2		95.6		70-130			
Perfluorooctanesulfonic acid (PFOS)	18.4	1.9	ng/L	17.8		103		70-130			
Perfluorononanoic acid (PFNA)	20.2	1.9	ng/L	19.2		105		70-130			
Surrogate: M2-4:2FTS	*48.3*		ng/L	36.0		134		50-200			
Surrogate: M2-8:2FTS	*77.3*		ng/L	36.9		**210**	*	50-200			S-29
Surrogate: MPFBA	*40.0*		ng/L	38.4		104		50-200			
Surrogate: M3HFPO-DA	*34.1*		ng/L	38.4		88.9		50-200			
Surrogate: M6PFDA	*42.1*		ng/L	38.4		110		50-200			
Surrogate: M3PFBS	*38.8*		ng/L	35.8		108		50-200			
Surrogate: M7PFUnA	*39.9*		ng/L	38.4		104		50-200			
Surrogate: M2-6:2FTS	*50.3*		ng/L	36.5		138		50-200			
Surrogate: M5PFPeA	*40.5*		ng/L	38.4		105		50-200			
Surrogate: M5PFHxA	*40.1*		ng/L	38.4		104		50-200			
Surrogate: M3PFHxS	*38.6*		ng/L	36.4		106		50-200			
Surrogate: M4PFHpA	*40.0*		ng/L	38.4		104		50-200			
Surrogate: M8PFOA	*40.3*		ng/L	38.4		105		50-200			
Surrogate: M8PFOS	*36.5*		ng/L	36.8		99.0		50-200			
Surrogate: M9PFNA	*39.2*		ng/L	38.4		102		50-200			
Surrogate: MPFDoA	*38.1*		ng/L	38.4		99.2		50-200			
LCS Dup (B347868-BSD1)				Prepared: 08/03/23 Analyzed: 08/04/23							
Perfluorobutanoic acid (PFBA)	20.0	2.0	ng/L	19.7		101		70-130	2.73	30	
Perfluorobutanesulfonic acid (PFBS)	17.3	2.0	ng/L	17.4		99.3		70-130	1.49	30	
Perfluoropentanoic acid (PFPeA)	19.9	2.0	ng/L	19.7		101		70-130	2.58	30	
Perfluorohexanoic acid (PFHxA)	20.0	2.0	ng/L	19.7		101		70-130	4.17	30	
11Cl-PF3OUdS (F53B Major)	18.6	2.0	ng/L	18.6		100		70-130	3.94	30	
9Cl-PF3ONS (F53B Minor)	17.3	2.0	ng/L	18.4		94.2		70-130	1.38	30	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	15.5	2.0	ng/L	18.6		83.7		70-130	2.99	30	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	16.3	2.0	ng/L	19.7		82.8		70-130	2.49	30	
8:2 Fluorotelomersulfonic acid (8:2FTS A)	20.5	2.0	ng/L	18.9		108		70-130	8.94	30	
Perfluorodecanoic acid (PFDA)	19.3	2.0	ng/L	19.7		97.8		70-130	11.3	30	
Perfluorododecanoic acid (PFDoA)	21.0	2.0	ng/L	19.7		107		70-130	0.392	30	
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	18.6	2.0	ng/L	17.5		106		70-130	2.09	30	
Perfluoroheptanesulfonic acid (PFHpS)	17.0	2.0	ng/L	18.8		90.5		70-130	8.45	30	
4:2 Fluorotelomersulfonic acid (4:2FTS A)	18.8	2.0	ng/L	18.4		102		70-130	1.41	30	
Perfluorohexanesulfonic acid (PFHxS)	17.9	2.0	ng/L	18.0		99.1		70-130	2.18	30	
Perfluoro-4-oxapentanoic acid (PFMPA)	16.1	2.0	ng/L	19.7		81.6		70-130	1.17	30	
Perfluoro-5-oxahexanoic acid (PFMBA)	15.7	2.0	ng/L	19.7		79.6		70-130	4.18	30	
6:2 Fluorotelomersulfonic acid (6:2FTS A)	18.7	2.0	ng/L	18.7		99.7		70-130	3.84	30	
Perfluoropentanesulfonic acid (PFPeS)	18.6	2.0	ng/L	18.5		100		70-130	3.14	30	
Perfluoroundecanoic acid (PFUnA)	19.1	2.0	ng/L	19.7		96.8		70-130	5.39	30	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	15.6	2.0	ng/L	19.7		79.1		70-130	2.25	30	
Perfluoroheptanoic acid (PFHpA)	19.6	2.0	ng/L	19.7		99.4		70-130	2.93	30	
Perfluorooctanoic acid (PFOA)	18.5	2.0	ng/L	19.7		94.1		70-130	1.01	30	
Perfluorooctanesulfonic acid (PFOS)	17.7	2.0	ng/L	18.2		97.2		70-130	3.57	30	
Perfluorononanoic acid (PFNA)	19.1	2.0	ng/L	19.7		96.9		70-130	5.79	30	
Surrogate: M2-4:2FTS	*52.4*		ng/L	37.0		142		50-200			
Surrogate: M2-8:2FTS	*76.1*		ng/L	37.8		**201**	*	50-200			S-29
Surrogate: MPFBA	*40.0*		ng/L	39.4		102		50-200			

