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Automated Report

Technical Report for

AECOM, INC.

N6274223F0104 RH Fire Suppression System

60697810

SGS Job Number: FC1802

Sampling Date: 01/09/23



Report to:

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

Total number of pages in report: 34



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

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Test results relate only to samples analyzed.

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Sample Summary

AECOM, INC.

Job No: FC1802

N6274223F0104 RH Fire Suppression System
Project No: 60697810

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
FC1802-1	01/09/23	12:40 JS	01/10/23	AQ	Ground Water	AF-RHMW02-WGN01LF-2301W2

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: AECOM, INC.

Job No: FC1802

Site: N6274223F0104 RH Fire Suppression System

Report Date: 1/18/2023 3:36:21 PM

On 01/10/2023, 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 2.4 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FC1802 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: OP94977

Sample(s) FC1706-2MSD, FC1706-2MS were used as the QC samples indicated.

RPD(s) for MSD for 11Cl-PF3OUdS (F-53B Minor), 3:3 Fluorotelomer carboxylate, 4:2 Fluorotelomer sulfonate, 5:3 Fluorotelomer carboxylate, 6:2 Fluorotelomer sulfonate, 7:3 Fluorotelomer carboxylate, 8:2 Fluorotelomer sulfonate, 9Cl-PF3ONS (F-53B Major), ADONA, EtFOSA, EtFOSAA, EtFOSE, HFPO-DA (GenX), MeFOSA, MeFOSAA, MeFOSE, NFDHA, Perfluorobutanesulfonic acid, Perfluorobutanoic acid, Perfluorodecanesulfonic acid, Perfluorodecanoic acid, Perfluorododecanesulfonic acid, Perfluorododecanoic acid, Perfluoroheptanesulfonic acid, Perfluoroheptanoic acid, Perfluorohexanesulfonic acid, Perfluorohexanoic acid, Perfluorononanesulfonic acid, Perfluorononanoic acid, Perfluorooctanesulfonic acid, Perfluorooctanoic acid, Perfluoropentanesulfonic acid, Perfluoropentanoic acid, Perfluorotetradecanoic acid, Perfluorotridecanoic acid, Perfluoroundecanoic acid, PFEESA, PFMBAA, PFMPA, PFOSA are outside control limits for sample OP94977-MSD. High RPD due to spike amount differences.

OP94977-MS: MS recoveries corrected for double spike.

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: FC1802
Account: AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System
Collected: 01/09/23



Lab Sample ID	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
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FC1802-1 AF-RHMW02-WGN01LF-2301W2

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	AF-RHMW02-WGN01LF-2301W2		
Lab Sample ID:	FC1802-1	Date Sampled:	01/09/23
Matrix:	AQ - Ground Water	Date Received:	01/10/23
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	6Q11465.D	1	01/17/23 08:41	MV	01/13/23 09:00	OP94977	S6Q179
Run #2							

Run #	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	19	3.7	1.8	ng/l	
2706-90-3	Perfluoropentanoic acid	1.9 U	9.3	1.9	0.87	ng/l	
307-24-4	Perfluorohexanoic acid	0.93 U	4.6	0.93	0.46	ng/l	
375-85-9	Perfluoroheptanoic acid	0.93 U	4.6	0.93	0.46	ng/l	
335-67-1	Perfluorooctanoic acid	0.93 U	4.6	0.93	0.46	ng/l	
375-95-1	Perfluorononanoic acid	1.9 U	4.6	1.9	0.56	ng/l	
335-76-2	Perfluorodecanoic acid	0.93 U	4.6	0.93	0.46	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.9 U	4.6	1.9	0.56	ng/l	
307-55-1	Perfluorododecanoic acid	1.9 U	4.6	1.9	0.56	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.9 U	4.6	1.9	0.78	ng/l	
376-06-7	Perfluorotetradecanoic acid	0.93 U	4.6	0.93	0.46	ng/l	

PERFLUOROALKYL SULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	0.93 U	4.6	0.93	0.46	ng/l	
2706-91-4	Perfluoropentanesulfonic acid	3.7 U	4.6	3.7	1.0	ng/l	
355-46-4	Perfluorohexanesulfonic acid	1.9 U	4.6	1.9	0.65	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	0.93 U	4.6	0.93	0.46	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.9 U	4.6	1.9	0.50	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.9 U	4.6	1.9	0.53	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.9 U	4.6	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	

PERFLUOROOCCTANE SULFONAMIDES

754-91-6	PFOSA	1.9 U	4.6	1.9	0.62	ng/l	
31506-32-8	MeFOSA	1.9 U	4.6	1.9	0.93	ng/l	
4151-50-2	EtFOSA	1.9 U	4.6	1.9	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-RHMW02-WGN01LF-2301W2		Date Sampled:	01/09/23
Lab Sample ID:	FC1802-1	Date Received:	01/10/23	
Matrix:	AQ - Ground Water	Percent Solids:	n/a	
Method:	EPA DRAFT 1633 EPA 1633 DRAFT			
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	4.6	3.7	0.93	ng/l	
2991-50-6	EtFOSAA	3.7 U	4.6	3.7	1.2	ng/l	

PERFLUOROOCCTANE SULFONAMIDO ETHANOLS

24448-09-7	MeFOSE	9.3 U	46	9.3	4.1	ng/l	
1691-99-2	EtFOSE	19 U	46	19	6.9	ng/l	

PER and POLYFLUOROETHER CARBOXYLIC ACIDS

13252-13-6	HFPO-DA (GenX)	3.7 U	19	3.7	0.93	ng/l	
919005-14-4	ADONA	3.7 U	19	3.7	1.7	ng/l	
377-73-1	PFMPA	1.9 U	9.3	1.9	0.93	ng/l	
863090-89-5	PFMBA	3.7 U	9.3	3.7	1.1	ng/l	
151772-58-6	NFDHA	3.7 U	9.3	3.7	1.1	ng/l	

