May 15, 2023 Project No. 31404847.001

Mr. Curt Fujii
Waste Solutions Group of San Benito
2650 John Smith Road
Hollister CA 95024

PFAS MONITORING RESULTS, OCTOBER 2022, JOHN SMITH ROAD CLASS III LANDFILL

Dear Mr. Fujii,

This letter presents the results of groundwater sampling at select wells for PFAS analysis at the John Smith Road Landfill Class III Area. Three off-site wells located along John Smith Road were sampled on October 7, 2022, off-site extraction well EW-2, corrective action monitoring well WA-20, and downgradient detection monitoring well CP-25 (Figure 1). Well EW-2 is the furthest downgradient extraction well, WA-20 is approximately 600 feet downgradient from EW-2, and CP-25 is approximately 1,000 feet downgradient from EW-2 and is the furthest downgradient monitoring well.

The groundwater sample from well EW-2 was taken directly from the dedicated electric submersible pump discharge. Wells WA-20 and CP-25 were purged and sampled using new PFAS-free disposable bailers (see Field Sample Forms in Appendix A). Groundwater samples from each well were submitted to Eurofins/Test America for laboratory analysis for the 31 per- and polyfluoroalkyl substances (PFAS) listed in the Central Coast Regional Water Quality Control Board (RWQCB) letter dated July 14, 2021 - *Land Disposal Program: John Smith Road Landfill, San Benito County – PFAS Detection Follow-Up Workplan, WDID NO. 3 350300001.* The three sampled wells are included in the approved PFAS workplan.[1]

The PFAS analytical results are summarized in Table 1 in units of nanograms per liter (ng/L), also referred to as parts per trillion (ppt). The laboratory report is included as Appendix B. Nine PFAS were detected above the laboratory reporting limit in the groundwater sample from extraction well EW-2, and two PFAS were detected at estimated trace concentrations. The highest concentration in EW-2 was reported for Perfluoropentanoic acid (PFPeA) at 220 nanograms per liter (ng/L). Eight PFAS were detected above the laboratory reporting limit in the groundwater sample from corrective action monitoring wells WA-20. The highest concentration in WA-20 was reported for PFPeA at 140 ng/L. Three PFAS were detected at estimated trace concentrations in the groundwater sample from detection monitoring well CP-25. PFPeA was detected in well CP-25 at a trace concentration of 1.2 ng/L and Perfluorooctanesulfonic acid (PFOS) was detected at a trace concentration of 1.5 ng/L. The PFOS concentration in the furthest downgradient well (CP-25) is lower than the California drinking water notification and response levels of 6.5 ng/L and 40 ng/L, respectively. The other PFAS with notification and

[1] Golder Associates USA Inc., June 6, 2022, PFAS Detection Follow-Up Workplan, John Smith Road Landfill, San Benito County, CA (Revised June 2022).

response levels (PFOA, PFHxS, and PFBS) were not detected in well CP-25. No PFAS were detected in the quality control trip blank, field blank, and equipment blank samples.

Volatile organic compounds (VOCs) were detected in extraction well EW-2 and the corrective action monitoring well WA-20 during fourth quarter 2022 monitoring. No VOCs were detected in the furthest downgradient monitoring well CP-25. To put the PFAS detections in perspective, Table 2 presents PFAS detections and VOC detections in the same concentration units, micrograms per liter (µg/L) or parts per billion (ppb).

The PFAS detected in the groundwater samples are likely part of the existing plume from the old unlined landfill unit. Because PFAS were detected in extracted groundwater at EW-2, this indicates that the groundwater extraction wells are capturing PFAS as well as other components of the plume. The PFAS concentrations detected in downgradient well CP-25 are two orders of magnitude lower than in extraction well EW-2. These decreases in PFAS concentrations are similar to the decreases in VOC concentrations in groundwater, which indicates that the groundwater extraction system is capturing and controlling PFAS in groundwater as well as VOCs.

The remaining PFAS workplan monitoring locations were sampled for PFAS during the routine semiannual monitoring event in late October to early November 2022. The results from these PFAS analyses were included in the second semiannual monitoring report dated January 31, 2023.

Sincerely,

WSP USA Inc.

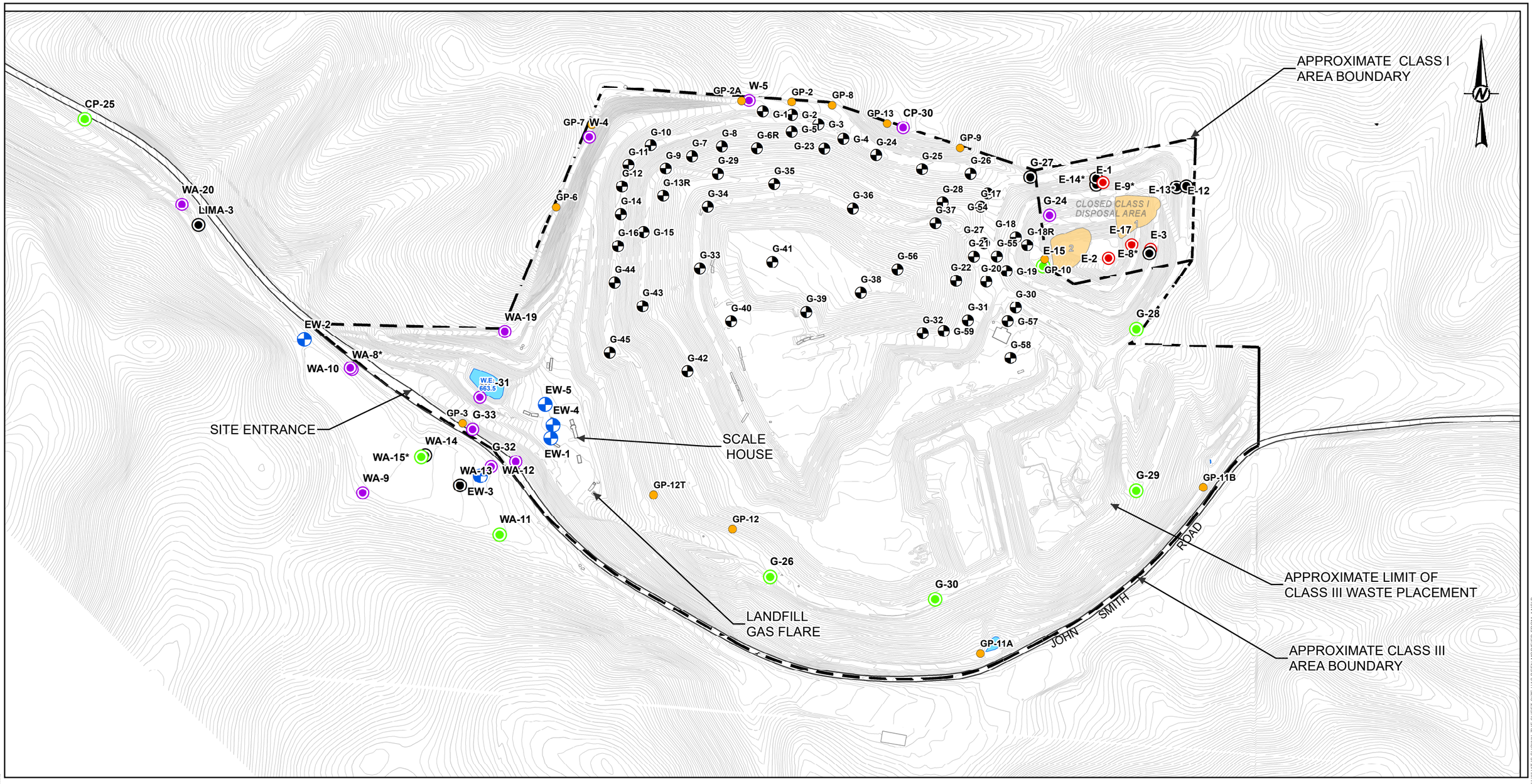
Kris H. Johnson

Kris H. Johnson, PG 4496, CEG 1763
Vice President, Geologist

CC: Mike Zischke, Cox, Castle & Nicholson

Attachments: Figure 1 – Monitoring Locations
Table 1 – PFAS Analytical Results
Table 2 - PFAS and VOC Analytical Results
Appendix A – Water Sample Field Sheets
Appendix B – Laboratory Analytical Report

https://golderassociates.sharepoint.com/sites/156959/project files/5 technical work/october 2022 pfas/jsrl october 2022 pfas results 5-15-23a.docx



LEGEND

- CLASS III AREA DETECTION MONITORING WELL
- CLASS III AREA CORRECTIVE ACTION
- GROUNDWATER EXTRACTION SYSTEM WELL
- GROUNDWATER ELEVATION MONITORING WELL
- CLASS I AREA POST-CLOSURE DETECTION MONITORING WELL
- FORMER CLASS I IMPOUNDMENT
- EXISTING LANDFILL BOUNDARY

0 150 300
Feet
1 inch = 333 feet

REFERENCE(S)
DATE OF TOPOGRAPHY: MAY 14, 2020 (CONTINENTAL MAPPING CONSULTANTS, INC., SUN PRAIRIE, WI - CA STATE PLANE COORDINATES ZONE IV; NAD 83; NGVD 29).

CLIENT
WASTE CONNECTIONS, INC.

