

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: FC5352

Sampling Date: 04/18/23



Report to:

AECOM, Inc
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ATTN: Katie Abbott

Total number of pages in report: 34



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Elvin Kumar 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001)
DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177),
AL, AK, AR, CT, IA, KY, MA, MI, MS, ND, NH, NV, OK, OR, IL, UT, VT, WA, WI, WV

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Test results relate only to samples analyzed.

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Sample Summary

AECOM, INC.

Job No: FC5352

N6274223F0104 RH Fire Suppression System
Project No: 60697810

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
FC5352-1	04/18/23	11:00	EMAG04/19/23	AQ	Ground Water	AF-HDMW225303-WGN01LF-2304W3
FC5352-2	04/18/23	14:30	EMAG04/19/23	AQ	Ground Water	AF-RHMW10-WGN01LF-2304W3

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: AECOM, INC.

Job No: FC5352

Site: N6274223F0104 RH Fire Suppression System

Report Date: 4/25/2023 3:16:49 PM

On 04/19/2023, 2 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc - Orlando. at a maximum corrected temperature of 0.3 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FC5352 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: OP96492

Sample(s) FC5352-1MS, FC5352-2DUP were used as the QC samples indicated.

Blank Spike Recovery(s) for 3:3 Fluorotelomer carboxylate are outside control limits.

FC5352-1 for 3:3 Fluorotelomer carboxylate: Associated BS recovery outside control limits.

FC5352-2 for 3:3 Fluorotelomer carboxylate: Associated BS recovery 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: FC5352
Account: AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System
Collected: 04/18/23



Lab Sample ID	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
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FC5352-1 AF-HDMW225303-WGN01LF-2304W3

No hits reported in this sample.

FC5352-2 AF-RHMW10-WGN01LF-2304W3

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	AF-HDMW225303-WGN01LF-2304W3		
Lab Sample ID:	FC5352-1	Date Sampled:	04/18/23
Matrix:	AQ - Ground Water	Date Received:	04/19/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4Q43455.D	1	04/21/23 22:16	MV	04/20/23 11:00	OP96492	S4Q627
Run #2							

Run #	Initial Volume	Final Volume
Run #1	540 ml	5.0 ml
Run #2		

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

375-22-4	Perfluorobutanoic acid	3.7 U	19	3.7	1.8	ng/l	
2706-90-3	Perfluoropentanoic acid	1.9 U	9.3	1.9	0.87	ng/l	
307-24-4	Perfluorohexanoic acid	0.93 U	4.6	0.93	0.46	ng/l	
375-85-9	Perfluoroheptanoic acid	0.93 U	4.6	0.93	0.46	ng/l	
335-67-1	Perfluorooctanoic acid	0.93 U	4.6	0.93	0.46	ng/l	
375-95-1	Perfluorononanoic acid	1.9 U	4.6	1.9	0.56	ng/l	
335-76-2	Perfluorodecanoic acid	0.93 U	4.6	0.93	0.46	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.9 U	4.6	1.9	0.56	ng/l	
307-55-1	Perfluorododecanoic acid	1.9 U	4.6	1.9	0.56	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.9 U	4.6	1.9	0.78	ng/l	
376-06-7	Perfluorotetradecanoic acid	0.93 U	4.6	0.93	0.46	ng/l	

PERFLUOROALKYL SULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	0.93 U	4.6	0.93	0.46	ng/l	
2706-91-4	Perfluoropentanesulfonic acid	3.7 U	4.6	3.7	1.0	ng/l	
355-46-4	Perfluorohexanesulfonic acid	1.9 U	4.6	1.9	0.65	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	0.93 U	4.6	0.93	0.46	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.9 U	4.6	1.9	0.50	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.9 U	4.6	1.9	0.53	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.9 U	4.6	1.9	0.59	ng/l	
79780-39-5	Perfluorododecanesulfonic aci	3.7 U	4.6	3.7	1.1	ng/l	

FLUOROTELOMER SULFONIC ACIDS

757124-72-4	4:2 Fluorotelomer sulfonate	7.4 U	19	7.4	3.0	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	7.4 U	19	7.4	3.2	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	7.4 U	19	7.4	3.8	ng/l	

PERFLUOROOCCTANE SULFONAMIDES

754-91-6	PFOSA	1.9 U	4.6	1.9	0.62	ng/l	
31506-32-8	MeFOSA	1.9 U	4.6	1.9	0.93	ng/l	
4151-50-2	EtFOSA	1.9 U	4.6	1.9	0.93	ng/l	

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

Report of Analysis

Client Sample ID:	AF-HDMW225303-WGN01LF-2304W3		
Lab Sample ID:	FC5352-1	Date Sampled:	04/18/23
Matrix:	AQ - Ground Water	Date Received:	04/19/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

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

2355-31-9	MeFOSAA	3.7 U	4.6	3.7	0.93	ng/l	
2991-50-6	EtFOSAA	3.7 U	4.6	3.7	1.2	ng/l	

