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: FC5514

Sampling Date: 04/19/23

Report to:

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

Total number of pages in report: 44

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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Sample Summary

AECOM, INC.

Job No: FC5514

N6274223F0104 RH Fire Suppression System
Project No: 60697810

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
FC5514-1	04/19/23	10:00	EM	04/25/23	AQ	Ground Water	AF-RHMW12A-WGN01LF-2304W3
FC5514-2	04/19/23	10:00	EM	04/25/23	AQ	Ground Water	AF-RHMW12A-WGFD01LF-2304W3
FC5514-3	04/19/23	10:55	CL	04/25/23	AQ	Ground Water	AF-RHMW04-WGN01LF-2304W3
FC5514-4	04/19/23	12:10	EM	04/25/23	AQ	Ground Water	AF-RHMW16-WGN01LF-2304W3
FC5514-5	04/19/23	14:40	CL	04/25/23	AQ	Ground Water	AF-RHMW06-WGN01LF-2304W3

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: AECOM, INC. **Job No:** FC5514

Site: N6274223F0104 RH Fire Suppression System **Report Date:** 5/1/2023 10:45:50 AM

On 04/25/2023, 5 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 16.2 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FC5514 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:** OP96603

Sample(s) FC5514-3MS, FC5522-4DUP were used as the QC samples indicated.

OP96603-BS for d7-MeFOSE: Outside control limits.

OP96603-BS for d9-EtFOSE: Outside control limits.

OP96603-LLBS for d7-MeFOSE: Outside control limts.

OP96603-LLBS for d9-EtFOSE: Outside control limts.

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: FC5514
Account: AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System
Collected: 04/19/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FC5514-1	**AF-RHMW12A-WGN01LF-2304W3**					
Perfluoropentanoic acid		3.9 J	7.0	1.8	ng/l	EPA DRAFT 1633
Perfluorohexanoic acid		1.1 J	3.5	1.8	ng/l	EPA DRAFT 1633
FC5514-2	**AF-RHMW12A-WGFD01LF-2304W3**					
Perfluoropentanoic acid		4.0 J	7.0	1.8	ng/l	EPA DRAFT 1633
Perfluorohexanoic acid		1.2 J	3.5	1.8	ng/l	EPA DRAFT 1633
FC5514-3	**AF-RHMW04-WGN01LF-2304W3**					
No hits reported in this sample.						
FC5514-4	**AF-RHMW16-WGN01LF-2304W3**					
No hits reported in this sample.						
FC5514-5	**AF-RHMW06-WGN01LF-2304W3**					
No hits reported in this sample.						

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	AF-RHMW12A-WGN01LF-2304W3		
Lab Sample ID:	FC5514-1	**Date Sampled:**	04/19/23
Matrix:	AQ - Ground Water	**Date Received:**	04/25/23
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	6Q17075.D	1	04/28/23 18:37	MV	04/27/23 10:00	OP96603	S6Q258
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	14	3.5	1.7	ng/l	
2706-90-3	Perfluoropentanoic acid	3.9	7.0	1.8	0.82	ng/l	J
307-24-4	Perfluorohexanoic acid	1.1	3.5	1.8	0.44	ng/l	J
375-85-9	Perfluoroheptanoic acid	1.8 U	3.5	1.8	0.44	ng/l	
335-67-1	Perfluorooctanoic acid	0.88 U	3.5	0.88	0.44	ng/l	
375-95-1	Perfluorononanoic acid	1.8 U	3.5	1.8	0.54	ng/l	
335-76-2	Perfluorodecanoic acid	1.8 U	3.5	1.8	0.44	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.8 U	3.5	1.8	0.53	ng/l	
307-55-1	Perfluorododecanoic acid	1.8 U	3.5	1.8	0.53	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.8 U	3.5	1.8	0.74	ng/l	
376-06-7	Perfluorotetradecanoic acid	1.8 U	3.5	1.8	0.44	ng/l	
PERFLUOROALKYL SULFONIC ACIDS							
375-73-5	Perfluorobutanesulfonic acid	1.8 U	3.5	1.8	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	3.5	1.8	0.61	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	1.8 U	3.5	1.8	0.44	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.8 U	3.5	1.8	0.47	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.8 U	3.5	1.8	0.50	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.8 U	3.5	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	3.5	1.8	0.59	ng/l	
31506-32-8	MeFOSA	3.5 U	7.0	3.5	0.88	ng/l	
4151-50-2	EtFOSA	3.5 U	7.0	3.5	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-RHMW12A-WGN01LF-2304W3		
Lab Sample ID:	FC5514-1	**Date Sampled:**	04/19/23
Matrix:	AQ - Ground Water	**Date Received:**	04/25/23
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	18 U	35	18	3.8	ng/l	
1691-99-2	EtFOSE	18 U	35	18	6.5	ng/l	
PER and POLYFLUOROETHER CARBOXYLIC ACIDS							
13252-13-6	HFPO-DA (GenX)	1.8 U	3.5	1.8	0.88	ng/l	
919005-14-4	ADONA	3.5 U	7.0	3.5	1.6	ng/l	
377-73-1	PFMPA	1.8 U	7.0	1.8	0.88	ng/l	
863090-89-5	PFMBA	3.5 U	7.0	3.5	1.0	ng/l	
151772-58-6	NFDHA	3.5 U	7.0	3.5	1.1	ng/l	
PER and POLYFLUOROETHER SULFONIC ACIDS							
756426-58-1	9Cl-PF3ONS (F-53B Major)	3.5 U	7.0	3.5	1.2	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	3.5 U	7.0	3.5	1.5	ng/l	
113507-82-7	PFEESA	1.8 U	7.0	1.8	0.68	ng/l	
FLUOROTELOMER CARBOXYLIC ACIDS							
356-02-5	3:3 Fluorotelomer carboxylate	8.8 U	18	8.8	4.0	ng/l	
914637-49-3	5:3 Fluorotelomer carboxylate	18 U	88	18	7.7	ng/l	
812-70-4	7:3 Fluorotelomer carboxylate	18 U	88	18	6.9	ng/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	88%		20-150%
	13C5-PFPeA	106%		20-150%
	13C5-PFHxA	108%		20-150%
	13C4-PFHpA	104%		20-150%
	13C8-PFOA	105%		20-150%
	13C9-PFNA	103%		20-150%
	13C6-PFDA	98%		20-150%
	13C7-PFUnDA	98%		20-150%
	13C2-PFDoDA	78%		20-150%
	13C2-PFTeDA	72%		20-150%
	13C3-PFBS	106%		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

Report of Analysis

Client Sample ID:	AF-RHMW12A-WGN01LF-2304W3		
Lab Sample ID:	FC5514-1	**Date Sampled:**	04/19/23
Matrix:	AQ - Ground Water	**Date Received:**	04/25/23
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	59%		20-150%
	d3-MeFOSA	43%		20-150%
	d5-EtFOSA	42%		20-150%
	d3-MeFOSAA	108%		20-150%
	d5-EtFOSAA	97%		20-150%
	d7-MeFOSE	30%		20-150%
	d9-EtFOSE	33%		20-150%
	13C2-4:2FTS	110%		20-180%
	13C2-6:2FTS	113%		20-180%
	13C2-8:2FTS	93%		20-180%
	13C3-HFPO-DA	100%		20-150%