PROJECT
JOHN SMITH ROAD LANDFILL
SAN BENITO COUNTY, CALIFORNIA

CONSULTANT
WSP GOLDER

YYYY-MM-DD	2022-07-11
DESIGNED	MR
PREPARED	TK
REVIEWED	KJ
APPROVED	KJ

TITLE
MONITORING LOCATIONS

FOR DISCUSSION PURPOSES ONLY
DRAFT

PROJECT NO.	CONTROL	REV.	FIGURE
31404847	####	####	1

PATH: G:\GIS\Sites\JohnSmithRoadLandfill\Maps\Figure2-MonitoringLocations_July2022.mxd

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm
0

Table 1
PFAS Analytical Results
John Smith Road Landfill

Analyte	Unit	EW-2 10/7/2022	WA-20 10/7/2022	CP-25 10/7/2022
Perfluorobutanoic acid (PFBA)	ng/L	68	67	ND
Perfluoropentanoic acid (PFPeA)	ng/L	220	140	1.2 J
Perfluorohexanoic acid (PFHxA)	ng/L	110	71	0.8 J
Perfluoroheptanoic acid (PFHpA)	ng/L	29	13	ND
Perfluorooctanoic acid (PFOA)	ng/L	38	16	ND
Perfluorononanoic acid (PFNA)	ng/L	2.0	ND	ND
Perfluorodecanoic acid (PFDA)	ng/L	ND	ND	ND
Perfluoroundecanoic acid (PFUnA)	ng/L	ND	ND	ND
Perfluorododecanoic acid (PFDoA)	ng/L	ND	ND	ND
Perfluorotridecanoic acid (PFTrDA)	ng/L	ND	ND	ND
Perfluorotetradecanoic acid (PFTeA)	ng/L	ND	ND	ND
Perfluorobutanesulfonic acid (PFBS)	ng/L	12	12	ND
Perfluoropentanesulfonic acid (PFPeS)	ng/L	1.6 J	2.4	ND
Perfluorohexanesulfonic acid (PFHxS)	ng/L	4	5.3	ND
Perfluoroheptanesulfonic acid (PFHpS)	ng/L	ND	ND	ND
Perfluorooctanesulfonic acid (PFOS)	ng/L	5.6	ND	1.5 J
Perfluorodecanesulfonic acid (PFDS)	ng/L	ND	ND	ND
Perfluorooctanesulfonamide (FOSA)	ng/L	1.3 J	ND	ND
NEtFOSA	ng/L	ND	ND	ND
NEtFOSAA	ng/L	ND	ND	ND
NEtFOSE	ng/L	ND	ND	ND
NMeFOSA	ng/L	ND	ND	ND
NMeFOSAA	ng/L	ND	ND	ND
NMeFOSE	ng/L	ND	ND	ND
4:2 FTS	ng/L	ND	ND	ND
6:2 FTS	ng/L	ND	ND	ND
8:2 FTS	ng/L	ND	ND	ND
11Cl-PF3OUdS	ng/L	ND	ND	ND
9Cl-PF3ONS	ng/L	ND	ND	ND
HFPO-DA (GenX)	ng/L	ND	ND	ND
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ng/L	ND	ND	ND

Notes:
ng/L = nanograms per liter
J = estimated trace concentration between the method detection limit and laboratory reporting limit.
< = not detected at listed detection limit

Table 2
PFAS and VOC Analytical Results
John Smith Road Landfill

Analyte	Unit	EW-2	WA-20	CP-25
PFAS	**Date**	**10/7/2022**	**10/7/2022**	**10/7/2022**
Perfluorobutanoic acid (PFBA)	µg/L	0.068	0.067	ND
Perfluoropentanoic acid (PFPeA)	µg/L	0.22	0.14	0.0012 J
Perfluorohexanoic acid (PFHxA)	µg/L	0.11	0.071	0.0008 J
Perfluoroheptanoic acid (PFHpA)	µg/L	0.029	0.013	ND
Perfluorooctanoic acid (PFOA)	µg/L	0.038	0.016	ND
Perfluorononanoic acid (PFNA)	µg/L	0.0	ND	ND
Perfluorobutanesulfonic acid (PFBS)	µg/L	0.012	0.012	ND
Perfluoropentanesulfonic acid (PFPeS)	µg/L	0.0016 J	0.0024	ND
Perfluorohexanesulfonic acid (PFHxS)	µg/L	0.004	0.0053	ND
Perfluorooctanesulfonic acid (PFOS)	µg/L	0.0056	ND	0.0015 J
Perfluorodecanesulfonic acid (PFDS)	µg/L	ND	ND	ND
Perfluorooctanesulfonamide (FOSA)	µg/L	0.0013 J	ND	ND
All other PFAS not detected				
VOCs	**Date**	**11/3/2022**	**11/4/2022**	**10/26/2022**
Tetrachloroethene	µg/L	1	0.18 J	ND
Trichloroethene	µg/L	1.2	0.23 J	ND
All other VOCs not detected				

Notes:
µg/L = nanograms per liter
J = estimated trace concentration between the method detection limit and laboratory reporting limit.
< = not detected at listed detection limit

APPENDIX A

Water Sample Field Sheets

GOLDER
MEMBER OF WSP

WATER SAMPLE FIELD DATA

LOCATION: John Smith SAMPLE ID: CP-25
PROJECT NO: 31404548 SAMPLED BY: DW
SAMPLE TYPE: Groundwater X Surface Water ____ Leachate ____ Other ____
CASING DIAMETER (OD-inches): 3/4 ____ 1 ____ 2 X 4 ____ 4.5 ____ 6 ____ 8 ____ Other ____
GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): 74.00	Volume in Casing (gal): 9.5
Depth to Water (ft): 17.91	Calculated Purge (volumes / gal.): 28.5
Height of Water Column (ft): 56.09	Actual Pre-Sampling Purge (gal): 28.5

PURGE:
Device (Depth of Intake from TOC): Disp. Bailer X Peristaltic Pump ____ Centrifugal Pump ____
Bladder Pump ____ Electric Submersible Pump ____ Dedicated ____ Other ____
Purge Water Containment: None
Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:____ Other ____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (NTUs) ~~(visual)~~	Other	Observation
1445	9.5	21.1	8457	7.34	Brown	167		
1455	19.0	20.2	10152	7.35	"	87.6		
1505	28.5	20.1	10417	7.39	"	~~158.6~~	58.6	

Purge Date: 10-7-22

SAMPLE:
Device (Depth of Intake from TOC): Disp. Bailer X Peristaltic Pump ____ Centrifugal Pump ____
Bladder Pump ____ Electric Submersible Pump ____ Dedicated ____ Other ____

Time (2400 Hr)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	DO (mg/l)	Color (visual)	Turbidity (NTU)	ORP (mV)
1510	20.1	10417	7.39	0.83	Brown	58.6	-115.0

Sheen: No Odor: No Sample Date: 10-7-22

Field Measurement Devices: Horiba: ____ YSI: ____X___ LaMotte Turbidity: ____X____ Other: ____

Meter Calibration Date: 10-7-22 Time:____ Location: EW-2 Ins. # ____
pH 4: (____/____@____°C) pH 7: (____/____@____°C) pH 10: (____/____@____°C)
D.O. (____/____@100%) EC (____/____µmhos/cm@25°C)
ORP (____/____/____@°C Turbidity (____/____ NTU)

REMARKS: ____

SIGNATURE: David C Walter **DATE:** 10-7-22

GOLDER
MEMBER OF WSP

WATER SAMPLE FIELD DATA

LOCATION: John Smith SAMPLE ID: EW-2
PROJECT NO: 31404548 SAMPLED BY: DW
SAMPLE TYPE: Groundwater X Surface Water ____ Leachate ____ Other ____
CASING DIAMETER (OD-inches): 3/4 ____ 1 ____ 2 ____ 4 ____ 4.5 ____ 6 ____ 8 X Other ____
GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): —	Volume in Casing (gal): —
Depth to Water (ft): 45.29	Calculated Purge (volumes / gal.): —
Height of Water Column (ft): —	Actual Pre-Sampling Purge (gal): —

PURGE:
Device (Depth of Intake from TOC): Disp. Bailer ____ Peristaltic Pump ____ Centrifugal Pump ____
Bladder Pump ____ Electric Submersible Pump X Dedicated X Other ____
Purge Water Containment: None
Field QC Samples Collected: EB- QC FB-01 DUP- ____ Time: 1310 Other ____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
1300	Pump	running.						

Purge Date: 10-7-22

SAMPLE:
Device (Depth of Intake from TOC): Disp. Bailer ____ Peristaltic Pump ____ Centrifugal Pump ____
Bladder Pump ____ Electric Submersible Pump X Dedicated X Other ____

Time (2400 Hr)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	DO (mg/l)	Color (visual)	Turbidity (NTU)	ORP (mV)
1315	20.7	3159	6.87	5.08	cloudy	39.8	173.0

Sheen: No Odor: No Sample Date: 10-7-22

Field Measurement Devices: Horiba: ____ YSI: ____X___ LaMotte Turbidity: ____X____ Other: ____

Meter Calibration Date: 10-7-22 Time: 1245 Location: EW-2 Ins. # 19K102541
pH 4: (4.01 / 4.00 @ 20.2 °C) pH 7: (6.89 / 7.00 @ 19.7 °C) pH 10: (9.97 / 10.00 @ 20.5 °C)
D.O. (101.2 / 101.2 @100%) EC (1411 / 1413 µmhos/cm@25°C)
ORP (____/____/____@°C Turbidity (20.1 / 20.0 NTU)

REMARKS: ____

SIGNATURE: David C Walter **DATE:** 10-7-22

GOLDER
MEMBER OF WSP

WATER SAMPLE FIELD DATA

LOCATION: John Smith SAMPLE ID: WA-20
PROJECT NO: 31404548 SAMPLED BY: DW
SAMPLE TYPE: Groundwater X Surface Water ____ Leachate ____ Other ____
CASING DIAMETER (OD-inches): 3/4 ____ 1 ____ 2 X 4 ____ 4.5 ____ 6 ____ 8 ____ Other ____
GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): 17.60	Volume in Casing (gal): 1.2
Depth to Water (ft): 10.00	Calculated Purge (volumes / gal.): 3.6
Height of Water Column (ft): 7.00	Actual Pre-Sampling Purge (gal): 3.6

PURGE:
Device (Depth of Intake from TOC): Disp. Bailer X Peristaltic Pump ____ Centrifugal Pump ____
Bladder Pump ____ Electric Submersible Pump ____ Dedicated ____ Other ____
Purge Water Containment: None
Field QC Samples Collected: EB-01 FB-___ DUP-___ Time: 1340 Other ____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (~~visual~~) NTU	Other	Observation
1345	1.2	21.2	4067	7.33	Brown	304		
1348	2.4	20.8	4088	7.33	"	1100		
1351	3.6	20.7	4061	7.37	"	1100		

Purge Date: 10-7-22

SAMPLE:
Device (Depth of Intake from TOC): Disp. Bailer X Peristaltic Pump ____ Centrifugal Pump ____
Bladder Pump ____ Electric Submersible Pump ____ Dedicated ____ Other ____

Time (2400 Hr)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	DO (mg/l)	Color (visual)	Turbidity (NTU)	ORP (mV)
1355	20.7	4061	7.37	3.31	Brown	1100	136.2

Sheen: No Odor: No Sample Date: 10-7-22

Field Measurement Devices: Horiba: ____ YSI: ___X___ LaMotte Turbidity: ___X___ Other: ____

Meter Calibration Date: 10-7-22 Time: ____ Location: EW-2 Ins. # ____
pH 4: (____/____@____°C) pH 7: (____/____@____°C) pH 10: (____/____@____°C)
D.O. (____/____@100%) EC (____/____µmhos/cm@25°C)
ORP (____/____/____@°C Turbidity (____/____ NTU)

REMARKS: ____

SIGNATURE: David C Walt **DATE:** 10-7-22

APPENDIX B

Laboratory Analytical Report

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-93007-1
Client Project/Site: 18105117

For:
Golder Associates Inc
425 Lakeside Drive
Sunnyvale, California 94085

Attn: Kris Johnson

Authorized for release by:
10/13/2022 4:13:52 PM

Jill Kellmann, Client Service Manager
(916)374-4402
Jill.Kellmann@et.eurofinsus.com

Table of Contents

Definitions/Glossary

Client: Golder Associates Inc
Project/Site: 18105117

Job ID: 320-93007-1

Qualifiers

LCMS

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Golder Associates Inc
Project/Site: 18105117

Job ID: 320-93007-1

Job ID: 320-93007-1

Laboratory: Eurofins Sacramento

Narrative

Receipt
The samples were received on 10/8/2022 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.2º C.

