

The results set forth herein are provided by SGS North America Inc.

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Automated Report

Technical Report for

AECOM, INC.

N6274223F0104 RH Fire Suppression System

60697810

SGS Job Number: FC9424

Sampling Date: 09/06/23



Report to:

AECOM, Inc
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Denver, CO 80237
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ATTN: Katie Abbott

Total number of pages in report: 32



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable unless noted in the narrative, comments or footnotes.

Norm Farmer
Technical Director

Client Service contact: Elvin Kumar 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001)

DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177),

AL, AK, AR, CT, IA, KY, MA, MI, MS, ND, NH, NV, OK, OR, IL, UT, VT, WA, WI, WV

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Test results relate only to samples analyzed.

Table of Contents

-1-

Section 1: Sample Summary	3
Section 2: Case Narrative/Conformance Summary	4
Section 3: Summary of Hits	5
Section 4: Sample Results	6
4.1: FC9424-1: AF-RHMW225401-WGN01B-2309	7
Section 5: Misc. Forms	10
5.1: Chain of Custody	11
5.2: QC Evaluation: DOD QSM5.x Limits	13
Section 6: MS Semi-volatiles - QC Data Summaries	14
6.1: Method Blank Summary	15
6.2: Blank Spike Summary	25
6.3: Matrix Spike Summary	29
6.4: Duplicate Summary	31

1

2

3

4

5

6



Sample Summary

AECOM, INC.

Job No: FC9424

N6274223F0104 RH Fire Suppression System
Project No: 60697810

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
FC9424-1	09/06/23	12:00 JV	09/08/23	AQ	Ground Water	AF-RHMW225401-WGN01B-2309

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: AECOM, INC.

Job No: FC9424

Site: N6274223F0104 RH Fire Suppression System

Report Date: 9/13/2023 4:46:06 PM

On 09/08/2023, 1 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc - Orlando. at a maximum corrected temperature of 4 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FC9424 was assigned to the project.

Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section. Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

MS Semi-volatiles By Method EPA DRAFT 1633

Matrix: AQ

Batch ID: OP98930

Sample(s) FC9447-3MS, FC9447-4DUP were used as the QC samples indicated.

Matrix Spike Recovery(s) for 3:3 Fluorotelomer carboxylate are outside control limits. Probable cause is due to matrix interference.

SGS North America Inc. - Orlando certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted. Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria. SGS North America Inc.- Orlando is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety.

Narrative prepared by:

Kim Benham, Client Services (*Signature on File*)

Summary of Hits

Job Number: FC9424
Account: AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System
Collected: 09/06/23



Lab Sample ID	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
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FC9424-1 AF-RHMW225401-WGN01B-2309

Perfluorohexanoic acid	0.91 J	3.7	1.9	ng/l	EPA DRAFT 1633
Perfluoroheptanoic acid	0.62 J	3.7	1.9	ng/l	EPA DRAFT 1633
Perfluorobutanesulfonic acid	0.67 J	3.7	1.9	ng/l	EPA DRAFT 1633
Perfluorohexanesulfonic acid	1.2 J	3.7	1.9	ng/l	EPA DRAFT 1633
Perfluorooctanesulfonic acid	1.4 J	3.7	1.9	ng/l	EPA DRAFT 1633

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	AF-RHMW225401-WGN01B-2309		
Lab Sample ID:	FC9424-1	Date Sampled:	09/06/23
Matrix:	AQ - Ground Water	Date Received:	09/08/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6Q24388.D	1	09/13/23 03:20	MV	09/11/23 09:35	OP98930	S6Q350
Run #2							

Run #	Initial Volume	Final Volume
Run #1	535 ml	5.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
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PERFLUOROALKYL CARBOXYLIC ACIDS

375-22-4	Perfluorobutanoic acid	3.7 U	15	3.7	1.8	ng/l	
2706-90-3	Perfluoropentanoic acid	1.9 U	7.5	1.9	0.88	ng/l	
307-24-4	Perfluorohexanoic acid	0.91	3.7	1.9	0.47	ng/l	J
375-85-9	Perfluoroheptanoic acid	0.62	3.7	1.9	0.47	ng/l	J
335-67-1	Perfluorooctanoic acid	0.93 U	3.7	0.93	0.47	ng/l	
375-95-1	Perfluorononanoic acid	1.9 U	3.7	1.9	0.57	ng/l	
335-76-2	Perfluorodecanoic acid	1.9 U	3.7	1.9	0.47	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.9 U	3.7	1.9	0.56	ng/l	
307-55-1	Perfluorododecanoic acid	1.9 U	3.7	1.9	0.56	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.9 U	3.7	1.9	0.79	ng/l	
376-06-7	Perfluorotetradecanoic acid	1.9 U	3.7	1.9	0.47	ng/l	

PERFLUOROALKYL SULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	0.67	3.7	1.9	0.47	ng/l	J
2706-91-4	Perfluoropentanesulfonic acid	3.7 U	4.7	3.7	1.0	ng/l	
355-46-4	Perfluorohexanesulfonic acid	1.2	3.7	1.9	0.65	ng/l	J
375-92-8	Perfluoroheptanesulfonic acid	1.9 U	3.7	1.9	0.47	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.4	3.7	1.9	0.50	ng/l	J
68259-12-1	Perfluorononanesulfonic acid	1.9 U	3.7	1.9	0.53	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.9 U	3.7	1.9	0.60	ng/l	
79780-39-5	Perfluorododecanesulfonic aci	3.7 U	4.7	3.7	1.1	ng/l	