PERFLUOROOCCTANE SULFONAMIDO ETHANOLS

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

PER and POLYFLUOROETHER CARBOXYLIC ACIDS

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

PER and POLYFLUOROETHER SULFONIC ACIDS

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

FLUOROTELOMER CARBOXYLIC ACIDS

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

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	113%		20-150%
	13C5-PFPeA	110%		20-150%
	13C5-PFHxA	114%		20-150%
	13C4-PFHpA	112%		20-150%
	13C8-PFOA	101%		20-150%
	13C9-PFNA	106%		20-150%
	13C6-PFDA	103%		20-150%
	13C7-PFUnDA	91%		20-150%
	13C2-PFDoDA	80%		20-150%
	13C2-PFTeDA	71%		20-150%
	13C3-PFBS	128%		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-HDMW225303-WGN01LF-2304W3	
Lab Sample ID:	FC5352-1	Date Sampled: 04/18/23
Matrix:	AQ - Ground Water	Date Received: 04/19/23
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	88%		20-150%
	13C8-FOSA	60%		20-150%
	d3-MeFOSA	74%		20-150%
	d5-EtFOSA	79%		20-150%
	d3-MeFOSAA	108%		20-150%
	d5-EtFOSAA	96%		20-150%
	d7-MeFOSE	61%		20-150%
	d9-EtFOSE	69%		20-150%
	13C2-4:2FTS	147%		20-150%
	13C2-6:2FTS	140%		20-150%
	13C2-8:2FTS	114%		20-150%
	13C3-HFPO-DA	94%		20-150%

(a) Associated BS recovery 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

Report of Analysis

Client Sample ID:	AF-RHMW10-WGN01LF-2304W3		
Lab Sample ID:	FC5352-2	Date Sampled:	04/18/23
Matrix:	AQ - Ground Water	Date Received:	04/19/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4Q43457.D	1	04/21/23 22:44	MV	04/20/23 11:00	OP96492	S4Q627
Run #2							

Run #	Initial Volume	Final Volume
Run #1	540 ml	5.0 ml
Run #2		

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

375-22-4	Perfluorobutanoic acid	3.7 U	19	3.7	1.8	ng/l	
2706-90-3	Perfluoropentanoic acid	1.9 U	9.3	1.9	0.87	ng/l	
307-24-4	Perfluorohexanoic acid	0.93 U	4.6	0.93	0.46	ng/l	
375-85-9	Perfluoroheptanoic acid	0.93 U	4.6	0.93	0.46	ng/l	
335-67-1	Perfluorooctanoic acid	0.93 U	4.6	0.93	0.46	ng/l	
375-95-1	Perfluorononanoic acid	1.9 U	4.6	1.9	0.56	ng/l	
335-76-2	Perfluorodecanoic acid	0.93 U	4.6	0.93	0.46	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.9 U	4.6	1.9	0.56	ng/l	
307-55-1	Perfluorododecanoic acid	1.9 U	4.6	1.9	0.56	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.9 U	4.6	1.9	0.78	ng/l	
376-06-7	Perfluorotetradecanoic acid	0.93 U	4.6	0.93	0.46	ng/l	

PERFLUOROALKYL SULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	0.93 U	4.6	0.93	0.46	ng/l	
2706-91-4	Perfluoropentanesulfonic acid	3.7 U	4.6	3.7	1.0	ng/l	
355-46-4	Perfluorohexanesulfonic acid	1.9 U	4.6	1.9	0.65	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	0.93 U	4.6	0.93	0.46	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.9 U	4.6	1.9	0.50	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.9 U	4.6	1.9	0.53	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.9 U	4.6	1.9	0.59	ng/l	
79780-39-5	Perfluorododecanesulfonic aci	3.7 U	4.6	3.7	1.1	ng/l	

FLUOROTELOMER SULFONIC ACIDS

757124-72-4	4:2 Fluorotelomer sulfonate	7.4 U	19	7.4	3.0	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	7.4 U	19	7.4	3.2	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	7.4 U	19	7.4	3.8	ng/l	

PERFLUOROOCCTANE SULFONAMIDES

754-91-6	PFOSA	1.9 U	4.6	1.9	0.62	ng/l	
31506-32-8	MeFOSA	1.9 U	4.6	1.9	0.93	ng/l	
4151-50-2	EtFOSA	1.9 U	4.6	1.9	0.93	ng/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
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 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.2
4

Report of Analysis

Client Sample ID:	AF-RHMW10-WGN01LF-2304W3		
Lab Sample ID:	FC5352-2	Date Sampled:	04/18/23
Matrix:	AQ - Ground Water	Date Received:	04/19/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

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

2355-31-9	MeFOSAA	3.7 U	4.6	3.7	0.93	ng/l	
2991-50-6	EtFOSAA	3.7 U	4.6	3.7	1.2	ng/l	

PERFLUOROOCCTANE SULFONAMIDO ETHANOLS

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

PER and POLYFLUOROETHER CARBOXYLIC ACIDS

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

PER and POLYFLUOROETHER SULFONIC ACIDS

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

FLUOROTELOMER CARBOXYLIC ACIDS

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

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	109%		20-150%
	13C5-PFPeA	109%		20-150%
	13C5-PFHxA	113%		20-150%
	13C4-PFHpA	113%		20-150%
	13C8-PFOA	109%		20-150%
	13C9-PFNA	112%		20-150%
	13C6-PFDA	101%		20-150%
	13C7-PFUnDA	106%		20-150%
	13C2-PFDoDA	94%		20-150%
	13C2-PFTeDA	80%		20-150%
	13C3-PFBS	116%		20-150%
	13C3-PFHxS	113%		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-RHMW10-WGN01LF-2304W3		Date Sampled:	04/18/23
Lab Sample ID:	FC5352-2		Date Received:	04/19/23
Matrix:	AQ - Ground Water		Percent Solids:	n/a
Method:	EPA DRAFT 1633 EPA 1633 DRAFT			
Project:	N6274223F0104 RH Fire Suppression System			

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	101%		20-150%
	13C8-FOSA	76%		20-150%
	d3-MeFOSA	91%		20-150%
	d5-EtFOSA	98%		20-150%
	d3-MeFOSAA	116%		20-150%
	d5-EtFOSAA	113%		20-150%
	d7-MeFOSE	80%		20-150%
	d9-EtFOSE	89%		20-150%
	13C2-4:2FTS	137%		20-150%
	13C2-6:2FTS	120%		20-150%
	13C2-8:2FTS	126%		20-150%
	13C3-HFPO-DA	91%		20-150%

