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## Technical Report for

**AECOM, INC.**

**N6274223F0104 RH Fire Suppression System**

**60697810**

**SGS Job Number: FC2151**

**Sampling Date: 01/23/23**



### Report to:

**AECOM, Inc**  
**7595 Technology Way**  
**Denver, CO 80237**  
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**ATTN: Katie Abbott**

**Total number of pages in report: 38**



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.

# Table of Contents

-1-

<b>Section 1: Sample Summary .....</b>	<b>3</b>
<b>Section 2: Case Narrative/Conformance Summary .....</b>	<b>4</b>
<b>Section 3: Summary of Hits .....</b>	<b>5</b>
<b>Section 4: Sample Results .....</b>	<b>6</b>
<b>4.1: FC2151-1: AF-RHMW02-WGN01LF-2301W4 .....</b>	<b>7</b>
<b>4.2: FC2151-2: AF-RHMW03-WGN01LF-2301W4 .....</b>	<b>10</b>
<b>Section 5: Misc. Forms .....</b>	<b>13</b>
<b>5.1: Chain of Custody .....</b>	<b>14</b>
<b>5.2: QC Evaluation: DOD QSM5.x Limits .....</b>	<b>17</b>
<b>Section 6: MS Semi-volatiles - QC Data Summaries .....</b>	<b>18</b>
<b>6.1: Method Blank Summary .....</b>	<b>19</b>
<b>6.2: Blank Spike Summary .....</b>	<b>33</b>
<b>6.3: Matrix Spike/Matrix Spike Duplicate Summary .....</b>	<b>37</b>

1

2

3

4

5

6



## Sample Summary

AECOM, INC.

Job No: FC2151

N6274223F0104 RH Fire Suppression System  
Project No: 60697810

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
FC2151-1	01/23/23	11:15 TM	01/24/23	AQ	Ground Water	AF-RHMW02-WGN01LF-2301W4
FC2151-2	01/23/23	12:30 MY	01/24/23	AQ	Ground Water	AF-RHMW03-WGN01LF-2301W4

## SAMPLE DELIVERY GROUP CASE NARRATIVE

**Client:** AECOM, INC.

**Job No:** FC2151

**Site:** N6274223F0104 RH Fire Suppression System

**Report Date:** 2/2/2023 1:29:13 PM

On 01/24/2023, 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 3.2 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FC2151 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:** OP95171

Sample(s) FC1914-2MS, FC1914-2MSD were used as the QC samples indicated.

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:

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

# Summary of Hits

**Job Number:** FC2151  
**Account:** AECOM, INC.  
**Project:** N6274223F0104 RH Fire Suppression System  
**Collected:** 01/23/23



Lab Sample ID	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FC2151-1	AF-RHMW02-WGN01LF-2301W4					
6:2 Fluorotelomer sulfonate		3.6 J	18	7.0	ng/l	EPA DRAFT 1633
FC2151-2	AF-RHMW03-WGN01LF-2301W4					
Perfluoropentanoic acid		5.4 J	8.9	1.8	ng/l	EPA DRAFT 1633
Perfluorohexanoic acid		2.4 J	4.5	0.89	ng/l	EPA DRAFT 1633
Perfluoroheptanoic acid		1.7 J	4.5	0.89	ng/l	EPA DRAFT 1633
6:2 Fluorotelomer sulfonate		8.3 J	18	7.1	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-2301W4		
Lab Sample ID:	FC2151-1	Date Sampled:	01/23/23
Matrix:	AQ - Ground Water	Date Received:	01/24/23
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	6Q12707.D	1	02/01/23 13:46	MV	01/26/23 09:00	OP95171	S6Q195
Run #2							

Run #	Initial Volume	Final Volume
Run #1	570 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	3.5 U	18	3.5	1.7	ng/l	
2706-90-3	Perfluoropentanoic acid	1.8 U	8.8	1.8	0.82	ng/l	
307-24-4	Perfluorohexanoic acid	0.88 U	4.4	0.88	0.44	ng/l	
375-85-9	Perfluoroheptanoic acid	0.88 U	4.4	0.88	0.44	ng/l	
335-67-1	Perfluorooctanoic acid	0.88 U	4.4	0.88	0.44	ng/l	
375-95-1	Perfluorononanoic acid	1.8 U	4.4	1.8	0.54	ng/l	
335-76-2	Perfluorodecanoic acid	0.88 U	4.4	0.88	0.44	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.8 U	4.4	1.8	0.53	ng/l	
307-55-1	Perfluorododecanoic acid	1.8 U	4.4	1.8	0.53	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.8 U	4.4	1.8	0.74	ng/l	
376-06-7	Perfluorotetradecanoic acid	0.88 U	4.4	0.88	0.44	ng/l	

**PERFLUOROALKYL SULFONIC ACIDS**

375-73-5	Perfluorobutanesulfonic acid	0.88 U	4.4	0.88	0.44	ng/l	
2706-91-4	Perfluoropentanesulfonic acid	3.5 U	4.4	3.5	0.98	ng/l	
355-46-4	Perfluorohexanesulfonic acid	1.8 U	4.4	1.8	0.61	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	0.88 U	4.4	0.88	0.44	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.8 U	4.4	1.8	0.47	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.8 U	4.4	1.8	0.50	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.8 U	4.4	1.8	0.56	ng/l	
79780-39-5	Perfluorododecanesulfonic aci	3.5 U	4.4	3.5	1.0	ng/l	

**FLUOROTELOMER SULFONIC ACIDS**

757124-72-4	4:2 Fluorotelomer sulfonate	7.0 U	18	7.0	2.8	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	3.6	18	7.0	3.0	ng/l	J
39108-34-4	8:2 Fluorotelomer sulfonate	7.0 U	18	7.0	3.6	ng/l	