FLUOROTELOMER SULFONIC ACIDS

757124-72-4	4:2 Fluorotelomer sulfonate	7.5 U	19	7.5	3.0	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	7.5 U	19	7.5	3.2	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	7.5 U	19	7.5	3.8	ng/l	

PERFLUOROOCCTANE SULFONAMIDES

754-91-6	PFOSA	1.9 U	3.7	1.9	0.63	ng/l	
31506-32-8	MeFOSA	3.7 U	7.5	3.7	0.93	ng/l	
4151-50-2	EtFOSA	3.7 U	7.5	3.7	0.93	ng/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
 LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.1
4

Report of Analysis

Client Sample ID:	AF-RHMW225401-WGN01B-2309		
Lab Sample ID:	FC9424-1	Date Sampled:	09/06/23
Matrix:	AQ - Ground Water	Date Received:	09/08/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
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PERFLUOROOCCTANE SULFONAMIDOACETIC ACIDS

2355-31-9	MeFOSAA	3.7 U	4.7	3.7	0.93	ng/l	
2991-50-6	EtFOSAA	3.7 U	4.7	3.7	1.2	ng/l	

PERFLUOROOCCTANE SULFONAMIDO ETHANOLS

24448-09-7	MeFOSE	19 U	37	19	4.1	ng/l	
1691-99-2	EtFOSE	19 U	37	19	6.9	ng/l	

PER and POLYFLUOROETHER CARBOXYLIC ACIDS

13252-13-6	HFPO-DA (GenX)	1.9 U	3.7	1.9	0.93	ng/l	
919005-14-4	ADONA	3.7 U	7.5	3.7	1.7	ng/l	
377-73-1	PFMPA	1.9 U	7.5	1.9	0.93	ng/l	
863090-89-5	PFMBA	3.7 U	7.5	3.7	1.1	ng/l	
151772-58-6	NFDHA	3.7 U	7.5	3.7	1.1	ng/l	

PER and POLYFLUOROETHER SULFONIC ACIDS

756426-58-1	9Cl-PF3ONS (F-53B Major)	3.7 U	7.5	3.7	1.3	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	3.7 U	7.5	3.7	1.6	ng/l	
113507-82-7	PFEESA	1.9 U	7.5	1.9	0.73	ng/l	

FLUOROTELOMER CARBOXYLIC ACIDS

356-02-5	3:3 Fluorotelomer carboxylate	9.3 U	19	9.3	4.2	ng/l	
914637-49-3	5:3 Fluorotelomer carboxylate	19 U	93	19	8.2	ng/l	
812-70-4	7:3 Fluorotelomer carboxylate	19 U	93	19	7.3	ng/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
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13C4-PFBA	89%		20-150%
13C5-PFPeA	82%		20-150%
13C5-PFHxA	95%		20-150%
13C4-PFHpA	98%		20-150%
13C8-PFOA	87%		20-150%
13C9-PFNA	108%		20-150%
13C6-PFDA	96%		20-150%
13C7-PFUnDA	104%		20-150%
13C2-PFDoDA	103%		20-150%
13C2-PFTeDA	82%		20-150%
13C3-PFBS	92%		20-150%
13C3-PFHxS	81%		20-150%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
 LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AF-RHMW225401-WGN01B-2309		
Lab Sample ID:	FC9424-1	Date Sampled:	09/06/23
Matrix:	AQ - Ground Water	Date Received:	09/08/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	89%		20-150%
	13C8-FOSA	77%		20-150%
	d3-MeFOSA	71%		20-150%
	d5-EtFOSA	75%		20-150%
	d3-MeFOSAA	97%		20-150%
	d5-EtFOSAA	88%		20-150%
	d7-MeFOSE	76%		20-150%
	d9-EtFOSE	83%		20-150%
	13C2-4:2FTS	88%		20-180%
	13C2-6:2FTS	83%		20-180%
	13C2-8:2FTS	83%		20-180%
	13C3-HFPO-DA	94%		20-150%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
 LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5.x Limits



SGS North America Inc - Orlando
Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, FL 32811
 TEL: 407-425-6700 FAX: 407-425-0707
 www.sgs.com

FC9424

CoC #: 2309AFSG07

SGS - ORLANDO JOB #:

PAGE 1 OF 1

SGS - ORLANDO Quote # SKIFF #

Client / Reporting Information		Project Information		Analytical Information				Matrix Codes	
Company Name: AECOM		Project Name: N6274223F0104 RH Fire Suppression System		<p style="font-size: 2em;">JAL</p> <p style="font-size: 1.2em;">9/16/23</p>				DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge OL - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe	
Address: 1001 Bishop St. ste 1600		Street							
City: Honolulu State: HI Zip: 96813		City Honolulu State Hawaii							
Project Contact: Katie Abbott Email: katie.abbott@aecom.com		Project # CTO CV123F0104							
Project Manager: Watson Tanji Email: watson.tanji@aecom.com		Fax #							
Phone #: 303-796-4624 / 808-954-4512		Client Purchase Order # 151253							
Sampler(s) Name(s) (Printed)		Sampler 1: <u>JAL</u> Sampler 2:							