PER and POLYFLUOROETHER SULFONIC ACIDS

756426-58-1	9Cl-PF3ONS (F-53B Major)	3.7 U	19	3.7	1.3	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	3.7 U	19	3.7	1.6	ng/l	
113507-82-7	PFEESA	1.9 U	9.3	1.9	0.72	ng/l	

FLUOROTELOMER CARBOXYLIC ACIDS

356-02-5	3:3 Fluorotelomer carboxylate	9.3 U	23	9.3	4.2	ng/l	
914637-49-3	5:3 Fluorotelomer carboxylate	19 U	120	19	8.1	ng/l	
812-70-4	7:3 Fluorotelomer carboxylate	19 U	120	19	7.3	ng/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	106%		20-150%
	13C5-PFPeA	111%		20-150%
	13C5-PFHxA	115%		20-150%
	13C4-PFHpA	128%		20-150%
	13C8-PFOA	115%		20-150%
	13C9-PFNA	119%		20-150%
	13C6-PFDA	100%		20-150%
	13C7-PFUnDA	100%		20-150%
	13C2-PFDoDA	93%		20-150%
	13C2-PFTeDA	71%		20-150%
	13C3-PFBS	108%		20-150%
	13C3-PFHxS	111%		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

4.1
4

Report of Analysis

Client Sample ID:	AF-RHMW02-WGN01LF-2301W2	
Lab Sample ID:	FC1802-1	Date Sampled: 01/09/23
Matrix:	AQ - Ground Water	Date Received: 01/10/23
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	121%		20-150%
	13C8-FOSA	120%		20-150%
	d3-MeFOSA	92%		20-150%
	d5-EtFOSA	89%		20-150%
	d3-MeFOSAA	116%		20-150%
	d5-EtFOSAA	111%		20-150%
	d7-MeFOSE	94%		20-150%
	d9-EtFOSE	97%		20-150%
	13C2-4:2FTS	119%		20-150%
	13C2-6:2FTS	110%		20-150%
	13C2-8:2FTS	107%		20-150%
	13C3-HFPO-DA	109%		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

FC1802

COC #: 2301W2AFSG01

SGS - ORLANDO JOB # :

PAGE 1 OF 1

Client / Reporting Information			Project Information				Analytical Information													Matrix Codes																																																
Company Name: AECOM			Project Name: N6274223F0104 RH Fire Suppression System				<div style="display: flex; justify-content: space-between; border-bottom: 1px solid black;"> PPAS EPA Draft 1633 WD 01/04/23 </div>													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 IWD - 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 Manager: Watson Tanji Email: watson.tanji@aecom.com Phone #: 303-796-4624 / 808-954-4512			Project # 60697810 Fax #																																																																	
Sampler(s) Name(s) (Printed) Sampler 1: <i>Julia Stov</i> Sampler 2: <i>Amie Womack</i>			Client Purchase Order #				<table border="1"> <thead> <tr> <th colspan="2">COLLECTION</th> <th colspan="13">CONTAINER INFORMATION</th> </tr> <tr> <th>SGS Orlando Sample #</th> <th>Field ID / Point of Collection</th> <th>DATE</th> <th>TIME</th> <th>SAMPLED BY</th> <th>MATRIX</th> <th>TOTAL # OF BOTTLES</th> <th>OTHER</th> <th>NOI#</th> <th>IC</th> <th>HOCH</th> <th>PH03</th> <th>P2804</th> <th>ACH-PH03</th> <th>P/WATER</th> <th>MEDH</th> <th>LAB USE ONLY</th> </tr> </thead> <tbody> <tr> <td></td> <td>AF-RHMW02-WGN01LF-2301W2</td> <td>1/9/23</td> <td>1240</td> <td>JS</td> <td>GW</td> <td>3</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> </tr> </tbody> </table>													COLLECTION		CONTAINER INFORMATION													SGS Orlando Sample #	Field ID / Point of Collection	DATE	TIME	SAMPLED BY	MATRIX	TOTAL # OF BOTTLES	OTHER	NOI#	IC	HOCH	PH03	P2804	ACH-PH03	P/WATER	MEDH	LAB USE ONLY		AF-RHMW02-WGN01LF-2301W2	1/9/23	1240	JS	GW	3	X									X
COLLECTION		CONTAINER INFORMATION																																																																		
SGS Orlando Sample #	Field ID / Point of Collection	DATE	TIME	SAMPLED BY	MATRIX	TOTAL # OF BOTTLES	OTHER	NOI#	IC	HOCH	PH03	P2804	ACH-PH03	P/WATER	MEDH	LAB USE ONLY																																																				
	AF-RHMW02-WGN01LF-2301W2	1/9/23	1240	JS	GW	3	X									X																																																				
Turnaround Time (Business days)			Data Deliverable Information				Comments / Remarks																																																													
10 Day (Business) 7 Day <input checked="" type="checkbox"/> 5 Day 3 Day RUSH 2 Day RUSH 1 Day RUSH Other			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 EDMS Coverage: APFF Assessment Sampling GW																																																									
Rush T/A Data Available VIA Email or Lablink							INITIAL ASSESSMENT																																																													
Rush T/A Data Available VIA Email or Lablink							LABEL VERIFICATION																																																													
Relinquished by Sampler/Affiliation			Sample Custody must be documented below each time samples change possession, including courier delivery.																																																																	
1 <i>Julia Stov</i> / AECOM		Date Time: 01/09/23 1240		Received By/Affiliation		2 <i>Mina DeLuna</i> / AECOM		Date Time: 01/09/23 1632		Relinquished By/Affiliation		3 <i>Mina DeLuna</i> / AECOM		Date Time: 01/09/23 1642		Received By/Affiliation		4 <i>Katie Abbott</i> / AECOM																																																		
5 <i>Katie Abbott</i>		Date Time: 1/9/23 1416		Received By/Affiliation		6 <i>Julia Stov</i>		Date Time: 1/10/23		Relinquished By/Affiliation		7		Date Time: 1/10/23		Received By/Affiliation		8 <i>Amie Womack</i>																																																		
Lab Use Only: Cooler Temperature (s) Celsius (corrected):			<i>22.78</i>				http://www.sgs.com/en/terms-and-conditions																																																													

