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: FC5487

Sampling Date: 04/21/23

Report to:

AECOM, Inc
7595 Technology Way
Denver, CO 80237
katie.abbott@aecom.com; mark.kromis@aecom.com;
watson.tanji@aecom.com; kristin.rutherford@aecom.com
ATTN: Katie Abbott

Total number of pages in report: 30

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.

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

Sections: 1 2 3 4 5 6

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SGS North America Inc.

Sample Summary

AECOM, INC.

Job No: FC5487

N6274223F0104 RH Fire Suppression System
Project No: 60697810

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
FC5487-1	04/21/23	08:50	WMH	04/22/23	AQ	Ground Water	AF-RHMW225401-WGN01B-2304W3

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: AECOM, INC. **Job No:** FC5487

Site: N6274223F0104 RH Fire Suppression System **Report Date:** 5/2/2023 10:38:34 PM

On 04/22/2023, 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 0.3 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FC5487 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:** OP96579

Sample(s) FC5240-5MS, FC5240-5MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for 4:2 Fluorotelomer sulfonate, 6:2 Fluorotelomer sulfonate, Perfluorobutanesulfonic acid, Perfluoroheptanesulfonic acid, Perfluoroheptanoic acid, Perfluorohexanesulfonic acid, Perfluorohexanoic acid, Perfluorooctanesulfonic acid, Perfluorooctanoic acid, Perfluoropentanoic acid are outside control limits. Outside control limits due to high level in sample relative to spike amount.
Matrix Spike Duplicate Recovery(s) for 6:2 Fluorotelomer sulfonate, Perfluorobutanesulfonic acid, Perfluorobutanoic acid, Perfluoroheptanesulfonic acid, Perfluoroheptanoic acid, Perfluorohexanesulfonic acid, Perfluorohexanoic acid, Perfluorooctanoic acid, Perfluoropentanesulfonic acid, Perfluoropentanoic acid are outside control limits. Outside control limits due to high level in sample relative to spike amount.

RPD(s) for MSD for Perfluorotridecanoic acid, Perfluoroundecanoic acid are outside control limits for sample OP96579-MSD. Probable cause is due to sample non-homogeneity.

OP96579-MB for d7-MeFOSE: Outside control limits.

OP96579-MSD for d7-MeFOSE: Outside control limits.

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: FC5487
Account: AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System
Collected: 04/21/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FC5487-1	**AF-RHMW225401-WGN01B-2304W3**					
Perfluoropentanoic acid		1.8 J	7.4	1.9	ng/l	EPA DRAFT 1633
Perfluorohexanoic acid		1.4 J	3.7	1.9	ng/l	EPA DRAFT 1633
Perfluoroheptanoic acid		1.2 J	3.7	1.9	ng/l	EPA DRAFT 1633
Perfluorooctanoic acid		1.8 J	3.7	0.93	ng/l	EPA DRAFT 1633
Perfluorobutanesulfonic acid		0.74 J	3.7	1.9	ng/l	EPA DRAFT 1633
Perfluorohexanesulfonic acid		1.5 J	3.7	1.9	ng/l	EPA DRAFT 1633
Perfluorooctanesulfonic acid		2.2 J	3.7	1.9	ng/l	EPA DRAFT 1633

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: AF-RHMW225401-WGN01B-2304W3
Lab Sample ID: FC5487-1
Matrix: AQ - Ground Water
Method: EPA DRAFT 1633 EPA 1633 DRAFT
Project: N6274223F0104 RH Fire Suppression System

Date Sampled: 04/21/23
Date Received: 04/22/23
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6Q17114.D	1	04/29/23 04:02	MV	04/26/23 11:00	OP96579	S6Q258
Run #2							

