From: Paul Lindquist <PLINDQUIST@ramboll.com>
Sent: Thursday, January 5, 2023 9:14 AM
To: Beggs, Tauren R - DNR
Cc: Kloczko, Nathan F - DHS; Kristin Jones (Kristin.Jones@newellco.com); Jeanne Tarvin; Susan Petrofske
Subject: BRRTS #02-36-588656 (Former Mirro Plant No. 2) November Potable Well Sampling Results
Attachments: 02-36-588656_Residential Data Transmittals_11 23 2022 and 01 03 2023.pdf

Good morning Tauren,

Attached are copies of the data transmittal letters provided to the property owners at 2519 Woodland Drive, 2722 Woodland Drive, 3104 Woodland Drive, 1750 Mirro Drive, and 3202 Mirro Drive for the November 2022 potable well sampling activities completed as part of the *Immediate Action Work Plan* for the former Mirro Plant No. 2 project (BRRTS #02-36-588656). We received the last Level IV analytical reports for the properties on December 16, 2022. The property owner names have been redacted for privacy purposes. No compounds were detected above the WDHS recommended groundwater criteria for PFAS.

Please let us know if you have any questions or if you would like us to upload these letters to the WDNR submittal portal.

Paul Lindquist

Managing Consultant
1692722 - Great Lakes

D 262-901-3510
M 612-209-8676
plindquist@ramboll.com

Ramboll
234 W. Florida Street
Fifth Floor
Milwaukee, WI 53204
USA
https://ramboll.com

RAMBOLL

ENVIRONMENT
& HEALTH

Sent Via Overnight Delivery

[redacted]
3202 Mirro Drive
Manitowoc, WI 54220

POTABLE WELL SAMPLING RESULTS AT 3202 MIRRO DRIVE
FORMER MIRRO PLANT NO. 2, BRRTS NO. 02-36-588656
2009 MIRRO DRIVE, MANITOWOC, WISCONSIN

Dear [redacted]:

November 23, 2022

Ramboll
234 W. Florida Street
Fifth Floor
Milwaukee, WI 53204
USA

T +1 414 837 3607
F +1 414 837 3608
https://ramboll.com

Ref 1690026073

The purpose of this letter is to provide you with the results of the recent potable well testing from your property completed by Newell Operating Company (NOC) with the oversight of the Wisconsin Department of Natural Resources (WDNR). As you are aware, this testing was conducted because of the potential for per- and polyfluoroalkyl substances (PFAS) contaminated groundwater to migrate off-site from the nearby former Mirro Plant No. 2 facility.

On November 4, 2022, NOC's environmental consultant, Ramboll US Consulting, Inc. (Ramboll), collected water samples from your potable well using the spigot prior to your pressure tank. Ramboll submitted the samples to Eurofins Environment Testing (Eurofins) in Sacramento, California, a State of Wisconsin PFAS certified laboratory.

Your Test Results

The copy of the laboratory report for your potable well sample are enclosed. The analyses did not detect any PFAS compounds.

If you have any questions regarding the quality of your potable well water, please contact the following:

- Tauren Beggs, WDNR, (920) 510-3472, Tauren.Beggs@wisconsin.gov; or
- Nathan Kloczko, WDHS, (608) 267-3227, Nathan.Kloczko@dhs.wisconsin.gov.

For any other questions regarding this letter, please contact Lou Meschede at (219) 781-7177.

Sincerely,

Paul Lindquist
Managing Consultant

D +1 262 901 3510
plindquist@ramboll.com

Jeanne M. Tarvin, PG, CPG
E&H Americas Country Market Director

D +1 262 901 0085
jtarvin@ramboll.com

cc: Kristin Jones, NOC
Tauren Beggs, WDNR
Nathan Kloczko, WDHS

ENCLOSURE

EUROFINS LABORATORY ANALYTICAL REPORT

eurofins | Environment Testing

ANALYTICAL REPORT

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-225012-1
Client Project/Site: Fmr Mirro Plt 2 - 1690026073

For:
Ramboll US Corporation
234 W. Florida Street
Fifth Floor
Milwaukee, Wisconsin 53204

Attn: Paul Lindquist

Authorized for release by:
11/10/2022 11:52:06 AM

Sandie Fredrick, Project Manager II
(920)261-1660
Sandra.Fredrick@et.eurofinsus.com

Table of Contents

Case Narrative

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225012-1

Job ID: 500-225012-1

Laboratory: Eurofins Chicago

Narrative

Job Narrative
500-225012-1

Comments
No additional comments.

Receipt
The samples were received on 11/5/2022 10:10 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 2.2º C.

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

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

Detection Summary

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225012-1

Client Sample ID: 3202-E — Lab Sample ID: 500-225012-1

No Detections.

Client Sample ID: 3202-E-FB — Lab Sample ID: 500-225012-2

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225012-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	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: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225012-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-225012-1	3202-E	Water	11/04/22 08:10	11/05/22 10:10
500-225012-2	3202-E-FB	Water	11/04/22 08:05	11/05/22 10:10

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225012-1

Client Sample ID: 3202-E
Date Collected: 11/04/22 08:10
Date Received: 11/05/22 10:10

Lab Sample ID: 500-225012-1
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.0		4.2	2.0	ng/L		11/08/22 20:47	11/09/22 12:35	1
Perfluoropentanoic acid (PFPeA)	<0.42		1.7	0.42	ng/L		11/08/22 20:47	11/09/22 12:35	1
Perfluorohexanoic acid (PFHxA)	<0.49		1.7	0.49	ng/L		11/08/22 20:47	11/09/22 12:35	1
Perfluoroheptanoic acid (PFHpA)	<0.21		1.7	0.21	ng/L		11/08/22 20:47	11/09/22 12:35	1
Perfluorooctanoic acid (PFOA)	<0.72		1.7	0.72	ng/L		11/08/22 20:47	11/09/22 12:35	1
Perfluorononanoic acid (PFNA)	<0.23		1.7	0.23	ng/L		11/08/22 20:47	11/09/22 12:35	1
Perfluorodecanoic acid (PFDA)	<0.26		1.7	0.26	ng/L		11/08/22 20:47	11/09/22 12:35	1
Perfluoroundecanoic acid (PFUnA)	<0.93		1.7	0.93	ng/L		11/08/22 20:47	11/09/22 12:35	1
Perfluorododecanoic acid (PFDoA)	<0.47		1.7	0.47	ng/L		11/08/22 20:47	11/09/22 12:35	1
Perfluorotridecanoic acid (PFTrDA)	<1.1		1.7	1.1	ng/L		11/08/22 20:47	11/09/22 12:35	1
Perfluorotetradecanoic acid (PFTeA)	<0.62		1.7	0.62	ng/L		11/08/22 20:47	11/09/22 12:35	1
Perfluorobutanesulfonic acid (PFBS)	<0.17		1.7	0.17	ng/L		11/08/22 20:47	11/09/22 12:35	1
Perfluoropentanesulfonic acid (PFPeS)	<0.25		1.7	0.25	ng/L		11/08/22 20:47	11/09/22 12:35	1
Perfluorohexanesulfonic acid (PFHxS)	<0.48		1.7	0.48	ng/L		11/08/22 20:47	11/09/22 12:35	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.16		1.7	0.16	ng/L		11/08/22 20:47	11/09/22 12:35	1
Perfluorooctanesulfonic acid (PFOS)	<0.46		1.7	0.46	ng/L		11/08/22 20:47	11/09/22 12:35	1
Perfluorononanesulfonic acid (PFNS)	<0.31		1.7	0.31	ng/L		11/08/22 20:47	11/09/22 12:35	1
Perfluorodecanesulfonic acid (PFDS)	<0.27		1.7	0.27	ng/L		11/08/22 20:47	11/09/22 12:35	1
Perfluorododecanesulfonic acid (PFDoS)	<0.82		1.7	0.82	ng/L		11/08/22 20:47	11/09/22 12:35	1
Perfluorooctanesulfonamide (FOSA)	<0.83		1.7	0.83	ng/L		11/08/22 20:47	11/09/22 12:35	1
NEtFOSA	<0.74		1.7	0.74	ng/L		11/08/22 20:47	11/09/22 12:35	1
NMeFOSA	<0.36		1.7	0.36	ng/L		11/08/22 20:47	11/09/22 12:35	1
NMeFOSAA	<1.0		4.2	1.0	ng/L		11/08/22 20:47	11/09/22 12:35	1
NEtFOSAA	<1.1		4.2	1.1	ng/L		11/08/22 20:47	11/09/22 12:35	1
NMeFOSE	<1.2	F1	3.4	1.2	ng/L		11/08/22 20:47	11/09/22 12:35	1
NEtFOSE	<0.72		1.7	0.72	ng/L		11/08/22 20:47	11/09/22 12:35	1
4:2 FTS	<0.20		1.7	0.20	ng/L		11/08/22 20:47	11/09/22 12:35	1
6:2 FTS	<2.1		4.2	2.1	ng/L		11/08/22 20:47	11/09/22 12:35	1
8:2 FTS	<0.39		1.7	0.39	ng/L		11/08/22 20:47	11/09/22 12:35	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.34		1.7	0.34	ng/L		11/08/22 20:47	11/09/22 12:35	1
HFPO-DA (GenX)	<1.3		3.4	1.3	ng/L		11/08/22 20:47	11/09/22 12:35	1
9Cl-PF3ONS	<0.20		1.7	0.20	ng/L		11/08/22 20:47	11/09/22 12:35	1
11Cl-PF3OUdS	<0.27		1.7	0.27	ng/L		11/08/22 20:47	11/09/22 12:35	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*89*		*25 - 150*	*11/08/22 20:47*	*11/09/22 12:35*	*1*
13C5 PFPeA	*100*		*25 - 150*	*11/08/22 20:47*	*11/09/22 12:35*	*1*
13C2 PFHxA	*92*		*25 - 150*	*11/08/22 20:47*	*11/09/22 12:35*	*1*
13C4 PFHpA	*94*		*25 - 150*	*11/08/22 20:47*	*11/09/22 12:35*	*1*
13C4 PFOA	*97*		*25 - 150*	*11/08/22 20:47*	*11/09/22 12:35*	*1*
13C5 PFNA	*98*		*25 - 150*	*11/08/22 20:47*	*11/09/22 12:35*	*1*
13C2 PFDA	*98*		*25 - 150*	*11/08/22 20:47*	*11/09/22 12:35*	*1*
13C2 PFUnA	*97*		*25 - 150*	*11/08/22 20:47*	*11/09/22 12:35*	*1*
13C2 PFDoA	*94*		*25 - 150*	*11/08/22 20:47*	*11/09/22 12:35*	*1*
13C2 PFTeDA	*85*		*25 - 150*	*11/08/22 20:47*	*11/09/22 12:35*	*1*
13C3 PFBS	*102*		*25 - 150*	*11/08/22 20:47*	*11/09/22 12:35*	*1*
18O2 PFHxS	*104*		*25 - 150*	*11/08/22 20:47*	*11/09/22 12:35*	*1*