SGS_ORLANDO_COC.xls Rev 031318

5.1
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SGS Sample Receipt Summary

Job Number: FC1802

Client: AECOM

Project: N6274223F0104 RH Fire Suppression System

Date / Time Received: 1/10/2023 4:32:00 PM

Delivery Method: United Cargo/Airspace

Airbill #'s: United Cargo AWB #: 016-85611374

Therm ID: IR 1;

Therm CF: 0.2;

of Coolers: 1

Cooler Temps (Raw Measured) °C: Cooler 1: (2.2);

Cooler Temps (Corrected) °C: Cooler 1: (2.4);

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 230315

pH 10-12 219813A

Other: (Specify) _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: CARLOSD

Date: 1/10/2023 4:32:00 PM

Reviewer: CD

Date: 1/16/2023

FC1802: Chain of Custody

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QC Evaluation: DOD QSM5.x Limits

Job Number: FC1802
Account: AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System
Collected: 01/09/23

QC Sample ID	CAS#	Analyte	Sample Result Type	Result Type	Units	Limits
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No DOD QSM5.x Limits found for methods in this job.

* Sample used for QC is not from job FC1802

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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: FC1802
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q179-IBLK	6Q11385.D	1	01/16/23	MV	n/a	n/a	S6Q179

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC1802-1

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.020	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.010	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0050	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0050	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0050	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0050	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0050	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0050	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0050	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0050	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0050	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0050	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0050	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0050	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0050	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0050	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0050	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	0.0050	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0050	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0050	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	0.050	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.050	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.020	0.0010	ug/l	
919005-14-4	ADONA	ND	0.020	0.0019	ug/l	
377-73-1	PFMPA	ND	0.010	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.010	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.010	0.0012	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.020	0.0014	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.020	0.0018	ug/l	

Instrument Blank

Job Number: FC1802
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q179-IBLK	6Q11385.D	1	01/16/23	MV	n/a	n/a	S6Q179

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC1802-1

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.010	0.00078	ug/l	
356-02-5	3:3 Fluorotelomer carboxylate	ND	0.025	0.0045	ug/l	
914637-49-35:3	Fluorotelomer carboxylate	ND	0.13	0.0087	ug/l	
812-70-4	7:3 Fluorotelomer carboxylate	0.0191	0.13	0.0079	ug/l	J

CAS No.	ID Standard Recoveries	Limits	
	13C4-PFBA	100%	20-150%
	13C5-PFPeA	97%	20-150%
	13C5-PFHxA	98%	20-150%
	13C4-PFHpA	103%	20-150%
	13C8-PFOA	96%	20-150%
	13C9-PFNA	94%	20-150%
	13C6-PFDA	109%	20-150%
	13C7-PFUnDA	107%	20-150%
	13C2-PFDoDA	103%	20-150%
	13C2-PFTeDA	96%	20-150%
	13C3-PFBS	104%	20-150%
	13C3-PFHxS	104%	20-150%
	13C8-PFOS	107%	20-150%
	13C8-FOSA	103%	20-150%
	d3-MeFOSA	95%	20-150%
	d5-EtFOSA	94%	20-150%
	d3-MeFOSAA	96%	20-150%
	d5-EtFOSAA	100%	20-150%
	d7-MeFOSE	100%	20-150%
	d9-EtFOSE	101%	20-150%
	13C2-4:2FTS	118%	20-150%
	13C2-6:2FTS	103%	20-150%
	13C2-8:2FTS	99%	20-150%
	13C3-HFPO-DA	99%	20-150%

6.1.1

6

Instrument Blank

Job Number: FC1802
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q179-IBLK	6Q11471.D	1	01/17/23	MV	n/a	n/a	S6Q179

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC1802-1

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.020	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.010	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0050	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0050	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0050	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0050	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0050	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0050	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0050	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0050	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0050	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0050	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0050	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0050	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0050	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0050	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0050	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	0.0050	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0050	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0050	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	0.050	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.050	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.020	0.0010	ug/l	
919005-14-4	ADONA	ND	0.020	0.0019	ug/l	
377-73-1	PFMPA	ND	0.010	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.010	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.010	0.0012	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.020	0.0014	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.020	0.0018	ug/l	

Instrument Blank

Job Number: FC1802
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q179-IBLK	6Q11471.D	1	01/17/23	MV	n/a	n/a	S6Q179

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC1802-1

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.010	0.00078	ug/l	
356-02-5	3:3 Fluorotelomer carboxylate	ND	0.025	0.0045	ug/l	
914637-49-35:3	Fluorotelomer carboxylate	ND	0.13	0.0087	ug/l	
812-70-4	7:3 Fluorotelomer carboxylate	ND	0.13	0.0079	ug/l	