(a) Associated BS recovery 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-13 Orlando, FL 32811
 TEL: 407-425-0700 FAX: 407-425-0707
 WWW.SGS.COM

FC5352
 SGS - ORLANDO JOB #:

COC # 2304W3AFSG04

PAGE 1 OF 1

Client / Reporting Information		Project Information		Analytical Information										Matrix Codes		
Company Name: AECOM		Project Name: N6274223F0104 RH Fire Suppression System		<div style="position: relative; height: 100px;"> <div style="position: absolute; top: 10px; right: 10px; text-align: right;">EA 04/18/23</div> </div>										DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe		
Address: 1001 Bishop St. ste 1600		Street														
City: Honolulu State: HI Zip: 96813		City Honolulu State Hawaii														
Project Contact: Katie Abbott Email: katie.abbott@aecom.com		Project # 60697810														
Project Manager: Watson Tani Email: watson.tani@aecom.com		Fax #														
Sampler(s) Name(s) (Printed) Sampler 1: Angelo Gumbel Sampler 2: Miranika Diquema		Client Purchase Order #		PFAS EPA Draft 1633												
SGS Orlando Sample #	Field ID / Point of Collection	DATE	TIME	SAMPLED BY	MATRIX	TOTAL # OF BOTTLES	OTHER	ASBESTOS	PCB	NIH	NIH3	PCB4	NIH3+ZINC	DI WATERS	WICH	LAB USE ONLY
1	AF-HDMW225303-WGN01LF-2304W3	04/18/23	1100	Angelo Gumbel	GW	3		X								
<div style="position: relative; width: 100%; height: 100%;"> <div style="position: absolute; top: 10%; left: 10%; font-size: 2em; opacity: 0.5;">EA 04/18/23</div> </div>																
Turnaround Time (Business days)				Data Deliverable Information				Comments / Remarks								
<input type="checkbox"/> 10 Day (Business) <input type="checkbox"/> 7 Day <input checked="" type="checkbox"/> 5 Day <input type="checkbox"/> 3 Day RUSH <input type="checkbox"/> 2 Day RUSH <input type="checkbox"/> 1 Day RUSH <input type="checkbox"/> Other		Approved By: / Date:		<input type="checkbox"/> COMMERCIAL "A" (RESULTS ONLY) <input type="checkbox"/> COMMERCIAL "B" (RESULTS PLUS QC) <input type="checkbox"/> REDT1 (EPA LEVEL 3) <input checked="" type="checkbox"/> INITIAL ASSESSMENT <input checked="" type="checkbox"/> EDD'S LABEL VERIFICATION				EDMS upload database: JBPHE EDMS Coverage: AFFF Assessment Sampling GW United AWB 016-91766695 SP								
Rush T/A Data Available VIA Email or Lablink																
Relinquished by Sampler/Affiliation		Date Time:		Received By/Affiliation				Date Time:		Received By/Affiliation				Date Time:		
1 Eli Mucha / AECOM		04/18/23 1330		2 [Signature] AECOM				04/18/23		4 [Signature] AECOM				04/18/23 1520		
5				6				7		8						

PFAS_COCS_ALL.xls Rev 031318

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





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

FC5352

COC # 2304W3AFSG03

SGS - ORLANDO JOB #:

PAGE 1 OF 1

Client / Reporting Information		Project Information		Analytical Information		Matrix Codes										
Company Name: AECOM		Project Name: N6274223F0104 RH Fire Suppression System		SGS - ORLANDO Quote #		SKIFF #										
Address: 1001 Bishop St. ste 1600		Street		<div style="border: 1px solid black; padding: 5px;"> EN 04/18/23 </div>		DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SD - Soil SL - Sludge OL - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe										
City: Honolulu State: HI Zip: 96813		City Honolulu State Hawaii														
Project Contact: Katie Abbott Email: katie.abbott@aecom.com		Project # 60697810														
Project Manager: Watson Tanji Email: watson.tanji@aecom.com		Fax #														
Phone #: 303-796-4624 / 808-954-4512		Client Purchase Order #		PFAS EPA Draft 1633		LAB USE ONLY										
Sampler(s) Name(s) (Printed) Sampler 1: <i>Eli Martin</i> Sampler 2: <i>Angelo Gerbici</i>																
COLLECTION		CONTAINER INFORMATION														
SGS Orlando Sample #	Field ID / Point of Collection	DATE	TIME	SAMPLED BY	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	PC1	NH3H	NH3O	PERO4	NO3H+ZINC	CL WATER	MECH	
2	AF-RHMW10-WGN01LF-2304W3	04/18/23	1430	AG, MD, EP	GW	3			X							X
		EA 04/18/23														
Turnaround Time (Business days)				Data Deliverable Information				Comments / Remarks								
10 Day (Business) 7 Day <input checked="" type="checkbox"/> 5 Day 3 Day RUSH 2 Day RUSH 1 Day RUSH Other		Approved By: / Date:		<input type="checkbox"/> COMMERCIAL "A" (RESULTS ONLY) <input type="checkbox"/> COMMERCIAL "B" (RESULTS PLUS QC) <input type="checkbox"/> REDT1 (EPA LEVEL 3) <input checked="" type="checkbox"/> FULLT1 (EPA LEVEL 4) <input checked="" type="checkbox"/> EDD'S				EDMS upload database: JBPHE EDMS Coverage: AFFF Assessment Sampling GW United States 016-91766695								
Rush T/A Data Available VIA Email or Lablink																
Sample Custody must be documented below each time samples change possession, including courier delivery.																
Relinquished by Sampler/Affiliation		Date Time:		Received By/Affiliation		Date Time:		Relinquished By/Affiliation		Date Time:		Received By/Affiliation				
1 Eli Martin / AECOM		04/18/23 1515		2 <i>[Signature]</i> / AECOM		04/18/23		3 <i>[Signature]</i> / AECOM		04/18/23		4 <i>[Signature]</i> / AECOM				
5				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