	Initial Volume	Final Volume
Run #1	540 ml	5.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYL CARBOXYLIC ACIDS							
375-22-4	Perfluorobutanoic acid	3.7 U	15	3.7	1.8	ng/l	
2706-90-3	Perfluoropentanoic acid	1.8	7.4	1.9	0.87	ng/l	J
307-24-4	Perfluorohexanoic acid	1.4	3.7	1.9	0.46	ng/l	J
375-85-9	Perfluoroheptanoic acid	1.2	3.7	1.9	0.46	ng/l	J
335-67-1	Perfluorooctanoic acid	1.8	3.7	0.93	0.46	ng/l	J
375-95-1	Perfluorononanoic acid	1.9 U	3.7	1.9	0.56	ng/l	
335-76-2	Perfluorodecanoic acid	1.9 U	3.7	1.9	0.46	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	0.78	ng/l	
376-06-7	Perfluorotetradecanoic acid	1.9 U	3.7	1.9	0.46	ng/l	
PERFLUOROALKYL SULFONIC ACIDS							
375-73-5	Perfluorobutanesulfonic acid	0.74	3.7	1.9	0.46	ng/l	J
2706-91-4	Perfluoropentanesulfonic acid	3.7 U	4.6	3.7	1.0	ng/l	
355-46-4	Perfluorohexanesulfonic acid	1.5	3.7	1.9	0.65	ng/l	J
375-92-8	Perfluoroheptanesulfonic acid	1.9 U	3.7	1.9	0.46	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	2.2	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	0.59	ng/l	
79780-39-5	Perfluorododecanesulfonic aci	3.7 U	4.6	3.7	1.1	ng/l	
FLUOROTELOMER SULFONIC ACIDS							
757124-72-4	4:2 Fluorotelomer sulfonate	7.4 U	19	7.4	3.0	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	7.4 U	19	7.4	3.2	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	7.4 U	19	7.4	3.8	ng/l	
PERFLUOROOCTANE SULFONAMIDES							
754-91-6	PFOSA	1.9 U	3.7	1.9	0.62	ng/l	
31506-32-8	MeFOSA	3.7 U	7.4	3.7	0.93	ng/l	
4151-50-2	EtFOSA	3.7 U	7.4	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

Report of Analysis

Client Sample ID:	AF-RHMW225401-WGN01B-2304W3		
Lab Sample ID:	FC5487-1	**Date Sampled:**	04/21/23
Matrix:	AQ - Ground Water	**Date Received:**	04/22/23
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
PERFLUOROOCTANE SULFONAMIDOACETIC ACIDS							
2355-31-9	MeFOSAA	3.7 U	4.6	3.7	0.93	ng/l	
2991-50-6	EtFOSAA	3.7 U	4.6	3.7	1.2	ng/l	
PERFLUOROOCTANE 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	7.4	3.7	1.7	ng/l	
377-73-1	PFMPA	1.9 U	7.4	1.9	0.93	ng/l	
863090-89-5	PFMBA	3.7 U	7.4	3.7	1.1	ng/l	
151772-58-6	NFDHA	3.7 U	7.4	3.7	1.1	ng/l	
PER and POLYFLUOROETHER SULFONIC ACIDS							
756426-58-1	9Cl-PF3ONS (F-53B Major)	3.7 U	7.4	3.7	1.3	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	3.7 U	7.4	3.7	1.6	ng/l	
113507-82-7	PFEESA	1.9 U	7.4	1.9	0.72	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	8.1	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
	13C4-PFBA	101%		20-150%
	13C5-PFPeA	104%		20-150%
	13C5-PFHxA	101%		20-150%
	13C4-PFHpA	107%		20-150%
	13C8-PFOA	99%		20-150%
	13C9-PFNA	107%		20-150%
	13C6-PFDA	103%		20-150%
	13C7-PFUnDA	109%		20-150%
	13C2-PFDoDA	99%		20-150%
	13C2-PFTeDA	77%		20-150%
	13C3-PFBS	105%		20-150%
	13C3-PFHxS	102%		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-2304W3		
Lab Sample ID:	FC5487-1	**Date Sampled:**	04/21/23
Matrix:	AQ - Ground Water	**Date Received:**	04/22/23
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	99%		20-150%
	13C8-FOSA	75%		20-150%
	d3-MeFOSA	61%		20-150%
	d5-EtFOSA	61%		20-150%
	d3-MeFOSAA	109%		20-150%
	d5-EtFOSAA	104%		20-150%
	d7-MeFOSE	53%		20-150%
	d9-EtFOSE	54%		20-150%
	13C2-4:2FTS	109%		20-180%
	13C2-6:2FTS	102%		20-180%
	13C2-8:2FTS	97%		20-180%
	13C3-HFPO-DA	103%		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

FC5487 SGS - ORLANDO JOB

COC #: 2304W3AFSG07
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SGS - ORLANDO Quote # | SKIFF #

Client / Reporting Information

Company Name: AECOM
Address: 1001 Bishop St. ste 1600
City: Honolulu State: HI Zip: 96813
Project Contact: Katie Abbott Email: katie.abbott@aecom.com
Project Manager: Watson Tanji Email: watson.tanji@aecom.com
Phone #: 303-796-4624 / 808-954-4512
Sampler(s) Name(s) (Printed)
Sampler 1: Eli Martin Sampler 2: Chris Womack