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

Report of Analysis

Client Sample ID: AF-RHMW12A-WGFD01LF-2304W3
Lab Sample ID: FC5514-2 **Date Sampled:** 04/19/23
Matrix: AQ - Ground Water **Date Received:** 04/25/23
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	6Q17076.D	1	04/28/23 18:52	MV	04/27/23 10:00	OP96603	S6Q258
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	14	3.5	1.7	ng/l	
2706-90-3	Perfluoropentanoic acid	4.0	7.0	1.8	0.82	ng/l	J
307-24-4	Perfluorohexanoic acid	1.2	3.5	1.8	0.44	ng/l	J
375-85-9	Perfluoroheptanoic acid	1.8 U	3.5	1.8	0.44	ng/l	
335-67-1	Perfluorooctanoic acid	0.88 U	3.5	0.88	0.44	ng/l	
375-95-1	Perfluorononanoic acid	1.8 U	3.5	1.8	0.54	ng/l	
335-76-2	Perfluorodecanoic acid	1.8 U	3.5	1.8	0.44	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.8 U	3.5	1.8	0.53	ng/l	
307-55-1	Perfluorododecanoic acid	1.8 U	3.5	1.8	0.53	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.8 U	3.5	1.8	0.74	ng/l	
376-06-7	Perfluorotetradecanoic acid	1.8 U	3.5	1.8	0.44	ng/l	
PERFLUOROALKYL SULFONIC ACIDS							
375-73-5	Perfluorobutanesulfonic acid	1.8 U	3.5	1.8	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	3.5	1.8	0.61	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	1.8 U	3.5	1.8	0.44	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.8 U	3.5	1.8	0.47	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.8 U	3.5	1.8	0.50	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.8 U	3.5	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	3.5	1.8	0.59	ng/l	
31506-32-8	MeFOSA	3.5 U	7.0	3.5	0.88	ng/l	
4151-50-2	EtFOSA	3.5 U	7.0	3.5	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-RHMW12A-WGFD01LF-2304W3		
Lab Sample ID:	FC5514-2	**Date Sampled:**	04/19/23
Matrix:	AQ - Ground Water	**Date Received:**	04/25/23
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	18 U	35	18	3.8	ng/l	
1691-99-2	EtFOSE	18 U	35	18	6.5	ng/l	
PER and POLYFLUOROETHER CARBOXYLIC ACIDS							
13252-13-6	HFPO-DA (GenX)	1.8 U	3.5	1.8	0.88	ng/l	
919005-14-4	ADONA	3.5 U	7.0	3.5	1.6	ng/l	
377-73-1	PFMPA	1.8 U	7.0	1.8	0.88	ng/l	
863090-89-5	PFMBA	3.5 U	7.0	3.5	1.0	ng/l	
151772-58-6	NFDHA	3.5 U	7.0	3.5	1.1	ng/l	
PER and POLYFLUOROETHER SULFONIC ACIDS							
756426-58-1	9Cl-PF3ONS (F-53B Major)	3.5 U	7.0	3.5	1.2	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	3.5 U	7.0	3.5	1.5	ng/l	
113507-82-7	PFEESA	1.8 U	7.0	1.8	0.68	ng/l	
FLUOROTELOMER CARBOXYLIC ACIDS							
356-02-5	3:3 Fluorotelomer carboxylate	8.8 U	18	8.8	4.0	ng/l	
914637-49-3	5:3 Fluorotelomer carboxylate	18 U	88	18	7.7	ng/l	
812-70-4	7:3 Fluorotelomer carboxylate	18 U	88	18	6.9	ng/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	84%		20-150%
	13C5-PFPeA	102%		20-150%
	13C5-PFHxA	100%		20-150%
	13C4-PFHpA	103%		20-150%
	13C8-PFOA	103%		20-150%
	13C9-PFNA	98%		20-150%
	13C6-PFDA	92%		20-150%
	13C7-PFUnDA	74%		20-150%
	13C2-PFDoDA	67%		20-150%
	13C2-PFTeDA	68%		20-150%
	13C3-PFBS	104%		20-150%
	13C3-PFHxS	101%		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-RHMW12A-WGFD01LF-2304W3		
Lab Sample ID:	FC5514-2	**Date Sampled:**	04/19/23
Matrix:	AQ - Ground Water	**Date Received:**	04/25/23
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	97%		20-150%
	13C8-FOSA	57%		20-150%
	d3-MeFOSA	40%		20-150%
	d5-EtFOSA	40%		20-150%
	d3-MeFOSAA	80%		20-150%
	d5-EtFOSAA	74%		20-150%
	d7-MeFOSE	25%		20-150%
	d9-EtFOSE	27%		20-150%
	13C2-4:2FTS	103%		20-180%
	13C2-6:2FTS	110%		20-180%
	13C2-8:2FTS	103%		20-180%
	13C3-HFPO-DA	96%		20-150%

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

Report of Analysis

Client Sample ID: AF-RHMW04-WGN01LF-2304W3
Lab Sample ID: FC5514-3
Matrix: AQ - Ground Water
Method: EPA DRAFT 1633 EPA 1633 DRAFT
Project: N6274223F0104 RH Fire Suppression System

Date Sampled: 04/19/23
Date Received: 04/25/23
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6Q17077.D	1	04/28/23 19:06	MV	04/27/23 10:00	OP96603	S6Q258
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	15	3.6	1.7	ng/l	
2706-90-3	Perfluoropentanoic acid	1.8 U	7.3	1.8	0.85	ng/l	
307-24-4	Perfluorohexanoic acid	1.8 U	3.6	1.8	0.45	ng/l	
375-85-9	Perfluoroheptanoic acid	1.8 U	3.6	1.8	0.45	ng/l	
335-67-1	Perfluorooctanoic acid	0.91 U	3.6	0.91	0.45	ng/l	
375-95-1	Perfluorononanoic acid	1.8 U	3.6	1.8	0.55	ng/l	
335-76-2	Perfluorodecanoic acid	1.8 U	3.6	1.8	0.45	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.8 U	3.6	1.8	0.55	ng/l	
307-55-1	Perfluorododecanoic acid	1.8 U	3.6	1.8	0.55	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.8 U	3.6	1.8	0.76	ng/l	
376-06-7	Perfluorotetradecanoic acid	1.8 U	3.6	1.8	0.45	ng/l	
PERFLUOROALKYL SULFONIC ACIDS							
375-73-5	Perfluorobutanesulfonic acid	1.8 U	3.6	1.8	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	3.6	1.8	0.64	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	1.8 U	3.6	1.8	0.45	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.8 U	3.6	1.8	0.49	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.8 U	3.6	1.8	0.52	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.8 U	3.6	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	3.6	1.8	0.61	ng/l	
31506-32-8	MeFOSA	3.6 U	7.3	3.6	0.91	ng/l	
4151-50-2	EtFOSA	3.6 U	7.3	3.6	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-RHMW04-WGN01LF-2304W3		
Lab Sample ID:	FC5514-3	**Date Sampled:**	04/19/23
Matrix:	AQ - Ground Water	**Date Received:**	04/25/23
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	18 U	36	18	4.0	ng/l	
1691-99-2	EtFOSE	18 U	36	18	6.7	ng/l	
PER and POLYFLUOROETHER CARBOXYLIC ACIDS							
13252-13-6	HFPO-DA (GenX)	1.8 U	3.6	1.8	0.91	ng/l	
919005-14-4	ADONA	3.6 U	7.3	3.6	1.7	ng/l	
377-73-1	PFMPA	1.8 U	7.3	1.8	0.91	ng/l	
863090-89-5	PFMBA	3.6 U	7.3	3.6	1.0	ng/l	
151772-58-6	NFDHA	3.6 U	7.3	3.6	1.1	ng/l	
PER and POLYFLUOROETHER SULFONIC ACIDS							
756426-58-1	9Cl-PF3ONS (F-53B Major)	3.6 U	7.3	3.6	1.3	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	3.6 U	7.3	3.6	1.6	ng/l	
113507-82-7	PFEESA	1.8 U	7.3	1.8	0.71	ng/l	
FLUOROTELOMER CARBOXYLIC ACIDS							
356-02-5	3:3 Fluorotelomer carboxylate	9.1 U	18	9.1	4.1	ng/l	
914637-49-3	5:3 Fluorotelomer carboxylate	18 U	91	18	7.9	ng/l	
812-70-4	7:3 Fluorotelomer carboxylate	18 U	91	18	7.1	ng/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	102%		20-150%
	13C5-PFPeA	105%		20-150%
	13C5-PFHxA	104%		20-150%
	13C4-PFHpA	106%		20-150%
	13C8-PFOA	112%		20-150%
	13C9-PFNA	91%		20-150%
	13C6-PFDA	95%		20-150%
	13C7-PFUnDA	84%		20-150%
	13C2-PFDoDA	74%		20-150%
	13C2-PFTeDA	75%		20-150%
	13C3-PFBS	98%		20-150%
	13C3-PFHxS	100%		20-150%

