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## Technical Report for

**AECOM, INC.**

**N6274223F0104 RH Fire Suppression System**

**60697810**

**SGS Job Number: FC3167**

**Sampling Date: 03/02/23**



### Report to:

**AECOM, Inc**  
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**Denver, CO 80237**  
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**ATTN: Katie Abbott**

**Total number of pages in report: 50**



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: FC3167

N6274223F0104 RH Fire Suppression System  
Project No: 60697810

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
FC3167-1	03/02/23	11:10	AYMY03/03/23	AQ	Ground Water	AF-RHMW02-WGN01LF-2302W4
FC3167-2	03/02/23	12:45	AYMY03/03/23	AQ	Ground Water	AF-RHMW03-WGN01LF-2302W4

## SAMPLE DELIVERY GROUP CASE NARRATIVE

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**Client:** AECOM, INC.

**Job No:** FC3167

**Site:** N6274223F0104 RH Fire Suppression System

**Report Date:** 3/10/2023 4:39:25 PM

On 03/03/2023, 2 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 2.2 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FC3167 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:** OP95747

Sample(s) FC3191-3MS, FC3191-5DUP, FC3191-3MS were used as the QC samples indicated.

Matrix Spike Recovery(s) for PFMBA, PFMPA are outside control limits. Probable cause is due to matrix interference.

RPD(s) for Duplicate for Perfluorooctanoic acid are outside control limits for sample OP95747-DUP. Probable cause is due to sample non-homogeneity.

**Matrix:** AQ

**Batch ID:** OP95791

Sample(s) FC3167-1MS were used as the QC samples indicated.

OP95791-BS for 13C2-4:2FTS: Outside control limits.

OP95791-MB for 13C2-4:2FTS: Outside control limits.

OP95791-MB for 13C2-6:2FTS: Outside control limits.

OP95791-MB for 13C2-8:2FTS: 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:** FC3167  
**Account:** AECOM, INC.  
**Project:** N6274223F0104 RH Fire Suppression System  
**Collected:** 03/02/23



Lab Sample ID	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FC3167-1	AF-RHMW02-WGN01LF-2302W4					
6:2 Fluorotelomer sulfonate		3.6 J	19	7.7	ng/l	EPA DRAFT 1633
FC3167-2	AF-RHMW03-WGN01LF-2302W4					
Perfluoropentanoic acid		3.4 J	9.4	1.9	ng/l	EPA DRAFT 1633
Perfluorohexanoic acid		2.0 J	4.7	0.94	ng/l	EPA DRAFT 1633
Perfluoroheptanoic acid		1.4 J	4.7	0.94	ng/l	EPA DRAFT 1633
Perfluorooctanoic acid		0.58 J	4.7	0.94	ng/l	EPA DRAFT 1633
6:2 Fluorotelomer sulfonate		6.7 J	19	7.5	ng/l	EPA DRAFT 1633

**Sample Results**

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**Report of Analysis**

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# Report of Analysis

Client Sample ID:	AF-RHMW02-WGN01LF-2302W4		
Lab Sample ID:	FC3167-1	Date Sampled:	03/02/23
Matrix:	AQ - Ground Water	Date Received:	03/03/23
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	6Q14648.D	1	03/09/23 20:16	MV	03/08/23 09:30	OP95791	S6Q221
Run #2							

Run #	Initial Volume	Final Volume
Run #1	520 ml	5.0 ml
Run #2		

CAS No. Compound Result LOQ LOD DL Units Q

**PERFLUOROALKYL CARBOXYLIC ACIDS**

375-22-4	Perfluorobutanoic acid	3.8 U	19	3.8	1.8	ng/l	
2706-90-3	Perfluoropentanoic acid	1.9 U	9.6	1.9	0.90	ng/l	
307-24-4	Perfluorohexanoic acid	0.96 U	4.8	0.96	0.48	ng/l	
375-85-9	Perfluoroheptanoic acid	0.96 U	4.8	0.96	0.48	ng/l	
335-67-1	Perfluorooctanoic acid	0.96 U	4.8	0.96	0.48	ng/l	
375-95-1	Perfluorononanoic acid	1.9 U	4.8	1.9	0.59	ng/l	
335-76-2	Perfluorodecanoic acid	0.96 U	4.8	0.96	0.48	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.9 U	4.8	1.9	0.58	ng/l	
307-55-1	Perfluorododecanoic acid	1.9 U	4.8	1.9	0.58	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.9 U	4.8	1.9	0.81	ng/l	
376-06-7	Perfluorotetradecanoic acid	0.96 U	4.8	0.96	0.48	ng/l	

**PERFLUOROALKYL SULFONIC ACIDS**

375-73-5	Perfluorobutanesulfonic acid	0.96 U	4.8	0.96	0.48	ng/l	
2706-91-4	Perfluoropentanesulfonic acid	3.8 U	4.8	3.8	1.1	ng/l	
355-46-4	Perfluorohexanesulfonic acid	1.9 U	4.8	1.9	0.67	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	0.96 U	4.8	0.96	0.48	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.9 U	4.8	1.9	0.52	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.9 U	4.8	1.9	0.55	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.9 U	4.8	1.9	0.62	ng/l	
79780-39-5	Perfluorododecanesulfonic aci	3.8 U	4.8	3.8	1.1	ng/l	

**FLUOROTELOMER SULFONIC ACIDS**

757124-72-4	4:2 Fluorotelomer sulfonate	7.7 U	19	7.7	3.1	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	3.6	19	7.7	3.3	ng/l	J
39108-34-4	8:2 Fluorotelomer sulfonate	7.7 U	19	7.7	4.0	ng/l	

**PERFLUOROOCCTANE SULFONAMIDES**

754-91-6	PFOSA	1.9 U	4.8	1.9	0.64	ng/l	
31506-32-8	MeFOSA	1.9 U	4.8	1.9	0.96	ng/l	
4151-50-2	EtFOSA	1.9 U	4.8	1.9	0.96	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-2302W4		
Lab Sample ID:	FC3167-1	Date Sampled:	03/02/23
Matrix:	AQ - Ground Water	Date Received:	03/03/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

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

2355-31-9	MeFOSAA	3.8 U	4.8	3.8	0.96	ng/l	
2991-50-6	EtFOSAA	3.8 U	4.8	3.8	1.3	ng/l	

**PERFLUOROOCCTANE SULFONAMIDO ETHANOLS**

24448-09-7	MeFOSE	9.6 U	48	9.6	4.2	ng/l	
1691-99-2	EtFOSE	19 U	48	19	7.1	ng/l	

**PER and POLYFLUOROETHER CARBOXYLIC ACIDS**

13252-13-6	HFPO-DA (GenX)	3.8 U	19	3.8	0.96	ng/l	
919005-14-4	ADONA	3.8 U	19	3.8	1.8	ng/l	
377-73-1	PFMPA	1.9 U	9.6	1.9	0.96	ng/l	
863090-89-5	PFMBA	3.8 U	9.6	3.8	1.1	ng/l	
151772-58-6	NFDHA	3.8 U	9.6	3.8	1.2	ng/l	

**PER and POLYFLUOROETHER SULFONIC ACIDS**

756426-58-1	9Cl-PF3ONS (F-53B Major)	3.8 U	19	3.8	1.3	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	3.8 U	19	3.8	1.7	ng/l	
113507-82-7	PFEESA	1.9 U	9.6	1.9	0.75	ng/l	

**FLUOROTELOMER CARBOXYLIC ACIDS**

356-02-5	3:3 Fluorotelomer carboxylate	9.6 U	24	9.6	4.3	ng/l	
914637-49-3	5:3 Fluorotelomer carboxylate	19 U	120	19	8.4	ng/l	
812-70-4	7:3 Fluorotelomer carboxylate	19 U	120	19	7.5	ng/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
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	13C4-PFBA	74%		20-150%
	13C5-PFPeA	98%		20-150%
	13C5-PFHxA	102%		20-150%
	13C4-PFHpA	108%		20-150%
	13C8-PFOA	103%		20-150%
	13C9-PFNA	95%		20-150%
	13C6-PFDA	108%		20-150%
	13C7-PFUnDA	94%		20-150%
	13C2-PFDoDA	87%		20-150%
	13C2-PFTeDA	81%		20-150%
	13C3-PFBS	105%		20-150%
	13C3-PFHxS	100%		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

<b>Client Sample ID:</b>	AF-RHMW02-WGN01LF-2302W4	
<b>Lab Sample ID:</b>	FC3167-1	<b>Date Sampled:</b> 03/02/23
<b>Matrix:</b>	AQ - Ground Water	<b>Date Received:</b> 03/03/23
<b>Method:</b>	EPA DRAFT 1633 EPA 1633 DRAFT	<b>Percent Solids:</b> n/a
<b>Project:</b>	N6274223F0104 RH Fire Suppression System	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	89%		20-150%
	13C8-FOSA	87%		20-150%
	d3-MeFOSA	79%		20-150%
	d5-EtFOSA	78%		20-150%
	d3-MeFOSAA	102%		20-150%
	d5-EtFOSAA	91%		20-150%
	d7-MeFOSE	77%		20-150%
	d9-EtFOSE	78%		20-150%
	13C2-4:2FTS	113%		20-150%
	13C2-6:2FTS	110%		20-150%
	13C2-8:2FTS	77%		20-150%
	13C3-HFPO-DA	85%		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-RHMW03-WGN01LF-2302W4		
Lab Sample ID:	FC3167-2	Date Sampled:	03/02/23
Matrix:	AQ - Ground Water	Date Received:	03/03/23
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	6Q14549.D	1	03/08/23 20:27	MV	03/06/23 09:00	OP95747	S6Q220
Run #2							