**PERFLUOROOCCTANE SULFONAMIDES**

754-91-6	PFOSA	1.8 U	4.4	1.8	0.59	ng/l	
31506-32-8	MeFOSA	1.8 U	4.4	1.8	0.88	ng/l	
4151-50-2	EtFOSA	1.8 U	4.4	1.8	0.88	ng/l	

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

4.1  
4

# Report of Analysis

Client Sample ID:	AF-RHMW02-WGN01LF-2301W4		
Lab Sample ID:	FC2151-1	Date Sampled:	01/23/23
Matrix:	AQ - Ground Water	Date Received:	01/24/23
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	3.5 U	4.4	3.5	0.88	ng/l	
2991-50-6	EtFOSAA	3.5 U	4.4	3.5	1.2	ng/l	

**PERFLUOROOCCTANE SULFONAMIDO ETHANOLS**

24448-09-7	MeFOSE	8.8 U	44	8.8	3.8	ng/l	
1691-99-2	EtFOSE	18 U	44	18	6.5	ng/l	

**PER and POLYFLUOROETHER CARBOXYLIC ACIDS**

13252-13-6	HFPO-DA (GenX)	3.5 U	18	3.5	0.88	ng/l	
919005-14-4	ADONA	3.5 U	18	3.5	1.6	ng/l	
377-73-1	PFMPA	1.8 U	8.8	1.8	0.88	ng/l	
863090-89-5	PFMBA	3.5 U	8.8	3.5	1.0	ng/l	
151772-58-6	NFDHA	3.5 U	8.8	3.5	1.1	ng/l	

**PER and POLYFLUOROETHER SULFONIC ACIDS**

756426-58-1	9Cl-PF3ONS (F-53B Major)	3.5 U	18	3.5	1.2	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	3.5 U	18	3.5	1.5	ng/l	
113507-82-7	PFEESA	1.8 U	8.8	1.8	0.68	ng/l	

**FLUOROTELOMER CARBOXYLIC ACIDS**

356-02-5	3:3 Fluorotelomer carboxylate	8.8 U	22	8.8	4.0	ng/l	
914637-49-3	5:3 Fluorotelomer carboxylate	18 U	110	18	7.7	ng/l	
812-70-4	7:3 Fluorotelomer carboxylate	18 U	110	18	6.9	ng/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	54%		20-150%
	13C5-PFPeA	111%		20-150%
	13C5-PFHxA	112%		20-150%
	13C4-PFHpA	115%		20-150%
	13C8-PFOA	108%		20-150%
	13C9-PFNA	116%		20-150%
	13C6-PFDA	102%		20-150%
	13C7-PFUnDA	106%		20-150%
	13C2-PFDoDA	92%		20-150%
	13C2-PFTeDA	73%		20-150%
	13C3-PFBS	104%		20-150%
	13C3-PFHxS	105%		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

<b>Client Sample ID:</b>	AF-RHMW02-WGN01LF-2301W4		
<b>Lab Sample ID:</b>	FC2151-1	<b>Date Sampled:</b>	01/23/23
<b>Matrix:</b>	AQ - Ground Water	<b>Date Received:</b>	01/24/23
<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	106%		20-150%
	13C8-FOSA	108%		20-150%
	d3-MeFOSA	91%		20-150%
	d5-EtFOSA	81%		20-150%
	d3-MeFOSAA	110%		20-150%
	d5-EtFOSAA	103%		20-150%
	d7-MeFOSE	86%		20-150%
	d9-EtFOSE	77%		20-150%
	13C2-4:2FTS	130%		20-150%
	13C2-6:2FTS	94%		20-150%
	13C2-8:2FTS	81%		20-150%
	13C3-HFPO-DA	104%		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-2301W4		
Lab Sample ID:	FC2151-2	Date Sampled:	01/23/23
Matrix:	AQ - Ground Water	Date Received:	01/24/23
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	6Q12708.D	1	02/01/23 14:00	MV	01/26/23 09:00	OP95171	S6Q195
Run #2							

Run #	Initial Volume	Final Volume
Run #1	560 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	3.6 U	18	3.6	1.7	ng/l	
2706-90-3	Perfluoropentanoic acid	5.4	8.9	1.8	0.84	ng/l	J
307-24-4	Perfluorohexanoic acid	2.4	4.5	0.89	0.45	ng/l	J
375-85-9	Perfluoroheptanoic acid	1.7	4.5	0.89	0.45	ng/l	J
335-67-1	Perfluorooctanoic acid	0.89 U	4.5	0.89	0.45	ng/l	
375-95-1	Perfluorononanoic acid	1.8 U	4.5	1.8	0.54	ng/l	
335-76-2	Perfluorodecanoic acid	0.89 U	4.5	0.89	0.45	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.8 U	4.5	1.8	0.54	ng/l	
307-55-1	Perfluorododecanoic acid	1.8 U	4.5	1.8	0.54	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.8 U	4.5	1.8	0.75	ng/l	
376-06-7	Perfluorotetradecanoic acid	0.89 U	4.5	0.89	0.45	ng/l	

**PERFLUOROALKYL SULFONIC ACIDS**

375-73-5	Perfluorobutanesulfonic acid	0.89 U	4.5	0.89	0.45	ng/l	
2706-91-4	Perfluoropentanesulfonic acid	3.6 U	4.5	3.6	1.0	ng/l	
355-46-4	Perfluorohexanesulfonic acid	1.8 U	4.5	1.8	0.62	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	0.89 U	4.5	0.89	0.45	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.8 U	4.5	1.8	0.48	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.8 U	4.5	1.8	0.51	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.8 U	4.5	1.8	0.57	ng/l	
79780-39-5	Perfluorododecanesulfonic aci	3.6 U	4.5	3.6	1.0	ng/l	