SGS Orlando Sample #	Field ID / Point of Collection	DATE	TIME	SAMPLED BY	MATRIX	TOTAL # OF BOTTLES	CONTAINER INFORMATION												LAB USE ONLY	
							OTHER	NONE	ACI	NDR	HNDR	HSBA	NDRH-ZNAC	DI WATER	MECH	PFAS EPA Draft 1633				
1	AF-RHMMW225401-WGN01B-2309	9/16/23	1200	JAL	GW	3	X													

INITIAL ASSESSMENT: SP

LABEL VERIFICATION: ZB

Turnaround Time (Business days)		Data Deliverable Information		Comments / Remarks	
10 Day (Business)	Approved By: / Date:	<input type="checkbox"/> COMMERCIAL "A" (RESULTS ONLY)	<input type="checkbox"/> COMMERCIAL "B" (RESULTS PLUS QC) <input type="checkbox"/> REDT1 (EPA LEVEL 3) <input checked="" type="checkbox"/> FULLT1 (EPA LEVEL 4) <input checked="" type="checkbox"/> EDD'S	EDMS upload database: JBPHE	
7 Day				EDMS Coverage: AFFF Assessment Sampling GW	
5 Day				UNITED ANB: 016-92472774	
3 Day RUSH					
2 Day RUSH					

Sample Custody must be documented below each time samples change possession, including courier delivery.					
Relinquished by Sampler/Affiliation	Date/Time	Received By/Affiliation	Relinquished by/Affiliation	Date/Time	Received By/Affiliation
<u>JAL</u> / <u>AECOM</u>	<u>9/16/23 1415</u>	<u>Miranda DeGarmo/AECOM</u>	<u>Miranda DeGarmo/AECOM</u>	<u>9/16/23 1430</u>	<u>UC</u>
Relinquished by/Affiliation	Date/Time	Received By/Affiliation	Relinquished By/Affiliation	Date/Time	Received By/Affiliation
<u>UC</u>	<u>9/16/23 1642</u>	<u>JAL</u> / <u>AECOM</u>	<u>JAL</u> / <u>AECOM</u>	<u>9/16/23 1707</u>	<u>UC</u>

SP 4.2 FR # PFAS_COCs_ALL_09052023.xls Rev 031318

5.1 5



SGS Sample Receipt Summary

Job Number: fc9424

Client: AECOM

Project: N6274223F0104 RH Fire Suppression Syst

Date / Time Received: 9/8/2023 8:45:00 AM

Delivery Method: United Cargo/Airspace

Airbill #'s: United Cargo AWB #: 016-92472774

Cooler Temps (Raw Measured) °C: Cooler 1: (4.2);

Cooler Temps (Corrected) °C: Cooler 1: (4.0);

Cooler Informatio

Y or N

- 1. Custody Seals Present:
- 2. Custody Seals Intact:
- 3. Temp criteria achieved:
- 4. Cooler temp verification: IR Gun
- 5. Cooler media: Ice (Bag)

Trip Blank Information

Y or N N/A

- 1. Trip Blank present / cooler:
- 2. Trip Blank listed on COC:

W or S N/A

- 3. Type of TB Received

Sample Information

Y or N N/A

- 1. Sample labels present on bottles:
- 2. Samples presented properly:
- 3. Suffient volume/containers recv'd for analysi:
- 4. Condition of sample: Intact
- 5. Sample recv'd within HT:
- 6. Dates/Times/IDs on COC match sample labe:
- 7. VOCs have headspace:
- 8. Bottles received for unspecified tests:
- 9. Compositing instructions clear:
- 10. Voa Soil Kits/Jars received past 48hrs?:
- 11. % Solids Jar Received?:
- 12. Residual Chlorine Present?:

Misc Information

Number of Encores: 25 Gram 5 Gram

Number of Lab Filtered Metals

Test Strip Lot #: pH 0-3: _____

pH 10-12: _____ Other: (Specify) _____

Residual Chlorine Test Strip Lot: _____

Comments

SM001

Rev. Date 05/04/17

Technician: SHAYLAP

Date: 9/8/2023 8:45:00 AM

Reviewer: ZB

Date: 09/08/2023

FC9424: Chain of Custody

Page 2 of 2

5.1
5

QC Evaluation: DOD QSM5.x Limits

Job Number: FC9424
Account: AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System
Collected: 09/06/23

QC Sample ID	CAS#	Analyte	Sample Result Type	Result Type	Units	Limits
--------------	------	---------	--------------------	-------------	-------	--------

No DOD QSM5.x Limits found for methods in this job.

* Sample used for QC is not from job FC9424

5.2
5

MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Instrument Blank

Job Number: FC9424
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q350-IBLK	6Q24321.D	1	09/12/23	MV	n/a	n/a	S6Q350

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9424-1

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.016	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0080	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0040	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0040	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-44:2	Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0040	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0080	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0080	0.0010	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.040	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.040	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0080	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0080	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0080	0.0012	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Instrument Blank

Job Number: FC9424
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q350-IBLK	6Q24321.D	1	09/12/23	MV	n/a	n/a	S6Q350

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9424-1

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.0080	0.00078	ug/l	
356-02-5	3:3 Fluorotelomer carboxylate	ND	0.020	0.0045	ug/l	
914637-49-35:3	Fluorotelomer carboxylate	ND	0.10	0.0087	ug/l	
812-70-4	7:3 Fluorotelomer carboxylate	ND	0.10	0.0079	ug/l	