Receipt Exceptions

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): EW-2 (320-93007-3). Client label time is listed as 13:00 for 2 of 2 while the COC is listed as 13:15. Logged in according to the COC.

LCMS
Method EPA 537(Mod): The Isotope Dilution Analyte (IDA) recovery associated with the following samples is below the method recommended limit: CP-25 (320-93007-6). Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
Method 3535: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-624009.

Method 3535: During the solid phase extraction process, the following samples contained non-settable particulates which clogged the solid phase extraction column: WA-20 (320-93007-5) and CP-25 (320-93007-6).

Method 3535: The following samples in preparation batch 320-624009 were observed to have floating particulates present in the sample bottle. CP-25 (320-93007-6)

Method 3535: The following samples in preparation batch 320-624009 were observed to have a thin layer of sediment present in the bottom of the bottle prior to extraction. WA-20 (320-93007-5) and CP-25 (320-93007-6)

Method 3535: The following samples in preparation batch 320-624009 were light yellow in color prior to extraction. WA-20 (320-93007-5) and CP-25 (320-93007-6)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Golder Associates Inc
Project/Site: 18105117

Job ID: 320-93007-1

Client Sample ID: QCTB-01 — Lab Sample ID: 320-93007-1

No Detections.

Client Sample ID: QCFB-01 — Lab Sample ID: 320-93007-2

No Detections.

Client Sample ID: EW-2 — Lab Sample ID: 320-93007-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	68		4.3	2.1	ng/L	1		EPA 537(Mod)	Total/NA
Perfluoropentanoic acid (PFPeA)	220		1.7	0.43	ng/L	1		EPA 537(Mod)	Total/NA
Perfluorohexanoic acid (PFHxA)	110		1.7	0.50	ng/L	1		EPA 537(Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA)	29		1.7	0.22	ng/L	1		EPA 537(Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	38		1.7	0.74	ng/L	1		EPA 537(Mod)	Total/NA
Perfluorononanoic acid (PFNA)	2.0		1.7	0.23	ng/L	1		EPA 537(Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	12		1.7	0.17	ng/L	1		EPA 537(Mod)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	1.6	J	1.7	0.26	ng/L	1		EPA 537(Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	4.0		1.7	0.49	ng/L	1		EPA 537(Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	5.6		1.7	0.47	ng/L	1		EPA 537(Mod)	Total/NA
Perfluorooctanesulfonamide (FOSA)	1.3	J	1.7	0.85	ng/L	1		EPA 537(Mod)	Total/NA

Client Sample ID: QCEB-01 — Lab Sample ID: 320-93007-4

No Detections.

Client Sample ID: WA-20 — Lab Sample ID: 320-93007-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	67		4.6	2.2	ng/L	1		EPA 537(Mod)	Total/NA
Perfluoropentanoic acid (PFPeA)	140		1.8	0.45	ng/L	1		EPA 537(Mod)	Total/NA
Perfluorohexanoic acid (PFHxA)	71		1.8	0.53	ng/L	1		EPA 537(Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA)	13		1.8	0.23	ng/L	1		EPA 537(Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	16		1.8	0.78	ng/L	1		EPA 537(Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	12		1.8	0.18	ng/L	1		EPA 537(Mod)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	2.4		1.8	0.27	ng/L	1		EPA 537(Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	5.3		1.8	0.52	ng/L	1		EPA 537(Mod)	Total/NA

Client Sample ID: CP-25 — Lab Sample ID: 320-93007-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoropentanoic acid (PFPeA)	1.2	J	2.0	0.48	ng/L	1		EPA 537(Mod)	Total/NA
Perfluorohexanoic acid (PFHxA)	0.80	J	2.0	0.57	ng/L	1		EPA 537(Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.5	J	2.0	0.53	ng/L	1		EPA 537(Mod)	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Golder Associates Inc
Project/Site: 18105117

Job ID: 320-93007-1

Client Sample ID: QCTB-01

Date Collected: 10/07/22 00:00
Date Received: 10/08/22 09:45

Lab Sample ID: 320-93007-1

Matrix: Water

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		4.4	2.1	ng/L		10/11/22 12:26	10/12/22 09:22	1
Perfluoropentanoic acid (PFPeA)	ND		1.8	0.44	ng/L		10/11/22 12:26	10/12/22 09:22	1
Perfluorohexanoic acid (PFHxA)	ND		1.8	0.52	ng/L		10/11/22 12:26	10/12/22 09:22	1
Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.22	ng/L		10/11/22 12:26	10/12/22 09:22	1
Perfluorooctanoic acid (PFOA)	ND		1.8	0.76	ng/L		10/11/22 12:26	10/12/22 09:22	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.24	ng/L		10/11/22 12:26	10/12/22 09:22	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.28	ng/L		10/11/22 12:26	10/12/22 09:22	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.98	ng/L		10/11/22 12:26	10/12/22 09:22	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.49	ng/L		10/11/22 12:26	10/12/22 09:22	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.8	1.2	ng/L		10/11/22 12:26	10/12/22 09:22	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.65	ng/L		10/11/22 12:26	10/12/22 09:22	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.18	ng/L		10/11/22 12:26	10/12/22 09:22	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.8	0.27	ng/L		10/11/22 12:26	10/12/22 09:22	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.8	0.51	ng/L		10/11/22 12:26	10/12/22 09:22	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.8	0.17	ng/L		10/11/22 12:26	10/12/22 09:22	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.48	ng/L		10/11/22 12:26	10/12/22 09:22	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.28	ng/L		10/11/22 12:26	10/12/22 09:22	1
Perfluorooctanesulfonamide (FOSA)	ND		1.8	0.87	ng/L		10/11/22 12:26	10/12/22 09:22	1
NEtFOSA	ND		1.8	0.77	ng/L		10/11/22 12:26	10/12/22 09:22	1
NEtFOSAA	ND		4.4	1.2	ng/L		10/11/22 12:26	10/12/22 09:22	1
NEtFOSE	ND		1.8	0.76	ng/L		10/11/22 12:26	10/12/22 09:22	1
NMeFOSA	ND		1.8	0.38	ng/L		10/11/22 12:26	10/12/22 09:22	1
NMeFOSAA	ND		4.4	1.1	ng/L		10/11/22 12:26	10/12/22 09:22	1
NMeFOSE	ND		3.6	1.2	ng/L		10/11/22 12:26	10/12/22 09:22	1
4:2 FTS	ND		1.8	0.21	ng/L		10/11/22 12:26	10/12/22 09:22	1
6:2 FTS	ND		4.4	2.2	ng/L		10/11/22 12:26	10/12/22 09:22	1
8:2 FTS	ND		1.8	0.41	ng/L		10/11/22 12:26	10/12/22 09:22	1
11Cl-PF3OUdS	ND		1.8	0.28	ng/L		10/11/22 12:26	10/12/22 09:22	1
9Cl-PF3ONS	ND		1.8	0.21	ng/L		10/11/22 12:26	10/12/22 09:22	1
HFPO-DA (GenX)	ND		3.6	1.3	ng/L		10/11/22 12:26	10/12/22 09:22	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.8	0.36	ng/L		10/11/22 12:26	10/12/22 09:22	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*105*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:22*	*1*
13C5 PFPeA	*108*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:22*	*1*
13C2 PFHxA	*104*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:22*	*1*
13C4 PFHpA	*107*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:22*	*1*
13C4 PFOA	*105*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:22*	*1*
13C5 PFNA	*102*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:22*	*1*
13C2 PFDA	*107*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:22*	*1*
13C2 PFUnA	*104*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:22*	*1*
13C2 PFDoA	*103*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:22*	*1*
13C2 PFTeDA	*114*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:22*	*1*
13C3 PFBS	*102*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:22*	*1*
18O2 PFHxS	*106*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:22*	*1*
13C4 PFOS	*102*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:22*	*1*
13C8 FOSA	*99*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:22*	*1*
M2-4:2 FTS	*118*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:22*	*1*

Client Sample ID: QCTB-01

Date Collected: 10/07/22 00:00
Date Received: 10/08/22 09:45

Lab Sample ID: 320-93007-1
Matrix: Water

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-6:2 FTS	117		50 - 150	10/11/22 12:26	10/12/22 09:22	1
M2-8:2 FTS	105		50 - 150	10/11/22 12:26	10/12/22 09:22	1
d5-NEtFOSAA	115		50 - 150	10/11/22 12:26	10/12/22 09:22	1
d3-NMeFOSAA	119		50 - 150	10/11/22 12:26	10/12/22 09:22	1
d-N-EtFOSA-M	99		50 - 150	10/11/22 12:26	10/12/22 09:22	1
d9-N-EtFOSE-M	95		50 - 150	10/11/22 12:26	10/12/22 09:22	1
d7-N-MeFOSE-M	100		50 - 150	10/11/22 12:26	10/12/22 09:22	1
d-N-MeFOSA-M	94		50 - 150	10/11/22 12:26	10/12/22 09:22	1
13C3 HFPO-DA	102		50 - 150	10/11/22 12:26	10/12/22 09:22	1