Project Information

Project Name: N6274223F0104 RH Fire Suppression System
Street
City Honolulu State Hawaii
Project # 60697810
Fax #
Client Purchase Order #

Analytical Information

PFAS EPA Draft 1633

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NAOH+ZNAC	DI WATER	MEOH	PFAS EPA Draft 1633	LAB USE ONLY
1	AF-RHMW225401-WGN01B-2304W3	04/21/23	0850	EM/EMT	GW	3		X								X	

EM 04/21/23

INITIAL ASSESSMENT

LABEL VERIFICATION

Turnaround Time (Business days)

10 Day (Business) Approved By: / Date:
7 Day
5 Day
3 Day *RUSH*
2 Day *RUSH*
1 Day *RUSH*
Other
Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [x] FULLT1 (EPA LEVEL 4)
- [x] EDD'S

Comments / Remarks

EDMS upload database: JBPHE
EDMS Coverage: AFFF Assessment Sampling GW
United AWB: 016-48351575

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
1 Eli Martin/AECOM	04/21/23 1705	2 Hannah Brumby/AECOM	3 Hannah Brumby/AECOM	4/21/23 1540	4 1600 4/22/23
Relinquished by/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
5		6	7		8

Lab Use Only : Cooler Temperature (s) Celsius (corrected): 0.4°C

http://www.sgs.com/en/terms-and-conditions

PFAS_COCs_ALL.xls Rev 031318

FC5487: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: FC5487 **Client:** AECOM **Project:** N6274223F0104 RH Fire Suppression System

Date / Time Received: 4/22/2023 4:00:00 PM **Delivery Method:** United Cargo/Airspace **Airbill #'s:** 016-48351575

Therm ID: IR 1; **Therm CF:** -0.1; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (0.4);

Cooler Temps (Corrected) °C: Cooler 1: (0.3);

Cooler Information	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 preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
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 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230320 pH 10-12 25BDH07 Other: (Specify) pH 1.0 - 12.0 222221

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: NATHANS Date: 4/22/2023 4:00:00 PM Reviewer: CD Date: 4/24/2023

FC5487: Chain of Custody
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QC Evaluation: DOD QSM5.x Limits

Job Number: FC5487
Account: AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System
Collected: 04/21/23

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

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

* Sample used for QC is not from job FC5487

MS Semi-volatiles

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QC Data Summaries

Includes the following where applicable:

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

Instrument Blank

Job Number: FC5487
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q258-IBLK	6Q17059.D	1	04/28/23	MV	n/a	n/a	S6Q258

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5487-1

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	
757124-72-4	4:2 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	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Instrument Blank

Job Number: FC5487
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q258-IBLK	6Q17059.D	1	04/28/23	MV	n/a	n/a	S6Q258

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5487-1

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	
914637-49-3	5:3 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	99%	20-150%
	13C5-PFPeA	98%	20-150%
	13C5-PFHxA	95%	20-150%
	13C4-PFHpA	100%	20-150%
	13C8-PFOA	97%	20-150%
	13C9-PFNA	95%	20-150%
	13C6-PFDA	109%	20-150%
	13C7-PFUnDA	104%	20-150%
	13C2-PFDoDA	102%	20-150%
	13C2-PFTeDA	97%	20-150%
	13C3-PFBS	105%	20-150%
	13C3-PFHxS	101%	20-150%
	13C8-PFOS	115%	20-150%
	13C8-FOSA	112%	20-150%
	d3-MeFOSA	106%	20-150%
	d5-EtFOSA	106%	20-150%
	d3-MeFOSAA	112%	20-150%
	d5-EtFOSAA	111%	20-150%
	d7-MeFOSE	103%	20-150%
	d9-EtFOSE	109%	20-150%
	13C2-4:2FTS	102%	20-180%
	13C2-6:2FTS	109%	20-180%
	13C2-8:2FTS	108%	20-180%
	13C3-HFPO-DA	102%	20-150%

Continuing Calibration Blank

Job Number: FC5487
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q258-ICCB	6Q17104.D	1	04/29/23	MV	n/a	n/a	S6Q258

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5487-1

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	
757124-72-4	4:2 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	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Continuing Calibration Blank

Job Number: FC5487
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q258-ICCB	6Q17104.D	1	04/29/23	MV	n/a	n/a	S6Q258