**FLUOROTELOMER SULFONIC ACIDS**

757124-72-4	4:2 Fluorotelomer sulfonate	7.1 U	18	7.1	2.9	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	8.3	18	7.1	3.1	ng/l	J
39108-34-4	8:2 Fluorotelomer sulfonate	7.1 U	18	7.1	3.7	ng/l	

**PERFLUOROOCCTANE SULFONAMIDES**

754-91-6	PFOSA	1.8 U	4.5	1.8	0.60	ng/l	
31506-32-8	MeFOSA	1.8 U	4.5	1.8	0.89	ng/l	
4151-50-2	EtFOSA	1.8 U	4.5	1.8	0.89	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-RHMW03-WGN01LF-2301W4		
Lab Sample ID:	FC2151-2	Date Sampled:	01/23/23
Matrix:	AQ - Ground Water	Date Received:	01/24/23
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	3.6 U	4.5	3.6	0.89	ng/l	
2991-50-6	EtFOSAA	3.6 U	4.5	3.6	1.2	ng/l	

**PERFLUOROOCCTANE SULFONAMIDO ETHANOLS**

24448-09-7	MeFOSE	8.9 U	45	8.9	3.9	ng/l	
1691-99-2	EtFOSE	18 U	45	18	6.6	ng/l	

**PER and POLYFLUOROETHER CARBOXYLIC ACIDS**

13252-13-6	HFPO-DA (GenX)	3.6 U	18	3.6	0.89	ng/l	
919005-14-4	ADONA	3.6 U	18	3.6	1.7	ng/l	
377-73-1	PFMPA	1.8 U	8.9	1.8	0.89	ng/l	
863090-89-5	PFMBA	3.6 U	8.9	3.6	1.0	ng/l	
151772-58-6	NFDHA	3.6 U	8.9	3.6	1.1	ng/l	

**PER and POLYFLUOROETHER SULFONIC ACIDS**

756426-58-1	9Cl-PF3ONS (F-53B Major)	3.6 U	18	3.6	1.2	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	3.6 U	18	3.6	1.6	ng/l	
113507-82-7	PFEESA	1.8 U	8.9	1.8	0.70	ng/l	

**FLUOROTELOMER CARBOXYLIC ACIDS**

356-02-5	3:3 Fluorotelomer carboxylate	8.9 U	22	8.9	4.0	ng/l	
914637-49-3	5:3 Fluorotelomer carboxylate	18 U	110	18	7.8	ng/l	
812-70-4	7:3 Fluorotelomer carboxylate	18 U	110	18	7.0	ng/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
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	13C4-PFBA	91%		20-150%
	13C5-PFPeA	112%		20-150%
	13C5-PFHxA	111%		20-150%
	13C4-PFHpA	112%		20-150%
	13C8-PFOA	99%		20-150%
	13C9-PFNA	115%		20-150%
	13C6-PFDA	107%		20-150%
	13C7-PFUnDA	98%		20-150%
	13C2-PFDoDA	86%		20-150%
	13C2-PFTeDA	73%		20-150%
	13C3-PFBS	103%		20-150%
	13C3-PFHxS	106%		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

<b>Client Sample ID:</b>	AF-RHMW03-WGN01LF-2301W4		
<b>Lab Sample ID:</b>	FC2151-2	<b>Date Sampled:</b>	01/23/23
<b>Matrix:</b>	AQ - Ground Water	<b>Date Received:</b>	01/24/23
<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	96%		20-150%
	13C8-FOSA	93%		20-150%
	d3-MeFOSA	79%		20-150%
	d5-EtFOSA	80%		20-150%
	d3-MeFOSAA	91%		20-150%
	d5-EtFOSAA	87%		20-150%
	d7-MeFOSE	77%		20-150%
	d9-EtFOSE	72%		20-150%
	13C2-4:2FTS	105%		20-150%
	13C2-6:2FTS	103%		20-150%
	13C2-8:2FTS	92%		20-150%
	13C3-HFPO-DA	112%		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

FC2151

COC # 2301W4AFSG01

Chain of Custody

SGS - ORLANDO JOB # :

PAGE 1 OF 1

4405 Vineland Road, Suite C-15 Orlando, FL 32811  
TEL: 407-425-6700 FAX: 407-425-0705  
www.sgs.com

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;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">PFAS EPA Draft 1633</div> <div style="text-align: right;"> <p>21/23/23</p> </div> </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
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 #														
Sampler(s) Name(s) (Printed) Sampler 1: T14 Sampler 2:		Client Purchase Order #														
SGS Orlando Sample #	Field ID / Point of Collection	DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	PCB	INCH	INCH3	PCB04	INCH-ZN/C	IN WATER	INCH	LAB USE ONLY
1	AF-RHMW02-WGN01LF-2301W4	1/26/23	11:55	WJ	GW	3		X								
Turnaround Time ( Business days)		Approved By: / Date:		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				<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 United AQB 016-71996746
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		Date Time:		Received By/Affiliation				Date Time:		Received By/Affiliation				Date Time:		
1 Tran-her Me		1/26/23 1355		2 [Signature] AECOM				3 [Signature]		4 [Signature] 1530				5 [Signature] 1530		
Relinquished by/Affiliation		Date Time:		Received By/Affiliation				Date Time:		Received By/Affiliation				Date Time:		
5				6				7		8						
Lab Use Only : Cooler Temperature (s) Celsius (corrected): 3.0 IR+L																
<a href="http://www.sgs.com/en/terms-and-conditions">http://www.sgs.com/en/terms-and-conditions</a>																