Client Sample ID: QCFB-01

Date Collected: 10/07/22 13:10
Date Received: 10/08/22 09:45

Lab Sample ID: 320-93007-2
Matrix: Water

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		4.4	2.1	ng/L		10/11/22 12:26	10/12/22 09:32	1
Perfluoropentanoic acid (PFPeA)	ND		1.8	0.43	ng/L		10/11/22 12:26	10/12/22 09:32	1
Perfluorohexanoic acid (PFHxA)	ND		1.8	0.51	ng/L		10/11/22 12:26	10/12/22 09:32	1
Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.22	ng/L		10/11/22 12:26	10/12/22 09:32	1
Perfluorooctanoic acid (PFOA)	ND		1.8	0.75	ng/L		10/11/22 12:26	10/12/22 09:32	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.24	ng/L		10/11/22 12:26	10/12/22 09:32	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.27	ng/L		10/11/22 12:26	10/12/22 09:32	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.97	ng/L		10/11/22 12:26	10/12/22 09:32	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.48	ng/L		10/11/22 12:26	10/12/22 09:32	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.8	1.1	ng/L		10/11/22 12:26	10/12/22 09:32	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.64	ng/L		10/11/22 12:26	10/12/22 09:32	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.18	ng/L		10/11/22 12:26	10/12/22 09:32	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.8	0.26	ng/L		10/11/22 12:26	10/12/22 09:32	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.8	0.50	ng/L		10/11/22 12:26	10/12/22 09:32	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.8	0.17	ng/L		10/11/22 12:26	10/12/22 09:32	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.47	ng/L		10/11/22 12:26	10/12/22 09:32	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.28	ng/L		10/11/22 12:26	10/12/22 09:32	1
Perfluorooctanesulfonamide (FOSA)	ND		1.8	0.86	ng/L		10/11/22 12:26	10/12/22 09:32	1
NEtFOSA	ND		1.8	0.76	ng/L		10/11/22 12:26	10/12/22 09:32	1
NEtFOSAA	ND		4.4	1.1	ng/L		10/11/22 12:26	10/12/22 09:32	1
NEtFOSE	ND		1.8	0.75	ng/L		10/11/22 12:26	10/12/22 09:32	1
NMeFOSA	ND		1.8	0.38	ng/L		10/11/22 12:26	10/12/22 09:32	1
NMeFOSAA	ND		4.4	1.1	ng/L		10/11/22 12:26	10/12/22 09:32	1
NMeFOSE	ND		3.5	1.2	ng/L		10/11/22 12:26	10/12/22 09:32	1
4:2 FTS	ND		1.8	0.21	ng/L		10/11/22 12:26	10/12/22 09:32	1
6:2 FTS	ND		4.4	2.2	ng/L		10/11/22 12:26	10/12/22 09:32	1
8:2 FTS	ND		1.8	0.40	ng/L		10/11/22 12:26	10/12/22 09:32	1
11Cl-PF3OUdS	ND		1.8	0.28	ng/L		10/11/22 12:26	10/12/22 09:32	1
9Cl-PF3ONS	ND		1.8	0.21	ng/L		10/11/22 12:26	10/12/22 09:32	1
HFPO-DA (GenX)	ND		3.5	1.3	ng/L		10/11/22 12:26	10/12/22 09:32	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.8	0.35	ng/L		10/11/22 12:26	10/12/22 09:32	1

Client Sample ID: QCFB-01

Date Collected: 10/07/22 13:10
Date Received: 10/08/22 09:45

Lab Sample ID: 320-93007-2

Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	100		50 - 150	10/11/22 12:26	10/12/22 09:32	1
13C5 PFPeA	102		50 - 150	10/11/22 12:26	10/12/22 09:32	1
13C2 PFHxA	98		50 - 150	10/11/22 12:26	10/12/22 09:32	1
13C4 PFHpA	104		50 - 150	10/11/22 12:26	10/12/22 09:32	1
13C4 PFOA	103		50 - 150	10/11/22 12:26	10/12/22 09:32	1
13C5 PFNA	101		50 - 150	10/11/22 12:26	10/12/22 09:32	1
13C2 PFDA	102		50 - 150	10/11/22 12:26	10/12/22 09:32	1
13C2 PFUnA	101		50 - 150	10/11/22 12:26	10/12/22 09:32	1
13C2 PFDoA	105		50 - 150	10/11/22 12:26	10/12/22 09:32	1
13C2 PFTeDA	110		50 - 150	10/11/22 12:26	10/12/22 09:32	1
13C3 PFBS	98		50 - 150	10/11/22 12:26	10/12/22 09:32	1
18O2 PFHxS	104		50 - 150	10/11/22 12:26	10/12/22 09:32	1
13C4 PFOS	103		50 - 150	10/11/22 12:26	10/12/22 09:32	1
13C8 FOSA	97		50 - 150	10/11/22 12:26	10/12/22 09:32	1
M2-4:2 FTS	115		50 - 150	10/11/22 12:26	10/12/22 09:32	1
M2-6:2 FTS	115		50 - 150	10/11/22 12:26	10/12/22 09:32	1
M2-8:2 FTS	105		50 - 150	10/11/22 12:26	10/12/22 09:32	1
d5-NEtFOSAA	115		50 - 150	10/11/22 12:26	10/12/22 09:32	1
d3-NMeFOSAA	113		50 - 150	10/11/22 12:26	10/12/22 09:32	1
d-N-EtFOSA-M	92		50 - 150	10/11/22 12:26	10/12/22 09:32	1
d9-N-EtFOSE-M	92		50 - 150	10/11/22 12:26	10/12/22 09:32	1
d7-N-MeFOSE-M	96		50 - 150	10/11/22 12:26	10/12/22 09:32	1
d-N-MeFOSA-M	91		50 - 150	10/11/22 12:26	10/12/22 09:32	1
13C3 HFPO-DA	98		50 - 150	10/11/22 12:26	10/12/22 09:32	1

Client Sample ID: EW-2

Date Collected: 10/07/22 13:15
Date Received: 10/08/22 09:45

Lab Sample ID: 320-93007-3

Matrix: Water

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**68**		4.3	2.1	ng/L		10/11/22 12:26	10/12/22 09:42	1
Perfluoropentanoic acid (PFPeA)	**220**		1.7	0.43	ng/L		10/11/22 12:26	10/12/22 09:42	1
Perfluorohexanoic acid (PFHxA)	**110**		1.7	0.50	ng/L		10/11/22 12:26	10/12/22 09:42	1
Perfluoroheptanoic acid (PFHpA)	**29**		1.7	0.22	ng/L		10/11/22 12:26	10/12/22 09:42	1
Perfluorooctanoic acid (PFOA)	**38**		1.7	0.74	ng/L		10/11/22 12:26	10/12/22 09:42	1
Perfluorononanoic acid (PFNA)	**2.0**		1.7	0.23	ng/L		10/11/22 12:26	10/12/22 09:42	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.27	ng/L		10/11/22 12:26	10/12/22 09:42	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.95	ng/L		10/11/22 12:26	10/12/22 09:42	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.48	ng/L		10/11/22 12:26	10/12/22 09:42	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.7	1.1	ng/L		10/11/22 12:26	10/12/22 09:42	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.63	ng/L		10/11/22 12:26	10/12/22 09:42	1
Perfluorobutanesulfonic acid (PFBS)	**12**		1.7	0.17	ng/L		10/11/22 12:26	10/12/22 09:42	1
Perfluoropentanesulfonic acid (PFPeS)	**1.6**	J	1.7	0.26	ng/L		10/11/22 12:26	10/12/22 09:42	1
Perfluorohexanesulfonic acid (PFHxS)	**4.0**		1.7	0.49	ng/L		10/11/22 12:26	10/12/22 09:42	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.7	0.16	ng/L		10/11/22 12:26	10/12/22 09:42	1
Perfluorooctanesulfonic acid (PFOS)	**5.6**		1.7	0.47	ng/L		10/11/22 12:26	10/12/22 09:42	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.28	ng/L		10/11/22 12:26	10/12/22 09:42	1
Perfluorooctanesulfonamide (FOSA)	**1.3**	J	1.7	0.85	ng/L		10/11/22 12:26	10/12/22 09:42	1

Client Sample ID: EW-2

Lab Sample ID: 320-93007-3

Date Collected: 10/07/22 13:15

Matrix: Water

Date Received: 10/08/22 09:45

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
NEtFOSA	ND		1.7	0.75	ng/L		10/11/22 12:26	10/12/22 09:42	1
NEtFOSAA	ND		4.3	1.1	ng/L		10/11/22 12:26	10/12/22 09:42	1
NEtFOSE	ND		1.7	0.74	ng/L		10/11/22 12:26	10/12/22 09:42	1
NMeFOSA	ND		1.7	0.37	ng/L		10/11/22 12:26	10/12/22 09:42	1
NMeFOSAA	ND		4.3	1.0	ng/L		10/11/22 12:26	10/12/22 09:42	1
NMeFOSE	ND		3.5	1.2	ng/L		10/11/22 12:26	10/12/22 09:42	1
4:2 FTS	ND		1.7	0.21	ng/L		10/11/22 12:26	10/12/22 09:42	1
6:2 FTS	ND		4.3	2.2	ng/L		10/11/22 12:26	10/12/22 09:42	1
8:2 FTS	ND		1.7	0.40	ng/L		10/11/22 12:26	10/12/22 09:42	1
11Cl-PF3OUdS	ND		1.7	0.28	ng/L		10/11/22 12:26	10/12/22 09:42	1
9Cl-PF3ONS	ND		1.7	0.21	ng/L		10/11/22 12:26	10/12/22 09:42	1
HFPO-DA (GenX)	ND		3.5	1.3	ng/L		10/11/22 12:26	10/12/22 09:42	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.7	0.35	ng/L		10/11/22 12:26	10/12/22 09:42	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*89*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:42*	*1*
13C5 PFPeA	*101*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:42*	*1*
13C2 PFHxA	*104*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:42*	*1*
13C4 PFHpA	*107*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:42*	*1*
13C4 PFOA	*106*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:42*	*1*
13C5 PFNA	*104*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:42*	*1*
13C2 PFDA	*107*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:42*	*1*
13C2 PFUnA	*105*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:42*	*1*
13C2 PFDoA	*110*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:42*	*1*
13C2 PFTeDA	*118*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:42*	*1*
13C3 PFBS	*101*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:42*	*1*
18O2 PFHxS	*107*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:42*	*1*
13C4 PFOS	*103*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:42*	*1*
13C8 FOSA	*102*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:42*	*1*
M2-4:2 FTS	*109*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:42*	*1*
M2-6:2 FTS	*111*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:42*	*1*
M2-8:2 FTS	*107*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:42*	*1*
d5-NEtFOSAA	*120*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:42*	*1*
d3-NMeFOSAA	*119*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:42*	*1*
d-N-EtFOSA-M	*95*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:42*	*1*
d9-N-EtFOSE-M	*92*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:42*	*1*
d7-N-MeFOSE-M	*96*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:42*	*1*
d-N-MeFOSA-M	*95*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:42*	*1*
13C3 HFPO-DA	*96*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:42*	*1*

Client Sample ID: QCEB-01

Lab Sample ID: 320-93007-4

Date Collected: 10/07/22 13:40

Matrix: Water

Date Received: 10/08/22 09:45

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		4.3	2.1	ng/L		10/11/22 12:26	10/12/22 09:52	1
Perfluoropentanoic acid (PFPeA)	ND		1.7	0.43	ng/L		10/11/22 12:26	10/12/22 09:52	1
Perfluorohexanoic acid (PFHxA)	ND		1.7	0.50	ng/L		10/11/22 12:26	10/12/22 09:52	1
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.22	ng/L		10/11/22 12:26	10/12/22 09:52	1

Client Sample ID: QCEB-01
Date Collected: 10/07/22 13:40
Date Received: 10/08/22 09:45