CAS No.	ID Standard Recoveries	Limits
	13C4-PFBA	101% 20-150%
	13C5-PFPeA	86% 20-150%
	13C5-PFHxA	96% 20-150%
	13C4-PFHpA	101% 20-150%
	13C8-PFOA	97% 20-150%
	13C9-PFNA	116% 20-150%
	13C6-PFDA	99% 20-150%
	13C7-PFUnDA	93% 20-150%
	13C2-PFDoDA	97% 20-150%
	13C2-PFTeDA	98% 20-150%
	13C3-PFBS	103% 20-150%
	13C3-PFHxS	101% 20-150%
	13C8-PFOS	96% 20-150%
	13C8-FOSA	102% 20-150%
	d3-MeFOSAA	95% 20-150%
	d5-EtFOSAA	82% 20-150%
	13C2-4:2FTS	93% 20-180%
	13C2-6:2FTS	93% 20-180%
	13C2-8:2FTS	97% 20-180%

6.1.1

6

Continuing Calibration Blank

Job Number: FC9424
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q350-ICCB	6Q24383.D	1	09/13/23	MV	n/a	n/a	S6Q350

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9424-1

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.016	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0080	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0040	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0040	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-44:2	Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0040	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0080	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0080	0.0010	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.040	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.040	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0080	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0080	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0080	0.0012	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Continuing Calibration Blank

Job Number: FC9424
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q350-ICCB	6Q24383.D	1	09/13/23	MV	n/a	n/a	S6Q350

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9424-1

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.0080	0.00078	ug/l	
356-02-5	3:3 Fluorotelomer carboxylate	ND	0.020	0.0045	ug/l	
914637-49-35:3	Fluorotelomer carboxylate	ND	0.10	0.0087	ug/l	
812-70-4	7:3 Fluorotelomer carboxylate	ND	0.10	0.0079	ug/l	

CAS No.	ID Standard Recoveries	Limits
	13C4-PFBA	101% 20-150%
	13C5-PFPeA	87% 20-150%
	13C5-PFHxA	96% 20-150%
	13C4-PFHpA	103% 20-150%
	13C8-PFOA	97% 20-150%
	13C9-PFNA	112% 20-150%
	13C6-PFDA	97% 20-150%
	13C7-PFUnDA	99% 20-150%
	13C2-PFDoDA	98% 20-150%
	13C2-PFTeDA	100% 20-150%
	13C3-PFBS	102% 20-150%
	13C3-PFHxS	94% 20-150%
	13C8-PFOS	91% 20-150%
	13C8-FOSA	100% 20-150%
	d3-MeFOSAA	89% 20-150%
	d5-EtFOSAA	79% 20-150%
	13C2-4:2FTS	93% 20-180%
	13C2-6:2FTS	89% 20-180%
	13C2-8:2FTS	90% 20-180%

Method Blank Summary

Job Number: FC9424
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP98930-MB	6Q24386.D	1	09/13/23	MV	09/11/23	OP98930	S6Q350

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9424-1

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.016	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0080	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0040	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0040	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-44:2	Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0040	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0080	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0080	0.0010	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.040	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.040	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0080	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0080	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0080	0.0012	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Method Blank Summary

Job Number: FC9424
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP98930-MB	6Q24386.D	1	09/13/23	MV	09/11/23	OP98930	S6Q350

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9424-1

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.0080	0.00078	ug/l	
356-02-5	3:3 Fluorotelomer carboxylate	ND	0.020	0.0045	ug/l	
914637-49-35:3	Fluorotelomer carboxylate	ND	0.10	0.0087	ug/l	
812-70-4	7:3 Fluorotelomer carboxylate	ND	0.10	0.0079	ug/l	

CAS No.	ID Standard Recoveries	Limits
	13C4-PFBA	92% 20-150%
	13C5-PFPeA	80% 20-150%
	13C5-PFHxA	88% 20-150%
	13C4-PFHpA	92% 20-150%
	13C8-PFOA	86% 20-150%
	13C9-PFNA	95% 20-150%
	13C6-PFDA	85% 20-150%
	13C7-PFUnDA	81% 20-150%
	13C2-PFDoDA	79% 20-150%
	13C2-PFTeDA	78% 20-150%
	13C3-PFBS	96% 20-150%
	13C3-PFHxS	92% 20-150%
	13C8-PFOS	79% 20-150%
	13C8-FOSA	63% 20-150%
	d3-MeFOSA	55% 20-150%
	d5-EtFOSA	60% 20-150%
	d3-MeFOSAA	77% 20-150%
	d5-EtFOSAA	67% 20-150%
	d7-MeFOSE	62% 20-150%
	d9-EtFOSE	68% 20-150%
	13C2-4:2FTS	91% 20-180%
	13C2-6:2FTS	90% 20-180%
	13C2-8:2FTS	79% 20-180%
	13C3-HFPO-DA	89% 20-150%

Continuing Calibration Blank

Job Number: FC9424
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q350-ICCB	6Q24394.D	1	09/13/23	MV	n/a	n/a	S6Q350

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

OP98930-DUP

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.016	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0080	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0040	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0040	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-44:2	Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0040	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0080	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0080	0.0010	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.040	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.040	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0080	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0080	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0080	0.0012	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Continuing Calibration Blank

Job Number: FC9424
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q350-ICCB	6Q24394.D	1	09/13/23	MV	n/a	n/a	S6Q350