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FC2151: Chain of Custody

Page 1 of 3





SGS North America Inc - Orlando

FC2151

COC # 2301W4AFSG02

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

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																DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe	
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				PFAS EPA Draft 1633  X												LAB USE ONLY	
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: Matt Yin Sampler 2:																				
SGS Orlando Sample #	Field ID / Point of Collection		DATE	TIME	SAMPLED BY	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	PCl	NH3	NH4	HNO3	HNO2	PHOS	NaOH-ZnAC	DI WATER	MICH		
2	AF-RHMW03-WGN01LF-2301W4		1/23/23	1230	MY	GW	3	X												
			MY 1/23/23																	
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: AFFF Assessment Sampling GW  United AWB-016-71996746								
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			Date Time:	Received By/Affiliation			Relinquished By/Affiliation			Date Time:	Received By/Affiliation									
1 Matt Yin / AECOM			1/23/23 1355	2 Miranda DeCaro / AECOM			3 Miranda DeCaro			1/23/23 1530	4 [Signature] / AECOM									
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):					3.0 (RFL)							<a href="http://www.sgs.com/en/terms-and-conditions">http://www.sgs.com/en/terms-and-conditions</a>								

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FC2151: Chain of Custody

Page 2 of 3



## SGS Sample Receipt Summary

Job Number: FC2151

Client: AECOM

Project: N6274223F0104 RH Fire Suppression System

Date / Time Received: 1/24/2023 3:30:00 PM

Delivery Method: United Cargo/Airspace

Airbill #'s: United Cargo AWB #: 016-71996746

Therm ID: IR 1;

Therm CF: 0.2;

# of Coolers: 1

Cooler Temps (Raw Measured) °C: Cooler 1: (3.0);

Cooler Temps (Corrected) °C: Cooler 1: (3.2);

**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 #s: 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: 1/24/2023 3:30:00 PM

Reviewer: CD

Date: 1/25/2023

FC2151: Chain of Custody

Page 3 of 3



# QC Evaluation: DOD QSM5.x Limits

**Job Number:** FC2151  
**Account:** AECOM, INC.  
**Project:** N6274223F0104 RH Fire Suppression System  
**Collected:** 01/23/23

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 FC2151

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: FC2151  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q195-IBLK	6Q12658.D	1	01/31/23	MV	n/a	n/a	S6Q195

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC2151-1, FC2151-2

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	0.0013	0.0050	0.0010	ug/l	J
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	0.0196	0.050	0.0074	ug/l	J
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: FC2151  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q195-IBLK	6Q12658.D	1	01/31/23	MV	n/a	n/a	S6Q195

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC2151-1, FC2151-2

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	97% 20-150%
	13C5-PFPeA	101% 20-150%
	13C5-PFHxA	100% 20-150%
	13C4-PFHpA	98% 20-150%
	13C8-PFOA	98% 20-150%
	13C9-PFNA	96% 20-150%
	13C6-PFDA	101% 20-150%
	13C7-PFUnDA	94% 20-150%
	13C2-PFDoDA	93% 20-150%
	13C2-PFTeDA	96% 20-150%
	13C3-PFBS	102% 20-150%
	13C3-PFHxS	106% 20-150%
	13C8-PFOS	104% 20-150%
	13C8-FOSA	101% 20-150%
	d3-MeFOSA	96% 20-150%
	d5-EtFOSA	105% 20-150%
	d3-MeFOSAA	109% 20-150%
	d5-EtFOSAA	111% 20-150%
	d7-MeFOSE	99% 20-150%
	d9-EtFOSE	97% 20-150%
	13C2-4:2FTS	130% 20-150%
	13C2-6:2FTS	119% 20-150%
	13C2-8:2FTS	115% 20-150%
	13C3-HFPO-DA	95% 20-150%

6.1.1  
6

# Instrument Blank

Job Number: FC2151  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q195-IBLK	6Q12690.D	1	02/01/23	MV	n/a	n/a	S6Q195

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC2151-1, FC2151-2

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	0.0013	0.0050	0.0010	ug/l	J
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	0.0139	0.050	0.0074	ug/l	J
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: FC2151  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q195-IBLK	6Q12690.D	1	02/01/23	MV	n/a	n/a	S6Q195

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC2151-1, FC2151-2

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	98% 20-150%
	13C5-PFPeA	99% 20-150%
	13C5-PFHxA	103% 20-150%
	13C4-PFHpA	101% 20-150%
	13C8-PFOA	96% 20-150%
	13C9-PFNA	96% 20-150%
	13C6-PFDA	97% 20-150%
	13C7-PFUnDA	95% 20-150%
	13C2-PFDoDA	97% 20-150%
	13C2-PFTeDA	93% 20-150%
	13C3-PFBS	98% 20-150%
	13C3-PFHxS	104% 20-150%
	13C8-PFOS	104% 20-150%
	13C8-FOSA	98% 20-150%
	d3-MeFOSA	100% 20-150%
	d5-EtFOSA	99% 20-150%
	d3-MeFOSAA	104% 20-150%
	d5-EtFOSAA	105% 20-150%
	d7-MeFOSE	96% 20-150%
	d9-EtFOSE	93% 20-150%
	13C2-4:2FTS	126% 20-150%
	13C2-6:2FTS	113% 20-150%
	13C2-8:2FTS	104% 20-150%
	13C3-HFPO-DA	109% 20-150%

# Continuing Calibration Blank

Job Number: FC2151  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q195-ICCB	6Q12703.D	1	02/01/23	MV	n/a	n/a	S6Q195

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC2151-1, FC2151-2

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: FC2151  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q195-ICCB	6Q12703.D	1	02/01/23	MV	n/a	n/a	S6Q195

