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

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Automated Report

Technical Report for

AECOM, INC.

N6274223F0104 RH Fire Suppression System

60697810

SGS Job Number: FC5252

Sampling Date: 04/14/23

Report to:

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

Total number of pages in report: 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

Sections: 1 2 3 4 5 6

Table of Contents

SGS North America Inc.

Sample Summary

AECOM, INC.

Job No: FC5252

N6274223F0104 RH Fire Suppression System
Project No: 60697810

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FC5252-1	04/14/23	09:10	KO	04/15/23	AQ	Ground Water	AF-RHMW04-WGN01LF-2304W2
FC5252-2	04/14/23	09:55	RS	04/15/23	AQ	Ground Water	AF-RHMW17-WGN01LF-2304W2
FC5252-3	04/14/23	10:30	NH	04/15/23	AQ	Ground Water	AF-RHMW06-WGN01LF-2304W2
FC5252-4	04/14/23	11:45	RS	04/15/23	AQ	Ground Water	AF-RHMW17D-WGN01LF-2304W2
FC5252-5	04/14/23	10:45	RS	04/15/23	AQ	Field Blank Water	AF-RHMW17D-WQFB01-2304W2

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: AECOM, INC. **Job No:** FC5252

Site: N6274223F0104 RH Fire Suppression System **Report Date:** 4/21/2023 3:48:53 PM

On 04/15/2023, 4 Sample(s), 0 Trip Blank(s) and 1 Field Blank(s) were received at SGS North America Inc - Orlando. at a maximum corrected temperature of 3.3 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FC5252 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:** OP96427

Sample(s) FC5252-2MS, FC5252-3DUP were used as the QC samples indicated.

Sample(s) FC5252-5 have surrogates outside control limits.

FC5252-5 for Perfluorobutanoic acid: Associated ID Standard outside control limits. Confirmed by re-extraction and reanalysis.

FC5252-5 for 13C4-PFBA: Outside control limits.

Matrix: AQ **Batch ID:** OP96494

OP96494-BS: Insufficient sample for MS/MSD.

Sample(s) FC5252-5 have surrogates outside control limits.

FC5252-5 for 13C4-PFBA: Outside control limits.

FC5252-5 for 13C5-PFPeA: 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: FC5252
Account: AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System
Collected: 04/14/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FC5252-1	**AF-RHMW04-WGN01LF-2304W2**					
No hits reported in this sample.						
FC5252-2	**AF-RHMW17-WGN01LF-2304W2**					
Perfluorobutanoic acid		3.6 J	18	3.6	ng/l	EPA DRAFT 1633
Perfluoropentanoic acid		4.0 J	9.1	1.8	ng/l	EPA DRAFT 1633
Perfluorohexanoic acid		2.1 J	4.5	0.91	ng/l	EPA DRAFT 1633
Perfluorooctanoic acid		0.46 J	4.5	0.91	ng/l	EPA DRAFT 1633
FC5252-3	**AF-RHMW06-WGN01LF-2304W2**					
No hits reported in this sample.						
FC5252-4	**AF-RHMW17D-WGN01LF-2304W2**					
No hits reported in this sample.						
FC5252-5	**AF-RHMW17D-WQFB01-2304W2**					
No hits reported in this sample.						

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: AF-RHMW04-WGN01LF-2304W2
Lab Sample ID: FC5252-1
Matrix: AQ - Ground Water
Method: EPA DRAFT 1633 EPA 1633 DRAFT
Project: N6274223F0104 RH Fire Suppression System

Date Sampled: 04/14/23
Date Received: 04/15/23
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4Q43170.D	1	04/18/23 16:35	MV	04/17/23 11:00	OP96427	S4Q624
Run #2							

	Initial Volume	Final Volume
Run #1	570 ml	5.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
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	7.0 U	18	7.0	3.0	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	7.0 U	18	7.0	3.6	ng/l	
PERFLUOROOCTANE 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

Report of Analysis

Client Sample ID:	AF-RHMW04-WGN01LF-2304W2		
Lab Sample ID:	FC5252-1	**Date Sampled:**	04/14/23
Matrix:	AQ - Ground Water	**Date Received:**	04/15/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROOCTANE SULFONAMIDOACETIC ACIDS							
2355-31-9	MeFOSAA	3.5 U	4.4	3.5	0.88	ng/l	
2991-50-6	EtFOSAA	3.5 U	4.4	3.5	1.2	ng/l	
PERFLUOROOCTANE 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	121%		20-150%
	13C5-PFPeA	122%		20-150%
	13C5-PFHxA	119%		20-150%
	13C4-PFHpA	126%		20-150%
	13C8-PFOA	111%		20-150%
	13C9-PFNA	115%		20-150%
	13C6-PFDA	110%		20-150%
	13C7-PFUnDA	84%		20-150%
	13C2-PFDoDA	79%		20-150%
	13C2-PFTeDA	71%		20-150%
	13C3-PFBS	114%		20-150%
	13C3-PFHxS	116%		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-RHMW04-WGN01LF-2304W2		
Lab Sample ID:	FC5252-1	**Date Sampled:**	04/14/23
Matrix:	AQ - Ground Water	**Date Received:**	04/15/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	104%		20-150%
	13C8-FOSA	92%		20-150%
	d3-MeFOSA	82%		20-150%
	d5-EtFOSA	79%		20-150%
	d3-MeFOSAA	101%		20-150%
	d5-EtFOSAA	88%		20-150%
	d7-MeFOSE	68%		20-150%
	d9-EtFOSE	66%		20-150%
	13C2-4:2FTS	128%		20-150%
	13C2-6:2FTS	127%		20-150%
	13C2-8:2FTS	103%		20-150%
	13C3-HFPO-DA	123%		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-RHMW17-WGN01LF-2304W2		
Lab Sample ID:	FC5252-2	**Date Sampled:**	04/14/23
Matrix:	AQ - Ground Water	**Date Received:**	04/15/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4Q43171.D	1	04/18/23 16:49	MV	04/17/23 11:00	OP96427	S4Q624
Run #2							