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

Report of Analysis

Client Sample ID:	AF-RHMW04-WGN01LF-2304W3		
Lab Sample ID:	FC5514-3	**Date Sampled:**	04/19/23
Matrix:	AQ - Ground Water	**Date Received:**	04/25/23
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	98%		20-150%
	13C8-FOSA	51%		20-150%
	d3-MeFOSA	35%		20-150%
	d5-EtFOSA	31%		20-150%
	d3-MeFOSAA	88%		20-150%
	d5-EtFOSAA	80%		20-150%
	d7-MeFOSE	27%		20-150%
	d9-EtFOSE	29%		20-150%
	13C2-4:2FTS	101%		20-180%
	13C2-6:2FTS	103%		20-180%
	13C2-8:2FTS	95%		20-180%
	13C3-HFPO-DA	103%		20-150%

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

Report of Analysis

Client Sample ID:	AF-RHMW16-WGN01LF-2304W3		
Lab Sample ID:	FC5514-4	**Date Sampled:**	04/19/23
Matrix:	AQ - Ground Water	**Date Received:**	04/25/23
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	6Q17079.D	1	04/28/23 19:35	MV	04/27/23 10:00	OP96603	S6Q258
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	14	3.5	1.7	ng/l	
2706-90-3	Perfluoropentanoic acid	1.8 U	7.0	1.8	0.82	ng/l	
307-24-4	Perfluorohexanoic acid	1.8 U	3.5	1.8	0.44	ng/l	
375-85-9	Perfluoroheptanoic acid	1.8 U	3.5	1.8	0.44	ng/l	
335-67-1	Perfluorooctanoic acid	0.88 U	3.5	0.88	0.44	ng/l	
375-95-1	Perfluorononanoic acid	1.8 U	3.5	1.8	0.54	ng/l	
335-76-2	Perfluorodecanoic acid	1.8 U	3.5	1.8	0.44	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.8 U	3.5	1.8	0.53	ng/l	
307-55-1	Perfluorododecanoic acid	1.8 U	3.5	1.8	0.53	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.8 U	3.5	1.8	0.74	ng/l	
376-06-7	Perfluorotetradecanoic acid	1.8 U	3.5	1.8	0.44	ng/l	
PERFLUOROALKYL SULFONIC ACIDS							
375-73-5	Perfluorobutanesulfonic acid	1.8 U	3.5	1.8	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	3.5	1.8	0.61	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	1.8 U	3.5	1.8	0.44	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.8 U	3.5	1.8	0.47	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.8 U	3.5	1.8	0.50	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.8 U	3.5	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	3.5	1.8	0.59	ng/l	
31506-32-8	MeFOSA	3.5 U	7.0	3.5	0.88	ng/l	
4151-50-2	EtFOSA	3.5 U	7.0	3.5	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-RHMW16-WGN01LF-2304W3		
Lab Sample ID:	FC5514-4	**Date Sampled:**	04/19/23
Matrix:	AQ - Ground Water	**Date Received:**	04/25/23
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	18 U	35	18	3.8	ng/l	
1691-99-2	EtFOSE	18 U	35	18	6.5	ng/l	
PER and POLYFLUOROETHER CARBOXYLIC ACIDS							
13252-13-6	HFPO-DA (GenX)	1.8 U	3.5	1.8	0.88	ng/l	
919005-14-4	ADONA	3.5 U	7.0	3.5	1.6	ng/l	
377-73-1	PFMPA	1.8 U	7.0	1.8	0.88	ng/l	
863090-89-5	PFMBA	3.5 U	7.0	3.5	1.0	ng/l	
151772-58-6	NFDHA	3.5 U	7.0	3.5	1.1	ng/l	
PER and POLYFLUOROETHER SULFONIC ACIDS							
756426-58-1	9Cl-PF3ONS (F-53B Major)	3.5 U	7.0	3.5	1.2	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	3.5 U	7.0	3.5	1.5	ng/l	
113507-82-7	PFEESA	1.8 U	7.0	1.8	0.68	ng/l	
FLUOROTELOMER CARBOXYLIC ACIDS							
356-02-5	3:3 Fluorotelomer carboxylate	8.8 U	18	8.8	4.0	ng/l	
914637-49-3	5:3 Fluorotelomer carboxylate	18 U	88	18	7.7	ng/l	
812-70-4	7:3 Fluorotelomer carboxylate	18 U	88	18	6.9	ng/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	102%		20-150%
	13C5-PFPeA	104%		20-150%
	13C5-PFHxA	105%		20-150%
	13C4-PFHpA	100%		20-150%
	13C8-PFOA	101%		20-150%
	13C9-PFNA	98%		20-150%
	13C6-PFDA	103%		20-150%
	13C7-PFUnDA	99%		20-150%
	13C2-PFDoDA	86%		20-150%
	13C2-PFTeDA	84%		20-150%
	13C3-PFBS	101%		20-150%
	13C3-PFHxS	98%		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-RHMW16-WGN01LF-2304W3		
Lab Sample ID:	FC5514-4	**Date Sampled:**	04/19/23
Matrix:	AQ - Ground Water	**Date Received:**	04/25/23
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	107%		20-150%
	13C8-FOSA	51%		20-150%
	d3-MeFOSA	44%		20-150%
	d5-EtFOSA	42%		20-150%
	d3-MeFOSAA	105%		20-150%
	d5-EtFOSAA	98%		20-150%
	d7-MeFOSE	35%		20-150%
	d9-EtFOSE	37%		20-150%
	13C2-4:2FTS	104%		20-180%
	13C2-6:2FTS	105%		20-180%
	13C2-8:2FTS	94%		20-180%
	13C3-HFPO-DA	100%		20-150%

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

Report of Analysis

Client Sample ID: AF-RHMW06-WGN01LF-2304W3
Lab Sample ID: FC5514-5
Matrix: AQ - Ground Water
Method: EPA DRAFT 1633 EPA 1633 DRAFT
Project: N6274223F0104 RH Fire Suppression System

Date Sampled: 04/19/23
Date Received: 04/25/23
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6Q17081.D	1	04/28/23 20:04	MV	04/27/23 10:00	OP96603	S6Q258
Run #2							