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC2151-1, FC2151-2

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	96% 20-150%
	13C5-PFPeA	104% 20-150%
	13C5-PFHxA	105% 20-150%
	13C4-PFHpA	107% 20-150%
	13C8-PFOA	99% 20-150%
	13C9-PFNA	99% 20-150%
	13C6-PFDA	95% 20-150%
	13C7-PFUnDA	95% 20-150%
	13C2-PFDoDA	94% 20-150%
	13C2-PFTeDA	94% 20-150%
	13C3-PFBS	99% 20-150%
	13C3-PFHxS	99% 20-150%
	13C8-PFOS	113% 20-150%
	13C8-FOSA	105% 20-150%
	d3-MeFOSA	107% 20-150%
	d5-EtFOSA	107% 20-150%
	d3-MeFOSAA	114% 20-150%
	d5-EtFOSAA	118% 20-150%
	d7-MeFOSE	102% 20-150%
	d9-EtFOSE	93% 20-150%
	13C2-4:2FTS	129% 20-150%
	13C2-6:2FTS	111% 20-150%
	13C2-8:2FTS	101% 20-150%
	13C3-HFPO-DA	107% 20-150%



# Continuing Calibration Blank

Job Number: FC2151  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q195-ICCB	6Q12714.D	1	02/01/23	MV	n/a	n/a	S6Q195

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC2151-1, FC2151-2

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 acid	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: FC2151  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q195-ICCB	6Q12714.D	1	02/01/23	MV	n/a	n/a	S6Q195

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC2151-1, FC2151-2

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	98% 20-150%
	13C5-PFPeA	102% 20-150%
	13C5-PFHxA	99% 20-150%
	13C4-PFHpA	102% 20-150%
	13C8-PFOA	103% 20-150%
	13C9-PFNA	104% 20-150%
	13C6-PFDA	102% 20-150%
	13C7-PFUnDA	98% 20-150%
	13C2-PFDoDA	95% 20-150%
	13C2-PFTeDA	95% 20-150%
	13C3-PFBS	91% 20-150%
	13C3-PFHxS	91% 20-150%
	13C8-PFOS	105% 20-150%
	13C8-FOSA	104% 20-150%
	d3-MeFOSA	98% 20-150%
	d5-EtFOSA	100% 20-150%
	d3-MeFOSAA	114% 20-150%
	d5-EtFOSAA	112% 20-150%
	d7-MeFOSE	102% 20-150%
	d9-EtFOSE	94% 20-150%
	13C2-4:2FTS	119% 20-150%
	13C2-6:2FTS	107% 20-150%
	13C2-8:2FTS	99% 20-150%
	13C3-HFPO-DA	98% 20-150%

# Method Blank Summary

Job Number: FC2151  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP95171-MB	6Q12706.D	1	02/01/23	MV	01/26/23	OP95171	S6Q195

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC2151-1, FC2151-2

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: FC2151  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP95171-MB	6Q12706.D	1	02/01/23	MV	01/26/23	OP95171	S6Q195

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC2151-1, FC2151-2

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	121% 20-150%
	13C5-PFPeA	132% 20-150%
	13C5-PFHxA	135% 20-150%
	13C4-PFHpA	137% 20-150%
	13C8-PFOA	121% 20-150%
	13C9-PFNA	102% 20-150%
	13C6-PFDA	142% 20-150%
	13C7-PFUnDA	125% 20-150%
	13C2-PFDoDA	112% 20-150%
	13C2-PFTeDA	105% 20-150%
	13C3-PFBS	118% 20-150%
	13C3-PFHxS	132% 20-150%
	13C8-PFOS	113% 20-150%
	13C8-FOSA	103% 20-150%
	d3-MeFOSA	97% 20-150%
	d5-EtFOSA	96% 20-150%
	d3-MeFOSAA	118% 20-150%
	d5-EtFOSAA	104% 20-150%
	d7-MeFOSE	102% 20-150%
	d9-EtFOSE	100% 20-150%
	13C2-4:2FTS	165%* 20-150%
	13C2-6:2FTS	153%* 20-150%
	13C2-8:2FTS	132% 20-150%
	13C3-HFPO-DA	146% 20-150%

# Continuing Calibration Blank

Job Number: FC2151  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q195-ICCB	6Q12684.D	1	02/01/23	MV	n/a	n/a	S6Q195

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

S6Q195-IBLK, S6Q195-RT

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: FC2151  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q195-ICCB	6Q12684.D	1	02/01/23	MV	n/a	n/a	S6Q195

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

S6Q195-IBLK, S6Q195-RT

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	98% 20-150%
	13C5-PFPeA	99% 20-150%
	13C5-PFHxA	101% 20-150%
	13C4-PFHpA	107% 20-150%
	13C8-PFOA	101% 20-150%
	13C9-PFNA	92% 20-150%
	13C6-PFDA	99% 20-150%
	13C7-PFUnDA	100% 20-150%
	13C2-PFDoDA	97% 20-150%
	13C2-PFTeDA	95% 20-150%
	13C3-PFBS	100% 20-150%
	13C3-PFHxS	103% 20-150%
	13C8-PFOS	105% 20-150%
	13C8-FOSA	106% 20-150%
	d3-MeFOSA	100% 20-150%
	d5-EtFOSA	98% 20-150%
	d3-MeFOSAA	114% 20-150%
	d5-EtFOSAA	113% 20-150%
	d7-MeFOSE	100% 20-150%
	d9-EtFOSE	92% 20-150%
	13C2-4:2FTS	119% 20-150%
	13C2-6:2FTS	118% 20-150%
	13C2-8:2FTS	105% 20-150%
	13C3-HFPO-DA	100% 20-150%

# Continuing Calibration Blank

Job Number: FC2151  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q195-ICCB	6Q12686.D	1	02/01/23	MV	n/a	n/a	S6Q195