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225012-1

Client Sample ID: 3202-E
Date Collected: 11/04/22 08:10
Date Received: 11/05/22 10:10

Lab Sample ID: 500-225012-1
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	104		25 - 150	11/08/22 20:47	11/09/22 12:35	1
13C8 FOSA	110		10 - 150	11/08/22 20:47	11/09/22 12:35	1
d3-NMeFOSAA	109		25 - 150	11/08/22 20:47	11/09/22 12:35	1
d5-NEtFOSAA	108		25 - 150	11/08/22 20:47	11/09/22 12:35	1
d-N-MeFOSA-M	87		10 - 150	11/08/22 20:47	11/09/22 12:35	1
d-N-EtFOSA-M	88		10 - 150	11/08/22 20:47	11/09/22 12:35	1
d7-N-MeFOSE-M	89		10 - 150	11/08/22 20:47	11/09/22 12:35	1
d9-N-EtFOSE-M	87		10 - 150	11/08/22 20:47	11/09/22 12:35	1
M2-4:2 FTS	81		25 - 150	11/08/22 20:47	11/09/22 12:35	1
M2-6:2 FTS	105		25 - 150	11/08/22 20:47	11/09/22 12:35	1
M2-8:2 FTS	110		25 - 150	11/08/22 20:47	11/09/22 12:35	1
13C3 HFPO-DA	91		25 - 150	11/08/22 20:47	11/09/22 12:35	1
13C2 10:2 FTS	106		25 - 150	11/08/22 20:47	11/09/22 12:35	1

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225012-1

Client Sample ID: 3202-E-FB
Date Collected: 11/04/22 08:05
Date Received: 11/05/22 10:10

Lab Sample ID: 500-225012-2
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.1		4.3	2.1	ng/L		11/08/22 20:47	11/09/22 13:06	1
Perfluoropentanoic acid (PFPeA)	<0.42		1.7	0.42	ng/L		11/08/22 20:47	11/09/22 13:06	1
Perfluorohexanoic acid (PFHxA)	<0.50		1.7	0.50	ng/L		11/08/22 20:47	11/09/22 13:06	1
Perfluoroheptanoic acid (PFHpA)	<0.22		1.7	0.22	ng/L		11/08/22 20:47	11/09/22 13:06	1
Perfluorooctanoic acid (PFOA)	<0.73		1.7	0.73	ng/L		11/08/22 20:47	11/09/22 13:06	1
Perfluorononanoic acid (PFNA)	<0.23		1.7	0.23	ng/L		11/08/22 20:47	11/09/22 13:06	1
Perfluorodecanoic acid (PFDA)	<0.27		1.7	0.27	ng/L		11/08/22 20:47	11/09/22 13:06	1
Perfluoroundecanoic acid (PFUnA)	<0.95		1.7	0.95	ng/L		11/08/22 20:47	11/09/22 13:06	1
Perfluorododecanoic acid (PFDoA)	<0.47		1.7	0.47	ng/L		11/08/22 20:47	11/09/22 13:06	1
Perfluorotridecanoic acid (PFTrDA)	<1.1		1.7	1.1	ng/L		11/08/22 20:47	11/09/22 13:06	1
Perfluorotetradecanoic acid (PFTeA)	<0.63		1.7	0.63	ng/L		11/08/22 20:47	11/09/22 13:06	1
Perfluorobutanesulfonic acid (PFBS)	<0.17		1.7	0.17	ng/L		11/08/22 20:47	11/09/22 13:06	1
Perfluoropentanesulfonic acid (PFPeS)	<0.26		1.7	0.26	ng/L		11/08/22 20:47	11/09/22 13:06	1
Perfluorohexanesulfonic acid (PFHxS)	<0.49		1.7	0.49	ng/L		11/08/22 20:47	11/09/22 13:06	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.16		1.7	0.16	ng/L		11/08/22 20:47	11/09/22 13:06	1
Perfluorooctanesulfonic acid (PFOS)	<0.46		1.7	0.46	ng/L		11/08/22 20:47	11/09/22 13:06	1
Perfluorononanesulfonic acid (PFNS)	<0.32		1.7	0.32	ng/L		11/08/22 20:47	11/09/22 13:06	1
Perfluorodecanesulfonic acid (PFDS)	<0.28		1.7	0.28	ng/L		11/08/22 20:47	11/09/22 13:06	1
Perfluorododecanesulfonic acid (PFDoS)	<0.83		1.7	0.83	ng/L		11/08/22 20:47	11/09/22 13:06	1
Perfluorooctanesulfonamide (FOSA)	<0.84		1.7	0.84	ng/L		11/08/22 20:47	11/09/22 13:06	1
NEtFOSA	<0.75		1.7	0.75	ng/L		11/08/22 20:47	11/09/22 13:06	1
NMeFOSA	<0.37		1.7	0.37	ng/L		11/08/22 20:47	11/09/22 13:06	1
NMeFOSAA	<1.0		4.3	1.0	ng/L		11/08/22 20:47	11/09/22 13:06	1
NEtFOSAA	<1.1		4.3	1.1	ng/L		11/08/22 20:47	11/09/22 13:06	1
NMeFOSE	<1.2		3.4	1.2	ng/L		11/08/22 20:47	11/09/22 13:06	1
NEtFOSE	<0.73		1.7	0.73	ng/L		11/08/22 20:47	11/09/22 13:06	1
4:2 FTS	<0.21		1.7	0.21	ng/L		11/08/22 20:47	11/09/22 13:06	1
6:2 FTS	<2.2		4.3	2.2	ng/L		11/08/22 20:47	11/09/22 13:06	1
8:2 FTS	<0.40		1.7	0.40	ng/L		11/08/22 20:47	11/09/22 13:06	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.34		1.7	0.34	ng/L		11/08/22 20:47	11/09/22 13:06	1
HFPO-DA (GenX)	<1.3		3.4	1.3	ng/L		11/08/22 20:47	11/09/22 13:06	1
9Cl-PF3ONS	<0.21		1.7	0.21	ng/L		11/08/22 20:47	11/09/22 13:06	1
11Cl-PF3OUdS	<0.28		1.7	0.28	ng/L		11/08/22 20:47	11/09/22 13:06	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*89*		*25 - 150*	*11/08/22 20:47*	*11/09/22 13:06*	*1*
13C5 PFPeA	*90*		*25 - 150*	*11/08/22 20:47*	*11/09/22 13:06*	*1*
13C2 PFHxA	*86*		*25 - 150*	*11/08/22 20:47*	*11/09/22 13:06*	*1*
13C4 PFHpA	*87*		*25 - 150*	*11/08/22 20:47*	*11/09/22 13:06*	*1*
13C4 PFOA	*91*		*25 - 150*	*11/08/22 20:47*	*11/09/22 13:06*	*1*
13C5 PFNA	*95*		*25 - 150*	*11/08/22 20:47*	*11/09/22 13:06*	*1*
13C2 PFDA	*94*		*25 - 150*	*11/08/22 20:47*	*11/09/22 13:06*	*1*
13C2 PFUnA	*87*		*25 - 150*	*11/08/22 20:47*	*11/09/22 13:06*	*1*
13C2 PFDoA	*76*		*25 - 150*	*11/08/22 20:47*	*11/09/22 13:06*	*1*
13C2 PFTeDA	*71*		*25 - 150*	*11/08/22 20:47*	*11/09/22 13:06*	*1*
13C3 PFBS	*91*		*25 - 150*	*11/08/22 20:47*	*11/09/22 13:06*	*1*
18O2 PFHxS	*98*		*25 - 150*	*11/08/22 20:47*	*11/09/22 13:06*	*1*

Client: Ramboll US Corporation
Job ID: 500-225012-1
Project/Site: Fmr Mirro Plt 2 - 1690026073