CAS No.	ID Standard Recoveries	Limits
	13C4-PFBA	100% 20-150%
	13C5-PFPeA	101% 20-150%
	13C5-PFHxA	100% 20-150%
	13C4-PFHpA	101% 20-150%
	13C8-PFOA	100% 20-150%
	13C9-PFNA	106% 20-150%
	13C6-PFDA	106% 20-150%
	13C7-PFUnDA	100% 20-150%
	13C2-PFDoDA	97% 20-150%
	13C2-PFTeDA	98% 20-150%
	13C3-PFBS	96% 20-150%
	13C3-PFHxS	103% 20-150%
	13C8-PFOS	98% 20-150%
	13C8-FOSA	93% 20-150%
	d3-MeFOSA	89% 20-150%
	d5-EtFOSA	87% 20-150%
	d3-MeFOSAA	95% 20-150%
	d5-EtFOSAA	94% 20-150%
	d7-MeFOSE	92% 20-150%
	d9-EtFOSE	94% 20-150%
	13C2-4:2FTS	98% 20-150%
	13C2-6:2FTS	114% 20-150%
	13C2-8:2FTS	103% 20-150%
	13C3-HFPO-DA	102% 20-150%

Continuing Calibration Blank

Job Number: FC1802
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q179-ICCB	6Q11458.D	1	01/17/23	MV	n/a	n/a	S6Q179

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC1802-1

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.020	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.010	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0050	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0050	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0050	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0050	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0050	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0050	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0050	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0050	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0050	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0050	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0050	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0050	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0050	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0050	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0050	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	0.0050	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0050	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0050	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	0.050	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.050	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.020	0.0010	ug/l	
919005-14-4	ADONA	ND	0.020	0.0019	ug/l	
377-73-1	PFMPA	ND	0.010	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.010	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.010	0.0012	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.020	0.0014	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.020	0.0018	ug/l	

Continuing Calibration Blank

Job Number: FC1802
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q179-ICCB	6Q11458.D	1	01/17/23	MV	n/a	n/a	S6Q179

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC1802-1

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.010	0.00078	ug/l	
356-02-5	3:3 Fluorotelomer carboxylate	ND	0.025	0.0045	ug/l	
914637-49-35:3	Fluorotelomer carboxylate	ND	0.13	0.0087	ug/l	
812-70-4	7:3 Fluorotelomer carboxylate	ND	0.13	0.0079	ug/l	

CAS No.	ID Standard Recoveries	Limits	
	13C4-PFBA	100%	20-150%
	13C5-PFPeA	106%	20-150%
	13C5-PFHxA	98%	20-150%
	13C4-PFHpA	108%	20-150%
	13C8-PFOA	102%	20-150%
	13C9-PFNA	99%	20-150%
	13C6-PFDA	101%	20-150%
	13C7-PFUnDA	98%	20-150%
	13C2-PFDoDA	95%	20-150%
	13C2-PFTeDA	99%	20-150%
	13C3-PFBS	91%	20-150%
	13C3-PFHxS	91%	20-150%
	13C8-PFOS	100%	20-150%
	13C8-FOSA	105%	20-150%
	d3-MeFOSA	89%	20-150%
	d5-EtFOSA	88%	20-150%
	d3-MeFOSAA	99%	20-150%
	d5-EtFOSAA	99%	20-150%
	d7-MeFOSE	97%	20-150%
	d9-EtFOSE	97%	20-150%
	13C2-4:2FTS	93%	20-150%
	13C2-6:2FTS	106%	20-150%
	13C2-8:2FTS	97%	20-150%
	13C3-HFPO-DA	105%	20-150%

6.1.3

6

Method Blank Summary

Job Number: FC1802
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP94977-MB	6Q11443.D	1	01/17/23	MV	01/13/23	OP94977	S6Q179

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC1802-1

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.020	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.010	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0050	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0050	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0050	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0050	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0050	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0050	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0050	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0050	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0050	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0050	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0050	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0050	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0050	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0050	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0050	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	0.0050	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0050	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0050	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	0.050	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.050	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.020	0.0010	ug/l	
919005-14-4	ADONA	ND	0.020	0.0019	ug/l	
377-73-1	PFMPA	ND	0.010	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.010	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.010	0.0012	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.020	0.0014	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.020	0.0018	ug/l	

Method Blank Summary

Job Number: FC1802
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP94977-MB	6Q11443.D	1	01/17/23	MV	01/13/23	OP94977	S6Q179

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC1802-1

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.010	0.00078	ug/l	
356-02-5	3:3 Fluorotelomer carboxylate	ND	0.025	0.0045	ug/l	
914637-49-35:3	Fluorotelomer carboxylate	ND	0.13	0.0087	ug/l	
812-70-4	7:3 Fluorotelomer carboxylate	ND	0.13	0.0079	ug/l	

CAS No.	ID Standard Recoveries	Limits
	13C4-PFBA	107% 20-150%
	13C5-PFPeA	103% 20-150%
	13C5-PFHxA	101% 20-150%
	13C4-PFHpA	104% 20-150%
	13C8-PFOA	103% 20-150%
	13C9-PFNA	118% 20-150%
	13C6-PFDA	114% 20-150%
	13C7-PFUnDA	107% 20-150%
	13C2-PFDoDA	96% 20-150%
	13C2-PFTeDA	75% 20-150%
	13C3-PFBS	105% 20-150%
	13C3-PFHxS	105% 20-150%
	13C8-PFOS	108% 20-150%
	13C8-FOSA	111% 20-150%
	d3-MeFOSA	81% 20-150%
	d5-EtFOSA	81% 20-150%
	d3-MeFOSAA	105% 20-150%
	d5-EtFOSAA	98% 20-150%
	d7-MeFOSE	89% 20-150%
	d9-EtFOSE	92% 20-150%
	13C2-4:2FTS	126% 20-150%
	13C2-6:2FTS	126% 20-150%
	13C2-8:2FTS	103% 20-150%
	13C3-HFPO-DA	107% 20-150%

Continuing Calibration Blank

Job Number: FC1802
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q179-ICCB	6Q11435.D	1	01/17/23	MV	n/a	n/a	S6Q179