5.1
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SGS Sample Receipt Summary

Job Number: FC5352

Client: AECOM

Project: N6274223F0104 RH Fire Suppression System

Date / Time Received: 4/19/2023 3:00:00 PM

Delivery Method: United Cargo/Airspace

Airbill #'s: United Cargo AWB #: 016-91766695

Therm ID: IR 1;

Therm CF: -0.1;

of Coolers: 1

Cooler Temps (Raw Measured) °C: Cooler 1: (0.4);

Cooler Temps (Corrected) °C: Cooler 1: (0.3);

Cooler Information

Y or N

- | | | |
|-----------------------------|-------------------------------------|--------------------------|
| 1. Custody Seals Present | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Custody Seals Intact | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Temp criteria achieved | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 4. Cooler temp verification | IR Gun | |
| 5. Cooler media | Ice (Bag) | |

Trip Blank Information

Y or N

N/A

- | | | | |
|--------------------------------|--------------------------|--------------------------|-------------------------------------|
| 1. Trip Blank present / cooler | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Trip Blank listed on COC | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| | <u>W or S</u> | <u>N/A</u> | |
| 3. Type Of TB Received | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Sample Information

Y or N

N/A

- | | | | |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Sample labels present on bottles | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 2. Samples preserved properly | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 3. Sufficient volume/containers recvd for analysis: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. Condition of sample | Intact | | |
| 5. Sample recvd within HT | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 6. Dates/Times/IDs on COC match Sample Label | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 7. VOCs have headspace | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 8. Bottles received for unspecified tests | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 9. Compositing instructions clear | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 10. Voa Soil Kits/Jars received past 48hrs? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 11. % Solids Jar received? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 12. Residual Chlorine Present? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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: 4/19/2023 3:00:00 PM

Reviewer: CD

Date: 4/20/2023

FC5352: Chain of Custody

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QC Evaluation: DOD QSM5.x Limits

Job Number: FC5352
Account: AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System
Collected: 04/18/23

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

* Sample used for QC is not from job FC5352

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MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

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

Instrument Blank

Job Number: FC5352
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S4Q627-IBLK	4Q43427.D	1	04/21/23	MV	n/a	n/a	S4Q627

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5352-1, FC5352-2

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.020	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.010	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0050	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0050	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0050	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0050	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0050	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0050	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0050	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0050	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0050	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0050	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0050	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0050	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0050	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0050	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0050	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-44:2	Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0050	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0050	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0050	0.0010	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.050	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.050	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.020	0.0010	ug/l	
919005-14-4	ADONA	ND	0.020	0.0019	ug/l	
377-73-1	PFMPA	ND	0.010	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.010	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.010	0.0012	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.020	0.0014	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.020	0.0018	ug/l	

Instrument Blank

Job Number: FC5352
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S4Q627-IBLK	4Q43427.D	1	04/21/23	MV	n/a	n/a	S4Q627

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5352-1, FC5352-2

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

CAS No.	ID Standard Recoveries	Limits
	13C4-PFBA	100% 20-150%
	13C5-PFPeA	99% 20-150%
	13C5-PFHxA	99% 20-150%
	13C4-PFHpA	100% 20-150%
	13C8-PFOA	102% 20-150%
	13C9-PFNA	96% 20-150%
	13C6-PFDA	105% 20-150%
	13C7-PFUnDA	98% 20-150%
	13C2-PFDoDA	100% 20-150%
	13C2-PFTeDA	95% 20-150%
	13C3-PFBS	100% 20-150%
	13C3-PFHxS	102% 20-150%
	13C8-PFOS	94% 20-150%
	13C8-FOSA	91% 20-150%
	d3-MeFOSAA	105% 20-150%
	d5-EtFOSAA	99% 20-150%
	13C2-4:2FTS	117% 20-150%
	13C2-6:2FTS	104% 20-150%
	13C2-8:2FTS	108% 20-150%

6.1.1
6

Continuing Calibration Blank

Job Number: FC5352
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S4Q627-ICCB	4Q43451.D	1	04/21/23	MV	n/a	n/a	S4Q627

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5352-1, FC5352-2

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.020	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.010	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0050	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0050	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0050	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0050	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0050	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0050	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0050	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0050	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0050	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0050	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0050	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0050	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0050	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0050	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0050	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-44:2	Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0050	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0050	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0050	0.0010	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.050	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.050	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.020	0.0010	ug/l	
919005-14-4	ADONA	ND	0.020	0.0019	ug/l	
377-73-1	PFMPA	ND	0.010	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.010	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.010	0.0012	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.020	0.0014	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.020	0.0018	ug/l	

Continuing Calibration Blank

Job Number: FC5352
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S4Q627-ICCB	4Q43451.D	1	04/21/23	MV	n/a	n/a	S4Q627