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

OP98930-DUP

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.0080	0.00078	ug/l	
356-02-5	3:3 Fluorotelomer carboxylate	ND	0.020	0.0045	ug/l	
914637-49-35:3	Fluorotelomer carboxylate	ND	0.10	0.0087	ug/l	
812-70-4	7:3 Fluorotelomer carboxylate	ND	0.10	0.0079	ug/l	

CAS No.	ID Standard Recoveries	Limits
	13C4-PFBA	101% 20-150%
	13C5-PFPeA	88% 20-150%
	13C5-PFHxA	99% 20-150%
	13C4-PFHpA	100% 20-150%
	13C8-PFOA	104% 20-150%
	13C9-PFNA	109% 20-150%
	13C6-PFDA	100% 20-150%
	13C7-PFUnDA	98% 20-150%
	13C2-PFDoDA	104% 20-150%
	13C2-PFTeDA	102% 20-150%
	13C3-PFBS	108% 20-150%
	13C3-PFHxS	103% 20-150%
	13C8-PFOS	90% 20-150%
	13C8-FOSA	95% 20-150%
	d3-MeFOSAA	88% 20-150%
	d5-EtFOSAA	78% 20-150%
	13C2-4:2FTS	96% 20-180%
	13C2-6:2FTS	93% 20-180%
	13C2-8:2FTS	94% 20-180%

Continuing Calibration Blank

Job Number: FC9424
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q350-ICCB	6Q24401.D	1	09/13/23	MV	n/a	n/a	S6Q350

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

OP98930-DUP

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.016	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0080	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0040	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0040	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-44:2	Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0040	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0080	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0080	0.0010	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.040	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.040	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0080	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0080	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0080	0.0012	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Continuing Calibration Blank

Job Number: FC9424
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q350-ICCB	6Q24401.D	1	09/13/23	MV	n/a	n/a	S6Q350

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

OP98930-DUP

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.0080	0.00078	ug/l	
356-02-5	3:3 Fluorotelomer carboxylate	ND	0.020	0.0045	ug/l	
914637-49-35:3	Fluorotelomer carboxylate	ND	0.10	0.0087	ug/l	
812-70-4	7:3 Fluorotelomer carboxylate	ND	0.10	0.0079	ug/l	

CAS No.	ID Standard Recoveries	Limits
	13C4-PFBA	102% 20-150%
	13C5-PFPeA	85% 20-150%
	13C5-PFHxA	93% 20-150%
	13C4-PFHpA	97% 20-150%
	13C8-PFOA	94% 20-150%
	13C9-PFNA	106% 20-150%
	13C6-PFDA	97% 20-150%
	13C7-PFUnDA	98% 20-150%
	13C2-PFDoDA	103% 20-150%
	13C2-PFTeDA	98% 20-150%
	13C3-PFBS	106% 20-150%
	13C3-PFHxS	101% 20-150%
	13C8-PFOS	111% 20-150%
	13C8-FOSA	107% 20-150%
	d3-MeFOSAA	103% 20-150%
	d5-EtFOSAA	100% 20-150%
	13C2-4:2FTS	103% 20-180%
	13C2-6:2FTS	100% 20-180%
	13C2-8:2FTS	96% 20-180%

6.1.5

6

Blank Spike Summary

Job Number: FC9424
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP98930-LLBS	6Q24385.D	1	09/13/23	MV	09/11/23	OP98930	S6Q350

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9424-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.03	0.0320	107	40-150
2706-90-3	Perfluoropentanoic acid	0.015	0.0157	105	40-150
307-24-4	Perfluorohexanoic acid	0.0075	0.0075	100	40-150
375-85-9	Perfluoroheptanoic acid	0.0075	0.0075	100	40-150
335-67-1	Perfluorooctanoic acid	0.0075	0.0070	93	40-150
375-95-1	Perfluorononanoic acid	0.0075	0.0064	85	40-150
335-76-2	Perfluorodecanoic acid	0.0075	0.0079	105	40-150
2058-94-8	Perfluoroundecanoic acid	0.0075	0.0077	103	40-150
307-55-1	Perfluorododecanoic acid	0.0075	0.0075	100	40-150
72629-94-8	Perfluorotridecanoic acid	0.0075	0.0073	97	40-150
376-06-7	Perfluorotetradecanoic acid	0.0075	0.0077	103	40-150
375-73-5	Perfluorobutanesulfonic acid	0.00665	0.0061	92	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.00706	0.0074	105	40-150
355-46-4	Perfluorohexanesulfonic acid	0.00686	0.0075	109	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.00715	0.0081	113	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.00696	0.0073	105	40-150
68259-12-1	Perfluorononanesulfonic acid	0.00722	0.0070	97	40-150
335-77-3	Perfluorodecanesulfonic acid	0.00724	0.0076	105	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.00728	0.0066	91	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.0281	0.0303	108	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.0285	0.0274	96	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.0288	0.0315	109	40-150
754-91-6	PFOSA	0.0075	0.0075	100	40-150
31506-32-8	MeFOSA	0.015	0.0153	102	40-150
4151-50-2	EtFOSA	0.015	0.0140	93	40-150
2355-31-9	MeFOSAA	0.0075	0.0079	105	40-150
2991-50-6	EtFOSAA	0.0075	0.0080	107	40-150
24448-09-7	MeFOSE	0.0375	0.0373	99	40-150
1691-99-2	EtFOSE	0.0375	0.0369	98	40-150
13252-13-6	HFPO-DA (GenX)	0.015	0.0164	109	40-150
919005-14-4	ADONA	0.0142	0.0155	109	40-150
377-73-1	PFMPA	0.015	0.0168	112	40-150
863090-89-5	PFMBA	0.015	0.0169	113	40-150
151772-58-6	NFDHA	0.015	0.0159	106	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.014	0.0148	106	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0142	0.0141	99	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC9424
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP98930-LLBS	6Q24385.D	1	09/13/23	MV	09/11/23	OP98930	S6Q350