Client Sample ID: 3202-E-FB
Lab Sample ID: 500-225012-2
Date Collected: 11/04/22 08:05
Matrix: Water
Date Received: 11/05/22 10:10

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	98		25 - 150	11/08/22 20:47	11/09/22 13:06	1
13C8 FOSA	96		10 - 150	11/08/22 20:47	11/09/22 13:06	1
d3-NMeFOSAA	88		25 - 150	11/08/22 20:47	11/09/22 13:06	1
d5-NEtFOSAA	93		25 - 150	11/08/22 20:47	11/09/22 13:06	1
d-N-MeFOSA-M	79		10 - 150	11/08/22 20:47	11/09/22 13:06	1
d-N-EtFOSA-M	85		10 - 150	11/08/22 20:47	11/09/22 13:06	1
d7-N-MeFOSE-M	78		10 - 150	11/08/22 20:47	11/09/22 13:06	1
d9-N-EtFOSE-M	71		10 - 150	11/08/22 20:47	11/09/22 13:06	1
M2-4:2 FTS	85		25 - 150	11/08/22 20:47	11/09/22 13:06	1
M2-6:2 FTS	103		25 - 150	11/08/22 20:47	11/09/22 13:06	1
M2-8:2 FTS	96		25 - 150	11/08/22 20:47	11/09/22 13:06	1
13C3 HFPO-DA	93		25 - 150	11/08/22 20:47	11/09/22 13:06	1
13C2 10:2 FTS	85		25 - 150	11/08/22 20:47	11/09/22 13:06	1

Definitions/Glossary

Client: Ramboll US Corporation
Job ID: 500-225012-1
Project/Site: Fmr Mirro Plt 2 - 1690026073

Qualifiers

LCMS

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.

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

QC Association Summary

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225012-1

LCMS

Prep Batch: 631375

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-225012-1	3202-E	Total/NA	Water	3535	
500-225012-2	3202-E-FB	Total/NA	Water	3535	
MB 320-631375/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-631375/2-A	Lab Control Sample	Total/NA	Water	3535	
500-225012-1 MS	3202-E	Total/NA	Water	3535	
500-225012-1 MSD	3202-E	Total/NA	Water	3535	

Analysis Batch: 631466

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-225012-1	3202-E	Total/NA	Water	537 (modified)	631375
500-225012-2	3202-E-FB	Total/NA	Water	537 (modified)	631375
MB 320-631375/1-A	Method Blank	Total/NA	Water	537 (modified)	631375
LCS 320-631375/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	631375
500-225012-1 MS	3202-E	Total/NA	Water	537 (modified)	631375
500-225012-1 MSD	3202-E	Total/NA	Water	537 (modified)	631375

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-631375/1-A
Matrix: Water
Analysis Batch: 631466

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 631375

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.4		5.0	2.4	ng/L		11/08/22 20:47	11/09/22 11:55	1
Perfluoropentanoic acid (PFPeA)	<0.49		2.0	0.49	ng/L		11/08/22 20:47	11/09/22 11:55	1
Perfluorohexanoic acid (PFHxA)	<0.58		2.0	0.58	ng/L		11/08/22 20:47	11/09/22 11:55	1
Perfluoroheptanoic acid (PFHpA)	<0.25		2.0	0.25	ng/L		11/08/22 20:47	11/09/22 11:55	1
Perfluorooctanoic acid (PFOA)	<0.85		2.0	0.85	ng/L		11/08/22 20:47	11/09/22 11:55	1
Perfluorononanoic acid (PFNA)	<0.27		2.0	0.27	ng/L		11/08/22 20:47	11/09/22 11:55	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	0.31	ng/L		11/08/22 20:47	11/09/22 11:55	1
Perfluoroundecanoic acid (PFUnA)	<1.1		2.0	1.1	ng/L		11/08/22 20:47	11/09/22 11:55	1
Perfluorododecanoic acid (PFDoA)	<0.55		2.0	0.55	ng/L		11/08/22 20:47	11/09/22 11:55	1
Perfluorotridecanoic acid (PFTrDA)	<1.3		2.0	1.3	ng/L		11/08/22 20:47	11/09/22 11:55	1
Perfluorotetradecanoic acid (PFTeA)	<0.73		2.0	0.73	ng/L		11/08/22 20:47	11/09/22 11:55	1
Perfluorobutanesulfonic acid (PFBS)	<0.20		2.0	0.20	ng/L		11/08/22 20:47	11/09/22 11:55	1
Perfluoropentanesulfonic acid (PFPeS)	<0.30		2.0	0.30	ng/L		11/08/22 20:47	11/09/22 11:55	1
Perfluorohexanesulfonic acid (PFHxS)	<0.57		2.0	0.57	ng/L		11/08/22 20:47	11/09/22 11:55	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.19		2.0	0.19	ng/L		11/08/22 20:47	11/09/22 11:55	1
Perfluorooctanesulfonic acid (PFOS)	<0.54		2.0	0.54	ng/L		11/08/22 20:47	11/09/22 11:55	1
Perfluorononanesulfonic acid (PFNS)	<0.37		2.0	0.37	ng/L		11/08/22 20:47	11/09/22 11:55	1
Perfluorodecanesulfonic acid (PFDS)	<0.32		2.0	0.32	ng/L		11/08/22 20:47	11/09/22 11:55	1
Perfluorododecanesulfonic acid (PFDoS)	<0.97		2.0	0.97	ng/L		11/08/22 20:47	11/09/22 11:55	1
Perfluorooctanesulfonamide (FOSA)	<0.98		2.0	0.98	ng/L		11/08/22 20:47	11/09/22 11:55	1
NEtFOSA	<0.87		2.0	0.87	ng/L		11/08/22 20:47	11/09/22 11:55	1
NMeFOSA	<0.43		2.0	0.43	ng/L		11/08/22 20:47	11/09/22 11:55	1
NMeFOSAA	<1.2		5.0	1.2	ng/L		11/08/22 20:47	11/09/22 11:55	1
NEtFOSAA	<1.3		5.0	1.3	ng/L		11/08/22 20:47	11/09/22 11:55	1
NMeFOSE	<1.4		4.0	1.4	ng/L		11/08/22 20:47	11/09/22 11:55	1
NEtFOSE	<0.85		2.0	0.85	ng/L		11/08/22 20:47	11/09/22 11:55	1
4:2 FTS	<0.24		2.0	0.24	ng/L		11/08/22 20:47	11/09/22 11:55	1
6:2 FTS	<2.5		5.0	2.5	ng/L		11/08/22 20:47	11/09/22 11:55	1
8:2 FTS	<0.46		2.0	0.46	ng/L		11/08/22 20:47	11/09/22 11:55	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.40		2.0	0.40	ng/L		11/08/22 20:47	11/09/22 11:55	1
HFPO-DA (GenX)	<1.5		4.0	1.5	ng/L		11/08/22 20:47	11/09/22 11:55	1
9Cl-PF3ONS	<0.24		2.0	0.24	ng/L		11/08/22 20:47	11/09/22 11:55	1
11Cl-PF3OUdS	<0.32		2.0	0.32	ng/L		11/08/22 20:47	11/09/22 11:55	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*89*		*25 - 150*	*11/08/22 20:47*	*11/09/22 11:55*	*1*
13C5 PFPeA	*100*		*25 - 150*	*11/08/22 20:47*	*11/09/22 11:55*	*1*
13C2 PFHxA	*90*		*25 - 150*	*11/08/22 20:47*	*11/09/22 11:55*	*1*
13C4 PFHpA	*98*		*25 - 150*	*11/08/22 20:47*	*11/09/22 11:55*	*1*
13C4 PFOA	*96*		*25 - 150*	*11/08/22 20:47*	*11/09/22 11:55*	*1*
13C5 PFNA	*98*		*25 - 150*	*11/08/22 20:47*	*11/09/22 11:55*	*1*
13C2 PFDA	*94*		*25 - 150*	*11/08/22 20:47*	*11/09/22 11:55*	*1*
13C2 PFUnA	*89*		*25 - 150*	*11/08/22 20:47*	*11/09/22 11:55*	*1*
13C2 PFDoA	*85*		*25 - 150*	*11/08/22 20:47*	*11/09/22 11:55*	*1*
13C2 PFTeDA	*82*		*25 - 150*	*11/08/22 20:47*	*11/09/22 11:55*	*1*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-631375/1-A
Matrix: Water
Analysis Batch: 631466

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 631375

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFBS	96		25 - 150	11/08/22 20:47	11/09/22 11:55	1
18O2 PFHxS	98		25 - 150	11/08/22 20:47	11/09/22 11:55	1
13C4 PFOS	103		25 - 150	11/08/22 20:47	11/09/22 11:55	1
13C8 FOSA	104		10 - 150	11/08/22 20:47	11/09/22 11:55	1
d3-NMeFOSAA	100		25 - 150	11/08/22 20:47	11/09/22 11:55	1
d5-NEtFOSAA	102		25 - 150	11/08/22 20:47	11/09/22 11:55	1
d-N-MeFOSA-M	86		10 - 150	11/08/22 20:47	11/09/22 11:55	1
d-N-EtFOSA-M	85		10 - 150	11/08/22 20:47	11/09/22 11:55	1
d7-N-MeFOSE-M	86		10 - 150	11/08/22 20:47	11/09/22 11:55	1
d9-N-EtFOSE-M	80		10 - 150	11/08/22 20:47	11/09/22 11:55	1
M2-4:2 FTS	89		25 - 150	11/08/22 20:47	11/09/22 11:55	1
M2-6:2 FTS	105		25 - 150	11/08/22 20:47	11/09/22 11:55	1
M2-8:2 FTS	106		25 - 150	11/08/22 20:47	11/09/22 11:55	1
13C3 HFPO-DA	87		25 - 150	11/08/22 20:47	11/09/22 11:55	1
13C2 10:2 FTS	102		25 - 150	11/08/22 20:47	11/09/22 11:55	1