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

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYL CARBOXYLIC ACIDS							
375-22-4	Perfluorobutanoic acid	3.8 U	15	3.8	1.8	ng/l	
2706-90-3	Perfluoropentanoic acid	1.9 U	7.7	1.9	0.90	ng/l	
307-24-4	Perfluorohexanoic acid	1.9 U	3.8	1.9	0.48	ng/l	
375-85-9	Perfluoroheptanoic acid	1.9 U	3.8	1.9	0.48	ng/l	
335-67-1	Perfluorooctanoic acid	0.96 U	3.8	0.96	0.48	ng/l	
375-95-1	Perfluorononanoic acid	1.9 U	3.8	1.9	0.59	ng/l	
335-76-2	Perfluorodecanoic acid	1.9 U	3.8	1.9	0.48	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.9 U	3.8	1.9	0.58	ng/l	
307-55-1	Perfluorododecanoic acid	1.9 U	3.8	1.9	0.58	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.9 U	3.8	1.9	0.81	ng/l	
376-06-7	Perfluorotetradecanoic acid	1.9 U	3.8	1.9	0.48	ng/l	
PERFLUOROALKYL SULFONIC ACIDS							
375-73-5	Perfluorobutanesulfonic acid	1.9 U	3.8	1.9	0.48	ng/l	
2706-91-4	Perfluoropentanesulfonic acid	3.8 U	4.8	3.8	1.1	ng/l	
355-46-4	Perfluorohexanesulfonic acid	1.9 U	3.8	1.9	0.67	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	1.9 U	3.8	1.9	0.48	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.9 U	3.8	1.9	0.52	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.9 U	3.8	1.9	0.55	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.9 U	3.8	1.9	0.62	ng/l	
79780-39-5	Perfluorododecanesulfonic aci	3.8 U	4.8	3.8	1.1	ng/l	
FLUOROTELOMER SULFONIC ACIDS							
757124-72-4	4:2 Fluorotelomer sulfonate	7.7 U	19	7.7	3.1	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	7.7 U	19	7.7	3.3	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	7.7 U	19	7.7	4.0	ng/l	
PERFLUOROOCTANE SULFONAMIDES							
754-91-6	PFOSA	1.9 U	3.8	1.9	0.64	ng/l	
31506-32-8	MeFOSA	3.8 U	7.7	3.8	0.96	ng/l	
4151-50-2	EtFOSA	3.8 U	7.7	3.8	0.96	ng/l	

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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-RHMW06-WGN01LF-2304W3		
Lab Sample ID:	FC5514-5	**Date Sampled:**	04/19/23
Matrix:	AQ - Ground Water	**Date Received:**	04/25/23
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	3.8 U	4.8	3.8	0.96	ng/l	
2991-50-6	EtFOSAA	3.8 U	4.8	3.8	1.3	ng/l	
PERFLUOROOCTANE SULFONAMIDO ETHANOLS							
24448-09-7	MeFOSE	19 U	38	19	4.2	ng/l	
1691-99-2	EtFOSE	19 U	38	19	7.1	ng/l	
PER and POLYFLUOROETHER CARBOXYLIC ACIDS							
13252-13-6	HFPO-DA (GenX)	1.9 U	3.8	1.9	0.96	ng/l	
919005-14-4	ADONA	3.8 U	7.7	3.8	1.8	ng/l	
377-73-1	PFMPA	1.9 U	7.7	1.9	0.96	ng/l	
863090-89-5	PFMBA	3.8 U	7.7	3.8	1.1	ng/l	
151772-58-6	NFDHA	3.8 U	7.7	3.8	1.2	ng/l	
PER and POLYFLUOROETHER SULFONIC ACIDS							
756426-58-1	9Cl-PF3ONS (F-53B Major)	3.8 U	7.7	3.8	1.3	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	3.8 U	7.7	3.8	1.7	ng/l	
113507-82-7	PFEESA	1.9 U	7.7	1.9	0.75	ng/l	
FLUOROTELOMER CARBOXYLIC ACIDS							
356-02-5	3:3 Fluorotelomer carboxylate	9.6 U	19	9.6	4.3	ng/l	
914637-49-3	5:3 Fluorotelomer carboxylate	19 U	96	19	8.4	ng/l	
812-70-4	7:3 Fluorotelomer carboxylate	19 U	96	19	7.5	ng/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	101%		20-150%
	13C5-PFPeA	110%		20-150%
	13C5-PFHxA	110%		20-150%
	13C4-PFHpA	110%		20-150%
	13C8-PFOA	112%		20-150%
	13C9-PFNA	100%		20-150%
	13C6-PFDA	106%		20-150%
	13C7-PFUnDA	95%		20-150%
	13C2-PFDoDA	83%		20-150%
	13C2-PFTeDA	79%		20-150%
	13C3-PFBS	103%		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-2304W3		
Lab Sample ID:	FC5514-5	**Date Sampled:**	04/19/23
Matrix:	AQ - Ground Water	**Date Received:**	04/25/23
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	96%		20-150%
	13C8-FOSA	43%		20-150%
	d3-MeFOSA	37%		20-150%
	d5-EtFOSA	36%		20-150%
	d3-MeFOSAA	95%		20-150%
	d5-EtFOSAA	97%		20-150%
	d7-MeFOSE	26%		20-150%
	d9-EtFOSE	31%		20-150%
	13C2-4:2FTS	108%		20-180%
	13C2-6:2FTS	106%		20-180%
	13C2-8:2FTS	103%		20-180%
	13C3-HFPO-DA	109%		20-150%

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

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

SGS

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

FC5514
SGS - ORLANDO JOB # :

COC #: 2304W3AFSG05
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: Eli Martin Sampler 2: Zoe Diermier

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	LAB USE ONLY
1	AF-RHMW12A-WGN01LF-2304W3	04/19/23	1000	ZG/EM/MB	GW	3		X								X
2	AF-RHMW12A-WGFD01LF-2304W3	04/19/23	1000	ZG/EM/MB	GW	3		X								X

EM 04/19/23

INITIAL ASSESSMENT

LABEL VERIFICATION

Turnaround Time (Business days)

10 Day (Business)
7 Day
5 Day
3 Day *RUSH*
2 Day *RUSH*
1 Day *RUSH*
Other
Approved By: / Date:
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 0110-14103781

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1	Eli Martin / AECOM	04/19/23 1320	2 Miranda Delarmo / AECOM	3 Miranda Delarmo/AECOM	4/19/23 1445	4
5	Relinquished by/Affiliation	Date Time:	6 Received By/Affiliation	7 Relinquished By/Affiliation	Date Time:	8 Received By/Affiliation

Lab Use Only : Cooler Temperature (s) Celsius (corrected): 10.3 FRH

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

PFAS_COCs_ALL.xls Rev 031318

FC5514: Chain of Custody
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FC5514

C0C #: 2304W3AFSG08

SGS - ORLANDO JOB # :

PAGE 1 OF 1

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

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: Chris Warnock Sampler 2:

Project Information

Project Name: N6274223F0104 RH Fire Suppression System

Street

City Honolulu State Hawaii

Project # 60697810

Fax #

Client Purchase Order #

Analytical Information

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
3	AF-RHMW04-WGN01LF-2304W3	4.19.23	1055	CL	GW	3		X								X	

INITIAL ASSESSMENT

LABEL VERIFICATION

Turnaround Time (Business days)

10 Day (Business)

7 Day

5 Day

3 Day *RUSH*

2 Day *RUSH*

1 Day *RUSH*

Other

Approved By: / Date:

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 AWP: 016-141687-1

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	Chris Lin	4.19.23 1700	2 AECOM	3 AECOM	4/19/23 1730	4 4/20/23 900
5	Relinquished by/Affiliation	Date Time:	6 Received By/Affiliation	7 Relinquished By/Affiliation	Date Time:	8 Received By/Affiliation

Lab Use Only : Cooler Temperature (s) Celsius (corrected): 16.3 FR#1

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

FC5514
SGS - ORLANDO JOB # :

COC #: 2304W3AFSG06
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: Eli Martin Sampler 2: Zoe Lacomini

Project Information

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

Analytical Information

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:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH+ZNAC	DI WATER	MEOH	PFAS EPA Draft 1633	LAB USE ONLY
4	AF-RHMW16-WGN01LF-2304W3	04/19/23	1610	ZL	GW	3		X								X	

EM 04/19/23

INITIAL ASSESSMENT

LABEL VERIFICATION

Turnaround Time (Business days)

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

Data Deliverable Information

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

Comments / Remarks

EDMS upload database: JBPHE
EDMS Coverage: AFFF Assessment Sampling GW
UNITED AWB 016-14168781

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1	Eli Martin / AECOM	04/19/23 1300	2 Miranda DeGrama / AECOM	3 Miranda DeGrama AECOM	4/19/23 1730	4 4/20/23 940
5	Relinquished by/Affiliation	Date Time:	6 Received By/Affiliation	7 Relinquished By/Affiliation	Date Time:	8 Received By/Affiliation

Lab Use Only : Cooler Temperature (s) Celsius (corrected): 16.3 FedEx

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

PFAS_COCs_ALL.xls Rev 031318

FC5514: Chain of Custody
Page 3 of 6

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

FC5514
SGS - ORLANDO JOB # :
COC #: 2304W3AFSG09
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: Clarissa Sampler 2:

Project Information

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

Analytical Information

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	CONTAINER INFORMATION MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NAOH+ZNAC	DI WATER	MEOH	PFAS EPA Draft 1633	LAB USE ONLY
5	AF-RHMW06-WGN01LF-2304W3	4.19.23	1440	CL	GW	3		X								X	

W 4.19.23

INITIAL ASSESSMENT
LABEL VERIFICATION

Turnaround Time (Business days)

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

Data Deliverable Information

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

Comments / Remarks

EDMS upload database: JBPHE
EDMS Coverage: AFFF Assessment Sampling GW
UNITED AWB 016-14168761

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	Clarissa SGS	4.19.23 1440	2 AECOM	3 AECOM	4/19/23 1703	4 4/19/23 900
5	Relinquished by/Affiliation	Date Time:	Received By/Affiliation 6	Relinquished By/Affiliation 7	Date Time:	Received By/Affiliation 8

Lab Use Only : Cooler Temperature (s) Celsius (corrected): 16.3 FREE - ICE packs

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

PFAS_COCs_ALL.xls Rev 031318

FC5514: Chain of Custody
Page 4 of 6

SGS Sample Receipt Summary

Job Number: FC5514 **Client:** AECOM **Project:** N6274223F0104 RH Fire Suppression System

Date / Time Received: 4/25/2023 9:00:00 AM **Delivery Method:** United Cargo/Airspace **Airbill #'s:** United Cargo AWB #: 016-14168781

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

Cooler Temps (Raw Measured) °C: Cooler 1: (16.3);

Cooler Temps (Corrected) °C: Cooler 1: (16.2);

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 230320 pH 10-12 25BDH07 Other: (Specify) pH 1.0 - 12.0 222221

Residual Chlorine Test Strip Lot #: _____

Comments Cooler received out of Temperature

Technician: NATHANS Date: 4/25/2023 9:00:00 AM Reviewer: CD Date: 4/26/2023

SM001
Rev. Date 05/24/17

CSR: Elvin Kumar **Response Date:** 04/25/23

Response: Per client, Ok to proceed with analysis

SM001
Rev. Date 05/24/17

FC5514: Chain of Custody
Page 6 of 6

QC Evaluation: DOD QSM5.x Limits

Job Number: FC5514
Account: AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System
Collected: 04/19/23

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 FC5514

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: FC5514
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

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

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

FC5514-1, FC5514-2, FC5514-3, FC5514-4, FC5514-5

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.016	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0080	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0040	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0040	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-4	4:2 Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0040	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0080	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0080	0.0010	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.040	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.040	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0080	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0080	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0080	0.0012	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Instrument Blank

Job Number: FC5514
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

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

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

FC5514-1, FC5514-2, FC5514-3, FC5514-4, FC5514-5

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.0080	0.00078	ug/l	
356-02-5	3:3 Fluorotelomer carboxylate	ND	0.020	0.0045	ug/l	
914637-49-3	5:3 Fluorotelomer carboxylate	ND	0.10	0.0087	ug/l	
812-70-4	7:3 Fluorotelomer carboxylate	ND	0.10	0.0079	ug/l	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	99%	20-150%
	13C5-PFPeA	98%	20-150%
	13C5-PFHxA	95%	20-150%
	13C4-PFHpA	100%	20-150%
	13C8-PFOA	97%	20-150%
	13C9-PFNA	95%	20-150%
	13C6-PFDA	109%	20-150%
	13C7-PFUnDA	104%	20-150%
	13C2-PFDoDA	102%	20-150%
	13C2-PFTeDA	97%	20-150%
	13C3-PFBS	105%	20-150%
	13C3-PFHxS	101%	20-150%
	13C8-PFOS	115%	20-150%
	13C8-FOSA	112%	20-150%
	d3-MeFOSA	106%	20-150%
	d5-EtFOSA	106%	20-150%
	d3-MeFOSAA	112%	20-150%
	d5-EtFOSAA	111%	20-150%
	d7-MeFOSE	103%	20-150%
	d9-EtFOSE	109%	20-150%
	13C2-4:2FTS	102%	20-180%
	13C2-6:2FTS	109%	20-180%
	13C2-8:2FTS	108%	20-180%
	13C3-HFPO-DA	102%	20-150%

Continuing Calibration Blank

Job Number: FC5514
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q258-ICCB	6Q17071.D	1	04/28/23	MV	n/a	n/a	S6Q258

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

FC5514-1, FC5514-2, FC5514-3, FC5514-4, FC5514-5

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.016	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0080	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0040	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0040	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-4	4:2 Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0040	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0080	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0080	0.0010	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.040	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.040	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0080	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0080	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0080	0.0012	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Continuing Calibration Blank

Job Number: FC5514
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q258-ICCB	6Q17071.D	1	04/28/23	MV	n/a	n/a	S6Q258

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

FC5514-1, FC5514-2, FC5514-3, FC5514-4, FC5514-5

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.0080	0.00078	ug/l	
356-02-5	3:3 Fluorotelomer carboxylate	ND	0.020	0.0045	ug/l	
914637-49-3	5:3 Fluorotelomer carboxylate	ND	0.10	0.0087	ug/l	
812-70-4	7:3 Fluorotelomer carboxylate	ND	0.10	0.0079	ug/l	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	100%	20-150%
	13C5-PFPeA	101%	20-150%
	13C5-PFHxA	99%	20-150%
	13C4-PFHpA	98%	20-150%
	13C8-PFOA	91%	20-150%
	13C9-PFNA	108%	20-150%
	13C6-PFDA	96%	20-150%
	13C7-PFUnDA	98%	20-150%
	13C2-PFDoDA	93%	20-150%
	13C2-PFTeDA	92%	20-150%
	13C3-PFBS	106%	20-150%
	13C3-PFHxS	106%	20-150%
	13C8-PFOS	102%	20-150%
	13C8-FOSA	100%	20-150%
	d3-MeFOSAA	103%	20-150%
	d5-EtFOSAA	108%	20-150%
	13C2-4:2FTS	120%	20-180%
	13C2-6:2FTS	109%	20-180%
	13C2-8:2FTS	106%	20-180%