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5487-1

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	
914637-49-3	5:3 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	100%	20-150%
	13C5-PFPeA	101%	20-150%
	13C5-PFHxA	101%	20-150%
	13C4-PFHpA	99%	20-150%
	13C8-PFOA	96%	20-150%
	13C9-PFNA	105%	20-150%
	13C6-PFDA	107%	20-150%
	13C7-PFUnDA	108%	20-150%
	13C2-PFDoDA	107%	20-150%
	13C2-PFTeDA	99%	20-150%
	13C3-PFBS	102%	20-150%
	13C3-PFHxS	103%	20-150%
	13C8-PFOS	109%	20-150%
	13C8-FOSA	106%	20-150%
	d3-MeFOSA	106%	20-150%
	d5-EtFOSA	103%	20-150%
	d3-MeFOSAA	110%	20-150%
	d5-EtFOSAA	113%	20-150%
	d7-MeFOSE	105%	20-150%
	d9-EtFOSE	102%	20-150%
	13C2-4:2FTS	111%	20-180%
	13C2-6:2FTS	109%	20-180%
	13C2-8:2FTS	95%	20-180%
	13C3-HFPO-DA	97%	20-150%

Method Blank Summary

Job Number: FC5487
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96579-MB	6Q17095.D	1	04/28/23	MV	04/26/23	OP96579	S6Q258

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5487-1

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	
757124-72-4	4:2 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	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Method Blank Summary

Job Number: FC5487
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96579-MB	6Q17095.D	1	04/28/23	MV	04/26/23	OP96579	S6Q258

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5487-1

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	
914637-49-3	5:3 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	86%	20-150%
	13C5-PFPeA	85%	20-150%
	13C5-PFHxA	81%	20-150%
	13C4-PFHpA	87%	20-150%
	13C8-PFOA	84%	20-150%
	13C9-PFNA	86%	20-150%
	13C6-PFDA	87%	20-150%
	13C7-PFUnDA	83%	20-150%
	13C2-PFDoDA	72%	20-150%
	13C2-PFTeDA	62%	20-150%
	13C3-PFBS	87%	20-150%
	13C3-PFHxS	88%	20-150%
	13C8-PFOS	87%	20-150%
	13C8-FOSA	31%	20-150%
	d3-MeFOSA	27%	20-150%
	d5-EtFOSA	25%	20-150%
	d3-MeFOSAA	87%	20-150%
	d5-EtFOSAA	79%	20-150%
	d7-MeFOSE	18%* [a]	20-150%
	d9-EtFOSE	20%	20-150%
	13C2-4:2FTS	93%	20-180%
	13C2-6:2FTS	98%	20-180%
	13C2-8:2FTS	91%	20-180%
	13C3-HFPO-DA	79%	20-150%

(a) Outside control limits.

Instrument Blank

Job Number: FC5487
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q260-IBLK	6Q17236.D	1	05/01/23	MV	n/a	n/a	S6Q260

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

OP96579-MS, OP96579-MSD

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	
757124-72-4	4:2 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	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Instrument Blank

Job Number: FC5487
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q260-IBLK	6Q17236.D	1	05/01/23	MV	n/a	n/a	S6Q260

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

OP96579-MS, OP96579-MSD

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	
914637-49-3	5:3 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	98%	20-150%
	13C5-PFHxA	100%	20-150%
	13C4-PFHpA	103%	20-150%
	13C8-PFOA	101%	20-150%
	13C9-PFNA	97%	20-150%
	13C6-PFDA	107%	20-150%
	13C7-PFUnDA	105%	20-150%
	13C2-PFDoDA	99%	20-150%
	13C2-PFTeDA	101%	20-150%
	13C3-PFBS	93%	20-150%
	13C3-PFHxS	100%	20-150%
	13C8-PFOS	109%	20-150%
	13C8-FOSA	106%	20-150%
	d3-MeFOSA	102%	20-150%
	d5-EtFOSA	101%	20-150%
	d3-MeFOSAA	105%	20-150%
	d5-EtFOSAA	109%	20-150%
	d7-MeFOSE	104%	20-150%
	d9-EtFOSE	105%	20-150%
	13C2-4:2FTS	101%	20-180%
	13C2-6:2FTS	93%	20-180%
	13C2-8:2FTS	93%	20-180%
	13C3-HFPO-DA	102%	20-150%

Continuing Calibration Blank

Job Number: FC5487
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q258-ICCB	6Q17092.D	1	04/28/23	MV	n/a	n/a	S6Q258

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

OP96579-BS, OP96579-LLBS, OP96579-MB

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	
757124-72-4	4:2 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	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Continuing Calibration Blank

Job Number: FC5487
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q258-ICCB	6Q17092.D	1	04/28/23	MV	n/a	n/a	S6Q258