Lab Sample ID: LCS 320-631375/2-A
Matrix: Water
Analysis Batch: 631466

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 631375

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	40.0	44.8		ng/L		112	60 - 135
Perfluoropentanoic acid (PFPeA)	40.0	41.3		ng/L		103	60 - 135
Perfluorohexanoic acid (PFHxA)	40.0	41.5		ng/L		104	60 - 135
Perfluoroheptanoic acid (PFHpA)	40.0	42.9		ng/L		107	60 - 135
Perfluorooctanoic acid (PFOA)	40.0	40.2		ng/L		101	60 - 135
Perfluorononanoic acid (PFNA)	40.0	44.6		ng/L		112	60 - 135
Perfluorodecanoic acid (PFDA)	40.0	41.6		ng/L		104	60 - 135
Perfluoroundecanoic acid (PFUnA)	40.0	40.1		ng/L		100	60 - 135
Perfluorododecanoic acid (PFDoA)	40.0	42.7		ng/L		107	60 - 135
Perfluorotridecanoic acid (PFTrDA)	40.0	49.6		ng/L		124	60 - 135
Perfluorotetradecanoic acid (PFTeA)	40.0	41.5		ng/L		104	60 - 135
Perfluorobutanesulfonic acid (PFBS)	35.5	35.5		ng/L		100	60 - 135
Perfluoropentanesulfonic acid (PFPeS)	37.5	36.9		ng/L		98	60 - 135
Perfluorohexanesulfonic acid (PFHxS)	36.5	34.6		ng/L		95	60 - 135
Perfluoroheptanesulfonic acid (PFHpS)	38.2	40.1		ng/L		105	60 - 135
Perfluorooctanesulfonic acid (PFOS)	37.2	39.6		ng/L		107	60 - 135
Perfluorononanesulfonic acid (PFNS)	38.5	40.0		ng/L		104	60 - 135
Perfluorodecanesulfonic acid (PFDS)	38.6	33.5		ng/L		87	60 - 135
Perfluorododecanesulfonic acid (PFDoS)	38.8	36.1		ng/L		93	60 - 135

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-631375/2-A
Matrix: Water
Analysis Batch: 631466

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 631375

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanesulfonamide (FOSA)	40.0	44.4		ng/L		111	60 - 135
NEtFOSA	40.0	46.7		ng/L		117	60 - 135
NMeFOSA	40.0	41.0		ng/L		103	60 - 135
NMeFOSAA	40.0	43.8		ng/L		110	60 - 135
NEtFOSAA	40.0	42.3		ng/L		106	60 - 135
NMeFOSE	40.0	44.4		ng/L		111	60 - 135
NEtFOSE	40.0	42.4		ng/L		106	60 - 135
4:2 FTS	37.5	38.4		ng/L		102	60 - 135
6:2 FTS	38.1	40.9		ng/L		108	60 - 135
8:2 FTS	38.4	41.6		ng/L		108	60 - 135
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	36.6		ng/L		97	60 - 135
HFPO-DA (GenX)	40.0	41.1		ng/L		103	60 - 135
9Cl-PF3ONS	37.4	29.4		ng/L		79	60 - 135
11Cl-PF3OUdS	37.8	34.6		ng/L		92	60 - 135

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*97*		*25 - 150*
13C5 PFPeA	*101*		*25 - 150*
13C2 PFHxA	*96*		*25 - 150*
13C4 PFHpA	*100*		*25 - 150*
13C4 PFOA	*105*		*25 - 150*
13C5 PFNA	*104*		*25 - 150*
13C2 PFDA	*104*		*25 - 150*
13C2 PFUnA	*97*		*25 - 150*
13C2 PFDoA	*91*		*25 - 150*
13C2 PFTeDA	*84*		*25 - 150*
13C3 PFBS	*110*		*25 - 150*
18O2 PFHxS	*111*		*25 - 150*
13C4 PFOS	*119*		*25 - 150*
13C8 FOSA	*104*		*10 - 150*
d3-NMeFOSAA	*105*		*25 - 150*
d5-NEtFOSAA	*104*		*25 - 150*
d-N-MeFOSA-M	*91*		*10 - 150*
d-N-EtFOSA-M	*91*		*10 - 150*
d7-N-MeFOSE-M	*90*		*10 - 150*
d9-N-EtFOSE-M	*94*		*10 - 150*
M2-4:2 FTS	*97*		*25 - 150*
M2-6:2 FTS	*115*		*25 - 150*
M2-8:2 FTS	*116*		*25 - 150*
13C3 HFPO-DA	*105*		*25 - 150*
13C2 10:2 FTS	*107*		*25 - 150*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 500-225012-1 MS
Matrix: Water
Analysis Batch: 631466

Client Sample ID: 3202-E
Prep Type: Total/NA
Prep Batch: 631375

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	<2.0		34.8	38.9		ng/L		112	70 - 130
Perfluoropentanoic acid (PFPeA)	<0.42		34.8	37.8		ng/L		109	70 - 130
Perfluorohexanoic acid (PFHxA)	<0.49		34.8	35.5		ng/L		102	70 - 130
Perfluoroheptanoic acid (PFHpA)	<0.21		34.8	39.7		ng/L		114	70 - 130
Perfluorooctanoic acid (PFOA)	<0.72		34.8	38.3		ng/L		110	70 - 130
Perfluorononanoic acid (PFNA)	<0.23		34.8	36.4		ng/L		105	70 - 130
Perfluorodecanoic acid (PFDA)	<0.26		34.8	37.3		ng/L		107	70 - 130
Perfluoroundecanoic acid (PFUnA)	<0.93		34.8	34.3		ng/L		99	70 - 130
Perfluorododecanoic acid (PFDoA)	<0.47		34.8	36.0		ng/L		104	70 - 130
Perfluorotridecanoic acid (PFTrDA)	<1.1		34.8	38.8		ng/L		112	70 - 130
Perfluorotetradecanoic acid (PFTeA)	<0.62		34.8	35.8		ng/L		103	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<0.17		30.9	29.0		ng/L		94	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<0.25		32.6	30.7		ng/L		94	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<0.48		31.7	30.8		ng/L		97	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<0.16		33.2	35.7		ng/L		108	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<0.46		32.3	36.9		ng/L		114	70 - 130
Perfluorononanesulfonic acid (PFNS)	<0.31		33.4	35.1		ng/L		105	70 - 130
Perfluorodecanesulfonic acid (PFDS)	<0.27		33.5	32.2		ng/L		96	70 - 130
Perfluorododecanesulfonic acid (PFDoS)	<0.82		33.7	33.4		ng/L		99	70 - 130
Perfluorooctanesulfonamide (FOSA)	<0.83		34.8	38.7		ng/L		111	70 - 130
NEtFOSA	<0.74		34.8	39.8		ng/L		115	70 - 130
NMeFOSA	<0.36		34.8	39.2		ng/L		113	70 - 130
NMeFOSAA	<1.0		34.8	36.4		ng/L		105	70 - 130
NEtFOSAA	<1.1		34.8	36.6		ng/L		105	70 - 130
NMeFOSE	<1.2	F1	34.8	47.6	F1	ng/L		137	70 - 130
NEtFOSE	<0.72		34.8	40.5		ng/L		117	70 - 130
4:2 FTS	<0.20		32.6	31.2		ng/L		96	70 - 130
6:2 FTS	<2.1		33.1	33.5		ng/L		101	70 - 130
8:2 FTS	<0.39		33.4	36.1		ng/L		108	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.34		32.8	32.6		ng/L		99	70 - 130
HFPO-DA (GenX)	<1.3		34.8	35.5		ng/L		102	70 - 130
9Cl-PF3ONS	<0.20		32.5	27.3		ng/L		84	70 - 130
11Cl-PF3OUdS	<0.27		32.8	32.8		ng/L		100	70 - 130

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C4 PFBA	*89*		*25 - 150*
13C5 PFPeA	*92*		*25 - 150*
13C2 PFHxA	*94*		*25 - 150*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 500-225012-1 MS
Matrix: Water
Analysis Batch: 631466

Client Sample ID: 3202-E
Prep Type: Total/NA
Prep Batch: 631375

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C4 PFHpA	91		25 - 150
13C4 PFOA	91		25 - 150
13C5 PFNA	98		25 - 150
13C2 PFDA	91		25 - 150
13C2 PFUnA	91		25 - 150
13C2 PFDoA	82		25 - 150
13C2 PFTeDA	81		25 - 150
13C3 PFBS	99		25 - 150
18O2 PFHxS	101		25 - 150
13C4 PFOS	103		25 - 150
13C8 FOSA	104		10 - 150
d3-NMeFOSAA	95		25 - 150
d5-NEtFOSAA	92		25 - 150
d-N-MeFOSA-M	79		10 - 150
d-N-EtFOSA-M	83		10 - 150
d7-N-MeFOSE-M	71		10 - 150
d9-N-EtFOSE-M	76		10 - 150
M2-4:2 FTS	92		25 - 150
M2-6:2 FTS	97		25 - 150
M2-8:2 FTS	99		25 - 150
13C3 HFPO-DA	96		25 - 150
13C2 10:2 FTS	90		25 - 150