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QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B347868 - EPA 533										
LCS Dup (B347868-BSD1)				Prepared: 08/03/23 Analyzed: 08/04/23						
Surrogate: M3HFPO-DA	*37.5*		ng/L	39.4		95.2	50-200			
Surrogate: M6PFDA	*49.0*		ng/L	39.4		124	50-200			
Surrogate: M3PFBS	*41.3*		ng/L	36.7		113	50-200			
Surrogate: M7PFUnA	*45.9*		ng/L	39.4		117	50-200			
Surrogate: M2-6:2FTS	*53.1*		ng/L	37.5		142	50-200			
Surrogate: M5PFPeA	*40.6*		ng/L	39.4		103	50-200			
Surrogate: M5PFHxA	*43.2*		ng/L	39.4		110	50-200			
Surrogate: M3PFHxS	*41.9*		ng/L	37.3		112	50-200			
Surrogate: M4PFHpA	*43.2*		ng/L	39.4		110	50-200			
Surrogate: M8PFOA	*44.3*		ng/L	39.4		113	50-200			
Surrogate: M8PFOS	*41.1*		ng/L	37.8		109	50-200			
Surrogate: M9PFNA	*45.4*		ng/L	39.4		115	50-200			
Surrogate: MPFDoA	*44.2*		ng/L	39.4		112	50-200			

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
PF-17	Extracted Internal Standard recovery is outside of control limits. Data is not significantly affected since associated analyte is not detected and bias is on the high side.
PF-18	Duplicate analysis confirmed Extracted Internal Standard failure due to matrix effects.
S-29	Extracted Internal Standard is outside of control limits.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA 533 in Drinking Water	
Perfluorobutanoic acid (PFBA)	NH,NY,VT-DW,ME,NJ,PA,CT
Perfluorobutanesulfonic acid (PFBS)	NH,NY,VT-DW,ME,NJ,PA,CT
Perfluoropentanoic acid (PFPeA)	NH,NY,VT-DW,ME,NJ,PA,CT
Perfluorohexanoic acid (PFHxA)	NH,NY,VT-DW,ME,NJ,PA,CT
11Cl-PF3OUdS (F53B Major)	NH,NY,VT-DW,ME,NJ,PA,CT
9Cl-PF3ONS (F53B Minor)	NH,NY,VT-DW,ME,NJ,PA,CT
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NH,NY,VT-DW,ME,NJ,PA,CT
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH,NY,VT-DW,ME,NJ,PA,CT
8:2 Fluorotelomersulfonic acid (8:2FTS A)	NH,NY,VT-DW,ME,NJ,PA,CT
Perfluorodecanoic acid (PFDA)	NH,NY,VT-DW,ME,NJ,PA,CT
Perfluorododecanoic acid (PFDoA)	NH,NY,VT-DW,ME,NJ,PA,CT
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NH,NY,VT-DW,ME,NJ,PA,CT
Perfluoroheptanesulfonic acid (PFHpS)	NH,NY,VT-DW,ME,NJ,PA,CT
4:2 Fluorotelomersulfonic acid (4:2FTS A)	NH,NY,VT-DW,ME,NJ,PA,CT
Perfluorohexanesulfonic acid (PFHxS)	NH,NY,VT-DW,ME,NJ,PA,CT
Perfluoro-4-oxapentanoic acid (PFMPA)	NH,NY,VT-DW,ME,NJ,PA,CT
Perfluoro-5-oxahexanoic acid (PFMBA)	NH,NY,VT-DW,ME,NJ,PA,CT
6:2 Fluorotelomersulfonic acid (6:2FTS A)	NH,NY,VT-DW,ME,NJ,PA,CT
Perfluoropentanesulfonic acid (PFPeS)	NH,NY,VT-DW,ME,NJ,PA,CT
Perfluoroundecanoic acid (PFUnA)	NH,NY,VT-DW,ME,NJ,PA,CT
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH,NY,VT-DW,ME,NJ,PA,CT
Perfluoroheptanoic acid (PFHpA)	NH,NY,VT-DW,ME,NJ,PA,CT
Perfluorooctanoic acid (PFOA)	NH,NY,VT-DW,ME,NJ,PA,CT
Perfluorooctanesulfonic acid (PFOS)	NH,NY,VT-DW,ME,NJ,PA,CT
Perfluorononanoic acid (PFNA)	NH,NY,VT-DW,ME,NJ,PA,CT

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NJ	New Jersey DEP	MA007 NELAP	06/30/2024
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2024
ME	State of Maine	MA00100	06/9/2025
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024

LIF 236340

Internal Transfer Chain of Custody

Pace

☐ Samples Pre-Logged into eCOC.