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9424-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0134	0.0144	108	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.0375	0.0237	63	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.188	0.168	90	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.188	0.181	97	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	94%	20-150%
	13C5-PFPeA	80%	20-150%
	13C5-PFHxA	85%	20-150%
	13C4-PFHpA	93%	20-150%
	13C8-PFOA	90%	20-150%
	13C9-PFNA	107%	20-150%
	13C6-PFDA	100%	20-150%
	13C7-PFUnDA	99%	20-150%
	13C2-PFDoDA	93%	20-150%
	13C2-PFTeDA	90%	20-150%
	13C3-PFBS	97%	20-150%
	13C3-PFHxS	89%	20-150%
	13C8-PFOS	96%	20-150%
	13C8-FOSA	67%	20-150%
	d3-MeFOSA	68%	20-150%
	d5-EtFOSA	75%	20-150%
	d3-MeFOSAA	89%	20-150%
	d5-EtFOSAA	80%	20-150%
	d7-MeFOSE	66%	20-150%
	d9-EtFOSE	79%	20-150%
	13C2-4:2FTS	86%	20-180%
	13C2-6:2FTS	91%	20-180%
	13C2-8:2FTS	78%	20-180%
	13C3-HFPO-DA	87%	20-150%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC9424
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP98930-BS	6Q24384.D	1	09/13/23	MV	09/11/23	OP98930	S6Q350

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9424-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.1	0.105	105	40-150
2706-90-3	Perfluoropentanoic acid	0.05	0.0527	105	40-150
307-24-4	Perfluorohexanoic acid	0.025	0.0245	98	40-150
375-85-9	Perfluoroheptanoic acid	0.025	0.0240	96	40-150
335-67-1	Perfluorooctanoic acid	0.025	0.0236	94	40-150
375-95-1	Perfluorononanoic acid	0.025	0.0235	94	40-150
335-76-2	Perfluorodecanoic acid	0.025	0.0246	98	40-150
2058-94-8	Perfluoroundecanoic acid	0.025	0.0233	93	40-150
307-55-1	Perfluorododecanoic acid	0.025	0.0269	108	40-150
72629-94-8	Perfluorotridecanoic acid	0.025	0.0239	96	40-150
376-06-7	Perfluorotetradecanoic acid	0.025	0.0239	96	40-150
375-73-5	Perfluorobutanesulfonic acid	0.0222	0.0202	91	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0235	0.0232	99	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0229	0.0236	103	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0238	0.0232	97	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0232	0.0228	98	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0241	0.0240	100	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0241	0.0222	92	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0243	0.0209	86	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.0938	0.0933	100	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.095	0.109	115	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.096	0.0968	101	40-150
754-91-6	PFOSA	0.025	0.0257	103	40-150
31506-32-8	MeFOSA	0.05	0.0543	109	40-150
4151-50-2	EtFOSA	0.05	0.0494	99	40-150
2355-31-9	MeFOSAA	0.025	0.0238	95	40-150
2991-50-6	EtFOSAA	0.025	0.0277	111	40-150
24448-09-7	MeFOSE	0.125	0.124	99	40-150
1691-99-2	EtFOSE	0.125	0.122	98	40-150
13252-13-6	HFPO-DA (GenX)	0.05	0.0527	105	40-150
919005-14-4	ADONA	0.0473	0.0525	111	40-150
377-73-1	PFMPA	0.05	0.0555	111	40-150
863090-89-5	PFMBA	0.05	0.0545	109	40-150
151772-58-6	NFDHA	0.05	0.0538	108	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.0468	0.0481	103	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0473	0.0444	94	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC9424
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP98930-BS	6Q24384.D	1	09/13/23	MV	09/11/23	OP98930	S6Q350

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9424-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0445	0.0473	106	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.125	0.0802	64	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.625	0.587	94	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.625	0.690	110	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	99%	20-150%
	13C5-PFPeA	90%	20-150%
	13C5-PFHxA	93%	20-150%
	13C4-PFHpA	105%	20-150%
	13C8-PFOA	97%	20-150%
	13C9-PFNA	101%	20-150%
	13C6-PFDA	100%	20-150%
	13C7-PFUnDA	99%	20-150%
	13C2-PFDoDA	86%	20-150%
	13C2-PFTeDA	88%	20-150%
	13C3-PFBS	112%	20-150%
	13C3-PFHxS	103%	20-150%
	13C8-PFOS	94%	20-150%
	13C8-FOSA	66%	20-150%
	d3-MeFOSA	61%	20-150%
	d5-EtFOSA	65%	20-150%
	d3-MeFOSAA	86%	20-150%
	d5-EtFOSAA	73%	20-150%
	d7-MeFOSE	63%	20-150%
	d9-EtFOSE	74%	20-150%
	13C2-4:2FTS	98%	20-180%
	13C2-6:2FTS	86%	20-180%
	13C2-8:2FTS	95%	20-180%
	13C3-HFPO-DA	97%	20-150%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FC9424
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP98930-MS	6Q24392.D	1	09/13/23	MV	09/11/23	OP98930	S6Q350
FC9447-3	6Q24391.D	1	09/13/23	MV	09/11/23	OP98930	S6Q350