Lab Sample ID: 500-225012-1 MSD
Matrix: Water
Analysis Batch: 631466

Client Sample ID: 3202-E
Prep Type: Total/NA
Prep Batch: 631375

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	<2.0		34.6	38.6		ng/L		112	70 - 130	1	30
Perfluoropentanoic acid (PFPeA)	<0.42		34.6	37.0		ng/L		107	70 - 130	2	30
Perfluorohexanoic acid (PFHxA)	<0.49		34.6	34.9		ng/L		101	70 - 130	2	30
Perfluoroheptanoic acid (PFHpA)	<0.21		34.6	38.1		ng/L		110	70 - 130	4	30
Perfluorooctanoic acid (PFOA)	<0.72		34.6	39.2		ng/L		113	70 - 130	2	30
Perfluorononanoic acid (PFNA)	<0.23		34.6	39.0		ng/L		113	70 - 130	7	30
Perfluorodecanoic acid (PFDA)	<0.26		34.6	36.7		ng/L		106	70 - 130	2	30
Perfluoroundecanoic acid (PFUnA)	<0.93		34.6	34.4		ng/L		100	70 - 130	0	30
Perfluorododecanoic acid (PFDoA)	<0.47		34.6	37.3		ng/L		108	70 - 130	3	30
Perfluorotridecanoic acid (PFTrDA)	<1.1		34.6	38.1		ng/L		110	70 - 130	2	30
Perfluorotetradecanoic acid (PFTeA)	<0.62		34.6	35.1		ng/L		102	70 - 130	2	30
Perfluorobutanesulfonic acid (PFBS)	<0.17		30.7	34.4		ng/L		112	70 - 130	17	30
Perfluoropentanesulfonic acid (PFPeS)	<0.25		32.4	33.8		ng/L		104	70 - 130	10	30
Perfluorohexanesulfonic acid (PFHxS)	<0.48		31.5	34.1		ng/L		108	70 - 130	10	30
Perfluoroheptanesulfonic acid (PFHpS)	<0.16		33.0	36.3		ng/L		110	70 - 130	2	30

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 500-225012-1 MSD
Matrix: Water
Analysis Batch: 631466

Client Sample ID: 3202-E
Prep Type: Total/NA
Prep Batch: 631375

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorooctanesulfonic acid (PFOS)	<0.46		32.2	36.5		ng/L		114	70 - 130	1	30
Perfluorononanesulfonic acid (PFNS)	<0.31		33.3	36.9		ng/L		111	70 - 130	5	30
Perfluorodecanesulfonic acid (PFDS)	<0.27		33.3	31.9		ng/L		96	70 - 130	1	30
Perfluorododecanesulfonic acid (PFDoS)	<0.82		33.5	36.6		ng/L		109	70 - 130	9	30
Perfluorooctanesulfonamide (FOSA)	<0.83		34.6	37.3		ng/L		108	70 - 130	4	30
NEtFOSA	<0.74		34.6	39.6		ng/L		115	70 - 130	1	30
NMeFOSA	<0.36		34.6	38.3		ng/L		111	70 - 130	2	30
NMeFOSAA	<1.0		34.6	38.4		ng/L		111	70 - 130	5	30
NEtFOSAA	<1.1		34.6	32.8		ng/L		95	70 - 130	11	30
NMeFOSE	<1.2	F1	34.6	36.9		ng/L		107	70 - 130	25	30
NEtFOSE	<0.72		34.6	41.5		ng/L		120	70 - 130	2	30
4:2 FTS	<0.20		32.4	35.9		ng/L		111	70 - 130	14	30
6:2 FTS	<2.1		32.9	34.2		ng/L		104	70 - 130	2	30
8:2 FTS	<0.39		33.2	36.4		ng/L		110	70 - 130	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.34		32.6	34.8		ng/L		107	70 - 130	7	30
HFPO-DA (GenX)	<1.3		34.6	37.8		ng/L		109	70 - 130	6	30
9Cl-PF3ONS	<0.20		32.3	26.5		ng/L		82	70 - 130	3	30
11Cl-PF3OUdS	<0.27		32.6	34.6		ng/L		106	70 - 130	5	30

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C4 PFBA	*86*		*25 - 150*
13C5 PFPeA	*91*		*25 - 150*
13C2 PFHxA	*96*		*25 - 150*
13C4 PFHpA	*88*		*25 - 150*
13C4 PFOA	*92*		*25 - 150*
13C5 PFNA	*92*		*25 - 150*
13C2 PFDA	*92*		*25 - 150*
13C2 PFUnA	*87*		*25 - 150*
13C2 PFDoA	*81*		*25 - 150*
13C2 PFTeDA	*74*		*25 - 150*
13C3 PFBS	*92*		*25 - 150*
18O2 PFHxS	*97*		*25 - 150*
13C4 PFOS	*98*		*25 - 150*
13C8 FOSA	*104*		*10 - 150*
d3-NMeFOSAA	*86*		*25 - 150*
d5-NEtFOSAA	*89*		*25 - 150*
d-N-MeFOSA-M	*81*		*10 - 150*
d-N-EtFOSA-M	*81*		*10 - 150*
d7-N-MeFOSE-M	*81*		*10 - 150*
d9-N-EtFOSE-M	*76*		*10 - 150*
M2-4:2 FTS	*80*		*25 - 150*
M2-6:2 FTS	*96*		*25 - 150*
M2-8:2 FTS	*98*		*25 - 150*
13C3 HFPO-DA	*86*		*25 - 150*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 500-225012-1 MSD
Matrix: Water
Analysis Batch: 631466

Client Sample ID: 3202-E
Prep Type: Total/NA
Prep Batch: 631375

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C2 10:2 FTS	94		25 - 150

Lab Chronicle

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225012-1

Client Sample ID: 3202-E
Date Collected: 11/04/22 08:10
Date Received: 11/05/22 10:10

Lab Sample ID: 500-225012-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			631375	FX	EET SAC	11/08/22 20:47
Total/NA	Analysis	537 (modified)		1	631466	D1R	EET SAC	11/09/22 12:35

Client Sample ID: 3202-E-FB
Date Collected: 11/04/22 08:05
Date Received: 11/05/22 10:10

Lab Sample ID: 500-225012-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			631375	FX	EET SAC	11/08/22 20:47
Total/NA	Analysis	537 (modified)		1	631466	D1R	EET SAC	11/09/22 13:06

Laboratory References:

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

Accreditation/Certification Summary

Client: Ramboll US Corporation
Job ID: 500-225012-1
Project/Site: Fmr Mirro Plt 2 - 1690026073

Laboratory: Eurofins Sacramento

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

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998204680	08-31-23

Eurofins Sacramento
880 Riverside Parkway
West Sacramento CA 95605
Phone: 916-373-5600 Fax 916-372-1059

Chain of Custody Record

eurofins

Client Information	Sampler: J. GLASFORD	Lab PM: Fredrick, Sandie	Carrier Tracking No(s):	COC No: 500-106721-45320.1
Client Contact: Pau Lindquist	Phone	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin: WI	Page: Page 1 of *
Company: Ramboll US Corporation	PWSID			Job #: 500-225012
Address: 234 W Florida Street Fifth Floor	Due Date Requested:			
City: Milwaukee	TAT Requested (days):			
State, Zip: WI 53204	Compliance Project: Δ Yes Δ No			
Phone: 262-901-3510(Tel)	PO #: MIRRO 2			
Email: plindquist@ramboll.com	WO #:			
Project Name: Fmr Mirro Plt 2 1690026073	Project #: 50020429			
Site	SSOW#:			

500-225012 COC

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Y - Trizma; Z - other (specify); Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC_IDA_WI - PFAS, Standard List (33 analytes)	Total Number of containers	Special Instructions/Note
		Preservation Code:			N		N		
1 3202-E	11-4-22	810	G	Water	N	Y	X		
2 3202-E-FD	↓	805	↓	Water	N		X		
				Water					
				Water					
				Water					
				Water					

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by:	Date/Time: 11-4-22 1000	Company: RAMBOLL	Received by: FEDEX 1000
Relinquished by:	Date/Time:	Company:	Received by:
Relinquished by:	Date/Time:	Company:	Received by:

Date/Time	Company
11-4-22	RAMBOLL
11/5/22 - 1010	EETSAC

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: 2051710

Cooler Temperature(s) °C and Other Remarks:

Ver: X

Eurofins Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone: 916-373-5600 Fax: 916-372-1059

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: D. GLASFORD	Lab PM: Fredrick, Sandie	Carrier Tracking No(s):	COC No: 500-106721-45320.1
Client Contact: Paul Lindquist	Phone:	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin: WI	Page: Page 1 of 1
Company: Ramboll US Corporation	PWSID:			Job #:
Address: 234 W. Florida Street Fifth Floor	Due Date Requested:			
City: Milwaukee	TAT Requested (days):			
State, Zip: WI, 53204	Compliance Project: Δ Yes Δ No			
Phone: 262-901-3510(Tel)	PO #: MIRRO 2			
Email: plindquist@ramboll.com	WO #:			
Project Name: Fmr Mirro Plt 2 - 1690026073	Project #: 50020429			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

500-225012 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC_IDA_WI - PFAS, Standard List (33 analytes)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N		
3202-E	11-4-22	810	G	Water	N	Y	X		
3202-E-FD	↓	805	↓	Water	N		X		
				Water					
				Water					
				Water					
				Water					

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	[signature]	11-4-22 1000	RAMBOLL	FEDEX 1000	11-4-22	RAMBOLL
2	Relinquished by:	Date/Time:	Company	Received by: [signature]	Date/Time: 11/5/22 - 1010	Company: EETSA
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company:

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: 2051710 | Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Ramboll US Corporation

Job Number: 500-225012-1

Login Number: 225012
List Number: 2
Creator: Fisher, Jamyiah L

List Source: Eurofins Sacramento
List Creation: 11/08/22 09:04 AM

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	2051710
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	2.2 C
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.	True	
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	

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Sacramento Sample Receiving Notes

500-225012 Field Sheet

Tracking # : 6058-8696-5935

Job: _____

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier

GSO / OnTrac / Goldstreak / USPS / Other _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations. File in the job folder with the COC.