State Of Origin: NY

Cert. Needed: ☒ Yes ☐ No

Workorder: 70264400 **Workorder Name:** 1,4 DIOXANE/PFAS 7/25 **Owner Received Date:** 7/25/2023 **Results Requested By:** 8/8/2023

Report To	Subcontract To
Jennifer Aracri Pace Analytical Melville 575 Broad Hollow Road Melville, NY 11747 Phone (631)694-3040	Pace New England 39 Spruce St. East Longmeadow, MA 01028 Phone (413)525-2332

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Other	PFAS by 533	LAB USE ONLY
1	N-12795	PS	7/25/2023 11:00	70264400001	Drinking	1	X	
2	N-12795 FB	PS	7/25/2023 11:00	70264400002	Drinking	1	X	
3	N-10149	PS	7/25/2023 12:05	70264400003	Drinking	1	X	
4	N-10149 FB	PS	7/25/2023 12:05	70264400004	Drinking	1	X	
5	N-07593	PS	7/25/2023 12:20	70264400005	Drinking	1	X	
6	N-07593 FB	PS	7/25/2023 12:20	70264400006	Drinking	1	X	
7	N-07772	PS	7/25/2023 12:39	70264400007	Drinking	1	X	
8	N-07772 FB	PS	7/25/2023 12:39	70264400008	Drinking	1	X	
9	N-07773	PS	7/25/2023 12:59	70264400009	Drinking	1	X	
10	N-07773 FB	PS	7/25/2023 12:59	70264400010	Drinking	1	X	

Transfers	Released By	Date/Time	Received By	Date/Time
1	[illegible] Pace LI	7/26/23 1800	MS MA(AAL)	7/26 1736
2	MS MA(AAL)	7/26 2000	Anthony Green	JUL 26 2023 2100
3	Anthony Green	7/27 0400		7/27/23 0400

Comments: 25 Compound List

Cooler Temperature on Receipt ____ °C | Custody Seal Y or N | Received on Ice Y or N | Samples Intact Y or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.*

This chain of custody is considered complete as is since this information is available in the owner laboratory.

7/27/23 0400 AAL 7/27/23 09:00

AAL 7/27/23 07:00

7-27-23 0900 3.7°C

39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F:413-525-6405
www.pacelabs.com

Log In Back-Sheet

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

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Client Pace
Project 1,4 Dioxane/PFAS 7/25
MCP/RCP Required N/A
Deliverable Package Requirement N/A
Location 1,4 Dioxane/PFAS 7/25
PWSID# (When Applicable) N/A
Arrival Method:
Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐ //
Received By / Date / Time Am 7/27/23 900
Back-Sheet By / Date / Time LA 7/27/23 1335
Temperature Method Gun #5
Temp ☑ < 6° C Actual Temperature 3.1
Rush Samples: Yes / (No) Notify
Short Hold: Yes / (No) Notify

	True	False
Received on Ice	☑	☐
Received in Cooler	☐	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☐	☐
MS/MSD	☐	☐
Trip Blanks	☐	☐
Lab to Filters	☐	☐
COC Legible	☑	☐

COC Included: (Check all included)

Client	☑	Analysis	☑	Sampler Name	☐
Project	☑	IDs	☑	Collection Date/Time	☑

All Samples Proper pH: (N/A) ☐ ☐

Notes regarding Samples/COC outside of SOP:

Additional Container Notes

Sample			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
16oz Amb/Clear	Soils Jars (Circle Amb/Clear)																					
8oz Amb/Clear																						
4oz Amb/Clear																						
2oz Amb/Clear																						
Unpreserved	Ambers	1 Liter																				
HCL																						
Sulfuric																						
Sulfuric		250mL																				
Phosphoric																						
HCl																						
Unpreserved		100mL																				
Unpreserved	Plastics	1 Liter																				
Sulfuric																						
Unpreserved		500mL																				
Sulfuric																						
Unpreserved		250mL																				
Trizma																						
Sulfuric																						
Nitric																						
NaOH																						
Ammonium Acetate																						
NaOH/Zinc																						
Unpreserved	VOA Vials																					
HCl																						
MeOH																						
D.I. Water																						
BiSulfate																						
Col/Bact	Other / Fill in																					

Qualtrax ID: 120836