Lab Sample ID: 320-93007-4
Matrix: Water

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	ND		1.7	0.74	ng/L		10/11/22 12:26	10/12/22 09:52	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.23	ng/L		10/11/22 12:26	10/12/22 09:52	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.27	ng/L		10/11/22 12:26	10/12/22 09:52	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.96	ng/L		10/11/22 12:26	10/12/22 09:52	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.48	ng/L		10/11/22 12:26	10/12/22 09:52	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.7	1.1	ng/L		10/11/22 12:26	10/12/22 09:52	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.64	ng/L		10/11/22 12:26	10/12/22 09:52	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.17	ng/L		10/11/22 12:26	10/12/22 09:52	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.7	0.26	ng/L		10/11/22 12:26	10/12/22 09:52	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.7	0.50	ng/L		10/11/22 12:26	10/12/22 09:52	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.7	0.17	ng/L		10/11/22 12:26	10/12/22 09:52	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.47	ng/L		10/11/22 12:26	10/12/22 09:52	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.28	ng/L		10/11/22 12:26	10/12/22 09:52	1
Perfluorooctanesulfonamide (FOSA)	ND		1.7	0.85	ng/L		10/11/22 12:26	10/12/22 09:52	1
NEtFOSA	ND		1.7	0.76	ng/L		10/11/22 12:26	10/12/22 09:52	1
NEtFOSAA	ND		4.3	1.1	ng/L		10/11/22 12:26	10/12/22 09:52	1
NEtFOSE	ND		1.7	0.74	ng/L		10/11/22 12:26	10/12/22 09:52	1
NMeFOSA	ND		1.7	0.37	ng/L		10/11/22 12:26	10/12/22 09:52	1
NMeFOSAA	ND		4.3	1.0	ng/L		10/11/22 12:26	10/12/22 09:52	1
NMeFOSE	ND		3.5	1.2	ng/L		10/11/22 12:26	10/12/22 09:52	1
4:2 FTS	ND		1.7	0.21	ng/L		10/11/22 12:26	10/12/22 09:52	1
6:2 FTS	ND		4.3	2.2	ng/L		10/11/22 12:26	10/12/22 09:52	1
8:2 FTS	ND		1.7	0.40	ng/L		10/11/22 12:26	10/12/22 09:52	1
11Cl-PF3OUdS	ND		1.7	0.28	ng/L		10/11/22 12:26	10/12/22 09:52	1
9Cl-PF3ONS	ND		1.7	0.21	ng/L		10/11/22 12:26	10/12/22 09:52	1
HFPO-DA (GenX)	ND		3.5	1.3	ng/L		10/11/22 12:26	10/12/22 09:52	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.7	0.35	ng/L		10/11/22 12:26	10/12/22 09:52	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*99*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:52*	*1*
13C5 PFPeA	*103*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:52*	*1*
13C2 PFHxA	*102*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:52*	*1*
13C4 PFHpA	*103*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:52*	*1*
13C4 PFOA	*102*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:52*	*1*
13C5 PFNA	*98*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:52*	*1*
13C2 PFDA	*101*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:52*	*1*
13C2 PFUnA	*100*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:52*	*1*
13C2 PFDoA	*101*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:52*	*1*
13C2 PFTeDA	*109*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:52*	*1*
13C3 PFBS	*104*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:52*	*1*
18O2 PFHxS	*101*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:52*	*1*
13C4 PFOS	*102*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:52*	*1*
13C8 FOSA	*95*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:52*	*1*
M2-4:2 FTS	*120*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:52*	*1*
M2-6:2 FTS	*115*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:52*	*1*
M2-8:2 FTS	*103*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:52*	*1*
d5-NEtFOSAA	*109*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:52*	*1*
d3-NMeFOSAA	*112*		*50 - 150*	*10/11/22 12:26*	*10/12/22 09:52*	*1*

Client Sample ID: QCEB-01

Date Collected: 10/07/22 13:40
Date Received: 10/08/22 09:45

Lab Sample ID: 320-93007-4
Matrix: Water

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d-N-EtFOSA-M	89		50 - 150	10/11/22 12:26	10/12/22 09:52	1
d9-N-EtFOSE-M	86		50 - 150	10/11/22 12:26	10/12/22 09:52	1
d7-N-MeFOSE-M	94		50 - 150	10/11/22 12:26	10/12/22 09:52	1
d-N-MeFOSA-M	89		50 - 150	10/11/22 12:26	10/12/22 09:52	1
13C3 HFPO-DA	100		50 - 150	10/11/22 12:26	10/12/22 09:52	1

Client Sample ID: WA-20

Date Collected: 10/07/22 13:55
Date Received: 10/08/22 09:45

Lab Sample ID: 320-93007-5
Matrix: Water

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	67		4.6	2.2	ng/L		10/11/22 12:26	10/12/22 10:03	1
Perfluoropentanoic acid (PFPeA)	140		1.8	0.45	ng/L		10/11/22 12:26	10/12/22 10:03	1
Perfluorohexanoic acid (PFHxA)	71		1.8	0.53	ng/L		10/11/22 12:26	10/12/22 10:03	1
Perfluoroheptanoic acid (PFHpA)	13		1.8	0.23	ng/L		10/11/22 12:26	10/12/22 10:03	1
Perfluorooctanoic acid (PFOA)	16		1.8	0.78	ng/L		10/11/22 12:26	10/12/22 10:03	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.25	ng/L		10/11/22 12:26	10/12/22 10:03	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.28	ng/L		10/11/22 12:26	10/12/22 10:03	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	1.0	ng/L		10/11/22 12:26	10/12/22 10:03	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.50	ng/L		10/11/22 12:26	10/12/22 10:03	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.8	1.2	ng/L		10/11/22 12:26	10/12/22 10:03	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.67	ng/L		10/11/22 12:26	10/12/22 10:03	1
Perfluorobutanesulfonic acid (PFBS)	12		1.8	0.18	ng/L		10/11/22 12:26	10/12/22 10:03	1
Perfluoropentanesulfonic acid (PFPeS)	2.4		1.8	0.27	ng/L		10/11/22 12:26	10/12/22 10:03	1
Perfluorohexanesulfonic acid (PFHxS)	5.3		1.8	0.52	ng/L		10/11/22 12:26	10/12/22 10:03	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.8	0.17	ng/L		10/11/22 12:26	10/12/22 10:03	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.49	ng/L		10/11/22 12:26	10/12/22 10:03	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.29	ng/L		10/11/22 12:26	10/12/22 10:03	1
Perfluorooctanesulfonamide (FOSA)	ND		1.8	0.90	ng/L		10/11/22 12:26	10/12/22 10:03	1
NEtFOSA	ND		1.8	0.80	ng/L		10/11/22 12:26	10/12/22 10:03	1
NEtFOSAA	ND		4.6	1.2	ng/L		10/11/22 12:26	10/12/22 10:03	1
NEtFOSE	ND		1.8	0.78	ng/L		10/11/22 12:26	10/12/22 10:03	1
NMeFOSA	ND		1.8	0.39	ng/L		10/11/22 12:26	10/12/22 10:03	1
NMeFOSAA	ND		4.6	1.1	ng/L		10/11/22 12:26	10/12/22 10:03	1
NMeFOSE	ND		3.7	1.3	ng/L		10/11/22 12:26	10/12/22 10:03	1
4:2 FTS	ND		1.8	0.22	ng/L		10/11/22 12:26	10/12/22 10:03	1
6:2 FTS	ND		4.6	2.3	ng/L		10/11/22 12:26	10/12/22 10:03	1
8:2 FTS	ND		1.8	0.42	ng/L		10/11/22 12:26	10/12/22 10:03	1
11Cl-PF3OUdS	ND		1.8	0.29	ng/L		10/11/22 12:26	10/12/22 10:03	1
9Cl-PF3ONS	ND		1.8	0.22	ng/L		10/11/22 12:26	10/12/22 10:03	1
HFPO-DA (GenX)	ND		3.7	1.4	ng/L		10/11/22 12:26	10/12/22 10:03	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.8	0.37	ng/L		10/11/22 12:26	10/12/22 10:03	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	56		50 - 150	10/11/22 12:26	10/12/22 10:03	1
13C5 PFPeA	62		50 - 150	10/11/22 12:26	10/12/22 10:03	1
13C2 PFHxA	65		50 - 150	10/11/22 12:26	10/12/22 10:03	1

Client Sample ID: WA-20

Date Collected: 10/07/22 13:55
Date Received: 10/08/22 09:45

Lab Sample ID: 320-93007-5

Matrix: Water

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFHpA	66		50 - 150	10/11/22 12:26	10/12/22 10:03	1
13C4 PFOA	63		50 - 150	10/11/22 12:26	10/12/22 10:03	1
13C5 PFNA	66		50 - 150	10/11/22 12:26	10/12/22 10:03	1
13C2 PFDA	67		50 - 150	10/11/22 12:26	10/12/22 10:03	1
13C2 PFUnA	64		50 - 150	10/11/22 12:26	10/12/22 10:03	1
13C2 PFDoA	62		50 - 150	10/11/22 12:26	10/12/22 10:03	1
13C2 PFTeDA	61		50 - 150	10/11/22 12:26	10/12/22 10:03	1
13C3 PFBS	64		50 - 150	10/11/22 12:26	10/12/22 10:03	1
18O2 PFHxS	64		50 - 150	10/11/22 12:26	10/12/22 10:03	1
13C4 PFOS	66		50 - 150	10/11/22 12:26	10/12/22 10:03	1
13C8 FOSA	62		50 - 150	10/11/22 12:26	10/12/22 10:03	1
M2-4:2 FTS	70		50 - 150	10/11/22 12:26	10/12/22 10:03	1
M2-6:2 FTS	72		50 - 150	10/11/22 12:26	10/12/22 10:03	1
M2-8:2 FTS	63		50 - 150	10/11/22 12:26	10/12/22 10:03	1
d5-NEtFOSAA	71		50 - 150	10/11/22 12:26	10/12/22 10:03	1
d3-NMeFOSAA	72		50 - 150	10/11/22 12:26	10/12/22 10:03	1
d-N-EtFOSA-M	52		50 - 150	10/11/22 12:26	10/12/22 10:03	1
d9-N-EtFOSE-M	51		50 - 150	10/11/22 12:26	10/12/22 10:03	1
d7-N-MeFOSE-M	54		50 - 150	10/11/22 12:26	10/12/22 10:03	1
d-N-MeFOSA-M	54		50 - 150	10/11/22 12:26	10/12/22 10:03	1
13C3 HFPO-DA	61		50 - 150	10/11/22 12:26	10/12/22 10:03	1