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

OP96579-BS, OP96579-LLBS, OP96579-MB

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	
914637-49-3	5:3 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	99%	20-150%
	13C5-PFHxA	98%	20-150%
	13C4-PFHpA	97%	20-150%
	13C8-PFOA	103%	20-150%
	13C9-PFNA	89%	20-150%
	13C6-PFDA	99%	20-150%
	13C7-PFUnDA	103%	20-150%
	13C2-PFDoDA	95%	20-150%
	13C2-PFTeDA	99%	20-150%
	13C3-PFBS	108%	20-150%
	13C3-PFHxS	106%	20-150%
	13C8-PFOS	103%	20-150%
	13C8-FOSA	97%	20-150%
	d3-MeFOSA	98%	20-150%
	d5-EtFOSA	102%	20-150%
	d3-MeFOSAA	102%	20-150%
	d5-EtFOSAA	104%	20-150%
	d7-MeFOSE	99%	20-150%
	d9-EtFOSE	95%	20-150%
	13C2-4:2FTS	97%	20-180%
	13C2-6:2FTS	113%	20-180%
	13C2-8:2FTS	113%	20-180%
	13C3-HFPO-DA	95%	20-150%

Blank Spike Summary

Job Number: FC5487
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96579-LLBS	6Q17094.D	1	04/28/23	MV	04/26/23	OP96579	S6Q258

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5487-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.03	0.0302	101	40-150
2706-90-3	Perfluoropentanoic acid	0.015	0.0150	100	40-150
307-24-4	Perfluorohexanoic acid	0.0075	0.0071	95	40-150
375-85-9	Perfluoroheptanoic acid	0.0075	0.0077	103	40-150
335-67-1	Perfluorooctanoic acid	0.0075	0.0076	101	40-150
375-95-1	Perfluorononanoic acid	0.0075	0.0074	99	40-150
335-76-2	Perfluorodecanoic acid	0.0075	0.0072	96	40-150
2058-94-8	Perfluoroundecanoic acid	0.0075	0.0063	84	40-150
307-55-1	Perfluorododecanoic acid	0.0075	0.0075	100	40-150
72629-94-8	Perfluorotridecanoic acid	0.0075	0.0070	93	40-150
376-06-7	Perfluorotetradecanoic acid	0.0075	0.0076	101	40-150
375-73-5	Perfluorobutanesulfonic acid	0.00665	0.0065	98	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.00706	0.0070	99	40-150
355-46-4	Perfluorohexanesulfonic acid	0.00686	0.0065	95	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.00715	0.0083	116	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.00696	0.0070	101	40-150
68259-12-1	Perfluorononanesulfonic acid	0.00722	0.0084	116	40-150
335-77-3	Perfluorodecanesulfonic acid	0.00724	0.0074	102	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.00728	0.0062	85	40-150
757124-72-4	4:2 Fluorotelomer sulfonate	0.0281	0.0291	103	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.0285	0.0288	101	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.0288	0.0312	108	40-150
754-91-6	PFOSA	0.0075	0.0078	104	40-150
31506-32-8	MeFOSA	0.015	0.0150	100	40-150
4151-50-2	EtFOSA	0.015	0.0154	103	40-150
2355-31-9	MeFOSAA	0.0075	0.0075	100	40-150
2991-50-6	EtFOSAA	0.0075	0.0085	113	40-150
24448-09-7	MeFOSE	0.0375	0.0374	100	40-150
1691-99-2	EtFOSE	0.0375	0.0346	92	40-150
13252-13-6	HFPO-DA (GenX)	0.015	0.0160	107	40-150
919005-14-4	ADONA	0.0142	0.0155	109	40-150
377-73-1	PFMPA	0.015	0.0147	98	40-150
863090-89-5	PFMBA	0.015	0.0146	97	40-150
151772-58-6	NFDHA	0.015	0.0140	93	40-150
756426-58-1	9Cl-PF3ONS (F-53B Major)	0.014	0.0154	110	40-150
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	0.0142	0.0123	87	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC5487
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96579-LLBS	6Q17094.D	1	04/28/23	MV	04/26/23	OP96579	S6Q258