	Initial Volume	Final Volume
Run #1	550 ml	5.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYL CARBOXYLIC ACIDS							
375-22-4	Perfluorobutanoic acid	3.6	18	3.6	1.7	ng/l	J
2706-90-3	Perfluoropentanoic acid	4.0	9.1	1.8	0.85	ng/l	J
307-24-4	Perfluorohexanoic acid	2.1	4.5	0.91	0.45	ng/l	J
375-85-9	Perfluoroheptanoic acid	0.91 U	4.5	0.91	0.45	ng/l	
335-67-1	Perfluorooctanoic acid	0.46	4.5	0.91	0.45	ng/l	J
375-95-1	Perfluorononanoic acid	1.8 U	4.5	1.8	0.55	ng/l	
335-76-2	Perfluorodecanoic acid	0.91 U	4.5	0.91	0.45	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.8 U	4.5	1.8	0.55	ng/l	
307-55-1	Perfluorododecanoic acid	1.8 U	4.5	1.8	0.55	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.8 U	4.5	1.8	0.76	ng/l	
376-06-7	Perfluorotetradecanoic acid	0.91 U	4.5	0.91	0.45	ng/l	
PERFLUOROALKYL SULFONIC ACIDS							
375-73-5	Perfluorobutanesulfonic acid	0.91 U	4.5	0.91	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	0.64	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	0.91 U	4.5	0.91	0.45	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.8 U	4.5	1.8	0.49	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.8 U	4.5	1.8	0.52	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.8 U	4.5	1.8	0.58	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	7.3 U	18	7.3	2.9	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	7.3 U	18	7.3	3.2	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	7.3 U	18	7.3	3.7	ng/l	
PERFLUOROOCTANE SULFONAMIDES							
754-91-6	PFOSA	1.8 U	4.5	1.8	0.61	ng/l	
31506-32-8	MeFOSA	1.8 U	4.5	1.8	0.91	ng/l	
4151-50-2	EtFOSA	1.8 U	4.5	1.8	0.91	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-RHMW17-WGN01LF-2304W2		
Lab Sample ID:	FC5252-2	**Date Sampled:**	04/14/23
Matrix:	AQ - Ground Water	**Date Received:**	04/15/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROOCTANE SULFONAMIDOACETIC ACIDS							
2355-31-9	MeFOSAA	3.6 U	4.5	3.6	0.91	ng/l	
2991-50-6	EtFOSAA	3.6 U	4.5	3.6	1.2	ng/l	
PERFLUOROOCTANE SULFONAMIDO ETHANOLS							
24448-09-7	MeFOSE	9.1 U	45	9.1	4.0	ng/l	
1691-99-2	EtFOSE	18 U	45	18	6.7	ng/l	
PER and POLYFLUOROETHER CARBOXYLIC ACIDS							
13252-13-6	HFPO-DA (GenX)	3.6 U	18	3.6	0.91	ng/l	
919005-14-4	ADONA	3.6 U	18	3.6	1.7	ng/l	
377-73-1	PFMPA	1.8 U	9.1	1.8	0.91	ng/l	
863090-89-5	PFMBA	3.6 U	9.1	3.6	1.0	ng/l	
151772-58-6	NFDHA	3.6 U	9.1	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	1.3	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	9.1	1.8	0.71	ng/l	
FLUOROTELOMER CARBOXYLIC ACIDS							
356-02-5	3:3 Fluorotelomer carboxylate	9.1 U	23	9.1	4.1	ng/l	
914637-49-3	5:3 Fluorotelomer carboxylate	18 U	110	18	7.9	ng/l	
812-70-4	7:3 Fluorotelomer carboxylate	18 U	110	18	7.1	ng/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	118%		20-150%
	13C5-PFPeA	114%		20-150%
	13C5-PFHxA	113%		20-150%
	13C4-PFHpA	119%		20-150%
	13C8-PFOA	110%		20-150%
	13C9-PFNA	111%		20-150%
	13C6-PFDA	107%		20-150%
	13C7-PFUnDA	95%		20-150%
	13C2-PFDoDA	88%		20-150%
	13C2-PFTeDA	71%		20-150%
	13C3-PFBS	117%		20-150%
	13C3-PFHxS	112%		20-150%

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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-RHMW17-WGN01LF-2304W2		
Lab Sample ID:	FC5252-2	**Date Sampled:**	04/14/23
Matrix:	AQ - Ground Water	**Date Received:**	04/15/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	103%		20-150%
	13C8-FOSA	88%		20-150%
	d3-MeFOSA	86%		20-150%
	d5-EtFOSA	81%		20-150%
	d3-MeFOSAA	104%		20-150%
	d5-EtFOSAA	95%		20-150%
	d7-MeFOSE	70%		20-150%
	d9-EtFOSE	68%		20-150%
	13C2-4:2FTS	118%		20-150%
	13C2-6:2FTS	121%		20-150%
	13C2-8:2FTS	116%		20-150%
	13C3-HFPO-DA	110%		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-RHMW06-WGN01LF-2304W2
Lab Sample ID: FC5252-3
Matrix: AQ - Ground Water
Method: EPA DRAFT 1633 EPA 1633 DRAFT
Project: N6274223F0104 RH Fire Suppression System

Date Sampled: 04/14/23
Date Received: 04/15/23
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4Q43175.D	1	04/18/23 17:46	MV	04/17/23 11:00	OP96427	S4Q624
Run #2							

	Initial Volume	Final Volume
Run #1	550 ml	5.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYL CARBOXYLIC ACIDS							
375-22-4	Perfluorobutanoic acid	3.6 U	18	3.6	1.7	ng/l	
2706-90-3	Perfluoropentanoic acid	1.8 U	9.1	1.8	0.85	ng/l	
307-24-4	Perfluorohexanoic acid	0.91 U	4.5	0.91	0.45	ng/l	
375-85-9	Perfluoroheptanoic acid	0.91 U	4.5	0.91	0.45	ng/l	
335-67-1	Perfluorooctanoic acid	0.91 U	4.5	0.91	0.45	ng/l	
375-95-1	Perfluorononanoic acid	1.8 U	4.5	1.8	0.55	ng/l	
335-76-2	Perfluorodecanoic acid	0.91 U	4.5	0.91	0.45	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.8 U	4.5	1.8	0.55	ng/l	
307-55-1	Perfluorododecanoic acid	1.8 U	4.5	1.8	0.55	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.8 U	4.5	1.8	0.76	ng/l	
376-06-7	Perfluorotetradecanoic acid	0.91 U	4.5	0.91	0.45	ng/l	
PERFLUOROALKYL SULFONIC ACIDS							
375-73-5	Perfluorobutanesulfonic acid	0.91 U	4.5	0.91	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	0.64	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	0.91 U	4.5	0.91	0.45	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.8 U	4.5	1.8	0.49	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.8 U	4.5	1.8	0.52	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.8 U	4.5	1.8	0.58	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	7.3 U	18	7.3	2.9	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	7.3 U	18	7.3	3.2	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	7.3 U	18	7.3	3.7	ng/l	
PERFLUOROOCTANE SULFONAMIDES							
754-91-6	PFOSA	1.8 U	4.5	1.8	0.61	ng/l	
31506-32-8	MeFOSA	1.8 U	4.5	1.8	0.91	ng/l	
4151-50-2	EtFOSA	1.8 U	4.5	1.8	0.91	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-RHMW06-WGN01LF-2304W2		
Lab Sample ID:	FC5252-3	**Date Sampled:**	04/14/23
Matrix:	AQ - Ground Water	**Date Received:**	04/15/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROOCTANE SULFONAMIDOACETIC ACIDS							
2355-31-9	MeFOSAA	3.6 U	4.5	3.6	0.91	ng/l	
2991-50-6	EtFOSAA	3.6 U	4.5	3.6	1.2	ng/l	
PERFLUOROOCTANE SULFONAMIDO ETHANOLS							
24448-09-7	MeFOSE	9.1 U	45	9.1	4.0	ng/l	
1691-99-2	EtFOSE	18 U	45	18	6.7	ng/l	
PER and POLYFLUOROETHER CARBOXYLIC ACIDS							
13252-13-6	HFPO-DA (GenX)	3.6 U	18	3.6	0.91	ng/l	
919005-14-4	ADONA	3.6 U	18	3.6	1.7	ng/l	
377-73-1	PFMPA	1.8 U	9.1	1.8	0.91	ng/l	
863090-89-5	PFMBA	3.6 U	9.1	3.6	1.0	ng/l	
151772-58-6	NFDHA	3.6 U	9.1	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	1.3	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	9.1	1.8	0.71	ng/l	
FLUOROTELOMER CARBOXYLIC ACIDS							
356-02-5	3:3 Fluorotelomer carboxylate	9.1 U	23	9.1	4.1	ng/l	
914637-49-3	5:3 Fluorotelomer carboxylate	18 U	110	18	7.9	ng/l	
812-70-4	7:3 Fluorotelomer carboxylate	18 U	110	18	7.1	ng/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	113%		20-150%
	13C5-PFPeA	107%		20-150%
	13C5-PFHxA	109%		20-150%
	13C4-PFHpA	108%		20-150%
	13C8-PFOA	102%		20-150%
	13C9-PFNA	99%		20-150%
	13C6-PFDA	95%		20-150%
	13C7-PFUnDA	91%		20-150%
	13C2-PFDoDA	87%		20-150%
	13C2-PFTeDA	80%		20-150%
	13C3-PFBS	106%		20-150%
	13C3-PFHxS	109%		20-150%