Run #	Initial Volume	Final Volume
Run #1	530 ml	5.0 ml
Run #2		

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

375-22-4	Perfluorobutanoic acid	3.8 U	19	3.8	1.8	ng/l	
2706-90-3	Perfluoropentanoic acid	3.4	9.4	1.9	0.89	ng/l	J
307-24-4	Perfluorohexanoic acid	2.0	4.7	0.94	0.47	ng/l	J
375-85-9	Perfluoroheptanoic acid	1.4	4.7	0.94	0.47	ng/l	J
335-67-1	Perfluorooctanoic acid	0.58	4.7	0.94	0.47	ng/l	J
375-95-1	Perfluorononanoic acid	1.9 U	4.7	1.9	0.58	ng/l	
335-76-2	Perfluorodecanoic acid	0.94 U	4.7	0.94	0.47	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.9 U	4.7	1.9	0.57	ng/l	
307-55-1	Perfluorododecanoic acid	1.9 U	4.7	1.9	0.57	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.9 U	4.7	1.9	0.79	ng/l	
376-06-7	Perfluorotetradecanoic acid	0.94 U	4.7	0.94	0.47	ng/l	

**PERFLUOROALKYL SULFONIC ACIDS**

375-73-5	Perfluorobutanesulfonic acid	0.94 U	4.7	0.94	0.47	ng/l	
2706-91-4	Perfluoropentanesulfonic acid	3.8 U	4.7	3.8	1.1	ng/l	
355-46-4	Perfluorohexanesulfonic acid	1.9 U	4.7	1.9	0.66	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	0.94 U	4.7	0.94	0.47	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.9 U	4.7	1.9	0.51	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.9 U	4.7	1.9	0.54	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.9 U	4.7	1.9	0.60	ng/l	
79780-39-5	Perfluorododecanesulfonic aci	3.8 U	4.7	3.8	1.1	ng/l	

**FLUOROTELOMER SULFONIC ACIDS**

757124-72-4	4:2 Fluorotelomer sulfonate	7.5 U	19	7.5	3.0	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	6.7	19	7.5	3.3	ng/l	J
39108-34-4	8:2 Fluorotelomer sulfonate	7.5 U	19	7.5	3.9	ng/l	

**PERFLUOROOCCTANE SULFONAMIDES**

754-91-6	PFOSA	1.9 U	4.7	1.9	0.63	ng/l	
31506-32-8	MeFOSA	1.9 U	4.7	1.9	0.94	ng/l	
4151-50-2	EtFOSA	1.9 U	4.7	1.9	0.94	ng/l	

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

4.2  
4

# Report of Analysis

Client Sample ID:	AF-RHMW03-WGN01LF-2302W4		
Lab Sample ID:	FC3167-2	Date Sampled:	03/02/23
Matrix:	AQ - Ground Water	Date Received:	03/03/23
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

**PERFLUOROOCCTANE SULFONAMIDOACETIC ACIDS**

2355-31-9	MeFOSAA	3.8 U	4.7	3.8	0.94	ng/l
2991-50-6	EtFOSAA	3.8 U	4.7	3.8	1.3	ng/l

**PERFLUOROOCCTANE SULFONAMIDO ETHANOLS**

24448-09-7	MeFOSE	9.4 U	47	9.4	4.1	ng/l
1691-99-2	EtFOSE	19 U	47	19	7.0	ng/l

**PER and POLYFLUOROETHER CARBOXYLIC ACIDS**

13252-13-6	HFPO-DA (GenX)	3.8 U	19	3.8	0.94	ng/l
919005-14-4	ADONA	3.8 U	19	3.8	1.8	ng/l
377-73-1	PFMPA	1.9 U	9.4	1.9	0.94	ng/l
863090-89-5	PFMBA	3.8 U	9.4	3.8	1.1	ng/l
151772-58-6	NFDHA	3.8 U	9.4	3.8	1.1	ng/l

**PER and POLYFLUOROETHER SULFONIC ACIDS**

756426-58-1	9Cl-PF3ONS (F-53B Major)	3.8 U	19	3.8	1.3	ng/l
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	3.8 U	19	3.8	1.7	ng/l
113507-82-7	PFEESA	1.9 U	9.4	1.9	0.74	ng/l

**FLUOROTELOMER CARBOXYLIC ACIDS**

356-02-5	3:3 Fluorotelomer carboxylate	9.4 U	24	9.4	4.3	ng/l
914637-49-3	5:3 Fluorotelomer carboxylate	19 U	120	19	8.2	ng/l
812-70-4	7:3 Fluorotelomer carboxylate	19 U	120	19	7.4	ng/l

CAS No. ID Standard Recoveries Run# 1 Run# 2 Limits

13C4-PFBA	83%	20-150%
13C5-PFPeA	94%	20-150%
13C5-PFHxA	94%	20-150%
13C4-PFHpA	95%	20-150%
13C8-PFOA	87%	20-150%
13C9-PFNA	93%	20-150%
13C6-PFDA	87%	20-150%
13C7-PFUnDA	64%	20-150%
13C2-PFDoDA	58%	20-150%
13C2-PFTeDA	55%	20-150%
13C3-PFBS	99%	20-150%
13C3-PFHxS	101%	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

4.2  
4

## Report of Analysis

Client Sample ID:	AF-RHMW03-WGN01LF-2302W4		Date Sampled:	03/02/23
Lab Sample ID:	FC3167-2		Date Received:	03/03/23
Matrix:	AQ - Ground Water		Percent Solids:	n/a
Method:	EPA DRAFT 1633 EPA 1633 DRAFT			
Project:	N6274223F0104 RH Fire Suppression System			

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	81%		20-150%
	13C8-FOSA	87%		20-150%
	d3-MeFOSA	66%		20-150%
	d5-EtFOSA	66%		20-150%
	d3-MeFOSAA	78%		20-150%
	d5-EtFOSAA	73%		20-150%
	d7-MeFOSE	70%		20-150%
	d9-EtFOSE	67%		20-150%
	13C2-4:2FTS	118%		20-150%
	13C2-6:2FTS	94%		20-150%
	13C2-8:2FTS	84%		20-150%
	13C3-HFPO-DA	96%		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**

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**Includes the following where applicable:**

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



SGS North America Inc - Orlando  
Chain of Custody

**FC3167**  
SGS - ORLANDO JOB #:

COC #: 2302W4AFSG01  
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4405 Vineland Road, Suite C-15 Orlando, FL 32811  
TEL: 407-425-6700 FAX: 407-425-0707  
www.sgs.com

Client / Reporting Information		Project Information		SGS - ORLANDO Quote #	SKIFF #														
Company Name: AECOM		Project Name: N6274223F0104 RH Fire Suppression System		<b>Analytical Information</b>	<b>Matrix Codes</b>														
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 # 60697810																		
Project Manager: Watson Tanji Email: watson.tanji@aecom.com	Fax #																		
Phone #: 303-796-4624 / 808-954-4512	Client Purchase Order #																		
Sampler(s) Name(s) (Printed) Sampler 1: <i>Math</i> Sampler 2: <i>Max Wilcox</i>				DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge OL - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe															
SGS Orlando Sample #	Field ID / Point of Collection	DATE	TIME		SAMPLED BY: MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NH <sub>4</sub> OH	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	NH <sub>4</sub> OH/ZnAc	DI WATER	MEDIA	PFAS EPA Draft 1 633	<b>LAB USE ONLY</b>		
1	AF-RHMW02-WGN01LF-2302W4	3/2/23	1110		<i>Math</i>	3			X										
<div style="display: flex; justify-content: space-between;"> <span><i>Math</i> 3/2/23</span> <span>INITIAL ASSESSMENT <i>[Signature]</i></span> </div> <div style="display: flex; justify-content: center;"> <span>LABEL VERIFICATION <i>[Signature]</i></span> </div>																			
<b>Turnaround Time ( Business days)</b>			<b>Data Deliverable Information</b>						<b>Comments / Remarks</b>										
10 Day (Business) Approved By: / Date: 7 Day 5 Day 3 Day RUSH 2 Day RUSH 1 Day RUSH Other			<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: AFFF Assessment Sampling GW  <i>United NWS 016 51313883</i>										
Rush T/A Data Available VIA Email or Lablink																			
Sample Custody must be documented below each time samples change possession, including courier delivery.																			
Relinquished by Sampler/Affiliation <i>1 Andy Young / AECOM</i>	Date Time: <i>3/2/23 1400</i>	Received By/Affiliation <i>2 [Signature] AECOM</i>	Relinquished By/Affiliation <i>3 [Signature] AECOM</i>		Date Time: <i>3/2/23</i>	Received By/Affiliation <i>4 [Signature] AECOM</i>													
Relinquished by/Affiliation <i>5 [Signature]</i>	Date Time: <i>3/2/23</i>	Received By/Affiliation <i>6 [Signature]</i>	Relinquished By/Affiliation <i>7 [Signature]</i>		Date Time: <i>3/2/23</i>	Received By/Affiliation <i>8 [Signature]</i>													
Lab Use Only : Cooler Temperature (s) Celsius (corrected): <i>20 1RFL</i>																			