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5487-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0134	0.0127	95	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.0375	0.0320	85	40-150
914637-49-3	5:3 Fluorotelomer carboxylate	0.188	0.157	84	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.188	0.131	70	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	104%	20-150%
	13C5-PFPeA	106%	20-150%
	13C5-PFHxA	107%	20-150%
	13C4-PFHpA	102%	20-150%
	13C8-PFOA	98%	20-150%
	13C9-PFNA	101%	20-150%
	13C6-PFDA	110%	20-150%
	13C7-PFUnDA	102%	20-150%
	13C2-PFDoDA	96%	20-150%
	13C2-PFTeDA	84%	20-150%
	13C3-PFBS	110%	20-150%
	13C3-PFHxS	107%	20-150%
	13C8-PFOS	97%	20-150%
	13C8-FOSA	46%	20-150%
	d3-MeFOSA	32%	20-150%
	d5-EtFOSA	28%	20-150%
	d3-MeFOSAA	106%	20-150%
	d5-EtFOSAA	103%	20-150%
	d7-MeFOSE	21%	20-150%
	d9-EtFOSE	23%	20-150%
	13C2-4:2FTS	109%	20-180%
	13C2-6:2FTS	108%	20-180%
	13C2-8:2FTS	105%	20-180%
	13C3-HFPO-DA	99%	20-150%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC5487
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96579-BS	6Q17093.D	1	04/28/23	MV	04/26/23	OP96579	S6Q258

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5487-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.1	0.0960	96	40-150
2706-90-3	Perfluoropentanoic acid	0.05	0.0488	98	40-150
307-24-4	Perfluorohexanoic acid	0.025	0.0228	91	40-150
375-85-9	Perfluoroheptanoic acid	0.025	0.0242	97	40-150
335-67-1	Perfluorooctanoic acid	0.025	0.0231	92	40-150
375-95-1	Perfluorononanoic acid	0.025	0.0245	98	40-150
335-76-2	Perfluorodecanoic acid	0.025	0.0282	113	40-150
2058-94-8	Perfluoroundecanoic acid	0.025	0.0221	88	40-150
307-55-1	Perfluorododecanoic acid	0.025	0.0243	97	40-150
72629-94-8	Perfluorotridecanoic acid	0.025	0.0222	89	40-150
376-06-7	Perfluorotetradecanoic acid	0.025	0.0261	104	40-150
375-73-5	Perfluorobutanesulfonic acid	0.0222	0.0216	97	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0235	0.0216	92	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0229	0.0216	95	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0238	0.0233	98	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0232	0.0211	91	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0241	0.0221	92	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0241	0.0207	86	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0243	0.0178	73	40-150
757124-72-4	4:2 Fluorotelomer sulfonate	0.0938	0.0852	91	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.095	0.0900	95	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.096	0.103	107	40-150
754-91-6	PFOSA	0.025	0.0285	114	40-150
31506-32-8	MeFOSA	0.05	0.0471	94	40-150
4151-50-2	EtFOSA	0.05	0.0481	96	40-150
2355-31-9	MeFOSAA	0.025	0.0259	104	40-150
2991-50-6	EtFOSAA	0.025	0.0254	102	40-150
24448-09-7	MeFOSE	0.125	0.120	96	40-150
1691-99-2	EtFOSE	0.125	0.122	98	40-150
13252-13-6	HFPO-DA (GenX)	0.05	0.0458	92	40-150
919005-14-4	ADONA	0.0473	0.0451	95	40-150
377-73-1	PFMPA	0.05	0.0481	96	40-150
863090-89-5	PFMBA	0.05	0.0471	94	40-150
151772-58-6	NFDHA	0.05	0.0464	93	40-150
756426-58-1	9Cl-PF3ONS (F-53B Major)	0.0468	0.0469	100	40-150
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	0.0473	0.0376	80	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC5487
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96579-BS	6Q17093.D	1	04/28/23	MV	04/26/23	OP96579	S6Q258

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5487-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0445	0.0406	91	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.125	0.0996	80	40-150
914637-49-3	5:3 Fluorotelomer carboxylate	0.625	0.468	75	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.625	0.424	68	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	108%	20-150%
	13C5-PFPeA	110%	20-150%
	13C5-PFHxA	116%	20-150%
	13C4-PFHpA	111%	20-150%
	13C8-PFOA	107%	20-150%
	13C9-PFNA	100%	20-150%
	13C6-PFDA	104%	20-150%
	13C7-PFUnDA	114%	20-150%
	13C2-PFDoDA	101%	20-150%
	13C2-PFTeDA	85%	20-150%
	13C3-PFBS	111%	20-150%
	13C3-PFHxS	109%	20-150%
	13C8-PFOS	109%	20-150%
	13C8-FOSA	49%	20-150%
	d3-MeFOSA	44%	20-150%
	d5-EtFOSA	40%	20-150%
	d3-MeFOSAA	104%	20-150%
	d5-EtFOSAA	101%	20-150%
	d7-MeFOSE	21%	20-150%
	d9-EtFOSE	22%	20-150%
	13C2-4:2FTS	118%	20-180%
	13C2-6:2FTS	110%	20-180%
	13C2-8:2FTS	106%	20-180%
	13C3-HFPO-DA	111%	20-150%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FC5487
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96579-MS	6Q17243.D	10	05/01/23	MV	04/26/23	OP96579	S6Q260
OP96579-MSD	6Q17244.D	10	05/01/23	MV	04/26/23	OP96579	S6Q260
FC5240-5	6Q17100.D	1	04/29/23	MV	04/26/23	OP96579	S6Q258
FC5240-5	6Q17242.D	10	05/01/23	MV	04/26/23	OP96579	S6Q260