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

S6Q195-IBLK, S6Q195-RT

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: FC2151  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q195-ICCB	6Q12686.D	1	02/01/23	MV	n/a	n/a	S6Q195

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

S6Q195-IBLK, S6Q195-RT

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	94% 20-150%
	13C5-PFPeA	108% 20-150%
	13C5-PFHxA	102% 20-150%
	13C4-PFHpA	118% 20-150%
	13C8-PFOA	103% 20-150%
	13C9-PFNA	97% 20-150%
	13C6-PFDA	102% 20-150%
	13C7-PFUnDA	104% 20-150%
	13C2-PFDoDA	102% 20-150%
	13C2-PFTeDA	111% 20-150%
	13C3-PFBS	87% 20-150%
	13C3-PFHxS	96% 20-150%
	13C8-PFOS	112% 20-150%
	13C8-FOSA	107% 20-150%
	d3-MeFOSA	100% 20-150%
	d5-EtFOSA	97% 20-150%
	d3-MeFOSAA	88% 20-150%
	d5-EtFOSAA	97% 20-150%
	d7-MeFOSE	94% 20-150%
	d9-EtFOSE	85% 20-150%
	13C2-4:2FTS	116% 20-150%
	13C2-6:2FTS	97% 20-150%
	13C2-8:2FTS	84% 20-150%
	13C3-HFPO-DA	133% 20-150%



# Blank Spike Summary

Job Number: FC2151  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP95171-LLBS	6Q12705.D	1	02/01/23	MV	01/26/23	OP95171	S6Q195

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC2151-1, FC2151-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.04	0.0353	88	40-150
2706-90-3	Perfluoropentanoic acid	0.02	0.0192	96	40-150
307-24-4	Perfluorohexanoic acid	0.01	0.0102	102	40-150
375-85-9	Perfluoroheptanoic acid	0.01	0.0098	98	40-150
335-67-1	Perfluorooctanoic acid	0.01	0.0128	128	40-150
375-95-1	Perfluorononanoic acid	0.01	0.0087	87	40-150
335-76-2	Perfluorodecanoic acid	0.01	0.0092	92	40-150
2058-94-8	Perfluoroundecanoic acid	0.01	0.0095	95	40-150
307-55-1	Perfluorododecanoic acid	0.01	0.0096	96	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	0.0088	99	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.00941	0.0082	87	40-150
355-46-4	Perfluorohexanesulfonic acid	0.00914	0.0095	104	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.00953	0.0092	97	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.00928	0.0080	86	40-150
68259-12-1	Perfluorononanesulfonic acid	0.00962	0.0081	84	40-150
335-77-3	Perfluorodecanesulfonic acid	0.00965	0.0093	96	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0097	0.0065	67	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.0375	0.0348	93	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.038	0.0331	87	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.0384	0.0419	109	40-150
754-91-6	PFOSA	0.01	0.0092	92	40-150
31506-32-8	MeFOSA	0.01	0.0091	91	40-150
4151-50-2	EtFOSA	0.01	0.0086	86	40-150
2355-31-9	MeFOSAA	0.01	0.0096	96	40-150
2991-50-6	EtFOSAA	0.01	0.0099	99	40-150
24448-09-7	MeFOSE	0.1	0.0919	92	40-150
1691-99-2	EtFOSE	0.1	0.0928	93	40-150
13252-13-6	HFPO-DA (GenX)	0.04	0.0391	98	40-150
919005-14-4	ADONA	0.0378	0.0378	100	40-150
377-73-1	PFMPA	0.02	0.0192	96	40-150
863090-89-5	PFMBA	0.02	0.0179	90	40-150
151772-58-6	NFDHA	0.02	0.0190	95	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.0374	0.0350	94	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0378	0.0351	93	40-150

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: FC2151  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP95171-LLBS	6Q12705.D	1	02/01/23	MV	01/26/23	OP95171	S6Q195

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC2151-1, FC2151-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0178	0.0183	103	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.05	0.0368	74	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.25	0.234	94	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.25	0.257	103	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	112%	20-150%
	13C5-PFPeA	126%	20-150%
	13C5-PFHxA	118%	20-150%
	13C4-PFHpA	122%	20-150%
	13C8-PFOA	109%	20-150%
	13C9-PFNA	122%	20-150%
	13C6-PFDA	116%	20-150%
	13C7-PFUnDA	105%	20-150%
	13C2-PFDoDA	100%	20-150%
	13C2-PFTeDA	87%	20-150%
	13C3-PFBS	108%	20-150%
	13C3-PFHxS	113%	20-150%
	13C8-PFOS	120%	20-150%
	13C8-FOSA	111%	20-150%
	d3-MeFOSA	96%	20-150%
	d5-EtFOSA	92%	20-150%
	d3-MeFOSAA	124%	20-150%
	d5-EtFOSAA	119%	20-150%
	d7-MeFOSE	88%	20-150%
	d9-EtFOSE	85%	20-150%
	13C2-4:2FTS	146%	20-150%
	13C2-6:2FTS	145%	20-150%
	13C2-8:2FTS	102%	20-150%
	13C3-HFPO-DA	127%	20-150%

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: FC2151  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP95171-BS	6Q12704.D	1	02/01/23	MV	01/26/23	OP95171	S6Q195