PFAS\_COCS\_ALL.xls Rev 031318





**SGS North America Inc - Orlando**  
**Chain of Custody**

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

**FC3167**  
 SGS - ORLANDO JOB #:

COC #: 2302W4AFSG02  
 PAGE 1 OF 1

Client / Reporting Information		Project Information			SGS - ORLANDO Quote #		SKIFF #																													
Company Name: AECOM		Project Name: N6274223F0104 RH Fire Suppression System																																		
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 # 60697810																																		
Project Manager: Watson Tanji Email: watson.tanji@aecom.com		Fax #																																		
Phone #: 303-796-4624 / 808-954-4512		Client Purchase Order #																																		
Sampler(s) Name(s) (Printed) Sampler 1: <i>Watson Tanji</i> Sampler 2: <i>Andy Young</i>																																				
SGS Orlando Sample #	Field ID / Point of Collection	DATE	TIME	SAMPLER BY:	MATRIX	TOTAL # OF BOTTLES	CONTAINER INFORMATION								PFAS EPA Draft 1633	LAB USE ONLY																				
							OTHER	NONE	MCI	NCH	HC3	#2504	NCH-ZINC	DI WATER			MESH																			
2	AF-RHMW03-WGN01LF-2302W4	3/2/23	1245		GW	3		X																												
<table border="0"> <tr> <td>10 Day (Business)</td> <td>Approved By: / Date:</td> <td><input type="checkbox"/> COMMERCIAL "A" (RESULTS ONLY)</td> </tr> <tr> <td>7 Day</td> <td></td> <td><input type="checkbox"/> COMMERCIAL "B" (RESULTS PLUS QC)</td> </tr> <tr> <td><b>5 Day</b></td> <td></td> <td><input type="checkbox"/> REDT1 (EPA LEVEL 3)</td> </tr> <tr> <td>3 Day RUSH</td> <td></td> <td><input checked="" type="checkbox"/> FULLT1 (EPA LEVEL 4)</td> </tr> <tr> <td>2 Day RUSH</td> <td></td> <td><input checked="" type="checkbox"/> EDD'S</td> </tr> <tr> <td>1 Day RUSH</td> <td></td> <td></td> </tr> <tr> <td>Other</td> <td></td> <td></td> </tr> </table>										10 Day (Business)	Approved By: / Date:	<input type="checkbox"/> COMMERCIAL "A" (RESULTS ONLY)	7 Day		<input type="checkbox"/> COMMERCIAL "B" (RESULTS PLUS QC)	<b>5 Day</b>		<input type="checkbox"/> REDT1 (EPA LEVEL 3)	3 Day RUSH		<input checked="" type="checkbox"/> FULLT1 (EPA LEVEL 4)	2 Day RUSH		<input checked="" type="checkbox"/> EDD'S	1 Day RUSH			Other			Turnaround Time ( Business days)		Data Deliverable Information		Comments / Remarks	
10 Day (Business)	Approved By: / Date:	<input type="checkbox"/> COMMERCIAL "A" (RESULTS ONLY)																																		
7 Day		<input type="checkbox"/> COMMERCIAL "B" (RESULTS PLUS QC)																																		
<b>5 Day</b>		<input type="checkbox"/> REDT1 (EPA LEVEL 3)																																		
3 Day RUSH		<input checked="" type="checkbox"/> FULLT1 (EPA LEVEL 4)																																		
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Sample Custody must be documented below each time samples change possession, including courier delivery.																																				
Relinquished by Sampler/Affiliation 1 <i>Watson Tanji</i>	Date Time: 3/2/23	Received By/Affiliation 2 <i>Andy Young AECOM</i>	Relinquished By/Affiliation 3 <i>Andy Young AECOM</i>	Date Time: 3/2/23 1500	Received By/Affiliation 4 <i>Andy Young AECOM</i>																															
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):		2.0 IR#EL			<a href="http://www.sgs.com/en/terms-and-conditions">http://www.sgs.com/en/terms-and-conditions</a>																															

Analytical Information	Matrix Codes
<div style="position: absolute; top: 0; right: 0; font-size: 2em; opacity: 0.5;">M4 3/2/23</div>	DW - Drinking Water
	GW - Ground Water
	WW - Water
	SW - Surface Water
	SO - Soil
	SL - Sludge
	OL - Oil
	LIQ - Other Liquid
	AIR - Air
	SOL - Other Solid
	WP - Wipe

*M4 3/2/23*

INITIAL ASSESSMENT *[Signature]*

LABEL VERIFICATION \_\_\_\_\_

5.1 5

## SGS Sample Receipt Summary

Job Number: FC3167

Client: AECOM

Project: N6274223F0104 RH Fire Suppression System

Date / Time Received: 3/3/2023 3:00:00 PM

Delivery Method: United Cargo/Airspace

Airbill #'s: United Cargo AWB #: 016-51313883

Therm ID: IR 1;

Therm CF: 0.2;

# of Coolers: 1

Cooler Temps (Raw Measured) °C: Cooler 1: (2.0);

Cooler Temps (Corrected) °C: Cooler 1: (2.2);

**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 #: pH 0-3 230315      pH 10-12 219813A      Other: (Specify) \_\_\_\_\_  
 Residual Chlorine Test Strip Lot #: \_\_\_\_\_

Comments

SM001  
Rev. Date 05/24/17

Technician: NATHANS

Date: 3/3/2023 3:00:00 PM

Reviewer: CD

Date: 3/6/2023

**FC3167: Chain of Custody**

**Page 3 of 3**

5.1  
5



# QC Evaluation: DOD QSM5.x Limits

**Job Number:** FC3167  
**Account:** AECOM, INC.  
**Project:** N6274223F0104 RH Fire Suppression System  
**Collected:** 03/02/23

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.

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\* Sample used for QC is not from job FC3167

5.2  
5

## MS Semi-volatiles

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### QC Data Summaries

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#### Includes the following where applicable:

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

# Instrument Blank

Job Number: FC3167  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q221-IBLK	6Q14618.D	1	03/09/23	MV	n/a	n/a	S6Q221

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC3167-1

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.0080	0.0040	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0040	0.0010	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0020	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0020	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0020	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0020	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0020	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0020	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0020	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0020	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0020	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0020	0.0010	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0020	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0020	0.0010	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0020	0.0010	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0020	0.0010	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0020	0.0010	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0020	0.0010	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0020	0.0011	ug/l	
757124-72-44:2	Fluorotelomer sulfonate	ND	0.0080	0.0040	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.0080	0.0040	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.0080	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0020	0.0010	ug/l	
31506-32-8	MeFOSA	ND	0.0020	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0020	0.0010	ug/l	
2355-31-9	MeFOSAA	ND	0.0020	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0020	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.020	0.010	ug/l	
1691-99-2	EtFOSE	ND	0.020	0.010	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0080	0.0020	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0020	ug/l	
377-73-1	PFMPA	ND	0.0040	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0040	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0040	0.0012	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0020	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0020	ug/l	

# Instrument Blank

Job Number: FC3167  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q221-IBLK	6Q14618.D	1	03/09/23	MV	n/a	n/a	S6Q221

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC3167-1

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.0040	0.0010	ug/l	
356-02-5	3:3 Fluorotelomer carboxylate	ND	0.010	0.0050	ug/l	
914637-49-35:3	Fluorotelomer carboxylate	ND	0.050	0.010	ug/l	
812-70-4	7:3 Fluorotelomer carboxylate	ND	0.050	0.010	ug/l	

CAS No.	ID Standard Recoveries	Limits	
	13C4-PFBA	103%	20-150%
	13C5-PFPeA	99%	20-150%
	13C5-PFHxA	101%	20-150%
	13C4-PFHpA	97%	20-150%
	13C8-PFOA	93%	20-150%
	13C9-PFNA	99%	20-150%
	13C6-PFDA	91%	20-150%
	13C7-PFUnDA	89%	20-150%
	13C2-PFDoDA	94%	20-150%
	13C2-PFTeDA	90%	20-150%
	13C3-PFBS	102%	20-150%
	13C3-PFHxS	97%	20-150%
	13C8-PFOS	105%	20-150%
	13C8-FOSA	114%	20-150%
	d3-MeFOSA	99%	20-150%
	d5-EtFOSA	107%	20-150%
	d3-MeFOSAA	101%	20-150%
	d5-EtFOSAA	110%	20-150%
	d7-MeFOSE	98%	20-150%
	d9-EtFOSE	103%	20-150%
	13C2-4:2FTS	110%	20-150%
	13C2-6:2FTS	123%	20-150%
	13C2-8:2FTS	110%	20-150%
	13C3-HFPO-DA	100%	20-150%

# Continuing Calibration Blank

Job Number: FC3167  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q221-ICCB	6Q14644.D	1	03/09/23	MV	n/a	n/a	S6Q221