Method Blank Summary

Job Number: FC5514
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96603-MB	6Q17074.D	1	04/28/23	MV	04/27/23	OP96603	S6Q258

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

FC5514-1, FC5514-2, FC5514-3, FC5514-4, FC5514-5

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.016	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0080	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0040	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0040	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-4	4:2 Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0040	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0080	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0080	0.0010	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.040	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.040	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0080	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0080	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0080	0.0012	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Method Blank Summary

Job Number: FC5514
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96603-MB	6Q17074.D	1	04/28/23	MV	04/27/23	OP96603	S6Q258

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

FC5514-1, FC5514-2, FC5514-3, FC5514-4, FC5514-5

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.0080	0.00078	ug/l	
356-02-5	3:3 Fluorotelomer carboxylate	ND	0.020	0.0045	ug/l	
914637-49-3	5:3 Fluorotelomer carboxylate	ND	0.10	0.0087	ug/l	
812-70-4	7:3 Fluorotelomer carboxylate	ND	0.10	0.0079	ug/l	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	108%	20-150%
	13C5-PFPeA	110%	20-150%
	13C5-PFHxA	109%	20-150%
	13C4-PFHpA	108%	20-150%
	13C8-PFOA	112%	20-150%
	13C9-PFNA	101%	20-150%
	13C6-PFDA	104%	20-150%
	13C7-PFUnDA	104%	20-150%
	13C2-PFDoDA	94%	20-150%
	13C2-PFTeDA	77%	20-150%
	13C3-PFBS	108%	20-150%
	13C3-PFHxS	112%	20-150%
	13C8-PFOS	103%	20-150%
	13C8-FOSA	41%	20-150%
	d3-MeFOSA	28%	20-150%
	d5-EtFOSA	26%	20-150%
	d3-MeFOSAA	95%	20-150%
	d5-EtFOSAA	90%	20-150%
	d7-MeFOSE	20%	20-150%
	d9-EtFOSE	23%	20-150%
	13C2-4:2FTS	118%	20-180%
	13C2-6:2FTS	115%	20-180%
	13C2-8:2FTS	112%	20-180%
	13C3-HFPO-DA	104%	20-150%

Blank Spike Summary

Job Number: FC5514
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96603-LLBS	6Q17073.D	1	04/28/23	MV	04/27/23	OP96603	S6Q258

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

FC5514-1, FC5514-2, FC5514-3, FC5514-4, FC5514-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.03	0.0303	101	40-150
2706-90-3	Perfluoropentanoic acid	0.015	0.0149	99	40-150
307-24-4	Perfluorohexanoic acid	0.0075	0.0072	96	40-150
375-85-9	Perfluoroheptanoic acid	0.0075	0.0077	103	40-150
335-67-1	Perfluorooctanoic acid	0.0075	0.0089	119	40-150
375-95-1	Perfluorononanoic acid	0.0075	0.0076	101	40-150
335-76-2	Perfluorodecanoic acid	0.0075	0.0077	103	40-150
2058-94-8	Perfluoroundecanoic acid	0.0075	0.0074	99	40-150
307-55-1	Perfluorododecanoic acid	0.0075	0.0073	97	40-150
72629-94-8	Perfluorotridecanoic acid	0.0075	0.0074	99	40-150
376-06-7	Perfluorotetradecanoic acid	0.0075	0.0082	109	40-150
375-73-5	Perfluorobutanesulfonic acid	0.00665	0.0068	102	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.00706	0.0075	106	40-150
355-46-4	Perfluorohexanesulfonic acid	0.00686	0.0074	108	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.00715	0.0072	101	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.00696	0.0063	91	40-150
68259-12-1	Perfluorononanesulfonic acid	0.00722	0.0072	100	40-150
335-77-3	Perfluorodecanesulfonic acid	0.00724	0.0073	101	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.00728	0.0059	81	40-150
757124-72-4	4:2 Fluorotelomer sulfonate	0.0281	0.0286	102	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.0285	0.0277	97	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.0288	0.0305	106	40-150
754-91-6	PFOSA	0.0075	0.0083	111	40-150
31506-32-8	MeFOSA	0.015	0.0147	98	40-150
4151-50-2	EtFOSA	0.015	0.0159	106	40-150
2355-31-9	MeFOSAA	0.0075	0.0077	103	40-150
2991-50-6	EtFOSAA	0.0075	0.0068	91	40-150
24448-09-7	MeFOSE	0.0375	0.0398	106	40-150
1691-99-2	EtFOSE	0.0375	0.0342	91	40-150
13252-13-6	HFPO-DA (GenX)	0.015	0.0146	97	40-150
919005-14-4	ADONA	0.0142	0.0147	104	40-150
377-73-1	PFMPA	0.015	0.0146	97	40-150
863090-89-5	PFMBA	0.015	0.0150	100	40-150
151772-58-6	NFDHA	0.015	0.0145	97	40-150
756426-58-1	9Cl-PF3ONS (F-53B Major)	0.014	0.0148	106	40-150
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	0.0142	0.0139	98	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC5514
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96603-LLBS	6Q17073.D	1	04/28/23	MV	04/27/23	OP96603	S6Q258

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

FC5514-1, FC5514-2, FC5514-3, FC5514-4, FC5514-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0134	0.0132	99	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.0375	0.0313	83	40-150
914637-49-3	5:3 Fluorotelomer carboxylate	0.188	0.160	85	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.188	0.155	83	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	109%	20-150%
	13C5-PFPeA	105%	20-150%
	13C5-PFHxA	103%	20-150%
	13C4-PFHpA	104%	20-150%
	13C8-PFOA	96%	20-150%
	13C9-PFNA	103%	20-150%
	13C6-PFDA	119%	20-150%
	13C7-PFUnDA	114%	20-150%
	13C2-PFDoDA	105%	20-150%
	13C2-PFTeDA	87%	20-150%
	13C3-PFBS	109%	20-150%
	13C3-PFHxS	105%	20-150%
	13C8-PFOS	106%	20-150%
	13C8-FOSA	42%	20-150%
	d3-MeFOSA	30%	20-150%
	d5-EtFOSA	24%	20-150%
	d3-MeFOSAA	109%	20-150%
	d5-EtFOSAA	108%	20-150%
	d7-MeFOSE	16%* [a]	20-150%
	d9-EtFOSE	19%* [a]	20-150%
	13C2-4:2FTS	112%	20-180%
	13C2-6:2FTS	112%	20-180%
	13C2-8:2FTS	108%	20-180%
	13C3-HFPO-DA	99%	20-150%

(a) Outside control limts.