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC2151-1, FC2151-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.1	0.0916	92	40-150
2706-90-3	Perfluoropentanoic acid	0.05	0.0507	101	40-150
307-24-4	Perfluorohexanoic acid	0.025	0.0243	97	40-150
375-85-9	Perfluoroheptanoic acid	0.025	0.0254	102	40-150
335-67-1	Perfluorooctanoic acid	0.025	0.0257	103	40-150
375-95-1	Perfluorononanoic acid	0.025	0.0260	104	40-150
335-76-2	Perfluorodecanoic acid	0.025	0.0247	99	40-150
2058-94-8	Perfluoroundecanoic acid	0.025	0.0245	98	40-150
307-55-1	Perfluorododecanoic acid	0.025	0.0254	102	40-150
72629-94-8	Perfluorotridecanoic acid	0.025	0.0240	96	40-150
376-06-7	Perfluorotetradecanoic acid	0.025	0.0245	98	40-150
375-73-5	Perfluorobutanesulfonic acid	0.0222	0.0225	101	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0235	0.0226	96	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0229	0.0222	97	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0238	0.0239	100	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0232	0.0208	90	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0241	0.0221	92	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0241	0.0223	92	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0243	0.0202	83	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.0938	0.0871	93	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.095	0.0916	96	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.096	0.0954	99	40-150
754-91-6	PFOSA	0.025	0.0245	98	40-150
31506-32-8	MeFOSA	0.025	0.0257	103	40-150
4151-50-2	EtFOSA	0.025	0.0233	93	40-150
2355-31-9	MeFOSAA	0.025	0.0234	94	40-150
2991-50-6	EtFOSAA	0.025	0.0239	96	40-150
24448-09-7	MeFOSE	0.25	0.229	92	40-150
1691-99-2	EtFOSE	0.25	0.237	95	40-150
13252-13-6	HFPO-DA (GenX)	0.1	0.0990	99	40-150
919005-14-4	ADONA	0.0945	0.0931	99	40-150
377-73-1	PFMPA	0.05	0.0364	73	40-150
863090-89-5	PFMBA	0.05	0.0464	93	40-150
151772-58-6	NFDHA	0.05	0.0459	92	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.0935	0.0917	98	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0945	0.0897	95	40-150

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: FC2151  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP95171-BS	6Q12704.D	1	02/01/23	MV	01/26/23	OP95171	S6Q195

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC2151-1, FC2151-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0445	0.0473	106	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.125	0.0909	73	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.625	0.590	94	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.625	0.590	94	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	40%	20-150%
	13C5-PFPeA	118%	20-150%
	13C5-PFHxA	119%	20-150%
	13C4-PFHpA	116%	20-150%
	13C8-PFOA	119%	20-150%
	13C9-PFNA	116%	20-150%
	13C6-PFDA	106%	20-150%
	13C7-PFUnDA	106%	20-150%
	13C2-PFDoDA	99%	20-150%
	13C2-PFTeDA	88%	20-150%
	13C3-PFBS	111%	20-150%
	13C3-PFHxS	113%	20-150%
	13C8-PFOS	111%	20-150%
	13C8-FOSA	105%	20-150%
	d3-MeFOSA	97%	20-150%
	d5-EtFOSA	95%	20-150%
	d3-MeFOSAA	117%	20-150%
	d5-EtFOSAA	108%	20-150%
	d7-MeFOSE	98%	20-150%
	d9-EtFOSE	87%	20-150%
	13C2-4:2FTS	147%	20-150%
	13C2-6:2FTS	134%	20-150%
	13C2-8:2FTS	115%	20-150%
	13C3-HFPO-DA	125%	20-150%

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FC2151  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP95171-MS	6Q12710.D	1	02/01/23	MV	01/26/23	OP95171	S6Q195
OP95171-MSD	6Q12711.D	1	02/01/23	MV	01/26/23	OP95171	S6Q195
FC1914-2	6Q12709.D	1	02/01/23	MV	01/26/23	OP95171	S6Q195