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

OP94977-BS, OP94977-LLBS, OP94977-MB

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.020	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.010	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0050	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0050	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0050	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0050	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0050	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0050	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0050	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0050	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0050	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0050	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0050	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0050	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0050	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0050	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0050	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	0.0050	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0050	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0050	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	0.050	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.050	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.020	0.0010	ug/l	
919005-14-4	ADONA	ND	0.020	0.0019	ug/l	
377-73-1	PFMPA	ND	0.010	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.010	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.010	0.0012	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.020	0.0014	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.020	0.0018	ug/l	

Continuing Calibration Blank

Job Number: FC1802
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q179-ICCB	6Q11435.D	1	01/17/23	MV	n/a	n/a	S6Q179

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

OP94977-BS, OP94977-LLBS, OP94977-MB

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.010	0.00078	ug/l	
356-02-5	3:3 Fluorotelomer carboxylate	ND	0.025	0.0045	ug/l	
914637-49-35:3	Fluorotelomer carboxylate	ND	0.13	0.0087	ug/l	
812-70-4	7:3 Fluorotelomer carboxylate	ND	0.13	0.0079	ug/l	

CAS No.	ID Standard Recoveries	Limits
	13C4-PFBA	101% 20-150%
	13C5-PFPeA	100% 20-150%
	13C5-PFHxA	96% 20-150%
	13C4-PFHpA	97% 20-150%
	13C8-PFOA	94% 20-150%
	13C9-PFNA	98% 20-150%
	13C6-PFDA	111% 20-150%
	13C7-PFUnDA	99% 20-150%
	13C2-PFDoDA	103% 20-150%
	13C2-PFTeDA	93% 20-150%
	13C3-PFBS	103% 20-150%
	13C3-PFHxS	111% 20-150%
	13C8-PFOS	104% 20-150%
	13C8-FOSA	101% 20-150%
	d3-MeFOSA	92% 20-150%
	d5-EtFOSA	91% 20-150%
	d3-MeFOSAA	100% 20-150%
	d5-EtFOSAA	99% 20-150%
	d7-MeFOSE	98% 20-150%
	d9-EtFOSE	99% 20-150%
	13C2-4:2FTS	130% 20-150%
	13C2-6:2FTS	123% 20-150%
	13C2-8:2FTS	119% 20-150%
	13C3-HFPO-DA	105% 20-150%

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Continuing Calibration Blank

Job Number: FC1802
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q179-ICCB	6Q11446.D	1	01/17/23	MV	n/a	n/a	S6Q179

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

OP94977-MS, OP94977-MSD

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.020	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.010	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0050	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0050	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0050	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0050	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0050	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0050	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0050	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0050	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0050	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0050	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0050	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0050	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0050	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0050	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0050	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	0.0050	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0050	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0050	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	0.050	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.050	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.020	0.0010	ug/l	
919005-14-4	ADONA	ND	0.020	0.0019	ug/l	
377-73-1	PFMPA	ND	0.010	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.010	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.010	0.0012	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.020	0.0014	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.020	0.0018	ug/l	

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Job Number: FC1802
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q179-ICCB	6Q11446.D	1	01/17/23	MV	n/a	n/a	S6Q179

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

OP94977-MS, OP94977-MSD

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.010	0.00078	ug/l	
356-02-5	3:3 Fluorotelomer carboxylate	ND	0.025	0.0045	ug/l	
914637-49-35:3	Fluorotelomer carboxylate	ND	0.13	0.0087	ug/l	
812-70-4	7:3 Fluorotelomer carboxylate	ND	0.13	0.0079	ug/l	

CAS No.	ID Standard Recoveries	Limits	
	13C4-PFBA	101%	20-150%
	13C5-PFPeA	96%	20-150%
	13C5-PFHxA	97%	20-150%
	13C4-PFHpA	94%	20-150%
	13C8-PFOA	97%	20-150%
	13C9-PFNA	103%	20-150%
	13C6-PFDA	109%	20-150%
	13C7-PFUnDA	100%	20-150%
	13C2-PFDoDA	107%	20-150%
	13C2-PFTeDA	107%	20-150%
	13C3-PFBS	100%	20-150%
	13C3-PFHxS	102%	20-150%
	13C8-PFOS	103%	20-150%
	13C8-FOSA	104%	20-150%
	d3-MeFOSA	92%	20-150%
	d5-EtFOSA	93%	20-150%
	d3-MeFOSAA	103%	20-150%
	d5-EtFOSAA	113%	20-150%
	d7-MeFOSE	100%	20-150%
	d9-EtFOSE	102%	20-150%
	13C2-4:2FTS	117%	20-150%
	13C2-6:2FTS	113%	20-150%
	13C2-8:2FTS	123%	20-150%
	13C3-HFPO-DA	102%	20-150%

Continuing Calibration Blank

Job Number: FC1802
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q179-ICCB	6Q11467.D	1	01/17/23	MV	n/a	n/a	S6Q179

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

S6Q179-IBLK

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.020	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.010	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0050	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0050	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0050	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0050	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0050	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0050	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0050	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0050	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0050	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0050	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0050	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0050	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0050	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0050	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0050	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	0.0050	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0050	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0050	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	0.050	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.050	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.020	0.0010	ug/l	
919005-14-4	ADONA	ND	0.020	0.0019	ug/l	
377-73-1	PFMPA	ND	0.010	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.010	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.010	0.0012	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.020	0.0014	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.020	0.0018	ug/l	

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Job Number: FC1802
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q179-ICCB	6Q11467.D	1	01/17/23	MV	n/a	n/a	S6Q179

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

S6Q179-IBLK

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.010	0.00078	ug/l	
356-02-5	3:3 Fluorotelomer carboxylate	ND	0.025	0.0045	ug/l	
914637-49-35:3	Fluorotelomer carboxylate	ND	0.13	0.0087	ug/l	
812-70-4	7:3 Fluorotelomer carboxylate	ND	0.13	0.0079	ug/l	