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9424-1

CAS No.	Compound	FC9447-3 ug/l	Spike Q	MS ug/l	MS %	Limits
375-22-4	Perfluorobutanoic acid	0.015 U	0.0952	0.102	107	40-150
2706-90-3	Perfluoropentanoic acid	0.0076 U	0.0476	0.0543	114	40-150
307-24-4	Perfluorohexanoic acid	0.0038 U	0.0238	0.0226	95	40-150
375-85-9	Perfluoroheptanoic acid	0.0038 U	0.0238	0.0242	102	40-150
335-67-1	Perfluorooctanoic acid	0.0038 U	0.0238	0.0221	93	40-150
375-95-1	Perfluorononanoic acid	0.0038 U	0.0238	0.0191	80	40-150
335-76-2	Perfluorodecanoic acid	0.0038 U	0.0238	0.0220	92	40-150
2058-94-8	Perfluoroundecanoic acid	0.0038 U	0.0238	0.0270	113	40-150
307-55-1	Perfluorododecanoic acid	0.0038 U	0.0238	0.0244	102	40-150
72629-94-8	Perfluorotridecanoic acid	0.0038 U	0.0238	0.0206	87	40-150
376-06-7	Perfluorotetradecanoic acid	0.0038 U	0.0238	0.0238	100	40-150
375-73-5	Perfluorobutanesulfonic acid	0.0038 U	0.0211	0.0226	107	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0048 U	0.0224	0.0209	93	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0038 U	0.0218	0.0202	93	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0038 U	0.0227	0.0211	93	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0038 U	0.0221	0.0211	95	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0038 U	0.0229	0.0237	103	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0038 U	0.023	0.0201	87	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0048 U	0.0231	0.0173	75	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.019 U	0.0893	0.0916	103	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.019 U	0.0905	0.0954	105	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.019 U	0.0914	0.0835	91	40-150
754-91-6	PFOSA	0.0038 U	0.0238	0.0236	99	40-150
31506-32-8	MeFOSA	0.0076 U	0.0476	0.0519	109	40-150
4151-50-2	EtFOSA	0.0076 U	0.0476	0.0484	102	40-150
2355-31-9	MeFOSAA	0.0048 U	0.0238	0.0254	107	40-150
2991-50-6	EtFOSAA	0.0048 U	0.0238	0.0243	102	40-150
24448-09-7	MeFOSE	0.038 U	0.119	0.115	97	40-150
1691-99-2	EtFOSE	0.038 U	0.119	0.120	101	40-150
13252-13-6	HFPO-DA (GenX)	0.0038 U	0.0476	0.0479	101	40-150
919005-14-4	ADONA	0.0076 U	0.045	0.0475	106	40-150
377-73-1	PFMPA	0.0076 U	0.0476	0.0373	78	40-150
863090-89-5	PFMBA	0.0076 U	0.0476	0.0561	118	40-150
151772-58-6	NFDHA	0.0076 U	0.0476	0.0480	101	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.0076 U	0.0445	0.0445	100	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0076 U	0.045	0.0401	89	40-150

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FC9424
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP98930-MS	6Q24392.D	1	09/13/23	MV	09/11/23	OP98930	S6Q350
FC9447-3	6Q24391.D	1	09/13/23	MV	09/11/23	OP98930	S6Q350

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9424-1

CAS No.	Compound	FC9447-3 ug/l	Spike Q	MS ug/l	MS %	Limits
113507-82-7	PFEESA	0.0076 U	0.0424	0.0444	105	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.019 U	0.119	0.222	186*	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.095 U	0.595	0.590	99	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.095 U	0.595	0.611	103	40-150

CAS No.	ID Standard Recoveries	MS	FC9447-3	Limits
	13C4-PFBA	30%	47%	20-150%
	13C5-PFPeA	73%	83%	20-150%
	13C5-PFHxA	85%	90%	20-150%
	13C4-PFHpA	90%	93%	20-150%
	13C8-PFOA	91%	92%	20-150%
	13C9-PFNA	115%	106%	20-150%
	13C6-PFDA	103%	92%	20-150%
	13C7-PFUnDA	83%	87%	20-150%
	13C2-PFDoDA	83%	69%	20-150%
	13C2-PFTeDA	78%	64%	20-150%
	13C3-PFBS	98%	104%	20-150%
	13C3-PFHxS	101%	93%	20-150%
	13C8-PFOS	97%	89%	20-150%
	13C8-FOSA	82%	84%	20-150%
	d3-MeFOSA	77%	71%	20-150%
	d5-EtFOSA	74%	71%	20-150%
	d3-MeFOSAA	82%	75%	20-150%
	d5-EtFOSAA	78%	71%	20-150%
	d7-MeFOSE	73%	65%	20-150%
	d9-EtFOSE	76%	70%	20-150%
	13C2-4:2FTS	88%	95%	20-180%
	13C2-6:2FTS	92%	91%	20-180%
	13C2-8:2FTS	88%	91%	20-180%
	13C3-HFPO-DA	86%	94%	20-150%

* = Outside of Control Limits.