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC2151-1, FC2151-2

CAS No.	Compound	FC1914-2 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	0.018 U	0.0877	0.0803	92	0.0877	0.0785	89	2	40-150/30
2706-90-3	Perfluoropentanoic acid	0.0088 U	0.0439	0.0447	102	0.0439	0.0433	99	3	40-150/30
307-24-4	Perfluorohexanoic acid	0.0044 U	0.0219	0.0208	95	0.0219	0.0224	102	7	40-150/30
375-85-9	Perfluoroheptanoic acid	0.0044 U	0.0219	0.0212	97	0.0219	0.0215	98	1	40-150/30
335-67-1	Perfluorooctanoic acid	0.0044 U	0.0219	0.0218	99	0.0219	0.0217	99	0	40-150/30
375-95-1	Perfluorononanoic acid	0.0044 U	0.0219	0.0211	96	0.0219	0.0209	95	1	40-150/30
335-76-2	Perfluorodecanoic acid	0.0044 U	0.0219	0.0205	93	0.0219	0.0231	105	12	40-150/30
2058-94-8	Perfluoroundecanoic acid	0.0044 U	0.0219	0.0207	94	0.0219	0.0212	97	2	40-150/30
307-55-1	Perfluorododecanoic acid	0.0044 U	0.0219	0.0214	98	0.0219	0.0218	99	2	40-150/30
72629-94-8	Perfluorotridecanoic acid	0.0044 U	0.0219	0.0211	96	0.0219	0.0224	102	6	40-150/30
376-06-7	Perfluorotetradecanoic acid	0.0044 U	0.0219	0.0226	103	0.0219	0.0218	99	4	40-150/30
375-73-5	Perfluorobutanesulfonic acid	0.0044 U	0.0195	0.0196	101	0.0195	0.0182	94	7	40-150/30
2706-91-4	Perfluoropentanesulfonic acid	0.0044 U	0.0206	0.0212	103	0.0206	0.0192	93	10	40-150/30
355-46-4	Perfluorohexanesulfonic acid	0.0044 U	0.02	0.0199	99	0.02	0.0177	88	12	40-150/30
375-92-8	Perfluoroheptanesulfonic acid	0.0044 U	0.0209	0.0218	104	0.0209	0.0222	106	2	40-150/30
1763-23-1	Perfluorooctanesulfonic acid	0.0044 U	0.0204	0.0190	93	0.0204	0.0193	95	2	40-150/30
68259-12-1	Perfluorononanesulfonic acid	0.0044 U	0.0211	0.0214	101	0.0211	0.0169	80	23	40-150/30
335-77-3	Perfluorodecanesulfonic acid	0.0044 U	0.0212	0.0186	88	0.0212	0.0174	82	7	40-150/30
79780-39-5	Perfluorododecanesulfonic aci	0.0044 U	0.0213	0.0191	90	0.0213	0.0172	81	10	40-150/30
757124-72-44:2	Fluorotelomer sulfonate	0.018 U	0.0822	0.0766	93	0.0822	0.0726	88	5	40-150/30
27619-97-2	6:2 Fluorotelomer sulfonate	0.018 U	0.0833	0.0807	97	0.0833	0.0803	96	0	40-150/30
39108-34-4	8:2 Fluorotelomer sulfonate	0.018 U	0.0842	0.0874	104	0.0842	0.0898	107	3	40-150/30
754-91-6	PFOSA	0.0044 U	0.0219	0.0227	104	0.0219	0.0215	98	5	40-150/30
31506-32-8	MeFOSA	0.0044 U	0.0219	0.0202	92	0.0219	0.0208	95	3	40-150/30
4151-50-2	EtFOSA	0.0044 U	0.0219	0.0212	97	0.0219	0.0203	93	4	40-150/30
2355-31-9	MeFOSAA	0.0044 U	0.0219	0.0212	97	0.0219	0.0219	100	3	40-150/30
2991-50-6	EtFOSAA	0.0044 U	0.0219	0.0207	94	0.0219	0.0212	97	2	40-150/30
24448-09-7	MeFOSE	0.044 U	0.219	0.208	95	0.219	0.227	104	9	40-150/30
1691-99-2	EtFOSE	0.044 U	0.219	0.209	95	0.219	0.205	93	2	40-150/30
13252-13-6	HFPO-DA (GenX)	0.018 U	0.0877	0.0878	100	0.0877	0.0884	101	1	40-150/30
919005-14-4	ADONA	0.018 U	0.0829	0.0790	95	0.0829	0.0797	96	1	40-150/30
377-73-1	PFMPA	0.0088 U	0.0439	0.0424	97	0.0439	0.0421	96	1	40-150/30
863090-89-5	PFMBA	0.0088 U	0.0439	0.0410	93	0.0439	0.0402	92	2	40-150/30
151772-58-6	NFDHA	0.0088 U	0.0439	0.0400	91	0.0439	0.0427	97	7	40-150/30
756426-58-19	Cl-PF3ONS (F-53B Major)	0.018 U	0.082	0.0708	86	0.082	0.0674	82	5	40-150/30
763051-92-911	Cl-PF3OUdS (F-53B Minor)	0.018 U	0.0829	0.0669	81	0.0829	0.0636	77	5	40-150/30

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FC2151  
 Account: AECOMCOD AECOM, INC.  
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP95171-MS	6Q12710.D	1	02/01/23	MV	01/26/23	OP95171	S6Q195
OP95171-MSD	6Q12711.D	1	02/01/23	MV	01/26/23	OP95171	S6Q195
FC1914-2	6Q12709.D	1	02/01/23	MV	01/26/23	OP95171	S6Q195

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC2151-1, FC2151-2

CAS No.	Compound	FC1914-2 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	0.0088 U	0.039	0.0388	99	0.039	0.0387	99	0	40-150/30
356-02-5	3:3 Fluorotelomer carboxylate	0.022 U	0.11	0.0920	84	0.11	0.0977	89	6	40-150/30
914637-49-35:3	Fluorotelomer carboxylate	0.11 U	0.548	0.473	86	0.548	0.499	91	5	40-150/30
812-70-4	7:3 Fluorotelomer carboxylate	0.11 U	0.548	0.491	90	0.548	0.482	88	2	40-150/30

CAS No.	ID Standard Recoveries	MS	MSD	FC1914-2	Limits
	13C4-PFBA	83%	82%	87%	20-150%
	13C5-PFPeA	119%	127%	120%	20-150%
	13C5-PFHxA	123%	127%	123%	20-150%
	13C4-PFHpA	120%	126%	121%	20-150%
	13C8-PFOA	111%	109%	115%	20-150%
	13C9-PFNA	97%	111%	112%	20-150%
	13C6-PFDA	102%	103%	107%	20-150%
	13C7-PFUnDA	94%	91%	93%	20-150%
	13C2-PFDoDA	88%	81%	78%	20-150%
	13C2-PFTeDA	83%	84%	79%	20-150%
	13C3-PFBS	109%	108%	112%	20-150%
	13C3-PFHxS	110%	115%	110%	20-150%
	13C8-PFOS	99%	111%	111%	20-150%
	13C8-FOSA	97%	108%	104%	20-150%
	d3-MeFOSA	93%	92%		20-150%
	d5-EtFOSA	82%	86%		20-150%
	d3-MeFOSAA	100%	101%	98%	20-150%
	d5-EtFOSAA	98%	103%	99%	20-150%
	d7-MeFOSE	90%	84%		20-150%
	d9-EtFOSE	83%	82%		20-150%
	13C2-4:2FTS	142%	146%	143%	20-150%
	13C2-6:2FTS	129%	128%	141%	20-150%
	13C2-8:2FTS	106%	99%	114%	20-150%
	13C3-HFPO-DA	125%	135%		20-150%

\* = Outside of Control Limits.