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC3167-1

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.0080	0.0040	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0040	0.0010	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0020	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0020	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0020	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0020	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0020	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0020	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0020	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0020	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0020	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0020	0.0010	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0020	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0020	0.0010	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0020	0.0010	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0020	0.0010	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0020	0.0010	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0020	0.0010	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0020	0.0011	ug/l	
757124-72-44:2	Fluorotelomer sulfonate	ND	0.0080	0.0040	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.0080	0.0040	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.0080	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0020	0.0010	ug/l	
31506-32-8	MeFOSA	ND	0.0020	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0020	0.0010	ug/l	
2355-31-9	MeFOSAA	ND	0.0020	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0020	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.020	0.010	ug/l	
1691-99-2	EtFOSE	ND	0.020	0.010	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0080	0.0020	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0020	ug/l	
377-73-1	PFMPA	ND	0.0040	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0040	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0040	0.0012	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0020	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0020	ug/l	

# Continuing Calibration Blank

Job Number: FC3167  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q221-ICCB	6Q14644.D	1	03/09/23	MV	n/a	n/a	S6Q221

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC3167-1

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.0040	0.0010	ug/l	
356-02-5	3:3 Fluorotelomer carboxylate	ND	0.010	0.0050	ug/l	
914637-49-35:3	Fluorotelomer carboxylate	ND	0.050	0.010	ug/l	
812-70-4	7:3 Fluorotelomer carboxylate	ND	0.050	0.010	ug/l	

CAS No.	ID Standard Recoveries	Limits
	13C4-PFBA	102% 20-150%
	13C5-PFPeA	102% 20-150%
	13C5-PFHxA	104% 20-150%
	13C4-PFHpA	102% 20-150%
	13C8-PFOA	100% 20-150%
	13C9-PFNA	94% 20-150%
	13C6-PFDA	94% 20-150%
	13C7-PFUnDA	94% 20-150%
	13C2-PFDoDA	95% 20-150%
	13C2-PFTeDA	92% 20-150%
	13C3-PFBS	100% 20-150%
	13C3-PFHxS	96% 20-150%
	13C8-PFOS	98% 20-150%
	13C8-FOSA	99% 20-150%
	d3-MeFOSA	92% 20-150%
	d5-EtFOSA	90% 20-150%
	d3-MeFOSAA	100% 20-150%
	d5-EtFOSAA	100% 20-150%
	d7-MeFOSE	97% 20-150%
	d9-EtFOSE	88% 20-150%
	13C2-4:2FTS	102% 20-150%
	13C2-6:2FTS	124% 20-150%
	13C2-8:2FTS	128% 20-150%
	13C3-HFPO-DA	98% 20-150%

# Continuing Calibration Blank

Job Number: FC3167  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q221-ICCB	6Q14653.D	1	03/09/23	MV	n/a	n/a	S6Q221

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC3167-1

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.0080	0.0040	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0040	0.0010	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0020	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0020	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0020	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0020	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0020	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0020	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0020	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0020	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0020	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0020	0.0010	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0020	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0020	0.0010	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0020	0.0010	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0020	0.0010	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0020	0.0010	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0020	0.0010	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0020	0.0011	ug/l	
757124-72-44:2	Fluorotelomer sulfonate	ND	0.0080	0.0040	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.0080	0.0040	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.0080	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0020	0.0010	ug/l	
31506-32-8	MeFOSA	ND	0.0020	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0020	0.0010	ug/l	
2355-31-9	MeFOSAA	ND	0.0020	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0020	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.020	0.010	ug/l	
1691-99-2	EtFOSE	ND	0.020	0.010	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0080	0.0020	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0020	ug/l	
377-73-1	PFMPA	ND	0.0040	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0040	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0040	0.0012	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0020	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0020	ug/l	

# Continuing Calibration Blank

Job Number: FC3167  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q221-ICCB	6Q14653.D	1	03/09/23	MV	n/a	n/a	S6Q221

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC3167-1

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.0040	0.0010	ug/l	
356-02-5	3:3 Fluorotelomer carboxylate	ND	0.010	0.0050	ug/l	
914637-49-35:3	Fluorotelomer carboxylate	ND	0.050	0.010	ug/l	
812-70-4	7:3 Fluorotelomer carboxylate	ND	0.050	0.010	ug/l	

CAS No.	ID Standard Recoveries	Limits
	13C4-PFBA	99% 20-150%
	13C5-PFPeA	97% 20-150%
	13C5-PFHxA	100% 20-150%
	13C4-PFHpA	107% 20-150%
	13C8-PFOA	97% 20-150%
	13C9-PFNA	97% 20-150%
	13C6-PFDA	97% 20-150%
	13C7-PFUnDA	100% 20-150%
	13C2-PFDoDA	91% 20-150%
	13C2-PFTeDA	87% 20-150%
	13C3-PFBS	96% 20-150%
	13C3-PFHxS	98% 20-150%
	13C8-PFOS	96% 20-150%
	13C8-FOSA	98% 20-150%
	d3-MeFOSA	86% 20-150%
	d5-EtFOSA	92% 20-150%
	d3-MeFOSAA	96% 20-150%
	d5-EtFOSAA	99% 20-150%
	d7-MeFOSE	88% 20-150%
	d9-EtFOSE	83% 20-150%
	13C2-4:2FTS	116% 20-150%
	13C2-6:2FTS	130% 20-150%
	13C2-8:2FTS	103% 20-150%
	13C3-HFPO-DA	100% 20-150%

6.1.3

6



# Continuing Calibration Blank

Job Number: FC3167  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q220-ICCB	6Q14541.D	1	03/08/23	MV	n/a	n/a	S6Q220

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC3167-2

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: FC3167  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q220-ICCB	6Q14541.D	1	03/08/23	MV	n/a	n/a	S6Q220

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC3167-2

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	99% 20-150%
	13C5-PFHxA	103% 20-150%
	13C4-PFHpA	107% 20-150%
	13C8-PFOA	101% 20-150%
	13C9-PFNA	105% 20-150%
	13C6-PFDA	98% 20-150%
	13C7-PFUnDA	99% 20-150%
	13C2-PFDoDA	97% 20-150%
	13C2-PFTeDA	94% 20-150%
	13C3-PFBS	98% 20-150%
	13C3-PFHxS	100% 20-150%
	13C8-PFOS	96% 20-150%
	13C8-FOSA	105% 20-150%
	d3-MeFOSAA	97% 20-150%
	d5-EtFOSAA	94% 20-150%
	13C2-4:2FTS	123% 20-150%
	13C2-6:2FTS	110% 20-150%
	13C2-8:2FTS	128% 20-150%

6.1.4

6

# Method Blank Summary

Job Number: FC3167  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP95747-MB	6Q14548.D	1	03/08/23	MV	03/06/23	OP95747	S6Q220

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC3167-2

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: FC3167  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP95747-MB	6Q14548.D	1	03/08/23	MV	03/06/23	OP95747	S6Q220

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC3167-2

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	111% 20-150%
	13C5-PFPeA	110% 20-150%
	13C5-PFHxA	111% 20-150%
	13C4-PFHpA	112% 20-150%
	13C8-PFOA	110% 20-150%
	13C9-PFNA	98% 20-150%
	13C6-PFDA	112% 20-150%
	13C7-PFUnDA	105% 20-150%
	13C2-PFDoDA	88% 20-150%
	13C2-PFTeDA	82% 20-150%
	13C3-PFBS	115% 20-150%
	13C3-PFHxS	99% 20-150%
	13C8-PFOS	119% 20-150%
	13C8-FOSA	95% 20-150%
	d3-MeFOSA	74% 20-150%
	d5-EtFOSA	72% 20-150%
	d3-MeFOSAA	115% 20-150%
	d5-EtFOSAA	98% 20-150%
	d7-MeFOSE	78% 20-150%
	d9-EtFOSE	80% 20-150%
	13C2-4:2FTS	124% 20-150%
	13C2-6:2FTS	130% 20-150%
	13C2-8:2FTS	120% 20-150%
	13C3-HFPO-DA	105% 20-150%

# Method Blank Summary

Job Number: FC3167  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP95791-MB	6Q14647.D	1	03/09/23	MV	03/08/23	OP95791	S6Q221

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC3167-1

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: FC3167  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP95791-MB	6Q14647.D	1	03/09/23	MV	03/08/23	OP95791	S6Q221

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC3167-1

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	117%	20-150%
	13C5-PFPeA	107%	20-150%
	13C5-PFHxA	105%	20-150%
	13C4-PFHpA	112%	20-150%
	13C8-PFOA	128%	20-150%
	13C9-PFNA	116%	20-150%
	13C6-PFDA	117%	20-150%
	13C7-PFUnDA	119%	20-150%
	13C2-PFDoDA	100%	20-150%
	13C2-PFTeDA	93%	20-150%
	13C3-PFBS	129%	20-150%
	13C3-PFHxS	121%	20-150%
	13C8-PFOS	104%	20-150%
	13C8-FOSA	92%	20-150%
	d3-MeFOSA	91%	20-150%
	d5-EtFOSA	94%	20-150%
	d3-MeFOSAA	116%	20-150%
	d5-EtFOSAA	107%	20-150%
	d7-MeFOSE	92%	20-150%
	d9-EtFOSE	91%	20-150%
	13C2-4:2FTS	162%* a	20-150%
	13C2-6:2FTS	155%* a	20-150%
	13C2-8:2FTS	156%* a	20-150%
	13C3-HFPO-DA	108%	20-150%

(a) Outside control limits.