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

Report of Analysis

Client Sample ID:	AF-RHMW06-WGN01LF-2304W2		
Lab Sample ID:	FC5252-3	**Date Sampled:**	04/14/23
Matrix:	AQ - Ground Water	**Date Received:**	04/15/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	90%		20-150%
	13C8-FOSA	77%		20-150%
	d3-MeFOSA	88%		20-150%
	d5-EtFOSA	93%		20-150%
	d3-MeFOSAA	100%		20-150%
	d5-EtFOSAA	99%		20-150%
	d7-MeFOSE	72%		20-150%
	d9-EtFOSE	71%		20-150%
	13C2-4:2FTS	123%		20-150%
	13C2-6:2FTS	117%		20-150%
	13C2-8:2FTS	116%		20-150%
	13C3-HFPO-DA	107%		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-RHMW17D-WGN01LF-2304W2		
Lab Sample ID:	FC5252-4	**Date Sampled:**	04/14/23
Matrix:	AQ - Ground Water	**Date Received:**	04/15/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4Q43177.D	1	04/18/23 18:14	MV	04/17/23 11:00	OP96427	S4Q624
Run #2							

	Initial Volume	Final Volume
Run #1	570 ml	5.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
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	7.0 U	18	7.0	3.0	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	7.0 U	18	7.0	3.6	ng/l	
PERFLUOROOCTANE 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

Report of Analysis

Client Sample ID:	AF-RHMW17D-WGN01LF-2304W2		
Lab Sample ID:	FC5252-4	**Date Sampled:**	04/14/23
Matrix:	AQ - Ground Water	**Date Received:**	04/15/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROOCTANE SULFONAMIDOACETIC ACIDS							
2355-31-9	MeFOSAA	3.5 U	4.4	3.5	0.88	ng/l	
2991-50-6	EtFOSAA	3.5 U	4.4	3.5	1.2	ng/l	
PERFLUOROOCTANE 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	125%		20-150%
	13C5-PFPeA	117%		20-150%
	13C5-PFHxA	118%		20-150%
	13C4-PFHpA	120%		20-150%
	13C8-PFOA	118%		20-150%
	13C9-PFNA	107%		20-150%
	13C6-PFDA	107%		20-150%
	13C7-PFUnDA	95%		20-150%
	13C2-PFDoDA	79%		20-150%
	13C2-PFTeDA	71%		20-150%
	13C3-PFBS	115%		20-150%
	13C3-PFHxS	117%		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-RHMW17D-WGN01LF-2304W2		
Lab Sample ID:	FC5252-4	**Date Sampled:**	04/14/23
Matrix:	AQ - Ground Water	**Date Received:**	04/15/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	109%		20-150%
	13C8-FOSA	87%		20-150%
	d3-MeFOSA	87%		20-150%
	d5-EtFOSA	81%		20-150%
	d3-MeFOSAA	103%		20-150%
	d5-EtFOSAA	100%		20-150%
	d7-MeFOSE	72%		20-150%
	d9-EtFOSE	72%		20-150%
	13C2-4:2FTS	115%		20-150%
	13C2-6:2FTS	134%		20-150%
	13C2-8:2FTS	122%		20-150%
	13C3-HFPO-DA	117%		20-150%

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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-RHMW17D-WQFB01-2304W2		
Lab Sample ID:	FC5252-5	**Date Sampled:**	04/14/23
Matrix:	AQ - Field Blank Water	**Date Received:**	04/15/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4Q43178.D	1	04/18/23 18:28	MV	04/17/23 11:00	OP96427	S4Q624
Run #2	4Q43362.D	1	04/21/23 00:15	MV	04/20/23 09:30	OP96494	S4Q626

	Initial Volume	Final Volume
Run #1	510 ml	5.0 ml
Run #2	490 ml	5.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYL CARBOXYLIC ACIDS							
375-22-4	Perfluorobutanoic acid [a]	3.9 U	20	3.9	1.9	ng/l	
2706-90-3	Perfluoropentanoic acid	2.0 U	9.8	2.0	0.92	ng/l	
307-24-4	Perfluorohexanoic acid	0.98 U	4.9	0.98	0.49	ng/l	
375-85-9	Perfluoroheptanoic acid	0.98 U	4.9	0.98	0.49	ng/l	
335-67-1	Perfluorooctanoic acid	1.0 U [b]	5.1	1.0	0.51	ng/l	
375-95-1	Perfluorononanoic acid	2.0 U	4.9	2.0	0.60	ng/l	
335-76-2	Perfluorodecanoic acid	0.98 U	4.9	0.98	0.49	ng/l	
2058-94-8	Perfluoroundecanoic acid	2.0 U	4.9	2.0	0.59	ng/l	
307-55-1	Perfluorododecanoic acid	2.0 U	4.9	2.0	0.59	ng/l	
72629-94-8	Perfluorotridecanoic acid	2.0 U	4.9	2.0	0.82	ng/l	
376-06-7	Perfluorotetradecanoic acid	0.98 U	4.9	0.98	0.49	ng/l	
PERFLUOROALKYL SULFONIC ACIDS							
375-73-5	Perfluorobutanesulfonic acid	0.98 U	4.9	0.98	0.49	ng/l	
2706-91-4	Perfluoropentanesulfonic acid	3.9 U	4.9	3.9	1.1	ng/l	
355-46-4	Perfluorohexanesulfonic acid	2.0 U	4.9	2.0	0.69	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	0.98 U	4.9	0.98	0.49	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	2.0 U	4.9	2.0	0.53	ng/l	
68259-12-1	Perfluorononanesulfonic acid	2.0 U	4.9	2.0	0.56	ng/l	
335-77-3	Perfluorodecanesulfonic acid	2.0 U	4.9	2.0	0.63	ng/l	
79780-39-5	Perfluorododecanesulfonic aci	3.9 U	4.9	3.9	1.1	ng/l	
FLUOROTELOMER SULFONIC ACIDS							
757124-72-4	4:2 Fluorotelomer sulfonate	7.8 U	20	7.8	3.2	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	7.8 U	20	7.8	3.4	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	7.8 U	20	7.8	4.0	ng/l	
PERFLUOROOCTANE SULFONAMIDES							
754-91-6	PFOSA	2.0 U	4.9	2.0	0.66	ng/l	
31506-32-8	MeFOSA	2.0 U	4.9	2.0	0.98	ng/l	
4151-50-2	EtFOSA	2.0 U	4.9	2.0	0.98	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
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Report of Analysis

Client Sample ID:	AF-RHMW17D-WQFB01-2304W2		
Lab Sample ID:	FC5252-5	**Date Sampled:**	04/14/23
Matrix:	AQ - Field Blank Water	**Date Received:**	04/15/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROOCTANE SULFONAMIDOACETIC ACIDS							
2355-31-9	MeFOSAA	3.9 U	4.9	3.9	0.98	ng/l	
2991-50-6	EtFOSAA	3.9 U	4.9	3.9	1.3	ng/l	
PERFLUOROOCTANE SULFONAMIDO ETHANOLS							
24448-09-7	MeFOSE	9.8 U	49	9.8	4.3	ng/l	
1691-99-2	EtFOSE	20 U	49	20	7.3	ng/l	
PER and POLYFLUOROETHER CARBOXYLIC ACIDS							
13252-13-6	HFPO-DA (GenX)	3.9 U	20	3.9	0.98	ng/l	
919005-14-4	ADONA	3.9 U	20	3.9	1.8	ng/l	
377-73-1	PFMPA	2.0 U	9.8	2.0	0.98	ng/l	
863090-89-5	PFMBA	3.9 U	9.8	3.9	1.1	ng/l	
151772-58-6	NFDHA	3.9 U	9.8	3.9	1.2	ng/l	
PER and POLYFLUOROETHER SULFONIC ACIDS							
756426-58-1	9Cl-PF3ONS (F-53B Major)	3.9 U	20	3.9	1.4	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	3.9 U	20	3.9	1.7	ng/l	
113507-82-7	PFEESA	2.0 U	9.8	2.0	0.76	ng/l	
FLUOROTELOMER CARBOXYLIC ACIDS							
356-02-5	3:3 Fluorotelomer carboxylate	9.8 U	25	9.8	4.4	ng/l	
914637-49-3	5:3 Fluorotelomer carboxylate	20 U	120	20	8.6	ng/l	
812-70-4	7:3 Fluorotelomer carboxylate	20 U	120	20	7.7	ng/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	3% [C]	2% [C]	20-150%
	13C5-PFPeA	52%	12% [C]	20-150%
	13C5-PFHxA	108%	73%	20-150%
	13C4-PFHpA	110%	93%	20-150%
	13C8-PFOA	103%	88%	20-150%
	13C9-PFNA	95%	87%	20-150%
	13C6-PFDA	106%	99%	20-150%
	13C7-PFUnDA	99%	87%	20-150%
	13C2-PFDoDA	81%	76%	20-150%
	13C2-PFTeDA	58%	52%	20-150%
	13C3-PFBS	106%	80%	20-150%
	13C3-PFHxS	108%	94%	20-150%