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5487-1

CAS No.	Compound	FC5240-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
375-22-4	Perfluorobutanoic acid	0.607		0.0877	0.713	121	0.0943	0.794	198* [a]	11	40-150/30
2706-90-3	Perfluoropentanoic acid	2.32 [b]		0.0439	2.50	410* [a]	0.0472	2.64	678* [a]	5	40-150/30
307-24-4	Perfluorohexanoic acid	3.07 [b]		0.0219	3.68	2782* [a]	0.0236	4.29	5173* [a]	15	40-150/30
375-85-9	Perfluoroheptanoic acid	0.705 [b]		0.0219	0.763	264* [a]	0.0236	0.785	339* [a]	3	40-150/30
335-67-1	Perfluorooctanoic acid	4.66 [b]		0.0219	4.30	-1642* [a]	0.0236	4.29	-1569* [a]	0	40-150/30
375-95-1	Perfluorononanoic acid	0.161		0.0219	0.184	105	0.0236	0.188	114	2	40-150/30
335-76-2	Perfluorodecanoic acid	0.0036	U	0.0219	0.0258	118	0.0236	0.0287	122	11	40-150/30
2058-94-8	Perfluoroundecanoic acid	0.0036	U	0.0219	0.0204	93	0.0236	0.0319	135	44*	40-150/30
307-55-1	Perfluorododecanoic acid	0.0036	U	0.0219	0.0243	111	0.0236	0.0274	116	12	40-150/30
72629-94-8	Perfluorotridecanoic acid	0.0036	U	0.0219	0.0195	89	0.0236	0.0288	122	39*	40-150/30
376-06-7	Perfluorotetradecanoic acid	0.0036	U	0.0219	0.0253	115	0.0236	0.0304	129	18	40-150/30
375-73-5	Perfluorobutanesulfonic acid	0.821 [b]		0.0195	0.926	540* [a]	0.0209	1.05	1095* [a]	13	40-150/30
2706-91-4	Perfluoropentanesulfonic acid	1.03 [b]		0.0206	1.05	97	0.0222	1.09	270* [a]	4	40-150/30
355-46-4	Perfluorohexanesulfonic acid	6.11 [b]	E	0.02	4.94	-5837* [a]	0.0216	6.06	-232* [a]	20	40-150/30
375-92-8	Perfluoroheptanesulfonic acid	0.125		0.0209	0.0772	-229* [a]	0.0225	0.0713	-239* [a]	8	40-150/30
1763-23-1	Perfluorooctanesulfonic acid	0.0635		0.0204	0.0687	26* [a]	0.0219	0.0778	65	12	40-150/30
68259-12-1	Perfluorononanesulfonic acid	0.0036	U	0.0211	0.0185	88	0.0227	0.0187	82	1	40-150/30
335-77-3	Perfluorodecanesulfonic acid	0.0036	U	0.0212	0.0190	90	0.0228	0.0198	87	4	40-150/30
79780-39-5	Perfluorododecanesulfonic aci	0.0045	U	0.0213	0.0186	87	0.0229	0.0227	99	20	40-150/30
757124-72-4	4:2 Fluorotelomer sulfonate	0.302		0.0822	0.483	220* [a]	0.0884	0.395	105	20	40-150/30
27619-97-2	6:2 Fluorotelomer sulfonate	4.73 [b]		0.0833	4.04	-828* [a]	0.0896	4.96	257* [a]	20	40-150/30
39108-34-4	8:2 Fluorotelomer sulfonate	0.018	U	0.0842	0.0933	111	0.0906	0.115	127	21	40-150/30
754-91-6	PFOSA	0.0036	U	0.0219	0.0224	102	0.0236	0.0253	107	12	40-150/30
31506-32-8	MeFOSA	0.0071	U	0.0439	0.0446	102	0.0472	0.0503	107	12	40-150/30
4151-50-2	EtFOSA	0.0071	U	0.0439	0.0475	108	0.0472	0.0533	113	12	40-150/30
2355-31-9	MeFOSAA	0.0045	U	0.0219	0.0220	100	0.0236	0.0254	108	14	40-150/30
2991-50-6	EtFOSAA	0.0045	U	0.0219	0.0253	115	0.0236	0.0292	124	14	40-150/30
24448-09-7	MeFOSE	0.036	U	0.11	0.100	91	0.118	0.125	106	22	40-150/30
1691-99-2	EtFOSE	0.036	U	0.11	0.103	94	0.118	0.133	113	25	40-150/30
13252-13-6	HFPO-DA (GenX)	0.0036	U	0.0439	0.0418	95	0.0472	0.0550	117	27	40-150/30
919005-14-4	ADONA	0.0071	U	0.0414	0.0425	103	0.0446	0.0542	122	24	40-150/30
377-73-1	PFMPA	0.0071	U	0.0439	0.0417	95	0.0472	0.0493	105	17	40-150/30
863090-89-5	PFMBA	0.0071	U	0.0439	0.0503	115	0.0472	0.0581	123	14	40-150/30
151772-58-6	NFDHA	0.0071	U	0.0439	0.0444	101	0.0472	0.0534	113	18	40-150/30
756426-58-1	9Cl-PF3ONS (F-53B Major)	0.0071	U	0.041	0.0366	89	0.0441	0.0492	112	29	40-150/30
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	0.0071	U	0.0414	0.0295	71	0.0446	0.0392	88	28	40-150/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FC5487
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96579-MS	6Q17243.D	10	05/01/23	MV	04/26/23	OP96579	S6Q260
OP96579-MSD	6Q17244.D	10	05/01/23	MV	04/26/23	OP96579	S6Q260
FC5240-5	6Q17100.D	1	04/29/23	MV	04/26/23	OP96579	S6Q258
FC5240-5	6Q17242.D	10	05/01/23	MV	04/26/23	OP96579	S6Q260