Client Sample ID: CP-25

Date Collected: 10/07/22 15:10
Date Received: 10/08/22 09:45

Lab Sample ID: 320-93007-6

Matrix: Water

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		4.9	2.3	ng/L		10/11/22 12:26	10/12/22 10:33	1
Perfluoropentanoic acid (PFPeA)	1.2	J	2.0	0.48	ng/L		10/11/22 12:26	10/12/22 10:33	1
Perfluorohexanoic acid (PFHxA)	0.80	J	2.0	0.57	ng/L		10/11/22 12:26	10/12/22 10:33	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.24	ng/L		10/11/22 12:26	10/12/22 10:33	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.83	ng/L		10/11/22 12:26	10/12/22 10:33	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.26	ng/L		10/11/22 12:26	10/12/22 10:33	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.30	ng/L		10/11/22 12:26	10/12/22 10:33	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	1.1	ng/L		10/11/22 12:26	10/12/22 10:33	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.54	ng/L		10/11/22 12:26	10/12/22 10:33	1
Perfluorotridecanoic acid (PFTrDA)	ND		2.0	1.3	ng/L		10/11/22 12:26	10/12/22 10:33	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.0	0.71	ng/L		10/11/22 12:26	10/12/22 10:33	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.20	ng/L		10/11/22 12:26	10/12/22 10:33	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0	0.29	ng/L		10/11/22 12:26	10/12/22 10:33	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.56	ng/L		10/11/22 12:26	10/12/22 10:33	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.0	0.19	ng/L		10/11/22 12:26	10/12/22 10:33	1
Perfluorooctanesulfonic acid (PFOS)	1.5	J	2.0	0.53	ng/L		10/11/22 12:26	10/12/22 10:33	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.31	ng/L		10/11/22 12:26	10/12/22 10:33	1
Perfluorooctanesulfonamide (FOSA)	ND		2.0	0.96	ng/L		10/11/22 12:26	10/12/22 10:33	1
NEtFOSA	ND		2.0	0.85	ng/L		10/11/22 12:26	10/12/22 10:33	1
NEtFOSAA	ND		4.9	1.3	ng/L		10/11/22 12:26	10/12/22 10:33	1

Client: Golder Associates Inc
Project/Site: 18105117

Job ID: 320-93007-1

Client Sample ID: CP-25

Date Collected: 10/07/22 15:10
Date Received: 10/08/22 09:45

Lab Sample ID: 320-93007-6

Matrix: Water

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
NEtFOSE	ND		2.0	0.83	ng/L		10/11/22 12:26	10/12/22 10:33	1
NMeFOSA	ND		2.0	0.42	ng/L		10/11/22 12:26	10/12/22 10:33	1
NMeFOSAA	ND		4.9	1.2	ng/L		10/11/22 12:26	10/12/22 10:33	1
NMeFOSE	ND		3.9	1.4	ng/L		10/11/22 12:26	10/12/22 10:33	1
4:2 FTS	ND		2.0	0.23	ng/L		10/11/22 12:26	10/12/22 10:33	1
6:2 FTS	ND		4.9	2.4	ng/L		10/11/22 12:26	10/12/22 10:33	1
8:2 FTS	ND		2.0	0.45	ng/L		10/11/22 12:26	10/12/22 10:33	1
11Cl-PF3OUdS	ND		2.0	0.31	ng/L		10/11/22 12:26	10/12/22 10:33	1
9Cl-PF3ONS	ND		2.0	0.23	ng/L		10/11/22 12:26	10/12/22 10:33	1
HFPO-DA (GenX)	ND		3.9	1.5	ng/L		10/11/22 12:26	10/12/22 10:33	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0	0.39	ng/L		10/11/22 12:26	10/12/22 10:33	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*63*		*50 - 150*	*10/11/22 12:26*	*10/12/22 10:33*	*1*
13C5 PFPeA	*71*		*50 - 150*	*10/11/22 12:26*	*10/12/22 10:33*	*1*
13C2 PFHxA	*78*		*50 - 150*	*10/11/22 12:26*	*10/12/22 10:33*	*1*
13C4 PFHpA	*81*		*50 - 150*	*10/11/22 12:26*	*10/12/22 10:33*	*1*
13C4 PFOA	*79*		*50 - 150*	*10/11/22 12:26*	*10/12/22 10:33*	*1*
13C5 PFNA	*76*		*50 - 150*	*10/11/22 12:26*	*10/12/22 10:33*	*1*
13C2 PFDA	*71*		*50 - 150*	*10/11/22 12:26*	*10/12/22 10:33*	*1*
13C2 PFUnA	*70*		*50 - 150*	*10/11/22 12:26*	*10/12/22 10:33*	*1*
13C2 PFDoA	*63*		*50 - 150*	*10/11/22 12:26*	*10/12/22 10:33*	*1*
13C2 PFTeDA	*59*		*50 - 150*	*10/11/22 12:26*	*10/12/22 10:33*	*1*
13C3 PFBS	*76*		*50 - 150*	*10/11/22 12:26*	*10/12/22 10:33*	*1*
18O2 PFHxS	*79*		*50 - 150*	*10/11/22 12:26*	*10/12/22 10:33*	*1*
13C4 PFOS	*74*		*50 - 150*	*10/11/22 12:26*	*10/12/22 10:33*	*1*
13C8 FOSA	*69*		*50 - 150*	*10/11/22 12:26*	*10/12/22 10:33*	*1*
M2-4:2 FTS	*99*		*50 - 150*	*10/11/22 12:26*	*10/12/22 10:33*	*1*
M2-6:2 FTS	*90*		*50 - 150*	*10/11/22 12:26*	*10/12/22 10:33*	*1*
M2-8:2 FTS	*77*		*50 - 150*	*10/11/22 12:26*	*10/12/22 10:33*	*1*
d5-NEtFOSAA	*75*		*50 - 150*	*10/11/22 12:26*	*10/12/22 10:33*	*1*
d3-NMeFOSAA	*76*		*50 - 150*	*10/11/22 12:26*	*10/12/22 10:33*	*1*
d-N-EtFOSA-M	*50*		*50 - 150*	*10/11/22 12:26*	*10/12/22 10:33*	*1*
d9-N-EtFOSE-M	*47*	**5-*	*50 - 150*	*10/11/22 12:26*	*10/12/22 10:33*	*1*
d7-N-MeFOSE-M	*52*		*50 - 150*	*10/11/22 12:26*	*10/12/22 10:33*	*1*
d-N-MeFOSA-M	*54*		*50 - 150*	*10/11/22 12:26*	*10/12/22 10:33*	*1*
13C3 HFPO-DA	*72*		*50 - 150*	*10/11/22 12:26*	*10/12/22 10:33*	*1*

Isotope Dilution Summary

Client: Golder Associates Inc
Project/Site: 18105117

Job ID: 320-93007-1

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (50-150)	PFPeA (50-150)	PFHxA (50-150)	C4PFHA (50-150)	PFOA (50-150)	PFNA (50-150)	PFDA (50-150)	PFUnA (50-150)
320-93007-1	QCTB-01	105	108	104	107	105	102	107	104
320-93007-2	QCFB-01	100	102	98	104	103	101	102	101
320-93007-3	EW-2	89	101	104	107	106	104	107	105
320-93007-4	QCEB-01	99	103	102	103	102	98	101	100
320-93007-5	WA-20	56	62	65	66	63	66	67	64
320-93007-6	CP-25	63	71	78	81	79	76	71	70
LCS 320-624009/2-A	Lab Control Sample	102	106	105	105	105	105	111	104
LCSD 320-624009/3-A	Lab Control Sample Dup	105	107	105	109	105	104	111	104
MB 320-624009/1-A	Method Blank	103	103	105	105	102	102	102	104

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFDoA (50-150)	PFTDA (50-150)	C3PFBS (50-150)	PFHxS (50-150)	PFOS (50-150)	PFOSA (50-150)	M242FTS (50-150)	M262FTS (50-150)
320-93007-1	QCTB-01	103	114	102	106	102	99	118	117
320-93007-2	QCFB-01	105	110	98	104	103	97	115	115
320-93007-3	EW-2	110	118	101	107	103	102	109	111
320-93007-4	QCEB-01	101	109	104	101	102	95	120	115
320-93007-5	WA-20	62	61	64	64	66	62	70	72
320-93007-6	CP-25	63	59	76	79	74	69	99	90
LCS 320-624009/2-A	Lab Control Sample	108	113	103	108	102	99	110	108
LCSD 320-624009/3-A	Lab Control Sample Dup	111	114	103	106	104	101	114	113
MB 320-624009/1-A	Method Blank	103	113	101	103	103	99	113	112

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	M282FTS (50-150)	d5NEFOS (50-150)	d3NMFOS (50-150)	dEtFOSA (50-150)	NEFM (50-150)	NMFM (50-150)	dMeFOSA (50-150)	HFPODA (50-150)
320-93007-1	QCTB-01	105	115	119	99	95	100	94	102
320-93007-2	QCFB-01	105	115	113	92	92	96	91	98
320-93007-3	EW-2	107	120	119	95	92	96	95	96
320-93007-4	QCEB-01	103	109	112	89	86	94	89	100
320-93007-5	WA-20	63	71	72	52	51	54	54	61
320-93007-6	CP-25	77	75	76	50	47 *5-	52	54	72
LCS 320-624009/2-A	Lab Control Sample	107	112	118	93	94	99	86	100
LCSD 320-624009/3-A	Lab Control Sample Dup	105	115	118	93	95	98	92	105
MB 320-624009/1-A	Method Blank	109	114	117	91	95	96	89	101

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
PFOSA = 13C8 FOSA

Isotope Dilution Summary

Client: Golder Associates Inc
Project/Site: 18105117

Job ID: 320-93007-1

M242FTS = M2-4:2 FTS
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
d5NEFOS = d5-NEtFOSAA
d3NMFOS = d3-NMeFOSAA
dEtFOSA = d-N-EtFOSA-M
NEFM = d9-N-EtFOSE-M
NMFM = d7-N-MeFOSE-M
dMeFOSA = d-N-MeFOSA-M
HFPODA = 13C3 HFPO-DA