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

Report of Analysis

Client Sample ID:	AF-RHMW17D-WQFB01-2304W2		
Lab Sample ID:	FC5252-5	**Date Sampled:**	04/14/23
Matrix:	AQ - Field Blank Water	**Date Received:**	04/15/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	105%	82%	20-150%
	13C8-FOSA	93%	73%	20-150%
	d3-MeFOSA	111%	85%	20-150%
	d5-EtFOSA	107%	89%	20-150%
	d3-MeFOSAA	118%	113%	20-150%
	d5-EtFOSAA	122%	117%	20-150%
	d7-MeFOSE	74%	46%	20-150%
	d9-EtFOSE	73%	49%	20-150%
	13C2-4:2FTS	129%	91%	20-150%
	13C2-6:2FTS	102%	90%	20-150%
	13C2-8:2FTS	106%	86%	20-150%
	13C3-HFPO-DA	103%	62%	20-150%

(a) Associated ID Standard outside control limits. Confirmed by re-extraction and reanalysis.
(b) Result is from Run# 2
(c) Outside control limits.

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

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

SGS North America Inc - Orlando
Chain of Custody

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

FC5252
SGS - ORLANDO JOB # :

COC #: 2304W2AFSG08
PAGE 1 OF 1

SGS - ORLANDO Quote # | SKIFF #

Client / Reporting Information

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

Project Information

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

Analytical Information

PFAS EPA Draft 1633

Matrix Codes

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

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NAOH+ZNAC	DI WATER	MEOH	PFAS EPA Draft 1633	LAB USE ONLY
1	AF-RHMW04-WGN01LF-2304W2	4/14/23	0910	ZD KO NH	GW	3		X								X	

INITIAL ASSESSMENT
LABEL VERIFICATION

Turnaround Time (Business days)

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

Data Deliverable Information

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

Comments / Remarks

EDMS upload database: JBPHE
EDMS Coverage: AFFF Assessment Sampling GW
United AWB 016-13645914

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	Kaitlin Osterman	4/14/23 1120	2 Hannah Brumby /AECOM	3 Hannah Brumby /AECOM	4/14/23 1430	4 4/15/23
5	Relinquished by/Affiliation	Date Time: 4/15/23 1715	Received By/Affiliation 6	Relinquished By/Affiliation 7	Date Time:	Received By/Affiliation 8 14:52

Lab Use Only : Cooler Temperature (s) Celsius (corrected): 1R #4 3.4°

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

PFAS_COCs_ALL.xls Rev 031318

FC5252: Chain of Custody
Page 1 of 5

SGS North America Inc - Orlando
Chain of Custody

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

FC5252
SGS - ORLANDO JOB # :

COC #: 2304W2AFSG10
PAGE 1 OF 1

SGS - ORLANDO Quote #	SKIFF #

Client / Reporting Information

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

Project Information

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

Analytical Information

PFAS EPA Draft 1633

Matrix Codes

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

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	CONTAINER INFORMATION MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NAOH+ZNAC	DI WATER	MEOH	PFAS EPA Draft 1633	LAB USE ONLY
2	AF-RHMW17-WGN01LF-2304W2	4/14/23	0955	RS	GW	3		X								X	

Turnaround Time (Business days)

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

Data Deliverable Information

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

Comments / Remarks

EDMS upload database: JBPHE
EDMS Coverage: AFFF Assessment Sampling GW
United AWB 016-13645914

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	Ryan Shimmoto / AECOM	4/14/23 1100	2 Hannah Brumby / AECOM	3 Hannah Brumby / AECOM	4/14/23 1430	4
5	Relinquished by/Affiliation	Date Time: 4/15/23 1300	Received By/Affiliation 6	Relinquished By/Affiliation 7	Date Time:	Received By/Affiliation 8

Lab Use Only : Cooler Temperature (s) Celsius (corrected):

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

PFAS_COCs_ALL.xls Rev 031318

FC5252: Chain of Custody
Page 2 of 5

SGS North America Inc - Orlando
Chain of Custody

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

FC5252
SGS - ORLANDO JOB # :

COC #: 2304W2AFSG09
PAGE 1 OF 1

SGS - ORLANDO Quote # | SKIFF #

Client / Reporting Information

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

Project Information

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

Analytical Information

PFAS EPA Draft 1633

Matrix Codes

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

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY	MATRIX	CONTAINER INFORMATION TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI WATER	MEOH	PFAS EPA Draft 1633	LAB USE ONLY
1	AF-RHMW06-WGN01LF-2304W2	4-14-23	1030	NH	GW	3		x								x	

HB 4/14/23

HB 4/14/23

Turnaround Time (Business days)

- 10 Day (Business) — Approved By: / Date:
- 7 Day
- [5 Day]
- 3 Day *RUSH*
- 2 Day *RUSH*
- 1 Day *RUSH*
- Other

Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

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

Comments / Remarks

EDMS upload database: JBPHE
EDMS Coverage: AFFF Assessment Sampling GW
United AWB 0116-13645914

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 Zoe Diermier/Aecom	4/14/23 1115	2 Hannah Brumby /AECOM	3 Hannah Brumby /AECOM	4/14/23	4
Relinquished by/Affiliation	Date Time: 4/15/23 1520	Received By/Affiliation 6	Relinquished By/Affiliation 7	Date Time:	Received By/Affiliation 8

Lab Use Only : Cooler Temperature (s) Celsius (corrected):

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

PFAS_COCs_ALL.xls Rev 031318

SGS North America Inc - Orlando
Chain of Custody

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

FC5252
SGS - ORLANDO JOB #

COC #: 2304W2AFSG11
PAGE 1 OF 1

SGS - ORLANDO Quote # | SKIFF #

Client / Reporting Information

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

Project Information

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

Analytical Information

PFAS EPA Draft 1633

Matrix Codes

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

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	CONTAINER INFORMATION: TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NAOH+ZNAC	DI WATER	MEOH	PFAS EPA Draft 1633
4	AF-RHMW17D-WGN01LF-2304W2	4/14/23	1145	RS	GW	3		X								X
5	AF-RHMW17D-WQFB01-2304W2	4/14/23	1045	RS	GW	3		X								X

MD 4/14/23

MD 4/14/23

Turnaround Time (Business days)

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

Data Deliverable Information

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

Comments / Remarks

EDMS upload database: JBPHE
EDMS Coverage: AFFF Assessment Sampling GW

UNITED AWB 016-13643914

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 Ryan Shimmoto	4/14/23 1305	2 Miranda DeGarmo / AECOM	3 Miranda DeGarmo / AECOM	4/14/23 1430	4
Relinquished by/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
5	4/15/23 1540	6	7		8

Lab Use Only : Cooler Temperature (s) Celsius (corrected):

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

PFAS_COCs_ALL.xls Rev 031318

FC5252: Chain of Custody
Page 4 of 5

SGS Sample Receipt Summary

Job Number: FC5252 **Client:** AECOM **Project:** N6274223F0104 RH Fire Suppression System