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5352-1, FC5352-2

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

CAS No.	ID Standard Recoveries	Limits
	13C4-PFBA	101% 20-150%
	13C5-PFPeA	95% 20-150%
	13C5-PFHxA	95% 20-150%
	13C4-PFHpA	95% 20-150%
	13C8-PFOA	97% 20-150%
	13C9-PFNA	101% 20-150%
	13C6-PFDA	102% 20-150%
	13C7-PFUnDA	99% 20-150%
	13C2-PFDoDA	102% 20-150%
	13C2-PFTeDA	95% 20-150%
	13C3-PFBS	105% 20-150%
	13C3-PFHxS	102% 20-150%
	13C8-PFOS	89% 20-150%
	13C8-FOSA	92% 20-150%
	d3-MeFOSAA	105% 20-150%
	d5-EtFOSAA	107% 20-150%
	13C2-4:2FTS	126% 20-150%
	13C2-6:2FTS	129% 20-150%
	13C2-8:2FTS	116% 20-150%

Continuing Calibration Blank

Job Number: FC5352
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S4Q627-ICCB	4Q43461.D	1	04/21/23	MV	n/a	n/a	S4Q627

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5352-1, FC5352-2

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.020	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.010	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0050	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0050	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0050	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0050	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0050	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0050	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0050	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0050	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0050	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0050	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0050	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0050	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0050	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0050	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0050	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-44:2	Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0050	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0050	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0050	0.0010	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.050	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.050	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.020	0.0010	ug/l	
919005-14-4	ADONA	ND	0.020	0.0019	ug/l	
377-73-1	PFMPA	ND	0.010	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.010	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.010	0.0012	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.020	0.0014	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.020	0.0018	ug/l	

Continuing Calibration Blank

Job Number: FC5352
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S4Q627-ICCB	4Q43461.D	1	04/21/23	MV	n/a	n/a	S4Q627

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5352-1, FC5352-2

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

CAS No.	ID Standard Recoveries	Limits
	13C4-PFBA	103% 20-150%
	13C5-PFPeA	92% 20-150%
	13C5-PFHxA	100% 20-150%
	13C4-PFHpA	98% 20-150%
	13C8-PFOA	99% 20-150%
	13C9-PFNA	99% 20-150%
	13C6-PFDA	100% 20-150%
	13C7-PFUnDA	106% 20-150%
	13C2-PFDoDA	98% 20-150%
	13C2-PFTeDA	100% 20-150%
	13C3-PFBS	103% 20-150%
	13C3-PFHxS	103% 20-150%
	13C8-PFOS	90% 20-150%
	13C8-FOSA	85% 20-150%
	d3-MeFOSAA	103% 20-150%
	d5-EtFOSAA	104% 20-150%
	13C2-4:2FTS	125% 20-150%
	13C2-6:2FTS	136% 20-150%
	13C2-8:2FTS	117% 20-150%

Method Blank Summary

Job Number: FC5352
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96492-MB	4Q43454.D	1	04/21/23	MV	04/20/23	OP96492	S4Q627

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5352-1, FC5352-2

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.020	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.010	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0050	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0050	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0050	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0050	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0050	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0050	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0050	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0050	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0050	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0050	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0050	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0050	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0050	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0050	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0050	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-44:2	Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0050	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0050	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0050	0.0010	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.050	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.050	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.020	0.0010	ug/l	
919005-14-4	ADONA	ND	0.020	0.0019	ug/l	
377-73-1	PFMPA	ND	0.010	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.010	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.010	0.0012	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.020	0.0014	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.020	0.0018	ug/l	

Method Blank Summary

Job Number: FC5352
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96492-MB	4Q43454.D	1	04/21/23	MV	04/20/23	OP96492	S4Q627

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5352-1, FC5352-2

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

CAS No.	ID Standard Recoveries	Limits
	13C4-PFBA	122% 20-150%
	13C5-PFPeA	119% 20-150%
	13C5-PFHxA	121% 20-150%
	13C4-PFHpA	118% 20-150%
	13C8-PFOA	118% 20-150%
	13C9-PFNA	113% 20-150%
	13C6-PFDA	118% 20-150%
	13C7-PFUnDA	115% 20-150%
	13C2-PFDoDA	107% 20-150%
	13C2-PFTeDA	89% 20-150%
	13C3-PFBS	122% 20-150%
	13C3-PFHxS	117% 20-150%
	13C8-PFOS	107% 20-150%
	13C8-FOSA	69% 20-150%
	d3-MeFOSA	73% 20-150%
	d5-EtFOSA	79% 20-150%
	d3-MeFOSAA	127% 20-150%
	d5-EtFOSAA	113% 20-150%
	d7-MeFOSE	61% 20-150%
	d9-EtFOSE	74% 20-150%
	13C2-4:2FTS	145% 20-150%
	13C2-6:2FTS	146% 20-150%
	13C2-8:2FTS	136% 20-150%
	13C3-HFPO-DA	99% 20-150%

6.1.4

6

Blank Spike Summary

Job Number: FC5352
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96492-LLBS	4Q43453.D	1	04/21/23	MV	04/20/23	OP96492	S4Q627