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15

Lab Sample ID: MB 320-624009/1-A
Matrix: Water
Analysis Batch: 624217

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 624009

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		5.0	2.4	ng/L		10/11/22 12:26	10/12/22 08:32	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.49	ng/L		10/11/22 12:26	10/12/22 08:32	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.58	ng/L		10/11/22 12:26	10/12/22 08:32	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.25	ng/L		10/11/22 12:26	10/12/22 08:32	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.85	ng/L		10/11/22 12:26	10/12/22 08:32	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.27	ng/L		10/11/22 12:26	10/12/22 08:32	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.31	ng/L		10/11/22 12:26	10/12/22 08:32	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	1.1	ng/L		10/11/22 12:26	10/12/22 08:32	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		10/11/22 12:26	10/12/22 08:32	1
Perfluorotridecanoic acid (PFTrDA)	ND		2.0	1.3	ng/L		10/11/22 12:26	10/12/22 08:32	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.0	0.73	ng/L		10/11/22 12:26	10/12/22 08:32	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.20	ng/L		10/11/22 12:26	10/12/22 08:32	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0	0.30	ng/L		10/11/22 12:26	10/12/22 08:32	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.57	ng/L		10/11/22 12:26	10/12/22 08:32	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.0	0.19	ng/L		10/11/22 12:26	10/12/22 08:32	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.54	ng/L		10/11/22 12:26	10/12/22 08:32	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.32	ng/L		10/11/22 12:26	10/12/22 08:32	1
Perfluorooctanesulfonamide (FOSA)	ND		2.0	0.98	ng/L		10/11/22 12:26	10/12/22 08:32	1
NEtFOSA	ND		2.0	0.87	ng/L		10/11/22 12:26	10/12/22 08:32	1
NEtFOSAA	ND		5.0	1.3	ng/L		10/11/22 12:26	10/12/22 08:32	1
NEtFOSE	ND		2.0	0.85	ng/L		10/11/22 12:26	10/12/22 08:32	1
NMeFOSA	ND		2.0	0.43	ng/L		10/11/22 12:26	10/12/22 08:32	1
NMeFOSAA	ND		5.0	1.2	ng/L		10/11/22 12:26	10/12/22 08:32	1
NMeFOSE	ND		4.0	1.4	ng/L		10/11/22 12:26	10/12/22 08:32	1
4:2 FTS	ND		2.0	0.24	ng/L		10/11/22 12:26	10/12/22 08:32	1
6:2 FTS	ND		5.0	2.5	ng/L		10/11/22 12:26	10/12/22 08:32	1
8:2 FTS	ND		2.0	0.46	ng/L		10/11/22 12:26	10/12/22 08:32	1
11Cl-PF3OUdS	ND		2.0	0.32	ng/L		10/11/22 12:26	10/12/22 08:32	1
9Cl-PF3ONS	ND		2.0	0.24	ng/L		10/11/22 12:26	10/12/22 08:32	1
HFPO-DA (GenX)	ND		4.0	1.5	ng/L		10/11/22 12:26	10/12/22 08:32	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0	0.40	ng/L		10/11/22 12:26	10/12/22 08:32	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*103*		*50 - 150*	*10/11/22 12:26*	*10/12/22 08:32*	*1*
13C5 PFPeA	*103*		*50 - 150*	*10/11/22 12:26*	*10/12/22 08:32*	*1*
13C2 PFHxA	*105*		*50 - 150*	*10/11/22 12:26*	*10/12/22 08:32*	*1*
13C4 PFHpA	*105*		*50 - 150*	*10/11/22 12:26*	*10/12/22 08:32*	*1*
13C4 PFOA	*102*		*50 - 150*	*10/11/22 12:26*	*10/12/22 08:32*	*1*
13C5 PFNA	*102*		*50 - 150*	*10/11/22 12:26*	*10/12/22 08:32*	*1*
13C2 PFDA	*102*		*50 - 150*	*10/11/22 12:26*	*10/12/22 08:32*	*1*
13C2 PFUnA	*104*		*50 - 150*	*10/11/22 12:26*	*10/12/22 08:32*	*1*
13C2 PFDoA	*103*		*50 - 150*	*10/11/22 12:26*	*10/12/22 08:32*	*1*
13C2 PFTeDA	*113*		*50 - 150*	*10/11/22 12:26*	*10/12/22 08:32*	*1*
13C3 PFBS	*101*		*50 - 150*	*10/11/22 12:26*	*10/12/22 08:32*	*1*
18O2 PFHxS	*103*		*50 - 150*	*10/11/22 12:26*	*10/12/22 08:32*	*1*
13C4 PFOS	*103*		*50 - 150*	*10/11/22 12:26*	*10/12/22 08:32*	*1*

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Lab Sample ID: MB 320-624009/1-A
Matrix: Water
Analysis Batch: 624217

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 624009

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	99		50 - 150	10/11/22 12:26	10/12/22 08:32	1
M2-4:2 FTS	113		50 - 150	10/11/22 12:26	10/12/22 08:32	1
M2-6:2 FTS	112		50 - 150	10/11/22 12:26	10/12/22 08:32	1
M2-8:2 FTS	109		50 - 150	10/11/22 12:26	10/12/22 08:32	1
d5-NEtFOSAA	114		50 - 150	10/11/22 12:26	10/12/22 08:32	1
d3-NMeFOSAA	117		50 - 150	10/11/22 12:26	10/12/22 08:32	1
d-N-EtFOSA-M	91		50 - 150	10/11/22 12:26	10/12/22 08:32	1
d9-N-EtFOSE-M	95		50 - 150	10/11/22 12:26	10/12/22 08:32	1
d7-N-MeFOSE-M	96		50 - 150	10/11/22 12:26	10/12/22 08:32	1
d-N-MeFOSA-M	89		50 - 150	10/11/22 12:26	10/12/22 08:32	1
13C3 HFPO-DA	101		50 - 150	10/11/22 12:26	10/12/22 08:32	1

Lab Sample ID: LCS 320-624009/2-A
Matrix: Water
Analysis Batch: 624217

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 624009

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	40.0	45.1		ng/L		113	73 - 129
Perfluoropentanoic acid (PFPeA)	40.0	42.8		ng/L		107	72 - 129
Perfluorohexanoic acid (PFHxA)	40.0	42.7		ng/L		107	72 - 129
Perfluoroheptanoic acid (PFHpA)	40.0	45.1		ng/L		113	72 - 130
Perfluorooctanoic acid (PFOA)	40.0	44.6		ng/L		111	71 - 133
Perfluorononanoic acid (PFNA)	40.0	42.1		ng/L		105	69 - 130
Perfluorodecanoic acid (PFDA)	40.0	42.0		ng/L		105	71 - 129
Perfluoroundecanoic acid (PFUnA)	40.0	45.1		ng/L		113	69 - 133
Perfluorododecanoic acid (PFDoA)	40.0	41.0		ng/L		103	72 - 134
Perfluorotridecanoic acid (PFTrDA)	40.0	42.1		ng/L		105	65 - 144
Perfluorotetradecanoic acid (PFTeA)	40.0	40.8		ng/L		102	71 - 132
Perfluorobutanesulfonic acid (PFBS)	35.5	39.0		ng/L		110	72 - 130
Perfluoropentanesulfonic acid (PFPeS)	37.5	42.6		ng/L		113	71 - 127
Perfluorohexanesulfonic acid (PFHxS)	36.5	36.6		ng/L		100	68 - 131
Perfluoroheptanesulfonic acid (PFHpS)	38.2	43.8		ng/L		115	69 - 134
Perfluorooctanesulfonic acid (PFOS)	37.2	41.6		ng/L		112	65 - 140
Perfluorodecanesulfonic acid (PFDS)	38.6	41.0		ng/L		106	53 - 142
Perfluorooctanesulfonamide (FOSA)	40.0	43.5		ng/L		109	67 - 137
NEtFOSA	40.0	40.2		ng/L		101	67 - 127
NEtFOSAA	40.0	46.0		ng/L		115	61 - 135
NEtFOSE	40.0	41.6		ng/L		104	70 - 130
NMeFOSA	40.0	43.7		ng/L		109	68 - 141
NMeFOSAA	40.0	39.5		ng/L		99	65 - 136
NMeFOSE	40.0	39.1		ng/L		98	60 - 137

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Lab Sample ID: LCS 320-624009/2-A
Matrix: Water
Analysis Batch: 624217

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 624009

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
4:2 FTS			37.5	41.5		ng/L		111	63 - 143		
6:2 FTS			38.1	40.3		ng/L		106	64 - 140		
8:2 FTS			38.4	40.9		ng/L		106	67 - 138		
11Cl-PF3OUdS			37.8	40.2		ng/L		106	76 - 136		
9Cl-PF3ONS			37.4	40.8		ng/L		109	77 - 137		
HFPO-DA (GenX)			40.0	46.6		ng/L		117	72 - 132		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			37.8	46.6		ng/L		123	81 - 141		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*102*		*50 - 150*
13C5 PFPeA	*106*		*50 - 150*
13C2 PFHxA	*105*		*50 - 150*
13C4 PFHpA	*105*		*50 - 150*
13C4 PFOA	*105*		*50 - 150*
13C5 PFNA	*105*		*50 - 150*
13C2 PFDA	*111*		*50 - 150*
13C2 PFUnA	*104*		*50 - 150*
13C2 PFDoA	*108*		*50 - 150*
13C2 PFTeDA	*113*		*50 - 150*
13C3 PFBS	*103*		*50 - 150*
18O2 PFHxS	*108*		*50 - 150*
13C4 PFOS	*102*		*50 - 150*
13C8 FOSA	*99*		*50 - 150*
M2-4:2 FTS	*110*		*50 - 150*
M2-6:2 FTS	*108*		*50 - 150*
M2-8:2 FTS	*107*		*50 - 150*
d5-NEtFOSAA	*112*		*50 - 150*
d3-NMeFOSAA	*118*		*50 - 150*
d-N-EtFOSA-M	*93*		*50 - 150*
d9-N-EtFOSE-M	*94*		*50 - 150*
d7-N-MeFOSE-M	*99*		*50 - 150*
d-N-MeFOSA-M	*86*		*50 - 150*
13C3 HFPO-DA	*100*		*50 - 150*

Lab Sample ID: LCSD 320-624009/3-A
Matrix: Water
Analysis Batch: 624217

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 624009

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)			40.0	43.9		ng/L		110	73 - 129	3	30
Perfluoropentanoic acid (PFPeA)			40.0	43.1		ng/L		108	72 - 129	0	30
Perfluorohexanoic acid (PFHxA)			40.0	43.3		ng/L		108	72 - 129	1	30
Perfluoroheptanoic acid (PFHpA)			40.0	42.5		ng/L		106	72 - 130	6	30
Perfluorooctanoic acid (PFOA)			40.0	44.2		ng/L		110	71 - 133	1	30
Perfluorononanoic acid (PFNA)			40.0	43.3		ng/L		108	69 - 130	3	30
Perfluorodecanoic acid (PFDA)			40.0	41.6		ng/L		104	71 - 129	1	30
Perfluoroundecanoic acid (PFUnA)			40.0	46.2		ng/L		115	69 - 133	2	30

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Lab Sample ID: LCSD 320-624009/3-A
Matrix: Water
Analysis Batch: 624217