Date / Time Received: 4/15/2023 3:00:00 PM **Delivery Method:** United Cargo/Airspace **Airbill #'s:** United Cargo AWB #: 016-13645914

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

Cooler Temps (Raw Measured) °C: Cooler 1: (3.4);

Cooler Temps (Corrected) °C: Cooler 1: (3.3);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☐	☑
2. Trip Blank listed on COC	☐		☐	☑

	W	or	S	N/A
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☐	☑
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

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

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: NATHANS Date: 4/15/2023 3:00:00 PM Reviewer: CD Date: 4/17/2023

QC Evaluation: DOD QSM5.x Limits

Job Number: FC5252
Account: AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System
Collected: 04/14/23

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

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

* Sample used for QC is not from job FC5252

MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

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

Instrument Blank

Job Number: FC5252
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S4Q624-IBLK	4Q43148.D	1	04/18/23	MV	n/a	n/a	S4Q624

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

FC5252-1, FC5252-2, FC5252-3, FC5252-4, FC5252-5

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	
757124-72-4	4:2 Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0050	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	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.020	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.020	0.0018	ug/l	

Instrument Blank

Job Number: FC5252
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S4Q624-IBLK	4Q43148.D	1	04/18/23	MV	n/a	n/a	S4Q624

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

FC5252-1, FC5252-2, FC5252-3, FC5252-4, FC5252-5

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	
914637-49-3	5:3 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	103%	20-150%
	13C5-PFPeA	98%	20-150%
	13C5-PFHxA	102%	20-150%
	13C4-PFHpA	104%	20-150%
	13C8-PFOA	101%	20-150%
	13C9-PFNA	98%	20-150%
	13C6-PFDA	103%	20-150%
	13C7-PFUnDA	101%	20-150%
	13C2-PFDoDA	98%	20-150%
	13C2-PFTeDA	91%	20-150%
	13C3-PFBS	104%	20-150%
	13C3-PFHxS	110%	20-150%
	13C8-PFOS	96%	20-150%
	13C8-FOSA	85%	20-150%
	d3-MeFOSA	97%	20-150%
	d5-EtFOSA	102%	20-150%
	d3-MeFOSAA	107%	20-150%
	d5-EtFOSAA	108%	20-150%
	d7-MeFOSE	80%	20-150%
	d9-EtFOSE	81%	20-150%
	13C2-4:2FTS	122%	20-150%
	13C2-6:2FTS	119%	20-150%
	13C2-8:2FTS	119%	20-150%
	13C3-HFPO-DA	103%	20-150%

Instrument Blank

Job Number: FC5252
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S4Q626-IBLK	4Q43332.D	1	04/20/23	MV	n/a	n/a	S4Q626

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

FC5252-5

CAS No.	Compound	Result	RL	MDL	Units	Q
335-67-1	Perfluorooctanoic acid	ND	0.0050	0.00050	ug/l	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	97%	20-150%
	13C5-PFPeA	100%	20-150%
	13C5-PFHxA	96%	20-150%
	13C4-PFHpA	98%	20-150%
	13C8-PFOA	98%	20-150%
	13C9-PFNA	106%	20-150%
	13C6-PFDA	101%	20-150%
	13C7-PFUnDA	95%	20-150%
	13C2-PFDoDA	100%	20-150%
	13C2-PFTeDA	92%	20-150%
	13C3-PFBS	96%	20-150%
	13C3-PFHxS	99%	20-150%
	13C8-PFOS	101%	20-150%
	13C8-FOSA	97%	20-150%
	d3-MeFOSA	98%	20-150%
	d5-EtFOSA	106%	20-150%
	d3-MeFOSAA	97%	20-150%
	d5-EtFOSAA	96%	20-150%
	d7-MeFOSE	100%	20-150%
	d9-EtFOSE	103%	20-150%
	13C2-4:2FTS	95%	20-150%
	13C2-6:2FTS	97%	20-150%
	13C2-8:2FTS	91%	20-150%
	13C3-HFPO-DA	90%	20-150%

Continuing Calibration Blank

Job Number: FC5252
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S4Q624-ICCB	4Q43162.D	1	04/18/23	MV	n/a	n/a	S4Q624

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

FC5252-1, FC5252-2

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	
757124-72-4	4:2 Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0050	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	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.020	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.020	0.0018	ug/l	

Continuing Calibration Blank

Job Number: FC5252
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S4Q624-ICCB	4Q43162.D	1	04/18/23	MV	n/a	n/a	S4Q624

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

FC5252-1, FC5252-2

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	
914637-49-3	5:3 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	103%	20-150%
	13C5-PFPeA	103%	20-150%
	13C5-PFHxA	101%	20-150%
	13C4-PFHpA	106%	20-150%
	13C8-PFOA	99%	20-150%
	13C9-PFNA	101%	20-150%
	13C6-PFDA	102%	20-150%
	13C7-PFUnDA	101%	20-150%
	13C2-PFDoDA	98%	20-150%
	13C2-PFTeDA	88%	20-150%
	13C3-PFBS	103%	20-150%
	13C3-PFHxS	103%	20-150%
	13C8-PFOS	100%	20-150%
	13C8-FOSA	86%	20-150%
	d3-MeFOSAA	111%	20-150%
	d5-EtFOSAA	111%	20-150%
	13C2-4:2FTS	123%	20-150%
	13C2-6:2FTS	116%	20-150%
	13C2-8:2FTS	117%	20-150%

Continuing Calibration Blank

Job Number: FC5252
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S4Q624-ICCB	4Q43174.D	1	04/18/23	MV	n/a	n/a	S4Q624

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

FC5252-3, FC5252-4, FC5252-5

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	
757124-72-4	4:2 Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0050	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	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.020	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.020	0.0018	ug/l	

Continuing Calibration Blank

Job Number: FC5252
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S4Q624-ICCB	4Q43174.D	1	04/18/23	MV	n/a	n/a	S4Q624

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

FC5252-3, FC5252-4, FC5252-5

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	
914637-49-3	5:3 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	105%	20-150%
	13C5-PFPeA	100%	20-150%
	13C5-PFHxA	104%	20-150%
	13C4-PFHpA	106%	20-150%
	13C8-PFOA	97%	20-150%
	13C9-PFNA	97%	20-150%
	13C6-PFDA	96%	20-150%
	13C7-PFUnDA	95%	20-150%
	13C2-PFDoDA	92%	20-150%
	13C2-PFTeDA	83%	20-150%
	13C3-PFBS	104%	20-150%
	13C3-PFHxS	106%	20-150%
	13C8-PFOS	103%	20-150%
	13C8-FOSA	84%	20-150%
	d3-MeFOSA	96%	20-150%
	d5-EtFOSA	98%	20-150%
	d3-MeFOSAA	108%	20-150%
	d5-EtFOSAA	106%	20-150%
	d7-MeFOSE	77%	20-150%
	d9-EtFOSE	77%	20-150%
	13C2-4:2FTS	110%	20-150%
	13C2-6:2FTS	125%	20-150%
	13C2-8:2FTS	116%	20-150%
	13C3-HFPO-DA	100%	20-150%

Continuing Calibration Blank

Job Number: FC5252
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S4Q626-ICCB	4Q43357.D	1	04/20/23	MV	n/a	n/a	S4Q626