CAS No.	ID Standard Recoveries	Limits
	13C4-PFBA	99% 20-150%
	13C5-PFPeA	104% 20-150%
	13C5-PFHxA	100% 20-150%
	13C4-PFHpA	106% 20-150%
	13C8-PFOA	100% 20-150%
	13C9-PFNA	102% 20-150%
	13C6-PFDA	95% 20-150%
	13C7-PFUnDA	100% 20-150%
	13C2-PFDoDA	102% 20-150%
	13C2-PFTeDA	95% 20-150%
	13C3-PFBS	102% 20-150%
	13C3-PFHxS	102% 20-150%
	13C8-PFOS	109% 20-150%
	13C8-FOSA	112% 20-150%
	d3-MeFOSA	100% 20-150%
	d5-EtFOSA	99% 20-150%
	d3-MeFOSAA	111% 20-150%
	d5-EtFOSAA	106% 20-150%
	d7-MeFOSE	107% 20-150%
	d9-EtFOSE	105% 20-150%
	13C2-4:2FTS	114% 20-150%
	13C2-6:2FTS	117% 20-150%
	13C2-8:2FTS	123% 20-150%
	13C3-HFPO-DA	104% 20-150%

Blank Spike Summary

Job Number: FC1802
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP94977-LLBS	6Q11442.D	1	01/17/23	MV	01/13/23	OP94977	S6Q179

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC1802-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.04	0.0372	93	40-150
2706-90-3	Perfluoropentanoic acid	0.02	0.0184	92	40-150
307-24-4	Perfluorohexanoic acid	0.01	0.0093	93	40-150
375-85-9	Perfluoroheptanoic acid	0.01	0.0094	94	40-150
335-67-1	Perfluorooctanoic acid	0.01	0.0096	96	40-150
375-95-1	Perfluorononanoic acid	0.01	0.0099	99	40-150
335-76-2	Perfluorodecanoic acid	0.01	0.0089	89	40-150
2058-94-8	Perfluoroundecanoic acid	0.01	0.0102	102	40-150
307-55-1	Perfluorododecanoic acid	0.01	0.0095	95	40-150
72629-94-8	Perfluorotridecanoic acid	0.01	0.0087	87	40-150
376-06-7	Perfluorotetradecanoic acid	0.01	0.0094	94	40-150
375-73-5	Perfluorobutanesulfonic acid	0.00887	0.0089	100	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.00941	0.0086	91	40-150
355-46-4	Perfluorohexanesulfonic acid	0.00914	0.0085	93	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.00953	0.0087	91	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.00928	0.0091	98	40-150
68259-12-1	Perfluorononanesulfonic acid	0.00962	0.0084	87	40-150
335-77-3	Perfluorodecanesulfonic acid	0.00965	0.0082	85	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0097	0.0082	85	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.0375	0.0328	87	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.038	0.0348	92	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.0384	0.0340	89	40-150
754-91-6	PFOSA	0.01	0.0113	113	40-150
31506-32-8	MeFOSA	0.01	0.0090	90	40-150
4151-50-2	EtFOSA	0.01	0.0085	85	40-150
2355-31-9	MeFOSAA	0.01	0.0089	89	40-150
2991-50-6	EtFOSAA	0.01	0.0091	91	40-150
24448-09-7	MeFOSE	0.1	0.0919	92	40-150
1691-99-2	EtFOSE	0.1	0.0864	86	40-150
13252-13-6	HFPO-DA (GenX)	0.04	0.0377	94	40-150
919005-14-4	ADONA	0.0378	0.0362	96	40-150
377-73-1	PFMPA	0.02	0.0183	92	40-150
863090-89-5	PFMBA	0.02	0.0188	94	40-150
151772-58-6	NFDHA	0.02	0.0177	89	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.0374	0.0349	93	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0378	0.0349	92	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC1802
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP94977-LLBS	6Q11442.D	1	01/17/23	MV	01/13/23	OP94977	S6Q179

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC1802-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0178	0.0165	93	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.05	0.0414	83	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.25	0.226	90	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.25	0.243	97	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	105%	20-150%
	13C5-PFPeA	108%	20-150%
	13C5-PFHxA	109%	20-150%
	13C4-PFHpA	111%	20-150%
	13C8-PFOA	102%	20-150%
	13C9-PFNA	104%	20-150%
	13C6-PFDA	116%	20-150%
	13C7-PFUnDA	103%	20-150%
	13C2-PFDoDA	102%	20-150%
	13C2-PFTeDA	90%	20-150%
	13C3-PFBS	102%	20-150%
	13C3-PFHxS	106%	20-150%
	13C8-PFOS	113%	20-150%
	13C8-FOSA	96%	20-150%
	d3-MeFOSA	95%	20-150%
	d5-EtFOSA	96%	20-150%
	d3-MeFOSAA	106%	20-150%
	d5-EtFOSAA	105%	20-150%
	d7-MeFOSE	96%	20-150%
	d9-EtFOSE	103%	20-150%
	13C2-4:2FTS	125%	20-150%
	13C2-6:2FTS	120%	20-150%
	13C2-8:2FTS	106%	20-150%
	13C3-HFPO-DA	107%	20-150%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC1802
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP94977-BS	6Q11441.D	1	01/17/23	MV	01/13/23	OP94977	S6Q179