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 624009

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorododecanoic acid (PFDoA)			40.0	42.3		ng/L		106	72 - 134	3	30
Perfluorotridecanoic acid (PFTrDA)			40.0	42.9		ng/L		107	65 - 144	2	30
Perfluorotetradecanoic acid (PFTeA)			40.0	41.5		ng/L		104	71 - 132	2	30
Perfluorobutanesulfonic acid (PFBS)			35.5	40.5		ng/L		114	72 - 130	4	30
Perfluoropentanesulfonic acid (PFPeS)			37.5	42.7		ng/L		114	71 - 127	0	30
Perfluorohexanesulfonic acid (PFHxS)			36.5	37.4		ng/L		102	68 - 131	2	30
Perfluoroheptanesulfonic acid (PFHpS)			38.2	41.1		ng/L		108	69 - 134	6	30
Perfluorooctanesulfonic acid (PFOS)			37.2	39.0		ng/L		105	65 - 140	6	30
Perfluorodecanesulfonic acid (PFDS)			38.6	41.9		ng/L		109	53 - 142	2	30
Perfluorooctanesulfonamide (FOSA)			40.0	43.2		ng/L		108	67 - 137	1	30
NEtFOSA			40.0	42.3		ng/L		106	67 - 127	5	30
NEtFOSAA			40.0	45.4		ng/L		114	61 - 135	1	30
NEtFOSE			40.0	41.1		ng/L		103	70 - 130	1	30
NMeFOSA			40.0	43.4		ng/L		108	68 - 141	1	30
NMeFOSAA			40.0	39.1		ng/L		98	65 - 136	1	30
NMeFOSE			40.0	40.2		ng/L		101	60 - 137	3	30
4:2 FTS			37.5	38.6		ng/L		103	63 - 143	7	30
6:2 FTS			38.1	40.3		ng/L		106	64 - 140	0	30
8:2 FTS			38.4	40.7		ng/L		106	67 - 138	0	30
11Cl-PF3OUdS			37.8	40.4		ng/L		107	76 - 136	0	30
9Cl-PF3ONS			37.4	40.2		ng/L		108	77 - 137	2	30
HFPO-DA (GenX)			40.0	43.9		ng/L		110	72 - 132	6	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			37.8	44.0		ng/L		117	81 - 141	6	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C4 PFBA	*105*		*50 - 150*
13C5 PFPeA	*107*		*50 - 150*
13C2 PFHxA	*105*		*50 - 150*
13C4 PFHpA	*109*		*50 - 150*
13C4 PFOA	*105*		*50 - 150*
13C5 PFNA	*104*		*50 - 150*
13C2 PFDA	*111*		*50 - 150*
13C2 PFUnA	*104*		*50 - 150*
13C2 PFDoA	*111*		*50 - 150*
13C2 PFTeDA	*114*		*50 - 150*
13C3 PFBS	*103*		*50 - 150*
18O2 PFHxS	*106*		*50 - 150*
13C4 PFOS	*104*		*50 - 150*
13C8 FOSA	*101*		*50 - 150*
M2-4:2 FTS	*114*		*50 - 150*

Method: EPA 537(Mod) - PFAS for QSM 5.3, Table B-15 (Continued)

Lab Sample ID: LCSD 320-624009/3-A
Matrix: Water
Analysis Batch: 624217

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 624009

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
M2-6:2 FTS	113		50 - 150
M2-8:2 FTS	105		50 - 150
d5-NEtFOSAA	115		50 - 150
d3-NMeFOSAA	118		50 - 150
d-N-EtFOSA-M	93		50 - 150
d9-N-EtFOSE-M	95		50 - 150
d7-N-MeFOSE-M	98		50 - 150
d-N-MeFOSA-M	92		50 - 150
13C3 HFPO-DA	105		50 - 150

QC Association Summary

Client: Golder Associates Inc
Project/Site: 18105117

Job ID: 320-93007-1

LCMS

Prep Batch: 624009

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-93007-1	QCTB-01	Total/NA	Water	3535	
320-93007-2	QCFB-01	Total/NA	Water	3535	
320-93007-3	EW-2	Total/NA	Water	3535	
320-93007-4	QCEB-01	Total/NA	Water	3535	
320-93007-5	WA-20	Total/NA	Water	3535	
320-93007-6	CP-25	Total/NA	Water	3535	
MB 320-624009/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-624009/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-624009/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 624217

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-93007-1	QCTB-01	Total/NA	Water	EPA 537(Mod)	624009
320-93007-2	QCFB-01	Total/NA	Water	EPA 537(Mod)	624009
320-93007-3	EW-2	Total/NA	Water	EPA 537(Mod)	624009
320-93007-4	QCEB-01	Total/NA	Water	EPA 537(Mod)	624009
320-93007-5	WA-20	Total/NA	Water	EPA 537(Mod)	624009
320-93007-6	CP-25	Total/NA	Water	EPA 537(Mod)	624009
MB 320-624009/1-A	Method Blank	Total/NA	Water	EPA 537(Mod)	624009
LCS 320-624009/2-A	Lab Control Sample	Total/NA	Water	EPA 537(Mod)	624009
LCSD 320-624009/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 537(Mod)	624009

Lab Chronicle

Client: Golder Associates Inc
Project/Site: 18105117

Job ID: 320-93007-1

Client Sample ID: QCTB-01
Date Collected: 10/07/22 00:00
Date Received: 10/08/22 09:45

Lab Sample ID: 320-93007-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			281 mL	10.0 mL	624009	10/11/22 12:26	MRP	EET SAC
Total/NA	Analysis	EPA 537(Mod)		1	1 mL	1 mL	624217	10/12/22 09:22	K1S	EET SAC

Client Sample ID: QCFB-01
Date Collected: 10/07/22 13:10
Date Received: 10/08/22 09:45

Lab Sample ID: 320-93007-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			284.8 mL	10.0 mL	624009	10/11/22 12:26	MRP	EET SAC
Total/NA	Analysis	EPA 537(Mod)		1	1 mL	1 mL	624217	10/12/22 09:32	K1S	EET SAC

Client Sample ID: EW-2
Date Collected: 10/07/22 13:15
Date Received: 10/08/22 09:45

Lab Sample ID: 320-93007-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			288.1 mL	10.0 mL	624009	10/11/22 12:26	MRP	EET SAC
Total/NA	Analysis	EPA 537(Mod)		1	1 mL	1 mL	624217	10/12/22 09:42	K1S	EET SAC

Client Sample ID: QCEB-01
Date Collected: 10/07/22 13:40
Date Received: 10/08/22 09:45

Lab Sample ID: 320-93007-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			287.4 mL	10.0 mL	624009	10/11/22 12:26	MRP	EET SAC
Total/NA	Analysis	EPA 537(Mod)		1	1 mL	1 mL	624217	10/12/22 09:52	K1S	EET SAC

Client Sample ID: WA-20
Date Collected: 10/07/22 13:55
Date Received: 10/08/22 09:45

Lab Sample ID: 320-93007-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			273.4 mL	10.0 mL	624009	10/11/22 12:26	MRP	EET SAC
Total/NA	Analysis	EPA 537(Mod)		1	1 mL	1 mL	624217	10/12/22 10:03	K1S	EET SAC

Client Sample ID: CP-25
Date Collected: 10/07/22 15:10
Date Received: 10/08/22 09:45

Lab Sample ID: 320-93007-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			255.4 mL	10.0 mL	624009	10/11/22 12:26	MRP	EET SAC
Total/NA	Analysis	EPA 537(Mod)		1	1 mL	1 mL	624217	10/12/22 10:33	K1S	EET SAC

Laboratory References:
EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: Golder Associates Inc
Project/Site: 18105117

Job ID: 320-93007-1

Laboratory: Eurofins Sacramento

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2897	01-31-23

Method Summary

Client: Golder Associates Inc
Project/Site: 18105117

Job ID: 320-93007-1

Method	Method Description	Protocol	Laboratory
EPA 537(Mod)	PFAS for QSM 5.3, Table B-15	EPA	EET SAC
3535	Solid-Phase Extraction (SPE)	SW846	EET SAC

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Golder Associates Inc
Project/Site: 18105117

Job ID: 320-93007-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-93007-1	QCTB-01	Water	10/07/22 00:00	10/08/22 09:45
320-93007-2	QCFB-01	Water	10/07/22 13:10	10/08/22 09:45
320-93007-3	EW-2	Water	10/07/22 13:15	10/08/22 09:45
320-93007-4	QCEB-01	Water	10/07/22 13:40	10/08/22 09:45
320-93007-5	WA-20	Water	10/07/22 13:55	10/08/22 09:45
320-93007-6	CP-25	Water	10/07/22 15:10	10/08/22 09:45

BC La[illegible]atories Inc.
4100 Atlas Ct.
Bakersfield, CA 93308

Chain of Custody & Sample Information R[illegible]ord

Client: Golder **Contact:** Kris Johnson **Phone No.** (408) 220-9223

Address: 2570 N First St #100 San Jose **City:** Sunnyvale **State:** CA **Zip:** 94085

Project Name: John Smith Rd LF PFAS

Project Number: 31404548

Turn Around Time: [X] Routine [ ] 3-5 Day Rush [ ] 48 Hour Rush [ ] 24 Hour Rush

***Lab TAT Approval:** By:

*Additional Charges May Apply

Additional Reporting Requests
Include QC Data Package: [ ] Yes [ ] No
FAX Results: [ ] Yes [ ] No
Email Results: [x] Yes [ ] No
State EDT: [ ] Yes [ ] No
(Include Source Number in Notes)

Sampler Information

Name: David Walter
Employer: Golder
Signature: David C Walt

Sample Matrix: DW = Drinking Water; WW = Wastewater; GW = Groundwater; MW = Monitoring Well; S = Soil; SW = Stormwater; M = Miscellaneous

Notes: VOCs = App I plus 1,4-dioxane, TAME, MTBE, TBA, DIPE, ETBE

Sample ID	Date	Time	PFAS (See Attached List)	Container Qty.
QCTB-01	10-7-22	-	2	2
QCFB-01	↓	1310	2	2
EW-2	↓	1315	2	2
QCEB-01	↓	1340	2	2
WA-20	↓	1355	2	2
CP-25	↓	1500	2	2

320-93007 Chain of Custody

Relinquished By (sign)	Print Name / Company	Date / Time	Received By (Sign)	Print Name / Company
David C Walt	David Walter Golder	10-7-22 1600	[signature] 10-8-22 0945	Jesew Simmons BBTSA 0945; 10-8-22

(For Lab Use Only) Sample Integrity Upon Receipt				Lab Notes
Sample(s) Submitted on Ice?	Yes	No	Temperature	
Custody Seal(s) Intact?	Yes	No	N/A °C	
Sample(s) Intact?	Yes	No	[ ] Cooler Blank	

Lab No. ______

Page 1 of 1

1~ Time = 1300

Shipped via Fed Ex

1.2°c

10/13/2022

Login Sample Receipt Checklist

Client: Golder Associates Inc

Job Number: 320-93007-1

Login Number: 93007
List Number: 1
Creator: Oropeza, Salvador

List Source: Eurofins Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	1845809
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	