# Instrument Blank

Job Number: FC3167  
Account: AECOMCOD AECOM, INC.  
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q220-IBLK	6Q14525.D	1	03/08/23	MV	n/a	n/a	S6Q220

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

OP95747-MS

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: FC3167  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q220-IBLK	6Q14525.D	1	03/08/23	MV	n/a	n/a	S6Q220

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

OP95747-MS

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	94% 20-150%
	13C5-PFHxA	92% 20-150%
	13C4-PFHpA	94% 20-150%
	13C8-PFOA	99% 20-150%
	13C9-PFNA	116% 20-150%
	13C6-PFDA	100% 20-150%
	13C7-PFUnDA	103% 20-150%
	13C2-PFDoDA	101% 20-150%
	13C2-PFTeDA	107% 20-150%
	13C3-PFBS	109% 20-150%
	13C3-PFHxS	109% 20-150%
	13C8-PFOS	99% 20-150%
	13C8-FOSA	106% 20-150%
	d3-MeFOSAA	103% 20-150%
	d5-EtFOSAA	102% 20-150%
	13C2-4:2FTS	107% 20-150%
	13C2-6:2FTS	106% 20-150%
	13C2-8:2FTS	113% 20-150%

6.1.7  
6



# Continuing Calibration Blank

Job Number: FC3167  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q220-ICCB	6Q14553.D	1	03/08/23	MV	n/a	n/a	S6Q220

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

OP95747-DUP, OP95747-MS

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: FC3167  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q220-ICCB	6Q14553.D	1	03/08/23	MV	n/a	n/a	S6Q220

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

OP95747-DUP, OP95747-MS

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	94% 20-150%
	13C5-PFHxA	93% 20-150%
	13C4-PFHpA	98% 20-150%
	13C8-PFOA	95% 20-150%
	13C9-PFNA	99% 20-150%
	13C6-PFDA	92% 20-150%
	13C7-PFUnDA	95% 20-150%
	13C2-PFDoDA	92% 20-150%
	13C2-PFTeDA	91% 20-150%
	13C3-PFBS	98% 20-150%
	13C3-PFHxS	104% 20-150%
	13C8-PFOS	92% 20-150%
	13C8-FOSA	95% 20-150%
	d3-MeFOSAA	94% 20-150%
	d5-EtFOSAA	96% 20-150%
	13C2-4:2FTS	129% 20-150%
	13C2-6:2FTS	114% 20-150%
	13C2-8:2FTS	115% 20-150%

# Leachate Blank Summary

Job Number: FC3167  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP95772-LB	6Q14623.D	1	03/09/23	MV	03/07/23	OP95772	S6Q221

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

S6Q221-IBLK, S6Q221-ICCB

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.067	0.033	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.033	0.0083	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.017	0.0042	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.017	0.0042	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.017	0.0042	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.017	0.0051	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.017	0.0042	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.017	0.0050	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.017	0.0050	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.017	0.0070	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.017	0.0042	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.017	0.0083	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.017	0.0093	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.017	0.0083	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.017	0.0083	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.017	0.0083	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.017	0.0083	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.017	0.0083	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.017	0.0095	ug/l	
757124-72-44:2	Fluorotelomer sulfonate	ND	0.067	0.033	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.067	0.033	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.067	0.034	ug/l	
754-91-6	PFOSA	ND	0.017	0.0083	ug/l	
31506-32-8	MeFOSA	ND	0.017	0.0083	ug/l	
4151-50-2	EtFOSA	ND	0.017	0.0083	ug/l	
2355-31-9	MeFOSAA	ND	0.017	0.0083	ug/l	
2991-50-6	EtFOSAA	ND	0.017	0.011	ug/l	
24448-09-7	MeFOSE	ND	0.17	0.083	ug/l	
1691-99-2	EtFOSE	ND	0.17	0.083	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.067	0.017	ug/l	
919005-14-4	ADONA	ND	0.067	0.017	ug/l	
377-73-1	PFMPA	ND	0.033	0.0083	ug/l	
863090-89-5	PFMBA	ND	0.033	0.0095	ug/l	
151772-58-6	NFDHA	ND	0.033	0.010	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.067	0.017	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.067	0.017	ug/l	

# Leachate Blank Summary

Job Number: FC3167  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP95772-LB	6Q14623.D	1	03/09/23	MV	03/07/23	OP95772	S6Q221

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

S6Q221-IBLK, S6Q221-ICCB

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.033	0.0083	ug/l	
356-02-5	3:3 Fluorotelomer carboxylate	ND	0.083	0.042	ug/l	
914637-49-35:3	Fluorotelomer carboxylate	ND	0.42	0.083	ug/l	
812-70-4	7:3 Fluorotelomer carboxylate	ND	0.42	0.083	ug/l	

CAS No.	ID Standard Recoveries	Limits
	13C5-PFHxA	72% 20-150%
	13C4-PFHpA	74% 20-150%
	13C8-PFOA	70% 20-150%
	13C9-PFNA	65% 20-150%
	13C6-PFDA	73% 20-150%
	13C7-PFUnDA	69% 20-150%
	13C2-PFDoDA	64% 20-150%
	13C2-PFTeDA	71% 20-150%
	13C3-PFBS	67% 20-150%
	13C3-PFHxS	65% 20-150%
	13C8-PFOS	66% 20-150%
	d3-MeFOSAA	67% 20-150%
	d5-EtFOSAA	65% 20-150%
	13C3-HFPO-DA	77% 20-150%

6.2.1  
6

# Blank Spike Summary

Job Number: FC3167  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP95747-LLBS	6Q14547.D	1	03/08/23	MV	03/06/23	OP95747	S6Q220

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC3167-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.04	0.0332	83	40-150
2706-90-3	Perfluoropentanoic acid	0.02	0.0176	88	40-150
307-24-4	Perfluorohexanoic acid	0.01	0.0088	88	40-150
375-85-9	Perfluoroheptanoic acid	0.01	0.0082	82	40-150
335-67-1	Perfluorooctanoic acid	0.01	0.0087	87	40-150
375-95-1	Perfluorononanoic acid	0.01	0.0092	92	40-150
335-76-2	Perfluorodecanoic acid	0.01	0.0090	90	40-150
2058-94-8	Perfluoroundecanoic acid	0.01	0.0084	84	40-150
307-55-1	Perfluorododecanoic acid	0.01	0.0085	85	40-150
72629-94-8	Perfluorotridecanoic acid	0.01	0.0081	81	40-150
376-06-7	Perfluorotetradecanoic acid	0.01	0.0082	82	40-150
375-73-5	Perfluorobutanesulfonic acid	0.00887	0.0072	81	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.00941	0.0085	90	40-150
355-46-4	Perfluorohexanesulfonic acid	0.00914	0.0073	80	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.00953	0.0082	86	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.00928	0.0086	93	40-150
68259-12-1	Perfluorononanesulfonic acid	0.00962	0.0088	91	40-150
335-77-3	Perfluorodecanesulfonic acid	0.00965	0.0084	87	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0097	0.0079	81	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.0375	0.0335	89	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.038	0.0323	85	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.0384	0.0364	95	40-150
754-91-6	PFOSA	0.01	0.0095	95	40-150
31506-32-8	MeFOSA	0.01	0.0092	92	40-150
4151-50-2	EtFOSA	0.01	0.0085	85	40-150
2355-31-9	MeFOSAA	0.01	0.0094	94	40-150
2991-50-6	EtFOSAA	0.01	0.0092	92	40-150
24448-09-7	MeFOSE	0.1	0.0857	86	40-150
1691-99-2	EtFOSE	0.1	0.0864	86	40-150
13252-13-6	HFPO-DA (GenX)	0.04	0.0348	87	40-150
919005-14-4	ADONA	0.0378	0.0352	93	40-150
377-73-1	PFMPA	0.02	0.0175	88	40-150
863090-89-5	PFMBA	0.02	0.0186	93	40-150
151772-58-6	NFDHA	0.02	0.0164	82	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.0374	0.0340	91	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0378	0.0327	87	40-150

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: FC3167  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP95747-LLBS	6Q14547.D	1	03/08/23	MV	03/06/23	OP95747	S6Q220

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC3167-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0178	0.0156	88	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.05	0.0395	79	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.25	0.223	89	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.25	0.223	89	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	96%	20-150%
	13C5-PFPeA	95%	20-150%
	13C5-PFHxA	98%	20-150%
	13C4-PFHpA	104%	20-150%
	13C8-PFOA	94%	20-150%
	13C9-PFNA	84%	20-150%
	13C6-PFDA	92%	20-150%
	13C7-PFUnDA	93%	20-150%
	13C2-PFDoDA	88%	20-150%
	13C2-PFTeDA	86%	20-150%
	13C3-PFBS	96%	20-150%
	13C3-PFHxS	96%	20-150%
	13C8-PFOS	92%	20-150%
	13C8-FOSA	93%	20-150%
	d3-MeFOSA	78%	20-150%
	d5-EtFOSA	76%	20-150%
	d3-MeFOSAA	92%	20-150%
	d5-EtFOSAA	98%	20-150%
	d7-MeFOSE	84%	20-150%
	d9-EtFOSE	79%	20-150%
	13C2-4:2FTS	113%	20-150%
	13C2-6:2FTS	106%	20-150%
	13C2-8:2FTS	103%	20-150%
	13C3-HFPO-DA	93%	20-150%

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: FC3167  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP95791-LLBS	6Q14646.D	1	03/09/23	MV	03/08/23	OP95791	S6Q221