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC1802-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.1	0.101	101	40-150
2706-90-3	Perfluoropentanoic acid	0.05	0.0512	102	40-150
307-24-4	Perfluorohexanoic acid	0.025	0.0239	96	40-150
375-85-9	Perfluoroheptanoic acid	0.025	0.0279	112	40-150
335-67-1	Perfluorooctanoic acid	0.025	0.0273	109	40-150
375-95-1	Perfluorononanoic acid	0.025	0.0284	114	40-150
335-76-2	Perfluorodecanoic acid	0.025	0.0240	96	40-150
2058-94-8	Perfluoroundecanoic acid	0.025	0.0257	103	40-150
307-55-1	Perfluorododecanoic acid	0.025	0.0247	99	40-150
72629-94-8	Perfluorotridecanoic acid	0.025	0.0245	98	40-150
376-06-7	Perfluorotetradecanoic acid	0.025	0.0268	107	40-150
375-73-5	Perfluorobutanesulfonic acid	0.0222	0.0220	99	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0235	0.0225	96	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0229	0.0227	99	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0238	0.0233	98	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0232	0.0233	100	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0241	0.0243	101	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0241	0.0244	101	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0243	0.0209	86	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.0938	0.0928	99	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.095	0.0844	89	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.096	0.0904	94	40-150
754-91-6	PFOSA	0.025	0.0257	103	40-150
31506-32-8	MeFOSA	0.025	0.0231	92	40-150
4151-50-2	EtFOSA	0.025	0.0235	94	40-150
2355-31-9	MeFOSAA	0.025	0.0242	97	40-150
2991-50-6	EtFOSAA	0.025	0.0252	101	40-150
24448-09-7	MeFOSE	0.25	0.249	100	40-150
1691-99-2	EtFOSE	0.25	0.229	92	40-150
13252-13-6	HFPO-DA (GenX)	0.1	0.107	107	40-150
919005-14-4	ADONA	0.0945	0.0950	101	40-150
377-73-1	PFMPA	0.05	0.0496	99	40-150
863090-89-5	PFMBA	0.05	0.0521	104	40-150
151772-58-6	NFDHA	0.05	0.0467	93	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.0935	0.0919	98	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0945	0.0936	99	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC1802
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP94977-BS	6Q11441.D	1	01/17/23	MV	01/13/23	OP94977	S6Q179

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC1802-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0445	0.0442	99	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.125	0.116	93	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.625	0.586	94	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.625	0.671	107	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	104%	20-150%
	13C5-PFPeA	101%	20-150%
	13C5-PFHxA	104%	20-150%
	13C4-PFHpA	98%	20-150%
	13C8-PFOA	103%	20-150%
	13C9-PFNA	107%	20-150%
	13C6-PFDA	112%	20-150%
	13C7-PFUnDA	108%	20-150%
	13C2-PFDoDA	105%	20-150%
	13C2-PFTeDA	93%	20-150%
	13C3-PFBS	106%	20-150%
	13C3-PFHxS	109%	20-150%
	13C8-PFOS	102%	20-150%
	13C8-FOSA	105%	20-150%
	d3-MeFOSA	99%	20-150%
	d5-EtFOSA	91%	20-150%
	d3-MeFOSAA	100%	20-150%
	d5-EtFOSAA	99%	20-150%
	d7-MeFOSE	98%	20-150%
	d9-EtFOSE	111%	20-150%
	13C2-4:2FTS	119%	20-150%
	13C2-6:2FTS	131%	20-150%
	13C2-8:2FTS	115%	20-150%
	13C3-HFPO-DA	103%	20-150%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FC1802
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP94977-MS ^a	6Q11448.D	1	01/17/23	MV	01/13/23	OP94977	S6Q179
OP94977-MSD ^b	6Q11449.D	1	01/17/23	MV	01/13/23	OP94977	S6Q179
FC1706-2	6Q11447.D	1	01/17/23	MV	01/13/23	OP94977	S6Q179