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC5514
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96603-BS	6Q17072.D	1	04/28/23	MV	04/27/23	OP96603	S6Q258

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

FC5514-1, FC5514-2, FC5514-3, FC5514-4, FC5514-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.1	0.100	100	40-150
2706-90-3	Perfluoropentanoic acid	0.05	0.0505	101	40-150
307-24-4	Perfluorohexanoic acid	0.025	0.0236	94	40-150
375-85-9	Perfluoroheptanoic acid	0.025	0.0255	102	40-150
335-67-1	Perfluorooctanoic acid	0.025	0.0247	99	40-150
375-95-1	Perfluorononanoic acid	0.025	0.0248	99	40-150
335-76-2	Perfluorodecanoic acid	0.025	0.0257	103	40-150
2058-94-8	Perfluoroundecanoic acid	0.025	0.0234	94	40-150
307-55-1	Perfluorododecanoic acid	0.025	0.0263	105	40-150
72629-94-8	Perfluorotridecanoic acid	0.025	0.0247	99	40-150
376-06-7	Perfluorotetradecanoic acid	0.025	0.0237	95	40-150
375-73-5	Perfluorobutanesulfonic acid	0.0222	0.0216	97	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0235	0.0233	99	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0229	0.0216	95	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0238	0.0253	106	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0232	0.0259	112	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0241	0.0256	106	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0241	0.0256	106	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0243	0.0221	91	40-150
757124-72-4	4:2 Fluorotelomer sulfonate	0.0938	0.106	113	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.095	0.0859	90	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.096	0.100	104	40-150
754-91-6	PFOSA	0.025	0.0288	115	40-150
31506-32-8	MeFOSA	0.05	0.0518	104	40-150
4151-50-2	EtFOSA	0.05	0.0502	100	40-150
2355-31-9	MeFOSAA	0.025	0.0256	102	40-150
2991-50-6	EtFOSAA	0.025	0.0233	93	40-150
24448-09-7	MeFOSE	0.125	0.130	104	40-150
1691-99-2	EtFOSE	0.125	0.121	97	40-150
13252-13-6	HFPO-DA (GenX)	0.05	0.0508	102	40-150
919005-14-4	ADONA	0.0473	0.0477	101	40-150
377-73-1	PFMPA	0.05	0.0490	98	40-150
863090-89-5	PFMBA	0.05	0.0498	100	40-150
151772-58-6	NFDHA	0.05	0.0506	101	40-150
756426-58-1	9Cl-PF3ONS (F-53B Major)	0.0468	0.0505	108	40-150
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	0.0473	0.0479	101	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC5514
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96603-BS	6Q17072.D	1	04/28/23	MV	04/27/23	OP96603	S6Q258

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

FC5514-1, FC5514-2, FC5514-3, FC5514-4, FC5514-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0445	0.0437	98	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.125	0.0985	79	40-150
914637-49-3	5:3 Fluorotelomer carboxylate	0.625	0.524	84	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.625	0.473	76	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	107%	20-150%
	13C5-PFPeA	104%	20-150%
	13C5-PFHxA	104%	20-150%
	13C4-PFHpA	102%	20-150%
	13C8-PFOA	107%	20-150%
	13C9-PFNA	109%	20-150%
	13C6-PFDA	112%	20-150%
	13C7-PFUnDA	103%	20-150%
	13C2-PFDoDA	98%	20-150%
	13C2-PFTeDA	87%	20-150%
	13C3-PFBS	111%	20-150%
	13C3-PFHxS	109%	20-150%
	13C8-PFOS	108%	20-150%
	13C8-FOSA	49%	20-150%
	d3-MeFOSA	44%	20-150%
	d5-EtFOSA	42%	20-150%
	d3-MeFOSAA	114%	20-150%
	d5-EtFOSAA	114%	20-150%
	d7-MeFOSE	15%* [a]	20-150%
	d9-EtFOSE	16%* [a]	20-150%
	13C2-4:2FTS	101%	20-180%
	13C2-6:2FTS	115%	20-180%
	13C2-8:2FTS	101%	20-180%
	13C3-HFPO-DA	98%	20-150%

(a) Outside control limits.

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FC5514
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96603-MS	6Q17078.D	1	04/28/23	MV	04/27/23	OP96603	S6Q258
FC5514-3	6Q17077.D	1	04/28/23	MV	04/27/23	OP96603	S6Q258

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

FC5514-1, FC5514-2, FC5514-3, FC5514-4, FC5514-5

CAS No.	Compound	FC5514-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
375-22-4	Perfluorobutanoic acid	0.015	U	0.0926	0.0955	103	40-150
2706-90-3	Perfluoropentanoic acid	0.0073	U	0.0463	0.0467	101	40-150
307-24-4	Perfluorohexanoic acid	0.0036	U	0.0231	0.0218	94	40-150
375-85-9	Perfluoroheptanoic acid	0.0036	U	0.0231	0.0251	108	40-150
335-67-1	Perfluorooctanoic acid	0.0036	U	0.0231	0.0249	108	40-150
375-95-1	Perfluorononanoic acid	0.0036	U	0.0231	0.0241	104	40-150
335-76-2	Perfluorodecanoic acid	0.0036	U	0.0231	0.0271	117	40-150
2058-94-8	Perfluoroundecanoic acid	0.0036	U	0.0231	0.0249	108	40-150
307-55-1	Perfluorododecanoic acid	0.0036	U	0.0231	0.0228	98	40-150
72629-94-8	Perfluorotridecanoic acid	0.0036	U	0.0231	0.0236	102	40-150
376-06-7	Perfluorotetradecanoic acid	0.0036	U	0.0231	0.0266	115	40-150
375-73-5	Perfluorobutanesulfonic acid	0.0036	U	0.0205	0.0214	104	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0045	U	0.0218	0.0246	113	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0036	U	0.0212	0.0229	108	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0036	U	0.0221	0.0265	120	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0036	U	0.0215	0.0213	99	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0036	U	0.0223	0.0211	95	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0036	U	0.0223	0.0212	95	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0045	U	0.0225	0.0216	96	40-150
757124-72-4	4:2 Fluorotelomer sulfonate	0.018	U	0.0868	0.0929	107	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.018	U	0.088	0.105	119	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.018	U	0.0889	0.0937	105	40-150
754-91-6	PFOSA	0.0036	U	0.0231	0.0247	107	40-150
31506-32-8	MeFOSA	0.0073	U	0.0463	0.0512	111	40-150
4151-50-2	EtFOSA	0.0073	U	0.0463	0.0428	92	40-150
2355-31-9	MeFOSAA	0.0045	U	0.0231	0.0252	109	40-150
2991-50-6	EtFOSAA	0.0045	U	0.0231	0.0235	102	40-150
24448-09-7	MeFOSE	0.036	U	0.116	0.119	103	40-150
1691-99-2	EtFOSE	0.036	U	0.116	0.121	105	40-150
13252-13-6	HFPO-DA (GenX)	0.0036	U	0.0463	0.0457	99	40-150
919005-14-4	ADONA	0.0073	U	0.0438	0.0457	104	40-150
377-73-1	PFMPA	0.0073	U	0.0463	0.0459	99	40-150
863090-89-5	PFMBA	0.0073	U	0.0463	0.0474	102	40-150
151772-58-6	NFDHA	0.0073	U	0.0463	0.0457	99	40-150
756426-58-1	9Cl-PF3ONS (F-53B Major)	0.0073	U	0.0433	0.0391	90	40-150
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	0.0073	U	0.0438	0.0337	77	40-150

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FC5514
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96603-MS	6Q17078.D	1	04/28/23	MV	04/27/23	OP96603	S6Q258
FC5514-3	6Q17077.D	1	04/28/23	MV	04/27/23	OP96603	S6Q258