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5487-1

CAS No.	Compound	FC5240-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
113507-82-7	PFEESA	0.0071	U	0.039	0.0427	109	0.042	0.0534	127	22	40-150/30
356-02-5	3:3 Fluorotelomer carboxylate	0.0134	J	0.11	0.0938	73	0.118	0.114	85	19	40-150/30
914637-49-3	5:3 Fluorotelomer carboxylate	0.089	U	0.548	0.515	94	0.59	0.660	112	25	40-150/30
812-70-4	7:3 Fluorotelomer carboxylate	0.089	U	0.548	0.468	85	0.59	0.537	91	14	40-150/30

CAS No.	ID Standard Recoveries	MS	MSD	FC5240-5	FC5240-5	Limits
	13C4-PFBA	60%	64%	61%	63%	20-150%
	13C5-PFPeA	78%	80%	91%	79%	20-150%
	13C5-PFHxA	87%	80%	95%	92%	20-150%
	13C4-PFHpA	94%	90%	112%	97%	20-150%
	13C8-PFOA	97%	95%	101%	100%	20-150%
	13C9-PFNA	98%	89%	96%	104%	20-150%
	13C6-PFDA	84%	80%	83%	99%	20-150%
	13C7-PFUnDA	69%	66%	74%	83%	20-150%
	13C2-PFDoDA	61%	56%	64%	78%	20-150%
	13C2-PFTeDA	62%	57%	63%	79%	20-150%
	13C3-PFBS	85%	85%	112%	109%	20-150%
	13C3-PFHxS	89%	93%	90%	102%	20-150%
	13C8-PFOS	92%	86%	90%	100%	20-150%
	13C8-FOSA	46%	37%	62%	61%	20-150%
	d3-MeFOSA	30%	30%	45%	44%	20-150%
	d5-EtFOSA	27%	26%	48%	42%	20-150%
	d3-MeFOSAA	82%	68%	90%	73%	20-150%
	d5-EtFOSAA	68%	56%	88%	88%	20-150%
	d7-MeFOSE	24%	19%* [c]	38%	37%	20-150%
	d9-EtFOSE	26%	21%	43%	45%	20-150%
	13C2-4:2FTS	73%	99%	113%	107%	20-180%
	13C2-6:2FTS	132%	116%	116%	132%	20-180%
	13C2-8:2FTS	78%	78%	102%	106%	20-180%
	13C3-HFPO-DA	94%	85%	110%	95%	20-150%

(a) Outside control limits due to high level in sample relative to spike amount.
(b) Result is from Run #2.
(c) Outside control limits.

* = Outside of Control Limits.