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5352-1, FC5352-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.03	0.0317	106	40-150
2706-90-3	Perfluoropentanoic acid	0.015	0.0158	105	40-150
307-24-4	Perfluorohexanoic acid	0.0075	0.0080	107	40-150
375-85-9	Perfluoroheptanoic acid	0.0075	0.0082	109	40-150
335-67-1	Perfluorooctanoic acid	0.0075	0.0090	120	40-150
375-95-1	Perfluorononanoic acid	0.0075	0.0071	95	40-150
335-76-2	Perfluorodecanoic acid	0.0075	0.0071	95	40-150
2058-94-8	Perfluoroundecanoic acid	0.0075	0.0087	116	40-150
307-55-1	Perfluorododecanoic acid	0.0075	0.0078	104	40-150
72629-94-8	Perfluorotridecanoic acid	0.0075	0.0081	108	40-150
376-06-7	Perfluorotetradecanoic acid	0.0075	0.0075	100	40-150
375-73-5	Perfluorobutanesulfonic acid	0.00665	0.0068	102	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.00706	0.0076	108	40-150
355-46-4	Perfluorohexanesulfonic acid	0.00686	0.0074	108	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.00715	0.0092	129	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.00696	0.0084	121	40-150
68259-12-1	Perfluorononanesulfonic acid	0.00722	0.0078	108	40-150
335-77-3	Perfluorodecanesulfonic acid	0.00724	0.0086	119	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.00728	0.0072	99	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.0281	0.0311	111	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.0285	0.0308	108	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.0288	0.0349	121	40-150
754-91-6	PFOSA	0.0075	0.0085	113	40-150
31506-32-8	MeFOSA	0.015	0.0145	97	40-150
4151-50-2	EtFOSA	0.015	0.0152	101	40-150
2355-31-9	MeFOSAA	0.0075	0.0087	116	40-150
2991-50-6	EtFOSAA	0.0075	0.0094	125	40-150
24448-09-7	MeFOSE	0.0375	0.0398	106	40-150
1691-99-2	EtFOSE	0.0375	0.0370	99	40-150
13252-13-6	HFPO-DA (GenX)	0.015	0.0160	107	40-150
919005-14-4	ADONA	0.0142	0.0183	129	40-150
377-73-1	PFMPA	0.015	0.0157	105	40-150
863090-89-5	PFMBA	0.015	0.0159	106	40-150
151772-58-6	NFDHA	0.015	0.0165	110	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.014	0.0167	119	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0142	0.0170	120	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC5352
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96492-LLBS	4Q43453.D	1	04/21/23	MV	04/20/23	OP96492	S4Q627

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5352-1, FC5352-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0134	0.0134	100	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.0375	0.0289	77	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.188	0.177	94	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.188	0.185	99	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	114%	20-150%
	13C5-PFPeA	109%	20-150%
	13C5-PFHxA	112%	20-150%
	13C4-PFHpA	111%	20-150%
	13C8-PFOA	109%	20-150%
	13C9-PFNA	117%	20-150%
	13C6-PFDA	111%	20-150%
	13C7-PFUnDA	103%	20-150%
	13C2-PFDoDA	102%	20-150%
	13C2-PFTeDA	90%	20-150%
	13C3-PFBS	116%	20-150%
	13C3-PFHxS	108%	20-150%
	13C8-PFOS	98%	20-150%
	13C8-FOSA	68%	20-150%
	d3-MeFOSA	82%	20-150%
	d5-EtFOSA	84%	20-150%
	d3-MeFOSAA	116%	20-150%
	d5-EtFOSAA	115%	20-150%
	d7-MeFOSE	65%	20-150%
	d9-EtFOSE	75%	20-150%
	13C2-4:2FTS	131%	20-150%
	13C2-6:2FTS	130%	20-150%
	13C2-8:2FTS	116%	20-150%
	13C3-HFPO-DA	92%	20-150%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC5352
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96492-BS	4Q43452.D	1	04/21/23	MV	04/20/23	OP96492	S4Q627

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5352-1, FC5352-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.1	0.108	108	40-150
2706-90-3	Perfluoropentanoic acid	0.05	0.0545	109	40-150
307-24-4	Perfluorohexanoic acid	0.025	0.0259	104	40-150
375-85-9	Perfluoroheptanoic acid	0.025	0.0276	110	40-150
335-67-1	Perfluorooctanoic acid	0.025	0.0294	118	40-150
375-95-1	Perfluorononanoic acid	0.025	0.0254	102	40-150
335-76-2	Perfluorodecanoic acid	0.025	0.0273	109	40-150
2058-94-8	Perfluoroundecanoic acid	0.025	0.0293	117	40-150
307-55-1	Perfluorododecanoic acid	0.025	0.0257	103	40-150
72629-94-8	Perfluorotridecanoic acid	0.025	0.0279	112	40-150
376-06-7	Perfluorotetradecanoic acid	0.025	0.0273	109	40-150
375-73-5	Perfluorobutanesulfonic acid	0.0222	0.0213	96	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0235	0.0253	108	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0229	0.0229	100	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0238	0.0264	111	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0232	0.0254	109	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0241	0.0251	104	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0241	0.0277	115	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0243	0.0244	101	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.0938	0.0949	101	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.095	0.0995	105	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.096	0.104	108	40-150
754-91-6	PFOSA	0.025	0.0279	112	40-150
31506-32-8	MeFOSA	0.05	0.0515	103	40-150
4151-50-2	EtFOSA	0.05	0.0494	99	40-150
2355-31-9	MeFOSAA	0.025	0.0252	101	40-150
2991-50-6	EtFOSAA	0.025	0.0268	107	40-150
24448-09-7	MeFOSE	0.125	0.102	82	40-150
1691-99-2	EtFOSE	0.125	0.129	103	40-150
13252-13-6	HFPO-DA (GenX)	0.05	0.0556	111	40-150
919005-14-4	ADONA	0.0473	0.0635	134	40-150
377-73-1	PFMPA	0.05	0.0255	51	40-150
863090-89-5	PFMBA	0.05	0.0552	110	40-150
151772-58-6	NFDHA	0.05	0.0613	123	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.0468	0.0587	126	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0473	0.0598	127	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC5352
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96492-BS	4Q43452.D	1	04/21/23	MV	04/20/23	OP96492	S4Q627