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

FC5514-1, FC5514-2, FC5514-3, FC5514-4, FC5514-5

CAS No.	Compound	FC5514-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
113507-82-7	PFEESA	0.0073	U	0.0412	0.0416	101	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.018	U	0.116	0.0874	76	40-150
914637-49-3	5:3 Fluorotelomer carboxylate	0.091	U	0.579	0.450	78	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.091	U	0.579	0.403	70	40-150

CAS No.	ID Standard Recoveries	MS	FC5514-3	Limits
	13C4-PFBA	96%	102%	20-150%
	13C5-PFPeA	107%	105%	20-150%
	13C5-PFHxA	108%	104%	20-150%
	13C4-PFHpA	104%	106%	20-150%
	13C8-PFOA	99%	112%	20-150%
	13C9-PFNA	97%	91%	20-150%
	13C6-PFDA	89%	95%	20-150%
	13C7-PFUnDA	81%	84%	20-150%
	13C2-PFDoDA	77%	74%	20-150%
	13C2-PFTeDA	74%	75%	20-150%
	13C3-PFBS	111%	98%	20-150%
	13C3-PFHxS	100%	100%	20-150%
	13C8-PFOS	88%	98%	20-150%
	13C8-FOSA	39%	51%	20-150%
	d3-MeFOSA	29%	35%	20-150%
	d5-EtFOSA	33%	31%	20-150%
	d3-MeFOSAA	82%	88%	20-150%
	d5-EtFOSAA	77%	80%	20-150%
	d7-MeFOSE	22%	27%	20-150%
	d9-EtFOSE	24%	29%	20-150%
	13C2-4:2FTS	105%	101%	20-180%
	13C2-6:2FTS	99%	103%	20-180%
	13C2-8:2FTS	94%	95%	20-180%
	13C3-HFPO-DA	100%	103%	20-150%

* = Outside of Control Limits.

Duplicate Summary

Job Number: FC5514
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96603-DUP	6Q17080.D	1	04/28/23	MV	04/27/23	OP96603	S6Q258
FC5522-4	6Q17087.D	1	04/28/23	MV	04/27/23	OP96603	S6Q258

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

FC5514-1, FC5514-2, FC5514-3, FC5514-4, FC5514-5

CAS No.	Compound	FC5522-4 ug/l	Q	DUP ug/l	Q	RPD	Limits
375-22-4	Perfluorobutanoic acid	0.015 U		ND		nc	30
2706-90-3	Perfluoropentanoic acid	0.0074 U		ND		nc	30
307-24-4	Perfluorohexanoic acid	0.0037 U		ND		nc	30
375-85-9	Perfluoroheptanoic acid	0.0037 U		ND		nc	30
335-67-1	Perfluorooctanoic acid	0.0037 U		ND		nc	30
375-95-1	Perfluorononanoic acid	0.0037 U		ND		nc	30
335-76-2	Perfluorodecanoic acid	0.0037 U		ND		nc	30
2058-94-8	Perfluoroundecanoic acid	0.0037 U		ND		nc	30
307-55-1	Perfluorododecanoic acid	0.0037 U		ND		nc	30
72629-94-8	Perfluorotridecanoic acid	0.0037 U		ND		nc	30
376-06-7	Perfluorotetradecanoic acid	0.0037 U		ND		nc	30
375-73-5	Perfluorobutanesulfonic acid	0.0037 U		ND		nc	30
2706-91-4	Perfluoropentanesulfonic acid	0.0046 U		ND		nc	30
355-46-4	Perfluorohexanesulfonic acid	0.0037 U		ND		nc	30
375-92-8	Perfluoroheptanesulfonic acid	0.0037 U		ND		nc	30
1763-23-1	Perfluorooctanesulfonic acid	0.0037 U		ND		nc	30
68259-12-1	Perfluorononanesulfonic acid	0.0037 U		ND		nc	30
335-77-3	Perfluorodecanesulfonic acid	0.0037 U		ND		nc	30
79780-39-5	Perfluorododecanesulfonic aci	0.0046 U		ND		nc	30
757124-72-4	4:2 Fluorotelomer sulfonate	0.019 U		ND		nc	30
27619-97-2	6:2 Fluorotelomer sulfonate	0.019 U		ND		nc	30
39108-34-4	8:2 Fluorotelomer sulfonate	0.019 U		ND		nc	30
754-91-6	PFOSA	0.0037 U		ND		nc	30
31506-32-8	MeFOSA	0.0074 U		ND		nc	30
4151-50-2	EtFOSA	0.0074 U		ND		nc	30
2355-31-9	MeFOSAA	0.0046 U		ND		nc	30
2991-50-6	EtFOSAA	0.0046 U		ND		nc	30
24448-09-7	MeFOSE	0.037 U		ND		nc	30
1691-99-2	EtFOSE	0.037 U		ND		nc	30
13252-13-6	HFPO-DA (GenX)	0.0037 U		ND		nc	30
919005-14-4	ADONA	0.0074 U		ND		nc	30
377-73-1	PFMPA	0.0074 U		ND		nc	30
863090-89-5	PFMBA	0.0074 U		ND		nc	30
151772-58-6	NFDHA	0.0074 U		ND		nc	30
756426-58-1	9Cl-PF3ONS (F-53B Major)	0.0074 U		ND		nc	30
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	0.0074 U		ND		nc	30

* = Outside of Control Limits.

Duplicate Summary

Job Number: FC5514
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96603-DUP	6Q17080.D	1	04/28/23	MV	04/27/23	OP96603	S6Q258
FC5522-4	6Q17087.D	1	04/28/23	MV	04/27/23	OP96603	S6Q258

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

FC5514-1, FC5514-2, FC5514-3, FC5514-4, FC5514-5

CAS No.	Compound	FC5522-4 ug/l	Q	DUP ug/l	Q	RPD	Limits
113507-82-7	PFEESA	0.0074	U	ND		nc	30
356-02-5	3:3 Fluorotelomer carboxylate	0.019	U	ND		nc	30
914637-49-3	5:3 Fluorotelomer carboxylate	0.093	U	ND		nc	30
812-70-4	7:3 Fluorotelomer carboxylate	0.093	U	ND		nc	30

CAS No.	ID Standard Recoveries	DUP	FC5522-4	Limits
	13C4-PFBA	98%	100%	20-150%
	13C5-PFPeA	106%	108%	20-150%
	13C5-PFHxA	107%	108%	20-150%
	13C4-PFHpA	102%	107%	20-150%
	13C8-PFOA	107%	105%	20-150%
	13C9-PFNA	106%	101%	20-150%
	13C6-PFDA	96%	94%	20-150%
	13C7-PFUnDA	80%	88%	20-150%
	13C2-PFDoDA	76%	84%	20-150%
	13C2-PFTeDA	68%	77%	20-150%
	13C3-PFBS	112%	102%	20-150%
	13C3-PFHxS	103%	102%	20-150%
	13C8-PFOS	88%	98%	20-150%
	13C8-FOSA	36%	44%	20-150%
	d3-MeFOSA	27%	31%	20-150%
	d5-EtFOSA	27%	33%	20-150%
	d3-MeFOSAA	81%	82%	20-150%
	d5-EtFOSAA	85%	86%	20-150%
	d7-MeFOSE	20%	26%	20-150%
	d9-EtFOSE	24%	27%	20-150%
	13C2-4:2FTS	105%	104%	20-180%
	13C2-6:2FTS	107%	107%	20-180%
	13C2-8:2FTS	99%	98%	20-180%
	13C3-HFPO-DA	98%	100%	20-150%

* = Outside of Control Limits.