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC1802-1

CAS No.	Compound	FC1706-2 ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
375-22-4	Perfluorobutanoic acid	0.0129	J 0.179	0.179	93	0.0893	0.0965	94	60*	40-150/30
2706-90-3	Perfluoropentanoic acid	0.0015	J 0.0893	0.0876	96	0.0446	0.0437	95	67*	40-150/30
307-24-4	Perfluorohexanoic acid	0.0014	J 0.0446	0.0430	93	0.0223	0.0223	94	63*	40-150/30
375-85-9	Perfluoroheptanoic acid	0.0045	U 0.0446	0.0430	96	0.0223	0.0214	96	67*	40-150/30
335-67-1	Perfluorooctanoic acid	0.00055	J 0.0446	0.0468	104	0.0223	0.0222	97	71*	40-150/30
375-95-1	Perfluorononanoic acid	0.0045	U 0.0446	0.0420	94	0.0223	0.0199	89	71*	40-150/30
335-76-2	Perfluorodecanoic acid	0.0045	U 0.0446	0.0459	103	0.0223	0.0205	92	77*	40-150/30
2058-94-8	Perfluoroundecanoic acid	0.0045	U 0.0446	0.0450	101	0.0223	0.0214	96	71*	40-150/30
307-55-1	Perfluorododecanoic acid	0.0045	U 0.0446	0.0451	101	0.0223	0.0206	92	75*	40-150/30
72629-94-8	Perfluorotridecanoic acid	0.0045	U 0.0446	0.0473	106	0.0223	0.0214	96	75*	40-150/30
376-06-7	Perfluorotetradecanoic acid	0.0045	U 0.0446	0.0439	98	0.0223	0.0214	96	69*	40-150/30
375-73-5	Perfluorobutanesulfonic acid	0.0045	U 0.0396	0.0385	97	0.0198	0.0196	99	65*	40-150/30
2706-91-4	Perfluoropentanesulfonic acid	0.0045	U 0.042	0.0409	97	0.021	0.0190	90	73*	40-150/30
355-46-4	Perfluorohexanesulfonic acid	0.0011	J 0.0408	0.0375	89	0.0204	0.0203	94	60*	40-150/30
375-92-8	Perfluoroheptanesulfonic acid	0.0045	U 0.0425	0.0391	92	0.0213	0.0175	82	76*	40-150/30
1763-23-1	Perfluorooctanesulfonic acid	0.0045	U 0.0414	0.0374	90	0.0207	0.0181	87	70*	40-150/30
68259-12-1	Perfluorononanesulfonic acid	0.0045	U 0.0429	0.0350	81	0.0215	0.0194	90	57*	40-150/30
335-77-3	Perfluorodecanesulfonic acid	0.0045	U 0.0431	0.0349	81	0.0215	0.0185	86	61*	40-150/30
79780-39-5	Perfluorododecanesulfonic aci	0.0045	U 0.0433	0.0353	82	0.0217	0.0168	78	71*	40-150/30
757124-72-44:2	Fluorotelomer sulfonate	0.018	U 0.167	0.166	99	0.0837	0.0761	91	74*	40-150/30
27619-97-2	6:2 Fluorotelomer sulfonate	0.018	U 0.17	0.162	95	0.0848	0.0830	98	64*	40-150/30
39108-34-4	8:2 Fluorotelomer sulfonate	0.018	U 0.171	0.156	91	0.0857	0.0788	92	66*	40-150/30
754-91-6	PFOSA	0.0045	U 0.0446	0.0443	99	0.0223	0.0217	97	68*	40-150/30
31506-32-8	MeFOSA	0.0045	U 0.0446	0.0406	91	0.0223	0.0212	95	63*	40-150/30
4151-50-2	EtFOSA	0.0045	U 0.0446	0.0409	92	0.0223	0.0198	89	70*	40-150/30
2355-31-9	MeFOSAA	0.0045	U 0.0446	0.0415	93	0.0223	0.0182	82	78*	40-150/30
2991-50-6	EtFOSAA	0.0045	U 0.0446	0.0443	99	0.0223	0.0206	92	73*	40-150/30
24448-09-7	MeFOSE	0.045	U 0.446	0.419	94	0.223	0.205	92	69*	40-150/30
1691-99-2	EtFOSE	0.045	U 0.446	0.413	93	0.223	0.198	89	70*	40-150/30
13252-13-6	HFPO-DA (GenX)	0.018	U 0.179	0.167	94	0.0893	0.0844	95	66*	40-150/30
919005-14-4	ADONA	0.018	U 0.169	0.148	88	0.0844	0.0750	89	65*	40-150/30
377-73-1	PFMPA	0.0091	U 0.0893	0.0846	95	0.0446	0.0417	93	68*	40-150/30
863090-89-5	PFMBA	0.0091	U 0.0893	0.0837	94	0.0446	0.0432	97	64*	40-150/30
151772-58-6	NFDHA	0.0091	U 0.0893	0.0840	94	0.0446	0.0421	94	66*	40-150/30
756426-58-19	Cl-PF3ONS (F-53B Major)	0.018	U 0.167	0.143	86	0.0835	0.0733	88	64*	40-150/30
763051-92-911	Cl-PF3OUdS (F-53B Minor)	0.018	U 0.169	0.132	78	0.0844	0.0712	84	60*	40-150/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FC1802
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP94977-MS ^a	6Q11448.D	1	01/17/23	MV	01/13/23	OP94977	S6Q179
OP94977-MSD ^b	6Q11449.D	1	01/17/23	MV	01/13/23	OP94977	S6Q179
FC1706-2	6Q11447.D	1	01/17/23	MV	01/13/23	OP94977	S6Q179

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC1802-1

CAS No.	Compound	FC1706-2 ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
113507-82-7	PFEESA	0.0091 U	0.0795	0.0761	96	0.0397	0.0380	96	67*	40-150/30
356-02-5	3:3 Fluorotelomer carboxylate	0.023 U	0.223	0.199	89	0.112	0.0935	84	72*	40-150/30
914637-49-35:3	Fluorotelomer carboxylate	0.11 U	1.12	1.03	92	0.558	0.531	95	64*	40-150/30
812-70-4	7:3 Fluorotelomer carboxylate	0.11 U	1.12	1.03	92	0.558	0.569	102	58*	40-150/30

CAS No.	ID Standard Recoveries	MS	MSD	FC1706-2	Limits
	13C4-PFBA	108%	108%	107%	20-150%
	13C5-PFPeA	106%	114%	107%	20-150%
	13C5-PFHxA	105%	111%	101%	20-150%
	13C4-PFHpA	104%	113%	108%	20-150%
	13C8-PFOA	97%	108%	109%	20-150%
	13C9-PFNA	104%	111%	100%	20-150%
	13C6-PFDA	102%	111%	104%	20-150%
	13C7-PFUnDA	87%	97%	88%	20-150%
	13C2-PFDoDA	85%	97%	90%	20-150%
	13C2-PFTeDA	84%	95%	78%	20-150%
	13C3-PFBS	105%	100%	98%	20-150%
	13C3-PFHxS	107%	103%	100%	20-150%
	13C8-PFOS	100%	111%	104%	20-150%
	13C8-FOSA	98%	107%	112%	20-150%
	d3-MeFOSA	85%	94%		20-150%
	d5-EtFOSA	83%	93%		20-150%
	d3-MeFOSAA	96%	109%	103%	20-150%
	d5-EtFOSAA	88%	106%	97%	20-150%
	d7-MeFOSE	88%	101%		20-150%
	d9-EtFOSE	90%	101%		20-150%
	13C2-4:2FTS	110%	114%	114%	20-150%
	13C2-6:2FTS	113%	108%	115%	20-150%
	13C2-8:2FTS	121%	109%	108%	20-150%
	13C3-HFPO-DA	111%	118%		20-150%

- (a) MS recoveries corrected for double spike.
- (b) High RPD due to spike amount differences.

* = Outside of Control Limits.