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC3167-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.04	0.0327	82	40-150
2706-90-3	Perfluoropentanoic acid	0.02	0.0173	87	40-150
307-24-4	Perfluorohexanoic acid	0.01	0.0092	92	40-150
375-85-9	Perfluoroheptanoic acid	0.01	0.0082	82	40-150
335-67-1	Perfluorooctanoic acid	0.01	0.0086	86	40-150
375-95-1	Perfluorononanoic acid	0.01	0.0081	81	40-150
335-76-2	Perfluorodecanoic acid	0.01	0.0093	93	40-150
2058-94-8	Perfluoroundecanoic acid	0.01	0.0083	83	40-150
307-55-1	Perfluorododecanoic acid	0.01	0.0085	85	40-150
72629-94-8	Perfluorotridecanoic acid	0.01	0.0079	79	40-150
376-06-7	Perfluorotetradecanoic acid	0.01	0.0091	91	40-150
375-73-5	Perfluorobutanesulfonic acid	0.00887	0.0076	86	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.00941	0.0085	90	40-150
355-46-4	Perfluorohexanesulfonic acid	0.00914	0.0079	86	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.00953	0.0073	77	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.00928	0.0065	70	40-150
68259-12-1	Perfluorononanesulfonic acid	0.00962	0.0080	83	40-150
335-77-3	Perfluorodecanesulfonic acid	0.00965	0.0074	77	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0097	0.0064	66	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.0375	0.0318	85	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.038	0.0325	86	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.0384	0.0301	78	40-150
754-91-6	PFOSA	0.01	0.0088	88	40-150
31506-32-8	MeFOSA	0.01	0.0096	96	40-150
4151-50-2	EtFOSA	0.01	0.0087	87	40-150
2355-31-9	MeFOSAA	0.01	0.0075	75	40-150
2991-50-6	EtFOSAA	0.01	0.0096	96	40-150
24448-09-7	MeFOSE	0.1	0.0878	88	40-150
1691-99-2	EtFOSE	0.1	0.0858	86	40-150
13252-13-6	HFPO-DA (GenX)	0.04	0.0357	89	40-150
919005-14-4	ADONA	0.0378	0.0355	94	40-150
377-73-1	PFMPA	0.02	0.0171	86	40-150
863090-89-5	PFMBA	0.02	0.0168	84	40-150
151772-58-6	NFDHA	0.02	0.0177	89	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.0374	0.0332	89	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0378	0.0313	83	40-150

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: FC3167  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP95791-LLBS	6Q14646.D	1	03/09/23	MV	03/08/23	OP95791	S6Q221

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC3167-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0178	0.0160	90	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.05	0.0360	72	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.25	0.224	90	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.25	0.239	96	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	107%	20-150%
	13C5-PFPeA	99%	20-150%
	13C5-PFHxA	101%	20-150%
	13C4-PFHpA	102%	20-150%
	13C8-PFOA	109%	20-150%
	13C9-PFNA	112%	20-150%
	13C6-PFDA	94%	20-150%
	13C7-PFUnDA	97%	20-150%
	13C2-PFDoDA	88%	20-150%
	13C2-PFTeDA	74%	20-150%
	13C3-PFBS	117%	20-150%
	13C3-PFHxS	110%	20-150%
	13C8-PFOS	109%	20-150%
	13C8-FOSA	102%	20-150%
	d3-MeFOSA	88%	20-150%
	d5-EtFOSA	90%	20-150%
	d3-MeFOSAA	117%	20-150%
	d5-EtFOSAA	105%	20-150%
	d7-MeFOSE	98%	20-150%
	d9-EtFOSE	89%	20-150%
	13C2-4:2FTS	143%	20-150%
	13C2-6:2FTS	133%	20-150%
	13C2-8:2FTS	132%	20-150%
	13C3-HFPO-DA	99%	20-150%

\* = Outside of Control Limits.



# Blank Spike Summary

Job Number: FC3167  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP95747-BS	6Q14546.D	1	03/08/23	MV	03/06/23	OP95747	S6Q220

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC3167-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.1	0.0867	87	40-150
2706-90-3	Perfluoropentanoic acid	0.05	0.0448	90	40-150
307-24-4	Perfluorohexanoic acid	0.025	0.0241	96	40-150
375-85-9	Perfluoroheptanoic acid	0.025	0.0230	92	40-150
335-67-1	Perfluorooctanoic acid	0.025	0.0202	81	40-150
375-95-1	Perfluorononanoic acid	0.025	0.0233	93	40-150
335-76-2	Perfluorodecanoic acid	0.025	0.0207	83	40-150
2058-94-8	Perfluoroundecanoic acid	0.025	0.0236	94	40-150
307-55-1	Perfluorododecanoic acid	0.025	0.0248	99	40-150
72629-94-8	Perfluorotridecanoic acid	0.025	0.0206	82	40-150
376-06-7	Perfluorotetradecanoic acid	0.025	0.0229	92	40-150
375-73-5	Perfluorobutanesulfonic acid	0.0222	0.0199	90	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0235	0.0220	94	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0229	0.0212	93	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0238	0.0191	80	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0232	0.0196	84	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0241	0.0206	86	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0241	0.0197	82	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0243	0.0197	81	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.0938	0.0915	98	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.095	0.0907	95	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.096	0.0915	95	40-150
754-91-6	PFOSA	0.025	0.0227	91	40-150
31506-32-8	MeFOSA	0.025	0.0239	96	40-150
4151-50-2	EtFOSA	0.025	0.0220	88	40-150
2355-31-9	MeFOSAA	0.025	0.0228	91	40-150
2991-50-6	EtFOSAA	0.025	0.0237	95	40-150
24448-09-7	MeFOSE	0.25	0.221	88	40-150
1691-99-2	EtFOSE	0.25	0.221	88	40-150
13252-13-6	HFPO-DA (GenX)	0.1	0.0956	96	40-150
919005-14-4	ADONA	0.0945	0.0901	95	40-150
377-73-1	PFMPA	0.05	0.0242	48	40-150
863090-89-5	PFMBA	0.05	0.0467	93	40-150
151772-58-6	NFDHA	0.05	0.0464	93	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.0935	0.0915	98	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0945	0.0896	95	40-150

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: FC3167  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP95747-BS	6Q14546.D	1	03/08/23	MV	03/06/23	OP95747	S6Q220

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC3167-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0445	0.0437	98	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.125	0.0958	77	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.625	0.624	100	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.625	0.642	103	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	22%	20-150%
	13C5-PFPeA	87%	20-150%
	13C5-PFHxA	83%	20-150%
	13C4-PFHpA	90%	20-150%
	13C8-PFOA	87%	20-150%
	13C9-PFNA	77%	20-150%
	13C6-PFDA	79%	20-150%
	13C7-PFUnDA	72%	20-150%
	13C2-PFDoDA	68%	20-150%
	13C2-PFTeDA	64%	20-150%
	13C3-PFBS	83%	20-150%
	13C3-PFHxS	81%	20-150%
	13C8-PFOS	87%	20-150%
	13C8-FOSA	83%	20-150%
	d3-MeFOSA	71%	20-150%
	d5-EtFOSA	65%	20-150%
	d3-MeFOSAA	81%	20-150%
	d5-EtFOSAA	83%	20-150%
	d7-MeFOSE	68%	20-150%
	d9-EtFOSE	64%	20-150%
	13C2-4:2FTS	93%	20-150%
	13C2-6:2FTS	88%	20-150%
	13C2-8:2FTS	90%	20-150%
	13C3-HFPO-DA	83%	20-150%

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: FC3167  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP95791-BS	6Q14645.D	1	03/09/23	MV	03/08/23	OP95791	S6Q221

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC3167-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.1	0.0806	81	40-150
2706-90-3	Perfluoropentanoic acid	0.05	0.0412	82	40-150
307-24-4	Perfluorohexanoic acid	0.025	0.0190	76	40-150
375-85-9	Perfluoroheptanoic acid	0.025	0.0208	83	40-150
335-67-1	Perfluorooctanoic acid	0.025	0.0210	84	40-150
375-95-1	Perfluorononanoic acid	0.025	0.0186	74	40-150
335-76-2	Perfluorodecanoic acid	0.025	0.0208	83	40-150
2058-94-8	Perfluoroundecanoic acid	0.025	0.0186	74	40-150
307-55-1	Perfluorododecanoic acid	0.025	0.0209	84	40-150
72629-94-8	Perfluorotridecanoic acid	0.025	0.0182	73	40-150
376-06-7	Perfluorotetradecanoic acid	0.025	0.0208	83	40-150
375-73-5	Perfluorobutanesulfonic acid	0.0222	0.0187	84	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0235	0.0201	85	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0229	0.0187	82	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0238	0.0195	82	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0232	0.0179	77	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0241	0.0199	83	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0241	0.0197	82	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0243	0.0180	74	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.0938	0.0752	80	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.095	0.0854	90	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.096	0.0779	81	40-150
754-91-6	PFOSA	0.025	0.0203	81	40-150
31506-32-8	MeFOSA	0.025	0.0217	87	40-150
4151-50-2	EtFOSA	0.025	0.0195	78	40-150
2355-31-9	MeFOSAA	0.025	0.0196	78	40-150
2991-50-6	EtFOSAA	0.025	0.0202	81	40-150
24448-09-7	MeFOSE	0.25	0.212	85	40-150
1691-99-2	EtFOSE	0.25	0.222	89	40-150
13252-13-6	HFPO-DA (GenX)	0.1	0.0896	90	40-150
919005-14-4	ADONA	0.0945	0.0839	89	40-150
377-73-1	PFMPA	0.05	0.0279	56	40-150
863090-89-5	PFMBA	0.05	0.0404	81	40-150
151772-58-6	NFDHA	0.05	0.0422	84	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.0935	0.0871	93	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0945	0.0780	83	40-150