Therm. ID: L-10 Corr. Factor: (+ / -) 0 °C

Ice ✓ Wet ✓ Gel _____ Other _____

Cooler Custody Seal: 2051760

Cooler ID: _____

Temp Observed: 2.2 °C Corrected: 2.2 °C

From: Temp Blank ☐ Sample ☒

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	☐	☒	☐
Cooler Temperature is acceptable?	☒	☐	☐
Frozen samples show signs of thaw?	☐	☐	☐

Initials: JH Date: 11/5/22

Unpacking/Labeling The Samples	Yes	No	NA
COC is complete w/o discrepancies?	☑	☐	☐
Samples compromised/tampered with?	☐	☑	☐
Containers are not broken or leaking?	☑	☐	☐
Sample custody seal?	☐	☐	☑ 11/8/22
Sample containers have legible labels?	☑	☐	☑
Sample date/times are provided?	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Is the Field Sampler's name on COC?	☐	☑	☐
Samples require splitting/compositing?	☐	☐	☑
Samples w/o discrepancies?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

Initials: JF Date: 11/8/22

Notes: _____

Trizma Lot #(s): _____

Login Completion	Yes	No	NA
Receipt Temperature on COC?	☑	☐	☐
Samples received within hold time?	☑	☐	☐
NCM Filed?	☐	☐	☑
Log Release checked in TALS?	☑	☐	☐

Initials: JF Date: 11/8/22

Isotope Dilution Summary

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225012-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFUnA (25-150)
500-225012-1	3202-E	89	100	92	94	97	98	98	97
500-225012-1 MS	3202-E	89	92	94	91	91	98	91	91
500-225012-1 MSD	3202-E	86	91	96	88	92	92	92	87
500-225012-2	3202-E-FB	89	90	86	87	91	95	94	87
LCS 320-631375/2-A	Lab Control Sample	97	101	96	100	105	104	104	97
MB 320-631375/1-A	Method Blank	89	100	90	98	96	98	94	89

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFDoA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (10-150)	d3NMFOS (25-150)	d5NEFOS (25-150)
500-225012-1	3202-E	94	85	102	104	104	110	109	108
500-225012-1 MS	3202-E	82	81	99	101	103	104	95	92
500-225012-1 MSD	3202-E	81	74	92	97	98	104	86	89
500-225012-2	3202-E-FB	76	71	91	98	98	96	88	93
LCS 320-631375/2-A	Lab Control Sample	91	84	110	111	119	104	105	104
MB 320-631375/1-A	Method Blank	85	82	96	98	103	104	100	102

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	dMeFOSA (10-150)	dEtFOSA (10-150)	NMFM (10-150)	NEFM (10-150)	M242FTS (25-150)	M262FTS (25-150)	M282FTS (25-150)	HFPODA (25-150)
500-225012-1	3202-E	87	88	89	87	81	105	110	91
500-225012-1 MS	3202-E	79	83	71	76	92	97	99	96
500-225012-1 MSD	3202-E	81	81	81	76	80	96	98	86
500-225012-2	3202-E-FB	79	85	78	71	85	103	96	93
LCS 320-631375/2-A	Lab Control Sample	91	91	90	94	97	115	116	105
MB 320-631375/1-A	Method Blank	86	85	86	80	89	105	106	87

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	M102FTS (25-150)
500-225012-1	3202-E	106
500-225012-1 MS	3202-E	90
500-225012-1 MSD	3202-E	94
500-225012-2	3202-E-FB	85
LCS 320-631375/2-A	Lab Control Sample	107
MB 320-631375/1-A	Method Blank	102

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: Ramboll US Corporation
Job ID: 500-225012-1
Project/Site: Fmr Mirro Plt 2 - 1690026073

d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
dMeFOSA = d-N-MeFOSA-M
dEtFOSA = d-N-EtFOSA-M
NMFM = d7-N-MeFOSE-M
NEFM = d9-N-EtFOSE-M
M242FTS = M2-4:2 FTS
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
HFPODA = 13C3 HFPO-DA
M102FTS = 13C2 10:2 FTS

RAMBOLL

ENVIRONMENT
& HEALTH

Sent Via Overnight Delivery

[redacted]
1750 Mirro Drive
Manitowoc, WI 54220

POTABLE WELL SAMPLING RESULTS AT 1750 MIRRO DRIVE
FORMER MIRRO PLANT NO. 2, 2009 MIRRO DRIVE
MANITOWOC, WISCONSIN, BRRTS NO. 02-36-588656

Dear [redacted]:

January 3, 2023

Ramboll
234 W. Florida Street
Fifth Floor
Milwaukee, WI 53204
USA

T +1 414 837 3607
F +1 414 837 3608
https://ramboll.com

Ref 1690026073

The purpose of this letter is to provide you with the results of the recent potable well testing from your property completed by Newell Operating Company (NOC) with the oversight of the Wisconsin Department of Natural Resources (WDNR). As you are aware, this testing was conducted because of the potential for per- and polyfluoroalkyl substances (PFAS) contaminated groundwater to migrate off site from the nearby former Mirro Plant No. 2 facility.

On November 21, 2022, NOC's environmental consultant, Ramboll US Consulting, Inc. (Ramboll), collected water samples from your potable well using the spigot prior to your pressure tank. Ramboll submitted the samples to Eurofins Environment Testing (Eurofins) in Sacramento, California, a Wisconsin PFAS certified laboratory.

Your Test Results

A copy of the laboratory report for your potable well sample is enclosed. The analyses did not detect any PFAS in your potable well sample.

If you have any questions regarding the quality of your potable well water, please contact the following:

- Tauren Beggs, WDNR, (920) 510-3472, Tauren.Beggs@wisconsin.gov; or
- Nathan Kloczko, WDHS, (608) 267-3227, Nathan.Kloczko@dhs.wisconsin.gov.

For any other questions regarding this letter, please contact Lou Meschede at (219) 781-7177.

Sincerely,

Paul Lindquist
Managing Consultant

D +1 262 901 3510
plindquist@ramboll.com

Jeanne M. Tarvin, PG, CPG
E&H Americas Country Market Director

D +1 262 901 0085
jtarvin@ramboll.com

cc: Kristin Jones, NOC
Tauren Beggs, WDNR
Nathan Kloczko, WDHS

ENCLOSURE

EUROFINS LABORATORY ANALYTICAL REPORT

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Paul Lindquist
Ramboll US Corporation
234 W. Florida Street
Fifth Floor
Milwaukee, Wisconsin 53204

Generated 12/19/2022 11:33:31 AM Revision 1

JOB DESCRIPTION

Fmr Mirro Plt 2 - 1690026073

JOB NUMBER

500-225866-1

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Authorization

Generated
12/19/2022 11:33:31 AM
Revision 1

Authorized for release by
Sandie Fredrick, Project Manager II
Sandra.Fredrick@et.eurofinsus.com
(920)261-1660

Table of Contents

Job ID: 500-225866-1

Laboratory: Eurofins Chicago

Narrative

Job Narrative
500-225866-1

Comments
No additional comments.

Revision
The report being provided is a revision of the original report sent on 12/14/2022. The report (revision 1) is being revised due to: Additional sample cancelled by client for reporting.

Receipt
The samples were received on 11/22/2022 9:20 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 3.2º C.

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

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

Detection Summary

Client: Ramboll US Corporation
Job ID: 500-225866-1
Project/Site: Fmr Mirro Plt 2 - 1690026073

Client Sample ID: 1750-E
Lab Sample ID: 500-225866-1

No Detections.