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

FC5252-5

CAS No.	Compound	Result	RL	MDL	Units	Q
335-67-1	Perfluorooctanoic acid	ND	0.0050	0.00050	ug/l	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	102%	20-150%
	13C5-PFPeA	96%	20-150%
	13C5-PFHxA	102%	20-150%
	13C4-PFHpA	99%	20-150%
	13C8-PFOA	98%	20-150%
	13C9-PFNA	101%	20-150%
	13C6-PFDA	97%	20-150%
	13C7-PFUnDA	97%	20-150%
	13C2-PFDoDA	94%	20-150%
	13C2-PFTeDA	92%	20-150%
	13C3-PFBS	98%	20-150%
	13C3-PFHxS	99%	20-150%
	13C8-PFOS	96%	20-150%
	13C8-FOSA	96%	20-150%
	d3-MeFOSA	96%	20-150%
	d5-EtFOSA	98%	20-150%
	d3-MeFOSAA	102%	20-150%
	d5-EtFOSAA	103%	20-150%
	d7-MeFOSE	102%	20-150%
	d9-EtFOSE	98%	20-150%
	13C2-4:2FTS	112%	20-150%
	13C2-6:2FTS	109%	20-150%
	13C2-8:2FTS	98%	20-150%
	13C3-HFPO-DA	90%	20-150%

Method Blank Summary

Job Number: FC5252
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96427-MB	4Q43169.D	1	04/18/23	MV	04/17/23	OP96427	S4Q624

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

FC5252-1, FC5252-2, FC5252-3, FC5252-4, FC5252-5

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	
757124-72-4	4:2 Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0050	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	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.020	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.020	0.0018	ug/l	

Method Blank Summary

Job Number: FC5252
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96427-MB	4Q43169.D	1	04/18/23	MV	04/17/23	OP96427	S4Q624

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

FC5252-1, FC5252-2, FC5252-3, FC5252-4, FC5252-5

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	
914637-49-3	5:3 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	122%	20-150%
	13C5-PFPeA	118%	20-150%
	13C5-PFHxA	117%	20-150%
	13C4-PFHpA	124%	20-150%
	13C8-PFOA	119%	20-150%
	13C9-PFNA	115%	20-150%
	13C6-PFDA	110%	20-150%
	13C7-PFUnDA	110%	20-150%
	13C2-PFDoDA	100%	20-150%
	13C2-PFTeDA	82%	20-150%
	13C3-PFBS	117%	20-150%
	13C3-PFHxS	117%	20-150%
	13C8-PFOS	117%	20-150%
	13C8-FOSA	86%	20-150%
	d3-MeFOSA	90%	20-150%
	d5-EtFOSA	86%	20-150%
	d3-MeFOSAA	110%	20-150%
	d5-EtFOSAA	107%	20-150%
	d7-MeFOSE	75%	20-150%
	d9-EtFOSE	74%	20-150%
	13C2-4:2FTS	136%	20-150%
	13C2-6:2FTS	138%	20-150%
	13C2-8:2FTS	123%	20-150%
	13C3-HFPO-DA	117%	20-150%

Method Blank Summary

Job Number: FC5252
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96494-MB	4Q43360.D	1	04/20/23	MV	04/20/23	OP96494	S4Q626

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

FC5252-5

CAS No.	Compound	Result	RL	MDL	Units	Q
335-67-1	Perfluorooctanoic acid	ND	0.0050	0.00050	ug/l	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	108%	20-150%
	13C5-PFPeA	99%	20-150%
	13C5-PFHxA	106%	20-150%
	13C4-PFHpA	102%	20-150%
	13C8-PFOA	103%	20-150%
	13C9-PFNA	106%	20-150%
	13C6-PFDA	108%	20-150%
	13C7-PFUnDA	106%	20-150%
	13C2-PFDoDA	91%	20-150%
	13C2-PFTeDA	79%	20-150%
	13C3-PFBS	105%	20-150%
	13C3-PFHxS	109%	20-150%
	13C8-PFOS	105%	20-150%
	13C8-FOSA	66%	20-150%
	d3-MeFOSA	62%	20-150%
	d5-EtFOSA	65%	20-150%
	d3-MeFOSAA	107%	20-150%
	d5-EtFOSAA	97%	20-150%
	d7-MeFOSE	57%	20-150%
	d9-EtFOSE	65%	20-150%
	13C2-4:2FTS	130%	20-150%
	13C2-6:2FTS	132%	20-150%
	13C2-8:2FTS	118%	20-150%
	13C3-HFPO-DA	95%	20-150%

Blank Spike Summary

Job Number: FC5252
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96427-LLBS	4Q43168.D	1	04/18/23	MV	04/17/23	OP96427	S4Q624

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

FC5252-1, FC5252-2, FC5252-3, FC5252-4, FC5252-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.03	0.0318	106	40-150
2706-90-3	Perfluoropentanoic acid	0.015	0.0164	109	40-150
307-24-4	Perfluorohexanoic acid	0.0075	0.0082	109	40-150
375-85-9	Perfluoroheptanoic acid	0.0075	0.0085	113	40-150
335-67-1	Perfluorooctanoic acid	0.0075	0.0077	103	40-150
375-95-1	Perfluorononanoic acid	0.0075	0.0081	108	40-150
335-76-2	Perfluorodecanoic acid	0.0075	0.0075	100	40-150
2058-94-8	Perfluoroundecanoic acid	0.0075	0.0084	112	40-150
307-55-1	Perfluorododecanoic acid	0.0075	0.0081	108	40-150
72629-94-8	Perfluorotridecanoic acid	0.0075	0.0076	101	40-150
376-06-7	Perfluorotetradecanoic acid	0.0075	0.0080	107	40-150
375-73-5	Perfluorobutanesulfonic acid	0.00665	0.0075	113	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.00706	0.0073	103	40-150
355-46-4	Perfluorohexanesulfonic acid	0.00686	0.0070	102	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.00715	0.0088	123	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.00696	0.0077	111	40-150
68259-12-1	Perfluorononanesulfonic acid	0.00722	0.0077	107	40-150
335-77-3	Perfluorodecanesulfonic acid	0.00724	0.0076	105	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.00728	0.0078	107	40-150
757124-72-4	4:2 Fluorotelomer sulfonate	0.0281	0.0316	112	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.0285	0.0361	127	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.0288	0.0354	123	40-150
754-91-6	PFOSA	0.0075	0.0076	101	40-150
31506-32-8	MeFOSA	0.015	0.0144	96	40-150
4151-50-2	EtFOSA	0.015	0.0145	97	40-150
2355-31-9	MeFOSAA	0.0075	0.0077	103	40-150
2991-50-6	EtFOSAA	0.0075	0.0082	109	40-150
24448-09-7	MeFOSE	0.0375	0.0410	109	40-150
1691-99-2	EtFOSE	0.0375	0.0413	110	40-150
13252-13-6	HFPO-DA (GenX)	0.015	0.0158	105	40-150
919005-14-4	ADONA	0.0142	0.0162	114	40-150
377-73-1	PFMPA	0.015	0.0163	109	40-150
863090-89-5	PFMBA	0.015	0.0164	109	40-150
151772-58-6	NFDHA	0.015	0.0164	109	40-150
756426-58-1	9Cl-PF3ONS (F-53B Major)	0.014	0.0149	106	40-150
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	0.0142	0.0158	111	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC5252
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96427-LLBS	4Q43168.D	1	04/18/23	MV	04/17/23	OP96427	S4Q624

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

FC5252-1, FC5252-2, FC5252-3, FC5252-4, FC5252-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0134	0.0145	109	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.0375	0.0405	108	40-150
914637-49-3	5:3 Fluorotelomer carboxylate	0.188	0.207	110	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.188	0.204	109	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	116%	20-150%
	13C5-PFPeA	117%	20-150%
	13C5-PFHxA	115%	20-150%
	13C4-PFHpA	118%	20-150%
	13C8-PFOA	109%	20-150%
	13C9-PFNA	112%	20-150%
	13C6-PFDA	107%	20-150%
	13C7-PFUnDA	97%	20-150%
	13C2-PFDoDA	91%	20-150%
	13C2-PFTeDA	79%	20-150%
	13C3-PFBS	112%	20-150%
	13C3-PFHxS	114%	20-150%
	13C8-PFOS	108%	20-150%
	13C8-FOSA	90%	20-150%
	d3-MeFOSA	89%	20-150%
	d5-EtFOSA	95%	20-150%
	d3-MeFOSAA	110%	20-150%
	d5-EtFOSAA	113%	20-150%
	d7-MeFOSE	79%	20-150%
	d9-EtFOSE	77%	20-150%
	13C2-4:2FTS	118%	20-150%
	13C2-6:2FTS	117%	20-150%
	13C2-8:2FTS	115%	20-150%
	13C3-HFPO-DA	115%	20-150%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC5252
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96494-LLBS	4Q43359.D	1	04/20/23	MV	04/20/23	OP96494	S4Q626