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: FC3167  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP95791-BS	6Q14645.D	1	03/09/23	MV	03/08/23	OP95791	S6Q221

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC3167-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0445	0.0385	87	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.125	0.0885	71	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.625	0.514	82	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.625	0.539	86	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	37%	20-150%
	13C5-PFPeA	108%	20-150%
	13C5-PFHxA	113%	20-150%
	13C4-PFHpA	109%	20-150%
	13C8-PFOA	107%	20-150%
	13C9-PFNA	120%	20-150%
	13C6-PFDA	115%	20-150%
	13C7-PFUnDA	117%	20-150%
	13C2-PFDoDA	102%	20-150%
	13C2-PFTeDA	99%	20-150%
	13C3-PFBS	116%	20-150%
	13C3-PFHxS	113%	20-150%
	13C8-PFOS	107%	20-150%
	13C8-FOSA	113%	20-150%
	d3-MeFOSA	97%	20-150%
	d5-EtFOSA	95%	20-150%
	d3-MeFOSAA	128%	20-150%
	d5-EtFOSAA	115%	20-150%
	d7-MeFOSE	93%	20-150%
	d9-EtFOSE	88%	20-150%
	13C2-4:2FTS	154%* a	20-150%
	13C2-6:2FTS	123%	20-150%
	13C2-8:2FTS	141%	20-150%
	13C3-HFPO-DA	107%	20-150%

(a) Outside control limits.

\* = Outside of Control Limits.

# Matrix Spike Summary

Job Number: FC3167  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP95747-MS	6Q14555.D	1	03/08/23	MV	03/06/23	OP95747	S6Q220
FC3191-3	6Q14554.D	1	03/08/23	MV	03/06/23	OP95747	S6Q220
FC3191-3 <sup>a</sup>	6Q14650.D	5	03/09/23	MV	03/06/23	OP95747	S6Q221

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC3167-2

CAS No.	Compound	FC3191-3 ug/l	Spike Q	MS ug/l	MS %	Limits
375-22-4	Perfluorobutanoic acid	0.091 U <sup>b</sup>	0.0909	0.0535	59	40-150
2706-90-3	Perfluoropentanoic acid	0.0091 U	0.0455	0.0409	90	40-150
307-24-4	Perfluorohexanoic acid	0.0045 U	0.0227	0.0198	87	40-150
375-85-9	Perfluoroheptanoic acid	0.0045 U	0.0227	0.0205	90	40-150
335-67-1	Perfluorooctanoic acid	0.0045 U	0.0227	0.0209	92	40-150
375-95-1	Perfluorononanoic acid	0.0045 U	0.0227	0.0207	91	40-150
335-76-2	Perfluorodecanoic acid	0.0045 U	0.0227	0.0206	91	40-150
2058-94-8	Perfluoroundecanoic acid	0.0045 U	0.0227	0.0204	90	40-150
307-55-1	Perfluorododecanoic acid	0.0045 U	0.0227	0.0209	92	40-150
72629-94-8	Perfluorotridecanoic acid	0.0045 U	0.0227	0.0163	72	40-150
376-06-7	Perfluorotetradecanoic acid	0.0045 U	0.0227	0.0202	89	40-150
375-73-5	Perfluorobutanesulfonic acid	0.0045 U	0.0202	0.0182	90	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0045 U	0.0214	0.0192	90	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0045 U	0.0208	0.0182	88	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0045 U	0.0217	0.0271	125	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0045 U	0.0211	0.0160	76	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0045 U	0.0219	0.0175	80	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0045 U	0.0219	0.0151	69	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0045 U	0.022	0.0112	51	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.018 U	0.0852	0.0846	99	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.018 U	0.0864	0.0863	100	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.018 U	0.0873	0.0856	98	40-150
754-91-6	PFOSA	0.0045 U	0.0227	0.0213	94	40-150
31506-32-8	MeFOSA	0.0045 U	0.0227	0.0219	96	40-150
4151-50-2	EtFOSA	0.0045 U	0.0227	0.0207	91	40-150
2355-31-9	MeFOSAA	0.0045 U	0.0227	0.0207	91	40-150
2991-50-6	EtFOSAA	0.023 U <sup>b</sup>	0.0227	0.0196	86	40-150
24448-09-7	MeFOSE	0.045 U	0.227	0.223	98	40-150
1691-99-2	EtFOSE	0.045 U	0.227	0.210	92	40-150
13252-13-6	HFPO-DA (GenX)	0.018 U	0.0909	0.0817	90	40-150
919005-14-4	ADONA	0.018 U	0.0859	0.0853	99	40-150
377-73-1	PFMPA	0.0091 U	0.0455	0.0057	13*	40-150
863090-89-5	PFMBA	0.0091 U	0.0455	0.0912	201*	40-150
151772-58-6	NFDHA	0.0091 U	0.0455	0.0336	74	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.018 U	0.085	0.0885	104	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.018 U	0.0859	0.0718	84	40-150

\* = Outside of Control Limits.

# Matrix Spike Summary

Job Number: FC3167  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP95747-MS	6Q14555.D	1	03/08/23	MV	03/06/23	OP95747	S6Q220
FC3191-3	6Q14554.D	1	03/08/23	MV	03/06/23	OP95747	S6Q220
FC3191-3 <sup>a</sup>	6Q14650.D	5	03/09/23	MV	03/06/23	OP95747	S6Q221

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC3167-2

CAS No.	Compound	FC3191-3 ug/l	Spike Q	MS ug/l	MS %	Limits
113507-82-7	PFEESA	0.0091 U	0.0405	0.0379	94	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.023 U	0.114	0.0506	45	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.11 U	0.568	0.554	98	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.11 U	0.568	0.547	96	40-150

CAS No.	ID Standard Recoveries	MS	FC3191-3	FC3191-3	Limits
	13C4-PFBA	2%* c	2%* c	3%* c	20-150%
	13C5-PFPeA	22%	29%	29%	20-150%
	13C5-PFHxA	99%	96%	95%	20-150%
	13C4-PFHpA	104%	100%	95%	20-150%
	13C8-PFOA	95%	93%	106%	20-150%
	13C9-PFNA	101%	98%	101%	20-150%
	13C6-PFDA	104%	93%	107%	20-150%
	13C7-PFUnDA	101%	106%	98%	20-150%
	13C2-PFDoDA	85%	93%	91%	20-150%
	13C2-PFTeDA	65%	72%	64%	20-150%
	13C3-PFBS	94%	96%	117%	20-150%
	13C3-PFHxS	106%	93%	108%	20-150%
	13C8-PFOS	110%	112%	50%	20-150%
	13C8-FOSA	100%	108%	52%	20-150%
	d3-MeFOSA	93%	100%	54%	20-150%
	d5-EtFOSA	94%	100%	51%	20-150%
	d3-MeFOSAA	124%	138%	67%	20-150%
	d5-EtFOSAA	144%	161%* c	63%	20-150%
	d7-MeFOSE	78%	98%	45%	20-150%
	d9-EtFOSE	77%	92%	46%	20-150%
	13C2-4:2FTS	135%	142%	146%	20-150%
	13C2-6:2FTS	104%	105%	130%	20-150%
	13C2-8:2FTS	104%	110%	114%	20-150%
	13C3-HFPO-DA	90%	82%	94%	20-150%

- (a) Dilution required (ID recovery standard failure).
- (b) Result is from Run #2.
- (c) Outside control limits.

\* = Outside of Control Limits.

# Matrix Spike Summary

Job Number: FC3167  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP95791-MS	6Q14649.D	1	03/09/23	MV	03/08/23	OP95791	S6Q221
FC3167-1	6Q14648.D	1	03/09/23	MV	03/08/23	OP95791	S6Q221