Client Sample ID: 1750-E-FB
Lab Sample ID: 500-225866-2

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225866-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	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: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225866-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-225866-1	1750-E	Water	11/21/22 07:53	11/22/22 09:20
500-225866-2	1750-E-FB	Water	11/21/22 08:00	11/22/22 09:20

Client: Ramboll US Corporation
Job ID: 500-225866-1
Project/Site: Fmr Mirro Plt 2 - 1690026073

Client Sample ID: 1750-E
Lab Sample ID: 500-225866-1
Date Collected: 11/21/22 07:53
Matrix: Water
Date Received: 11/22/22 09:20

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.2		4.5	2.2	ng/L		12/07/22 06:05	12/09/22 02:03	1
Perfluoropentanoic acid (PFPeA)	<0.44		1.8	0.44	ng/L		12/07/22 06:05	12/09/22 02:03	1
Perfluorohexanoic acid (PFHxA)	<0.52		1.8	0.52	ng/L		12/07/22 06:05	12/09/22 02:03	1
Perfluoroheptanoic acid (PFHpA)	<0.22		1.8	0.22	ng/L		12/07/22 06:05	12/09/22 02:03	1
Perfluorooctanoic acid (PFOA)	<0.76		1.8	0.76	ng/L		12/07/22 06:05	12/09/22 02:03	1
Perfluorononanoic acid (PFNA)	<0.24		1.8	0.24	ng/L		12/07/22 06:05	12/09/22 02:03	1
Perfluorodecanoic acid (PFDA)	<0.28		1.8	0.28	ng/L		12/07/22 06:05	12/09/22 02:03	1
Perfluoroundecanoic acid (PFUnA)	<0.99		1.8	0.99	ng/L		12/07/22 06:05	12/09/22 02:03	1
Perfluorododecanoic acid (PFDoA)	<0.49		1.8	0.49	ng/L		12/07/22 06:05	12/09/22 02:03	1
Perfluorotridecanoic acid (PFTrDA)	<1.2		1.8	1.2	ng/L		12/07/22 06:05	12/09/22 02:03	1
Perfluorotetradecanoic acid (PFTeA)	<0.65		1.8	0.65	ng/L		12/07/22 06:05	12/09/22 02:03	1
Perfluorobutanesulfonic acid (PFBS)	<0.18		1.8	0.18	ng/L		12/07/22 06:05	12/09/22 02:03	1
Perfluoropentanesulfonic acid (PFPeS)	<0.27		1.8	0.27	ng/L		12/07/22 06:05	12/09/22 02:03	1
Perfluorohexanesulfonic acid (PFHxS)	<0.51		1.8	0.51	ng/L		12/07/22 06:05	12/09/22 02:03	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.17		1.8	0.17	ng/L		12/07/22 06:05	12/09/22 02:03	1
Perfluorooctanesulfonic acid (PFOS)	<0.48		1.8	0.48	ng/L		12/07/22 06:05	12/09/22 02:03	1
Perfluorononanesulfonic acid (PFNS)	<0.33		1.8	0.33	ng/L		12/07/22 06:05	12/09/22 02:03	1
Perfluorodecanesulfonic acid (PFDS)	<0.29		1.8	0.29	ng/L		12/07/22 06:05	12/09/22 02:03	1
Perfluorododecanesulfonic acid (PFDoS)	<0.87		1.8	0.87	ng/L		12/07/22 06:05	12/09/22 02:03	1
Perfluorooctanesulfonamide (FOSA)	<0.88		1.8	0.88	ng/L		12/07/22 06:05	12/09/22 02:03	1
NEtFOSA	<0.78		1.8	0.78	ng/L		12/07/22 06:05	12/09/22 02:03	1
NMeFOSA	<0.39		1.8	0.39	ng/L		12/07/22 06:05	12/09/22 02:03	1
NMeFOSAA	<1.1		4.5	1.1	ng/L		12/07/22 06:05	12/09/22 02:03	1
NEtFOSAA	<1.2		4.5	1.2	ng/L		12/07/22 06:05	12/09/22 02:03	1
NMeFOSE	<1.3		3.6	1.3	ng/L		12/07/22 06:05	12/09/22 02:03	1
NEtFOSE	<0.76		1.8	0.76	ng/L		12/07/22 06:05	12/09/22 02:03	1
4:2 FTS	<0.22		1.8	0.22	ng/L		12/07/22 06:05	12/09/22 02:03	1
6:2 FTS	<2.2		4.5	2.2	ng/L		12/07/22 06:05	12/09/22 02:03	1
8:2 FTS	<0.41		1.8	0.41	ng/L		12/07/22 06:05	12/09/22 02:03	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.36		1.8	0.36	ng/L		12/07/22 06:05	12/09/22 02:03	1
HFPO-DA (GenX)	<1.3		3.6	1.3	ng/L		12/07/22 06:05	12/09/22 02:03	1
9Cl-PF3ONS	<0.22		1.8	0.22	ng/L		12/07/22 06:05	12/09/22 02:03	1
11Cl-PF3OUdS	<0.29		1.8	0.29	ng/L		12/07/22 06:05	12/09/22 02:03	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*95*		*25 - 150*	*12/07/22 06:05*	*12/09/22 02:03*	*1*
13C5 PFPeA	*98*		*25 - 150*	*12/07/22 06:05*	*12/09/22 02:03*	*1*
13C2 PFHxA	*99*		*25 - 150*	*12/07/22 06:05*	*12/09/22 02:03*	*1*
13C4 PFHpA	*102*		*25 - 150*	*12/07/22 06:05*	*12/09/22 02:03*	*1*
13C4 PFOA	*97*		*25 - 150*	*12/07/22 06:05*	*12/09/22 02:03*	*1*
13C5 PFNA	*101*		*25 - 150*	*12/07/22 06:05*	*12/09/22 02:03*	*1*
13C2 PFDA	*99*		*25 - 150*	*12/07/22 06:05*	*12/09/22 02:03*	*1*
13C2 PFUnA	*95*		*25 - 150*	*12/07/22 06:05*	*12/09/22 02:03*	*1*
13C2 PFDoA	*96*		*25 - 150*	*12/07/22 06:05*	*12/09/22 02:03*	*1*
13C2 PFTeDA	*106*		*25 - 150*	*12/07/22 06:05*	*12/09/22 02:03*	*1*
13C3 PFBS	*100*		*25 - 150*	*12/07/22 06:05*	*12/09/22 02:03*	*1*
18O2 PFHxS	*95*		*25 - 150*	*12/07/22 06:05*	*12/09/22 02:03*	*1*

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225866-1

Client Sample ID: 1750-E
Date Collected: 11/21/22 07:53
Date Received: 11/22/22 09:20

Lab Sample ID: 500-225866-1
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	101		25 - 150	12/07/22 06:05	12/09/22 02:03	1
13C8 FOSA	100		10 - 150	12/07/22 06:05	12/09/22 02:03	1
d3-NMeFOSAA	77		25 - 150	12/07/22 06:05	12/09/22 02:03	1
d5-NEtFOSAA	80		25 - 150	12/07/22 06:05	12/09/22 02:03	1
d-N-MeFOSA-M	80		10 - 150	12/07/22 06:05	12/09/22 02:03	1
d-N-EtFOSA-M	78		10 - 150	12/07/22 06:05	12/09/22 02:03	1
d7-N-MeFOSE-M	93		10 - 150	12/07/22 06:05	12/09/22 02:03	1
d9-N-EtFOSE-M	95		10 - 150	12/07/22 06:05	12/09/22 02:03	1
M2-4:2 FTS	81		25 - 150	12/07/22 06:05	12/09/22 02:03	1
M2-6:2 FTS	84		25 - 150	12/07/22 06:05	12/09/22 02:03	1
M2-8:2 FTS	79		25 - 150	12/07/22 06:05	12/09/22 02:03	1
13C3 HFPO-DA	99		25 - 150	12/07/22 06:05	12/09/22 02:03	1
13C2 10:2 FTS	90		25 - 150	12/07/22 06:05	12/09/22 02:03	1

Client: Ramboll US Corporation
Job ID: 500-225866-1
Project/Site: Fmr Mirro Plt 2 - 1690026073

Client Sample ID: 1750-E-FB
Lab Sample ID: 500-225866-2
Date Collected: 11/21/22 08:00
Matrix: Water
Date Received: 11/22/22 09:20