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

FC5252-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
335-67-1	Perfluorooctanoic acid	0.0075	0.0102	136	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	104%	20-150%
	13C5-PFPeA	95%	20-150%
	13C5-PFHxA	101%	20-150%
	13C4-PFHpA	102%	20-150%
	13C8-PFOA	103%	20-150%
	13C9-PFNA	106%	20-150%
	13C6-PFDA	98%	20-150%
	13C7-PFUnDA	99%	20-150%
	13C2-PFDoDA	94%	20-150%
	13C2-PFTeDA	79%	20-150%
	13C3-PFBS	104%	20-150%
	13C3-PFHxS	105%	20-150%
	13C8-PFOS	90%	20-150%
	13C8-FOSA	64%	20-150%
	d3-MeFOSA	57%	20-150%
	d5-EtFOSA	59%	20-150%
	d3-MeFOSAA	100%	20-150%
	d5-EtFOSAA	99%	20-150%
	d7-MeFOSE	50%	20-150%
	d9-EtFOSE	57%	20-150%
	13C2-4:2FTS	119%	20-150%
	13C2-6:2FTS	121%	20-150%
	13C2-8:2FTS	108%	20-150%
	13C3-HFPO-DA	89%	20-150%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC5252
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96427-BS	4Q43167.D	1	04/18/23	MV	04/17/23	OP96427	S4Q624

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

FC5252-1, FC5252-2, FC5252-3, FC5252-4, FC5252-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.1	0.109	109	40-150
2706-90-3	Perfluoropentanoic acid	0.05	0.0584	117	40-150
307-24-4	Perfluorohexanoic acid	0.025	0.0282	113	40-150
375-85-9	Perfluoroheptanoic acid	0.025	0.0280	112	40-150
335-67-1	Perfluorooctanoic acid	0.025	0.0271	108	40-150
375-95-1	Perfluorononanoic acid	0.025	0.0280	112	40-150
335-76-2	Perfluorodecanoic acid	0.025	0.0284	114	40-150
2058-94-8	Perfluoroundecanoic acid	0.025	0.0283	113	40-150
307-55-1	Perfluorododecanoic acid	0.025	0.0283	113	40-150
72629-94-8	Perfluorotridecanoic acid	0.025	0.0262	105	40-150
376-06-7	Perfluorotetradecanoic acid	0.025	0.0285	114	40-150
375-73-5	Perfluorobutanesulfonic acid	0.0222	0.0244	110	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0235	0.0265	113	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0229	0.0242	106	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0238	0.0293	123	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0232	0.0255	110	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0241	0.0256	106	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0241	0.0258	107	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0243	0.0243	100	40-150
757124-72-4	4:2 Fluorotelomer sulfonate	0.0938	0.110	117	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.095	0.123	129	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.096	0.117	122	40-150
754-91-6	PFOSA	0.025	0.0272	109	40-150
31506-32-8	MeFOSA	0.05	0.0551	110	40-150
4151-50-2	EtFOSA	0.05	0.0553	111	40-150
2355-31-9	MeFOSAA	0.025	0.0258	103	40-150
2991-50-6	EtFOSAA	0.025	0.0269	108	40-150
24448-09-7	MeFOSE	0.125	0.133	106	40-150
1691-99-2	EtFOSE	0.125	0.138	110	40-150
13252-13-6	HFPO-DA (GenX)	0.05	0.0581	116	40-150
919005-14-4	ADONA	0.0473	0.0560	119	40-150
377-73-1	PFMPA	0.05	0.0572	114	40-150
863090-89-5	PFMBA	0.05	0.0564	113	40-150
151772-58-6	NFDHA	0.05	0.0576	115	40-150
756426-58-1	9Cl-PF3ONS (F-53B Major)	0.0468	0.0515	110	40-150
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	0.0473	0.0552	117	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC5252
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96427-BS	4Q43167.D	1	04/18/23	MV	04/17/23	OP96427	S4Q624

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

FC5252-1, FC5252-2, FC5252-3, FC5252-4, FC5252-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0445	0.0501	113	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.125	0.142	114	40-150
914637-49-3	5:3 Fluorotelomer carboxylate	0.625	0.712	114	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.625	0.698	112	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	117%	20-150%
	13C5-PFPeA	115%	20-150%
	13C5-PFHxA	114%	20-150%
	13C4-PFHpA	118%	20-150%
	13C8-PFOA	111%	20-150%
	13C9-PFNA	113%	20-150%
	13C6-PFDA	111%	20-150%
	13C7-PFUnDA	106%	20-150%
	13C2-PFDoDA	98%	20-150%
	13C2-PFTeDA	80%	20-150%
	13C3-PFBS	106%	20-150%
	13C3-PFHxS	108%	20-150%
	13C8-PFOS	115%	20-150%
	13C8-FOSA	94%	20-150%
	d3-MeFOSA	94%	20-150%
	d5-EtFOSA	97%	20-150%
	d3-MeFOSAA	119%	20-150%
	d5-EtFOSAA	117%	20-150%
	d7-MeFOSE	81%	20-150%
	d9-EtFOSE	82%	20-150%
	13C2-4:2FTS	109%	20-150%
	13C2-6:2FTS	106%	20-150%
	13C2-8:2FTS	100%	20-150%
	13C3-HFPO-DA	113%	20-150%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC5252
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96494-BS [a]	4Q43358.D	1	04/20/23	MV	04/20/23	OP96494	S4Q626

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

FC5252-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
335-67-1	Perfluorooctanoic acid	0.025	0.0313	125	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	33%	20-150%
	13C5-PFPeA	98%	20-150%
	13C5-PFHxA	108%	20-150%
	13C4-PFHpA	105%	20-150%
	13C8-PFOA	105%	20-150%
	13C9-PFNA	107%	20-150%
	13C6-PFDA	105%	20-150%
	13C7-PFUnDA	107%	20-150%
	13C2-PFDoDA	103%	20-150%
	13C2-PFTeDA	89%	20-150%
	13C3-PFBS	109%	20-150%
	13C3-PFHxS	113%	20-150%
	13C8-PFOS	96%	20-150%
	13C8-FOSA	71%	20-150%
	d3-MeFOSA	76%	20-150%
	d5-EtFOSA	80%	20-150%
	d3-MeFOSAA	108%	20-150%
	d5-EtFOSAA	108%	20-150%
	d7-MeFOSE	59%	20-150%
	d9-EtFOSE	64%	20-150%
	13C2-4:2FTS	121%	20-150%
	13C2-6:2FTS	119%	20-150%
	13C2-8:2FTS	99%	20-150%
	13C3-HFPO-DA	95%	20-150%

(a) Insufficient sample for MS/MSD.