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC3167-1

CAS No.	Compound	FC3167-1 ug/l	Spike Q	MS ug/l	MS %	Limits	
375-22-4	Perfluorobutanoic acid	0.019 U		0.0943	0.113	120	40-150
2706-90-3	Perfluoropentanoic acid	0.0096 U		0.0472	0.0570	121	40-150
307-24-4	Perfluorohexanoic acid	0.0048 U		0.0236	0.0215	91	40-150
375-85-9	Perfluoroheptanoic acid	0.0048 U		0.0236	0.0216	92	40-150
335-67-1	Perfluorooctanoic acid	0.0048 U		0.0236	0.0214	91	40-150
375-95-1	Perfluorononanoic acid	0.0048 U		0.0236	0.0202	86	40-150
335-76-2	Perfluorodecanoic acid	0.0048 U		0.0236	0.0206	87	40-150
2058-94-8	Perfluoroundecanoic acid	0.0048 U		0.0236	0.0196	83	40-150
307-55-1	Perfluorododecanoic acid	0.0048 U		0.0236	0.0208	88	40-150
72629-94-8	Perfluorotridecanoic acid	0.0048 U		0.0236	0.0188	80	40-150
376-06-7	Perfluorotetradecanoic acid	0.0048 U		0.0236	0.0193	82	40-150
375-73-5	Perfluorobutanesulfonic acid	0.0048 U		0.0209	0.0197	94	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0048 U		0.0222	0.0196	88	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0048 U		0.0216	0.0189	88	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0048 U		0.0225	0.0206	92	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0048 U		0.0219	0.0189	86	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0048 U		0.0227	0.0198	87	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0048 U		0.0228	0.0181	80	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0048 U		0.0229	0.0177	77	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.019 U		0.0884	0.0706	80	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.0036 U	J	0.0896	0.0831	89	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.019 U		0.0906	0.0807	89	40-150
754-91-6	PFOSA	0.0048 U		0.0236	0.0215	91	40-150
31506-32-8	MeFOSA	0.0048 U		0.0236	0.0227	96	40-150
4151-50-2	EtFOSA	0.0048 U		0.0236	0.0224	95	40-150
2355-31-9	MeFOSAA	0.0048 U		0.0236	0.0214	91	40-150
2991-50-6	EtFOSAA	0.0048 U		0.0236	0.0209	89	40-150
24448-09-7	MeFOSE	0.048 U		0.236	0.239	101	40-150
1691-99-2	EtFOSE	0.048 U		0.236	0.235	100	40-150
13252-13-6	HFPO-DA (GenX)	0.019 U		0.0943	0.0814	86	40-150
919005-14-4	ADONA	0.019 U		0.0892	0.0884	99	40-150
377-73-1	PFMPA	0.0096 U		0.0472	0.0398	84	40-150
863090-89-5	PFMBA	0.0096 U		0.0472	0.0445	94	40-150
151772-58-6	NFDHA	0.0096 U		0.0472	0.0386	82	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.019 U		0.0882	0.0817	93	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.019 U		0.0892	0.0750	84	40-150

\* = Outside of Control Limits.



# Matrix Spike Summary

Job Number: FC3167  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP95791-MS	6Q14649.D	1	03/09/23	MV	03/08/23	OP95791	S6Q221
FC3167-1	6Q14648.D	1	03/09/23	MV	03/08/23	OP95791	S6Q221

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC3167-1

CAS No.	Compound	FC3167-1 ug/l	Spike Q	MS ug/l	MS %	Limits
113507-82-7	PFEESA	0.0096 U	0.042	0.0390	93	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.024 U	0.118	0.0842	71	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.12 U	0.59	0.562	95	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.12 U	0.59	0.509	86	40-150

CAS No.	ID Standard Recoveries	MS	FC3167-1	Limits
	13C4-PFBA	68%	74%	20-150%
	13C5-PFPeA	95%	98%	20-150%
	13C5-PFHxA	101%	102%	20-150%
	13C4-PFHpA	106%	108%	20-150%
	13C8-PFOA	98%	103%	20-150%
	13C9-PFNA	120%	95%	20-150%
	13C6-PFDA	98%	108%	20-150%
	13C7-PFUnDA	96%	94%	20-150%
	13C2-PFDoDA	79%	87%	20-150%
	13C2-PFTeDA	73%	81%	20-150%
	13C3-PFBS	108%	105%	20-150%
	13C3-PFHxS	104%	100%	20-150%
	13C8-PFOS	89%	89%	20-150%
	13C8-FOSA	84%	87%	20-150%
	d3-MeFOSA	76%	79%	20-150%
	d5-EtFOSA	77%	78%	20-150%
	d3-MeFOSAA	101%	102%	20-150%
	d5-EtFOSAA	91%	91%	20-150%
	d7-MeFOSE	75%	77%	20-150%
	d9-EtFOSE	70%	78%	20-150%
	13C2-4:2FTS	134%	113%	20-150%
	13C2-6:2FTS	108%	110%	20-150%
	13C2-8:2FTS	98%	77%	20-150%
	13C3-HFPO-DA	93%	85%	20-150%

\* = Outside of Control Limits.



# Duplicate Summary

Job Number: FC3167  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP95747-DUP	6Q14558.D	1	03/08/23	MV	03/06/23	OP95747	S6Q220
FC3191-5	6Q14557.D	1	03/08/23	MV	03/06/23	OP95747	S6Q220

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC3167-2

CAS No.	Compound	FC3191-5 ug/l	DUP Q	ug/l	Q	RPD	Limits
375-22-4	Perfluorobutanoic acid	0.0035	J	0.0033	J	6	30
2706-90-3	Perfluoropentanoic acid	0.0106		0.0105		1	30
307-24-4	Perfluorohexanoic acid	0.0062		0.0060		3	30
375-85-9	Perfluoroheptanoic acid	0.00099	J	0.0010	J	1	30
335-67-1	Perfluorooctanoic acid	0.00063	J	0.00091	J	36*	30
375-95-1	Perfluorononanoic acid	0.0045	U	ND		nc	30
335-76-2	Perfluorodecanoic acid	0.0045	U	ND		nc	30
2058-94-8	Perfluoroundecanoic acid	0.0045	U	ND		nc	30
307-55-1	Perfluorododecanoic acid	0.0045	U	ND		nc	30
72629-94-8	Perfluorotridecanoic acid	0.0045	U	ND		nc	30
376-06-7	Perfluorotetradecanoic acid	0.0045	U	ND		nc	30
375-73-5	Perfluorobutanesulfonic acid	0.0045	U	ND		nc	30
2706-91-4	Perfluoropentanesulfonic acid	0.0045	U	ND		nc	30
355-46-4	Perfluorohexanesulfonic acid	0.0045	U	ND		nc	30
375-92-8	Perfluoroheptanesulfonic acid	0.0045	U	ND		nc	30
1763-23-1	Perfluorooctanesulfonic acid	0.0045	U	ND		nc	30
68259-12-1	Perfluorononanesulfonic acid	0.0045	U	ND		nc	30
335-77-3	Perfluorodecanesulfonic acid	0.0045	U	ND		nc	30
79780-39-5	Perfluorododecanesulfonic aci	0.0045	U	ND		nc	30
757124-72-44:2	Fluorotelomer sulfonate	0.018	U	ND		nc	30
27619-97-2	6:2 Fluorotelomer sulfonate	0.0284		0.0314		10	30
39108-34-4	8:2 Fluorotelomer sulfonate	0.018	U	ND		nc	30
754-91-6	PFOSA	0.0045	U	ND		nc	30
31506-32-8	MeFOSA	0.0045	U	ND		nc	30
4151-50-2	EtFOSA	0.0045	U	ND		nc	30
2355-31-9	MeFOSAA	0.0045	U	ND		nc	30
2991-50-6	EtFOSAA	0.0045	U	ND		nc	30
24448-09-7	MeFOSE	0.045	U	ND		nc	30
1691-99-2	EtFOSE	0.045	U	ND		nc	30
13252-13-6	HFPO-DA (GenX)	0.018	U	ND		nc	30
919005-14-4	ADONA	0.018	U	ND		nc	30
377-73-1	PFMPA	0.0091	U	ND		nc	30
863090-89-5	PFMBA	0.0091	U	ND		nc	30
151772-58-6	NFDHA	0.0091	U	ND		nc	30
756426-58-19	Cl-PF3ONS (F-53B Major)	0.018	U	ND		nc	30
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.018	U	ND		nc	30

\* = Outside of Control Limits.

# Duplicate Summary

Job Number: FC3167  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP95747-DUP	6Q14558.D	1	03/08/23	MV	03/06/23	OP95747	S6Q220
FC3191-5	6Q14557.D	1	03/08/23	MV	03/06/23	OP95747	S6Q220

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC3167-2

CAS No.	Compound	FC3191-5 ug/l	DUP Q ug/l	Q RPD	Limits
113507-82-7	PFEESA	0.0091 U	ND	nc	30
356-02-5	3:3 Fluorotelomer carboxylate	0.023 U	ND	nc	30
914637-49-35:3	Fluorotelomer carboxylate	0.11 U	ND	nc	30
812-70-4	7:3 Fluorotelomer carboxylate	0.11 U	ND	nc	30

CAS No.	ID Standard Recoveries	DUP	FC3191-5	Limits
	13C4-PFBA	91%	106%	20-150%
	13C5-PFPeA	90%	117%	20-150%
	13C5-PFHxA	91%	115%	20-150%
	13C4-PFHpA	91%	118%	20-150%
	13C8-PFOA	102%	109%	20-150%
	13C9-PFNA	99%	103%	20-150%
	13C6-PFDA	79%	114%	20-150%
	13C7-PFUnDA	71%	101%	20-150%
	13C2-PFDoDA	53%	83%	20-150%
	13C2-PFTeDA	48%	67%	20-150%
	13C3-PFBS	88%	106%	20-150%
	13C3-PFHxS	88%	105%	20-150%
	13C8-PFOS	92%	91%	20-150%
	13C8-FOSA	92%	93%	20-150%
	d3-MeFOSA	75%	79%	20-150%
	d5-EtFOSA	68%	75%	20-150%
	d3-MeFOSAA	83%	96%	20-150%
	d5-EtFOSAA	81%	93%	20-150%
	d7-MeFOSE	70%	83%	20-150%
	d9-EtFOSE	67%	83%	20-150%
	13C2-4:2FTS	103%	126%	20-150%
	13C2-6:2FTS	100%	123%	20-150%
	13C2-8:2FTS	95%	99%	20-150%
	13C3-HFPO-DA	87%	116%	20-150%

\* = Outside of Control Limits.