Duplicate Summary

Job Number: FC9424
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP98930-DUP	6Q24396.D	1	09/13/23	MV	09/11/23	OP98930	S6Q350
FC9447-4	6Q24395.D	1	09/13/23	MV	09/11/23	OP98930	S6Q350

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9424-1

CAS No.	Compound	FC9447-4 ug/l	DUP Q ug/l	Q	RPD	Limits
375-22-4	Perfluorobutanoic acid	0.015 U	ND		nc	30
2706-90-3	Perfluoropentanoic acid	0.0539	0.0524		3	30
307-24-4	Perfluorohexanoic acid	0.0036 U	ND		nc	30
375-85-9	Perfluoroheptanoic acid	0.00052 J	0.00067 J		25	30
335-67-1	Perfluorooctanoic acid	0.0036 U	ND		nc	30
375-95-1	Perfluorononanoic acid	0.0036 U	ND		nc	30
335-76-2	Perfluorodecanoic acid	0.0036 U	ND		nc	30
2058-94-8	Perfluoroundecanoic acid	0.0036 U	ND		nc	30
307-55-1	Perfluorododecanoic acid	0.0036 U	ND		nc	30
72629-94-8	Perfluorotridecanoic acid	0.0036 U	ND		nc	30
376-06-7	Perfluorotetradecanoic acid	0.0036 U	ND		nc	30
375-73-5	Perfluorobutanesulfonic acid	0.0036 U	ND		nc	30
2706-91-4	Perfluoropentanesulfonic acid	0.0045 U	ND		nc	30
355-46-4	Perfluorohexanesulfonic acid	0.0036 U	ND		nc	30
375-92-8	Perfluoroheptanesulfonic acid	0.0036 U	ND		nc	30
1763-23-1	Perfluorooctanesulfonic acid	0.0036 U	ND		nc	30
68259-12-1	Perfluorononanesulfonic acid	0.0036 U	ND		nc	30
335-77-3	Perfluorodecanesulfonic acid	0.0036 U	ND		nc	30
79780-39-5	Perfluorododecanesulfonic aci	0.0045 U	ND		nc	30
757124-72-44:2	Fluorotelomer sulfonate	0.018 U	ND		nc	30
27619-97-2	6:2 Fluorotelomer sulfonate	0.0042 J	0.0039 J		7	30
39108-34-4	8:2 Fluorotelomer sulfonate	0.018 U	ND		nc	30
754-91-6	PFOSA	0.0036 U	ND		nc	30
31506-32-8	MeFOSA	0.0073 U	ND		nc	30
4151-50-2	EtFOSA	0.0073 U	ND		nc	30
2355-31-9	MeFOSAA	0.0045 U	ND		nc	30
2991-50-6	EtFOSAA	0.0045 U	ND		nc	30
24448-09-7	MeFOSE	0.036 U	ND		nc	30
1691-99-2	EtFOSE	0.036 U	ND		nc	30
13252-13-6	HFPO-DA (GenX)	0.0036 U	ND		nc	30
919005-14-4	ADONA	0.0073 U	ND		nc	30
377-73-1	PFMPA	0.0073 U	ND		nc	30
863090-89-5	PFMBA	0.0073 U	ND		nc	30
151772-58-6	NFDHA	0.0073 U	ND		nc	30
756426-58-19	Cl-PF3ONS (F-53B Major)	0.0073 U	ND		nc	30
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0073 U	ND		nc	30

* = Outside of Control Limits.

Duplicate Summary

Job Number: FC9424
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP98930-DUP	6Q24396.D	1	09/13/23	MV	09/11/23	OP98930	S6Q350
FC9447-4	6Q24395.D	1	09/13/23	MV	09/11/23	OP98930	S6Q350

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9424-1

CAS No.	Compound	FC9447-4 ug/l	DUP Q ug/l	Q RPD	Limits
113507-82-7	PFEESA	0.0073 U	ND	nc	30
356-02-5	3:3 Fluorotelomer carboxylate	0.018 U	ND	nc	30
914637-49-35:3	Fluorotelomer carboxylate	0.091 U	ND	nc	30
812-70-4	7:3 Fluorotelomer carboxylate	0.091 U	ND	nc	30

CAS No.	ID Standard Recoveries	DUP	FC9447-4	Limits
	13C4-PFBA	76%	74%	20-150%
	13C5-PFPeA	72%	66%	20-150%
	13C5-PFHxA	88%	86%	20-150%
	13C4-PFHpA	96%	97%	20-150%
	13C8-PFOA	95%	85%	20-150%
	13C9-PFNA	102%	102%	20-150%
	13C6-PFDA	92%	94%	20-150%
	13C7-PFUnDA	89%	83%	20-150%
	13C2-PFDoDA	79%	71%	20-150%
	13C2-PFTeDA	57%	56%	20-150%
	13C3-PFBS	91%	96%	20-150%
	13C3-PFHxS	87%	96%	20-150%
	13C8-PFOS	83%	88%	20-150%
	13C8-FOSA	78%	85%	20-150%
	d3-MeFOSA	58%	59%	20-150%
	d5-EtFOSA	60%	54%	20-150%
	d3-MeFOSAA	71%	83%	20-150%
	d5-EtFOSAA	67%	71%	20-150%
	d7-MeFOSE	61%	61%	20-150%
	d9-EtFOSE	64%	60%	20-150%
	13C2-4:2FTS	82%	87%	20-180%
	13C2-6:2FTS	73%	79%	20-180%
	13C2-8:2FTS	72%	75%	20-180%
	13C3-HFPO-DA	76%	71%	20-150%

* = Outside of Control Limits.