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FC5252
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96427-MS	4Q43172.D	1	04/18/23	MV	04/17/23	OP96427	S4Q624
FC5252-2	4Q43171.D	1	04/18/23	MV	04/17/23	OP96427	S4Q624

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

FC5252-1, FC5252-2, FC5252-3, FC5252-4, FC5252-5

CAS No.	Compound	FC5252-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
375-22-4	Perfluorobutanoic acid	0.0036	J	0.0926	0.0872	90	40-150
2706-90-3	Perfluoropentanoic acid	0.0040	J	0.0463	0.0501	100	40-150
307-24-4	Perfluorohexanoic acid	0.0021	J	0.0231	0.0233	92	40-150
375-85-9	Perfluoroheptanoic acid	0.0045	U	0.0231	0.0236	102	40-150
335-67-1	Perfluorooctanoic acid	0.00046	J	0.0231	0.0212	90	40-150
375-95-1	Perfluorononanoic acid	0.0045	U	0.0231	0.0218	94	40-150
335-76-2	Perfluorodecanoic acid	0.0045	U	0.0231	0.0214	92	40-150
2058-94-8	Perfluoroundecanoic acid	0.0045	U	0.0231	0.0215	93	40-150
307-55-1	Perfluorododecanoic acid	0.0045	U	0.0231	0.0221	95	40-150
72629-94-8	Perfluorotridecanoic acid	0.0045	U	0.0231	0.0207	89	40-150
376-06-7	Perfluorotetradecanoic acid	0.0045	U	0.0231	0.0218	94	40-150
375-73-5	Perfluorobutanesulfonic acid	0.0045	U	0.0205	0.0192	94	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0045	U	0.0218	0.0212	97	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0045	U	0.0212	0.0206	97	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0045	U	0.0221	0.0219	99	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0045	U	0.0215	0.0194	90	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0045	U	0.0223	0.0185	83	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0045	U	0.0223	0.0183	82	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0045	U	0.0225	0.0167	74	40-150
757124-72-4	4:2 Fluorotelomer sulfonate	0.018	U	0.0868	0.0896	103	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.018	U	0.088	0.0808	92	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.018	U	0.0889	0.0994	112	40-150
754-91-6	PFOSA	0.0045	U	0.0231	0.0237	102	40-150
31506-32-8	MeFOSA	0.0045	U	0.0463	0.0560	121	40-150
4151-50-2	EtFOSA	0.0045	U	0.0463	0.0582	126	40-150
2355-31-9	MeFOSAA	0.0045	U	0.0231	0.0226	98	40-150
2991-50-6	EtFOSAA	0.0045	U	0.0231	0.0232	100	40-150
24448-09-7	MeFOSE	0.045	U	0.116	0.136	118	40-150
1691-99-2	EtFOSE	0.045	U	0.116	0.147	127	40-150
13252-13-6	HFPO-DA (GenX)	0.018	U	0.0463	0.0489	106	40-150
919005-14-4	ADONA	0.018	U	0.0438	0.0519	119	40-150
377-73-1	PFMPA	0.0091	U	0.0463	0.0569	123	40-150
863090-89-5	PFMBA	0.0091	U	0.0463	0.0551	119	40-150
151772-58-6	NFDHA	0.0091	U	0.0463	0.0570	123	40-150
756426-58-1	9Cl-PF3ONS (F-53B Major)	0.018	U	0.0433	0.0446	103	40-150
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	0.018	U	0.0438	0.0428	98	40-150

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FC5252
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96427-MS	4Q43172.D	1	04/18/23	MV	04/17/23	OP96427	S4Q624
FC5252-2	4Q43171.D	1	04/18/23	MV	04/17/23	OP96427	S4Q624

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

FC5252-1, FC5252-2, FC5252-3, FC5252-4, FC5252-5

CAS No.	Compound	FC5252-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
113507-82-7	PFEESA	0.0091	U	0.0412	0.0475	115	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.023	U	0.116	0.140	121	40-150
914637-49-3	5:3 Fluorotelomer carboxylate	0.11	U	0.579	0.682	118	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.11	U	0.579	0.700	121	40-150

CAS No.	ID Standard Recoveries	MS	FC5252-2	Limits
	13C4-PFBA	128%	118%	20-150%
	13C5-PFPeA	123%	114%	20-150%
	13C5-PFHxA	125%	113%	20-150%
	13C4-PFHpA	126%	119%	20-150%
	13C8-PFOA	121%	110%	20-150%
	13C9-PFNA	117%	111%	20-150%
	13C6-PFDA	117%	107%	20-150%
	13C7-PFUnDA	105%	95%	20-150%
	13C2-PFDoDA	96%	88%	20-150%
	13C2-PFTeDA	80%	71%	20-150%
	13C3-PFBS	130%	117%	20-150%
	13C3-PFHxS	121%	112%	20-150%
	13C8-PFOS	120%	103%	20-150%
	13C8-FOSA	99%	88%	20-150%
	d3-MeFOSA	95%	86%	20-150%
	d5-EtFOSA	90%	81%	20-150%
	d3-MeFOSAA	115%	104%	20-150%
	d5-EtFOSAA	111%	95%	20-150%
	d7-MeFOSE	76%	70%	20-150%
	d9-EtFOSE	73%	68%	20-150%
	13C2-4:2FTS	129%	118%	20-150%
	13C2-6:2FTS	139%	121%	20-150%
	13C2-8:2FTS	119%	116%	20-150%
	13C3-HFPO-DA	126%	110%	20-150%

* = Outside of Control Limits.

Duplicate Summary

Job Number: FC5252
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96427-DUP	4Q43176.D	1	04/18/23	MV	04/17/23	OP96427	S4Q624
FC5252-3	4Q43175.D	1	04/18/23	MV	04/17/23	OP96427	S4Q624

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

FC5252-1, FC5252-2, FC5252-3, FC5252-4, FC5252-5

CAS No.	Compound	FC5252-3 ug/l	Q	DUP ug/l	Q	RPD	Limits
375-22-4	Perfluorobutanoic acid	0.018 U		ND		nc	30
2706-90-3	Perfluoropentanoic acid	0.0091 U		ND		nc	30
307-24-4	Perfluorohexanoic acid	0.0045 U		ND		nc	30
375-85-9	Perfluoroheptanoic acid	0.0045 U		ND		nc	30
335-67-1	Perfluorooctanoic acid	0.0045 U		ND		nc	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
757124-72-4	4:2 Fluorotelomer sulfonate	0.018 U		ND		nc	30
27619-97-2	6:2 Fluorotelomer sulfonate	0.018 U		ND		nc	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
756426-58-1	9Cl-PF3ONS (F-53B Major)	0.018 U		ND		nc	30
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	0.018 U		ND		nc	30

* = Outside of Control Limits.

Duplicate Summary

Job Number: FC5252
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96427-DUP	4Q43176.D	1	04/18/23	MV	04/17/23	OP96427	S4Q624
FC5252-3	4Q43175.D	1	04/18/23	MV	04/17/23	OP96427	S4Q624

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

FC5252-1, FC5252-2, FC5252-3, FC5252-4, FC5252-5

CAS No.	Compound	FC5252-3 ug/l	Q	DUP 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
914637-49-3	5:3 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	FC5252-3	Limits
	13C4-PFBA	125%	113%	20-150%
	13C5-PFPeA	120%	107%	20-150%
	13C5-PFHxA	120%	109%	20-150%
	13C4-PFHpA	122%	108%	20-150%
	13C8-PFOA	117%	102%	20-150%
	13C9-PFNA	114%	99%	20-150%
	13C6-PFDA	114%	95%	20-150%
	13C7-PFUnDA	107%	91%	20-150%
	13C2-PFDoDA	98%	87%	20-150%
	13C2-PFTeDA	91%	80%	20-150%
	13C3-PFBS	114%	106%	20-150%
	13C3-PFHxS	116%	109%	20-150%
	13C8-PFOS	110%	90%	20-150%
	13C8-FOSA	91%	77%	20-150%
	d3-MeFOSA	97%	88%	20-150%
	d5-EtFOSA	96%	93%	20-150%
	d3-MeFOSAA	113%	100%	20-150%
	d5-EtFOSAA	111%	99%	20-150%
	d7-MeFOSE	78%	72%	20-150%
	d9-EtFOSE	77%	71%	20-150%
	13C2-4:2FTS	139%	123%	20-150%
	13C2-6:2FTS	111%	117%	20-150%
	13C2-8:2FTS	122%	116%	20-150%
	13C3-HFPO-DA	120%	107%	20-150%

* = Outside of Control Limits.