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5352-1, FC5352-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0445	0.0467	105	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.125	0.0429	34*	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.625	0.593	95	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.625	0.603	96	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	28%	20-150%
	13C5-PFPeA	109%	20-150%
	13C5-PFHxA	118%	20-150%
	13C4-PFHpA	116%	20-150%
	13C8-PFOA	109%	20-150%
	13C9-PFNA	117%	20-150%
	13C6-PFDA	108%	20-150%
	13C7-PFUnDA	105%	20-150%
	13C2-PFDoDA	110%	20-150%
	13C2-PFTeDA	99%	20-150%
	13C3-PFBS	121%	20-150%
	13C3-PFHxS	112%	20-150%
	13C8-PFOS	107%	20-150%
	13C8-FOSA	69%	20-150%
	d3-MeFOSA	86%	20-150%
	d5-EtFOSA	90%	20-150%
	d3-MeFOSAA	126%	20-150%
	d5-EtFOSAA	117%	20-150%
	d7-MeFOSE	66%	20-150%
	d9-EtFOSE	74%	20-150%
	13C2-4:2FTS	136%	20-150%
	13C2-6:2FTS	131%	20-150%
	13C2-8:2FTS	121%	20-150%
	13C3-HFPO-DA	97%	20-150%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FC5352
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96492-MS	4Q43456.D	1	04/21/23	MV	04/20/23	OP96492	S4Q627
FC5352-1	4Q43455.D	1	04/21/23	MV	04/20/23	OP96492	S4Q627

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5352-1, FC5352-2

CAS No.	Compound	FC5352-1 ug/l	Spike Q	MS ug/l	MS %	Limits
375-22-4	Perfluorobutanoic acid	0.019 U	0.0909	0.101	111	40-150
2706-90-3	Perfluoropentanoic acid	0.0093 U	0.0455	0.0521	115	40-150
307-24-4	Perfluorohexanoic acid	0.0046 U	0.0227	0.0250	110	40-150
375-85-9	Perfluoroheptanoic acid	0.0046 U	0.0227	0.0254	112	40-150
335-67-1	Perfluorooctanoic acid	0.0046 U	0.0227	0.0264	116	40-150
375-95-1	Perfluorononanoic acid	0.0046 U	0.0227	0.0254	112	40-150
335-76-2	Perfluorodecanoic acid	0.0046 U	0.0227	0.0255	112	40-150
2058-94-8	Perfluoroundecanoic acid	0.0046 U	0.0227	0.0262	115	40-150
307-55-1	Perfluorododecanoic acid	0.0046 U	0.0227	0.0269	118	40-150
72629-94-8	Perfluorotridecanoic acid	0.0046 U	0.0227	0.0287	126	40-150
376-06-7	Perfluorotetradecanoic acid	0.0046 U	0.0227	0.0266	117	40-150
375-73-5	Perfluorobutanesulfonic acid	0.0046 U	0.0202	0.0215	107	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0046 U	0.0214	0.0236	110	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0046 U	0.0208	0.0227	109	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0046 U	0.0217	0.0292	135	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0046 U	0.0211	0.0312	148	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0046 U	0.0219	0.0252	115	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0046 U	0.0219	0.0280	128	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0046 U	0.022	0.0248	112	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.019 U	0.0852	0.0973	114	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.019 U	0.0864	0.110	127	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.019 U	0.0873	0.103	118	40-150
754-91-6	PFOSA	0.0046 U	0.0227	0.0263	116	40-150
31506-32-8	MeFOSA	0.0046 U	0.0455	0.0497	109	40-150
4151-50-2	EtFOSA	0.0046 U	0.0455	0.0487	107	40-150
2355-31-9	MeFOSAA	0.0046 U	0.0227	0.0251	110	40-150
2991-50-6	EtFOSAA	0.0046 U	0.0227	0.0263	116	40-150
24448-09-7	MeFOSE	0.046 U	0.114	0.113	99	40-150
1691-99-2	EtFOSE	0.046 U	0.114	0.120	106	40-150
13252-13-6	HFPO-DA (GenX)	0.019 U	0.0455	0.0501	110	40-150
919005-14-4	ADONA	0.019 U	0.043	0.0567	132	40-150
377-73-1	PFMPA	0.0093 U	0.0455	0.0508	112	40-150
863090-89-5	PFMBA	0.0093 U	0.0455	0.0504	111	40-150
151772-58-6	NFDHA	0.0093 U	0.0455	0.0571	126	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.019 U	0.0425	0.0481	113	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.019 U	0.043	0.0459	107	40-150

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FC5352
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96492-MS	4Q43456.D	1	04/21/23	MV	04/20/23	OP96492	S4Q627
FC5352-1	4Q43455.D	1	04/21/23	MV	04/20/23	OP96492	S4Q627

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5352-1, FC5352-2

CAS No.	Compound	FC5352-1 ug/l	Spike Q	MS ug/l	MS %	Limits
113507-82-7	PFEESA	0.0093 U	0.0405	0.0445	110	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.023 U	0.114	0.0693	61	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.12 U	0.568	0.500	88	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.12 U	0.568	0.553	97	40-150

CAS No.	ID Standard Recoveries	MS	FC5352-1	Limits
	13C4-PFBA	112%	113%	20-150%
	13C5-PFPeA	110%	110%	20-150%
	13C5-PFHxA	112%	114%	20-150%
	13C4-PFHpA	113%	112%	20-150%
	13C8-PFOA	108%	101%	20-150%
	13C9-PFNA	108%	106%	20-150%
	13C6-PFDA	99%	103%	20-150%
	13C7-PFUnDA	89%	91%	20-150%
	13C2-PFDoDA	83%	80%	20-150%
	13C2-PFTeDA	79%	71%	20-150%
	13C3-PFBS	119%	128%	20-150%
	13C3-PFHxS	114%	109%	20-150%
	13C8-PFOS	83%	88%	20-150%
	13C8-FOSA	64%	60%	20-150%
	d3-MeFOSA	81%	74%	20-150%
	d5-EtFOSA	89%	79%	20-150%
	d3-MeFOSAA	105%	108%	20-150%
	d5-EtFOSAA	106%	96%	20-150%
	d7-MeFOSE	70%	61%	20-150%
	d9-EtFOSE	81%	69%	20-150%
	13C2-4:2FTS	129%	147%	20-150%
	13C2-6:2FTS	118%	140%	20-150%
	13C2-8:2FTS	117%	114%	20-150%
	13C3-HFPO-DA	97%	94%	20-150%

* = Outside of Control Limits.

Duplicate Summary

Job Number: FC5352
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96492-DUP	4Q43458.D	1	04/21/23	MV	04/20/23	OP96492	S4Q627
FC5352-2	4Q43457.D	1	04/21/23	MV	04/20/23	OP96492	S4Q627

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5352-1, FC5352-2

CAS No.	Compound	FC5352-2 ug/l	DUP Q ug/l	Q	RPD	Limits
375-22-4	Perfluorobutanoic acid	0.019 U	ND		nc	30
2706-90-3	Perfluoropentanoic acid	0.0093 U	ND		nc	30
307-24-4	Perfluorohexanoic acid	0.0046 U	ND		nc	30
375-85-9	Perfluoroheptanoic acid	0.0046 U	ND		nc	30
335-67-1	Perfluorooctanoic acid	0.0046 U	ND		nc	30
375-95-1	Perfluorononanoic acid	0.0046 U	ND		nc	30
335-76-2	Perfluorodecanoic acid	0.0046 U	ND		nc	30
2058-94-8	Perfluoroundecanoic acid	0.0046 U	ND		nc	30
307-55-1	Perfluorododecanoic acid	0.0046 U	ND		nc	30
72629-94-8	Perfluorotridecanoic acid	0.0046 U	ND		nc	30
376-06-7	Perfluorotetradecanoic acid	0.0046 U	ND		nc	30
375-73-5	Perfluorobutanesulfonic acid	0.0046 U	ND		nc	30
2706-91-4	Perfluoropentanesulfonic acid	0.0046 U	ND		nc	30
355-46-4	Perfluorohexanesulfonic acid	0.0046 U	ND		nc	30
375-92-8	Perfluoroheptanesulfonic acid	0.0046 U	ND		nc	30
1763-23-1	Perfluorooctanesulfonic acid	0.0046 U	ND		nc	30
68259-12-1	Perfluorononanesulfonic acid	0.0046 U	ND		nc	30
335-77-3	Perfluorodecanesulfonic acid	0.0046 U	ND		nc	30
79780-39-5	Perfluorododecanesulfonic aci	0.0046 U	ND		nc	30
757124-72-44:2	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	0.0046 U	ND		nc	30
31506-32-8	MeFOSA	0.0046 U	ND		nc	30
4151-50-2	EtFOSA	0.0046 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	0.046 U	ND		nc	30
1691-99-2	EtFOSE	0.046 U	ND		nc	30
13252-13-6	HFPO-DA (GenX)	0.019 U	ND		nc	30
919005-14-4	ADONA	0.019 U	ND		nc	30
377-73-1	PFMPA	0.0093 U	ND		nc	30
863090-89-5	PFMBA	0.0093 U	ND		nc	30
151772-58-6	NFDHA	0.0093 U	ND		nc	30
756426-58-19	Cl-PF3ONS (F-53B Major)	0.019 U	ND		nc	30
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.019 U	ND		nc	30

* = Outside of Control Limits.

Duplicate Summary

Job Number: FC5352
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96492-DUP	4Q43458.D	1	04/21/23	MV	04/20/23	OP96492	S4Q627
FC5352-2	4Q43457.D	1	04/21/23	MV	04/20/23	OP96492	S4Q627

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5352-1, FC5352-2

CAS No.	Compound	FC5352-2 ug/l	DUP Q ug/l	Q	RPD	Limits
113507-82-7PFEESA		0.0093 U	ND		nc	30
356-02-5	3:3 Fluorotelomer carboxylate	0.023 U	ND		nc	30
914637-49-35:3	Fluorotelomer carboxylate	0.12 U	ND		nc	30
812-70-4	7:3 Fluorotelomer carboxylate	0.12 U	ND		nc	30

CAS No.	ID Standard Recoveries	DUP	FC5352-2	Limits
	13C4-PFBA	100%	109%	20-150%
	13C5-PFPeA	107%	109%	20-150%
	13C5-PFHxA	111%	113%	20-150%
	13C4-PFHpA	108%	113%	20-150%
	13C8-PFOA	105%	109%	20-150%
	13C9-PFNA	104%	112%	20-150%
	13C6-PFDA	102%	101%	20-150%
	13C7-PFUnDA	91%	106%	20-150%
	13C2-PFDoDA	84%	94%	20-150%
	13C2-PFTeDA	72%	80%	20-150%
	13C3-PFBS	121%	116%	20-150%
	13C3-PFHxS	108%	113%	20-150%
	13C8-PFOS	95%	101%	20-150%
	13C8-FOSA	59%	76%	20-150%
	d3-MeFOSA	68%	91%	20-150%
	d5-EtFOSA	75%	98%	20-150%
	d3-MeFOSAA	102%	116%	20-150%
	d5-EtFOSAA	96%	113%	20-150%
	d7-MeFOSE	56%	80%	20-150%
	d9-EtFOSE	66%	89%	20-150%
	13C2-4:2FTS	144%	137%	20-150%
	13C2-6:2FTS	138%	120%	20-150%
	13C2-8:2FTS	123%	126%	20-150%
	13C3-HFPO-DA	93%	91%	20-150%

(a) Associated BS recovery outside DOD QSM control limits.

* = Outside of Control Limits.