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.2		4.6	2.2	ng/L		12/07/22 06:05	12/09/22 02:34	1
Perfluoropentanoic acid (PFPeA)	<0.46		1.9	0.46	ng/L		12/07/22 06:05	12/09/22 02:34	1
Perfluorohexanoic acid (PFHxA)	<0.54		1.9	0.54	ng/L		12/07/22 06:05	12/09/22 02:34	1
Perfluoroheptanoic acid (PFHpA)	<0.23		1.9	0.23	ng/L		12/07/22 06:05	12/09/22 02:34	1
Perfluorooctanoic acid (PFOA)	<0.79		1.9	0.79	ng/L		12/07/22 06:05	12/09/22 02:34	1
Perfluorononanoic acid (PFNA)	<0.25		1.9	0.25	ng/L		12/07/22 06:05	12/09/22 02:34	1
Perfluorodecanoic acid (PFDA)	<0.29		1.9	0.29	ng/L		12/07/22 06:05	12/09/22 02:34	1
Perfluoroundecanoic acid (PFUnA)	<1.0		1.9	1.0	ng/L		12/07/22 06:05	12/09/22 02:34	1
Perfluorododecanoic acid (PFDoA)	<0.51		1.9	0.51	ng/L		12/07/22 06:05	12/09/22 02:34	1
Perfluorotridecanoic acid (PFTrDA)	<1.2		1.9	1.2	ng/L		12/07/22 06:05	12/09/22 02:34	1
Perfluorotetradecanoic acid (PFTeA)	<0.68		1.9	0.68	ng/L		12/07/22 06:05	12/09/22 02:34	1
Perfluorobutanesulfonic acid (PFBS)	<0.19		1.9	0.19	ng/L		12/07/22 06:05	12/09/22 02:34	1
Perfluoropentanesulfonic acid (PFPeS)	<0.28		1.9	0.28	ng/L		12/07/22 06:05	12/09/22 02:34	1
Perfluorohexanesulfonic acid (PFHxS)	<0.53		1.9	0.53	ng/L		12/07/22 06:05	12/09/22 02:34	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.18		1.9	0.18	ng/L		12/07/22 06:05	12/09/22 02:34	1
Perfluorooctanesulfonic acid (PFOS)	<0.50		1.9	0.50	ng/L		12/07/22 06:05	12/09/22 02:34	1
Perfluorononanesulfonic acid (PFNS)	<0.34		1.9	0.34	ng/L		12/07/22 06:05	12/09/22 02:34	1
Perfluorodecanesulfonic acid (PFDS)	<0.30		1.9	0.30	ng/L		12/07/22 06:05	12/09/22 02:34	1
Perfluorododecanesulfonic acid (PFDoS)	<0.90		1.9	0.90	ng/L		12/07/22 06:05	12/09/22 02:34	1
Perfluorooctanesulfonamide (FOSA)	<0.91		1.9	0.91	ng/L		12/07/22 06:05	12/09/22 02:34	1
NEtFOSA	<0.81		1.9	0.81	ng/L		12/07/22 06:05	12/09/22 02:34	1
NMeFOSA	<0.40		1.9	0.40	ng/L		12/07/22 06:05	12/09/22 02:34	1
NMeFOSAA	<1.1		4.6	1.1	ng/L		12/07/22 06:05	12/09/22 02:34	1
NEtFOSAA	<1.2		4.6	1.2	ng/L		12/07/22 06:05	12/09/22 02:34	1
NMeFOSE	<1.3		3.7	1.3	ng/L		12/07/22 06:05	12/09/22 02:34	1
NEtFOSE	<0.79		1.9	0.79	ng/L		12/07/22 06:05	12/09/22 02:34	1
4:2 FTS	<0.22		1.9	0.22	ng/L		12/07/22 06:05	12/09/22 02:34	1
6:2 FTS	<2.3		4.6	2.3	ng/L		12/07/22 06:05	12/09/22 02:34	1
8:2 FTS	<0.43		1.9	0.43	ng/L		12/07/22 06:05	12/09/22 02:34	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.37		1.9	0.37	ng/L		12/07/22 06:05	12/09/22 02:34	1
HFPO-DA (GenX)	<1.4		3.7	1.4	ng/L		12/07/22 06:05	12/09/22 02:34	1
9Cl-PF3ONS	<0.22		1.9	0.22	ng/L		12/07/22 06:05	12/09/22 02:34	1
11Cl-PF3OUdS	<0.30		1.9	0.30	ng/L		12/07/22 06:05	12/09/22 02:34	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*97*		*25 - 150*	*12/07/22 06:05*	*12/09/22 02:34*	*1*
13C5 PFPeA	*102*		*25 - 150*	*12/07/22 06:05*	*12/09/22 02:34*	*1*
13C2 PFHxA	*100*		*25 - 150*	*12/07/22 06:05*	*12/09/22 02:34*	*1*
13C4 PFHpA	*103*		*25 - 150*	*12/07/22 06:05*	*12/09/22 02:34*	*1*
13C4 PFOA	*99*		*25 - 150*	*12/07/22 06:05*	*12/09/22 02:34*	*1*
13C5 PFNA	*104*		*25 - 150*	*12/07/22 06:05*	*12/09/22 02:34*	*1*
13C2 PFDA	*98*		*25 - 150*	*12/07/22 06:05*	*12/09/22 02:34*	*1*
13C2 PFUnA	*99*		*25 - 150*	*12/07/22 06:05*	*12/09/22 02:34*	*1*
13C2 PFDoA	*92*		*25 - 150*	*12/07/22 06:05*	*12/09/22 02:34*	*1*
13C2 PFTeDA	*104*		*25 - 150*	*12/07/22 06:05*	*12/09/22 02:34*	*1*
13C3 PFBS	*95*		*25 - 150*	*12/07/22 06:05*	*12/09/22 02:34*	*1*
18O2 PFHxS	*98*		*25 - 150*	*12/07/22 06:05*	*12/09/22 02:34*	*1*

Client Sample ID: 1750-E-FB
Date Collected: 11/21/22 08:00
Date Received: 11/22/22 09:20

Lab Sample ID: 500-225866-2
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	95		25 - 150	12/07/22 06:05	12/09/22 02:34	1
13C8 FOSA	97		10 - 150	12/07/22 06:05	12/09/22 02:34	1
d3-NMeFOSAA	80		25 - 150	12/07/22 06:05	12/09/22 02:34	1
d5-NEtFOSAA	84		25 - 150	12/07/22 06:05	12/09/22 02:34	1
d-N-MeFOSA-M	75		10 - 150	12/07/22 06:05	12/09/22 02:34	1
d-N-EtFOSA-M	71		10 - 150	12/07/22 06:05	12/09/22 02:34	1
d7-N-MeFOSE-M	92		10 - 150	12/07/22 06:05	12/09/22 02:34	1
d9-N-EtFOSE-M	99		10 - 150	12/07/22 06:05	12/09/22 02:34	1
M2-4:2 FTS	87		25 - 150	12/07/22 06:05	12/09/22 02:34	1
M2-6:2 FTS	85		25 - 150	12/07/22 06:05	12/09/22 02:34	1
M2-8:2 FTS	75		25 - 150	12/07/22 06:05	12/09/22 02:34	1
13C3 HFPO-DA	95		25 - 150	12/07/22 06:05	12/09/22 02:34	1
13C2 10:2 FTS	86		25 - 150	12/07/22 06:05	12/09/22 02:34	1

Definitions/Glossary

Client: Ramboll US Corporation
Job ID: 500-225866-1
Project/Site: Fmr Mirro Plt 2 - 1690026073

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

QC Association Summary

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225866-1

LCMS

Prep Batch: 637962

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-225866-1	1750-E	Total/NA	Water	3535	
500-225866-2	1750-E-FB	Total/NA	Water	3535	
MB 320-637962/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-637962/2-A	Lab Control Sample	Total/NA	Water	3535	
500-225866-1 MS	1750-E	Total/NA	Water	3535	
500-225866-1 MSD	1750-E	Total/NA	Water	3535	

Analysis Batch: 638552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-225866-1	1750-E	Total/NA	Water	537 (modified)	637962
500-225866-2	1750-E-FB	Total/NA	Water	537 (modified)	637962
MB 320-637962/1-A	Method Blank	Total/NA	Water	537 (modified)	637962
LCS 320-637962/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	637962
500-225866-1 MS	1750-E	Total/NA	Water	537 (modified)	637962
500-225866-1 MSD	1750-E	Total/NA	Water	537 (modified)	637962

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-637962/1-A
Matrix: Water
Analysis Batch: 638552

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 637962

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.4		5.0	2.4	ng/L		12/07/22 06:05	12/09/22 01:43	1
Perfluoropentanoic acid (PFPeA)	<0.49		2.0	0.49	ng/L		12/07/22 06:05	12/09/22 01:43	1
Perfluorohexanoic acid (PFHxA)	<0.58		2.0	0.58	ng/L		12/07/22 06:05	12/09/22 01:43	1
Perfluoroheptanoic acid (PFHpA)	<0.25		2.0	0.25	ng/L		12/07/22 06:05	12/09/22 01:43	1
Perfluorooctanoic acid (PFOA)	<0.85		2.0	0.85	ng/L		12/07/22 06:05	12/09/22 01:43	1
Perfluorononanoic acid (PFNA)	<0.27		2.0	0.27	ng/L		12/07/22 06:05	12/09/22 01:43	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	0.31	ng/L		12/07/22 06:05	12/09/22 01:43	1
Perfluoroundecanoic acid (PFUnA)	<1.1		2.0	1.1	ng/L		12/07/22 06:05	12/09/22 01:43	1
Perfluorododecanoic acid (PFDoA)	<0.55		2.0	0.55	ng/L		12/07/22 06:05	12/09/22 01:43	1
Perfluorotridecanoic acid (PFTrDA)	<1.3		2.0	1.3	ng/L		12/07/22 06:05	12/09/22 01:43	1
Perfluorotetradecanoic acid (PFTeA)	<0.73		2.0	0.73	ng/L		12/07/22 06:05	12/09/22 01:43	1
Perfluorobutanesulfonic acid (PFBS)	<0.20		2.0	0.20	ng/L		12/07/22 06:05	12/09/22 01:43	1
Perfluoropentanesulfonic acid (PFPeS)	<0.30		2.0	0.30	ng/L		12/07/22 06:05	12/09/22 01:43	1
Perfluorohexanesulfonic acid (PFHxS)	<0.57		2.0	0.57	ng/L		12/07/22 06:05	12/09/22 01:43	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.19		2.0	0.19	ng/L		12/07/22 06:05	12/09/22 01:43	1
Perfluorooctanesulfonic acid (PFOS)	<0.54		2.0	0.54	ng/L		12/07/22 06:05	12/09/22 01:43	1
Perfluorononanesulfonic acid (PFNS)	<0.37		2.0	0.37	ng/L		12/07/22 06:05	12/09/22 01:43	1
Perfluorodecanesulfonic acid (PFDS)	<0.32		2.0	0.32	ng/L		12/07/22 06:05	12/09/22 01:43	1
Perfluorododecanesulfonic acid (PFDoS)	<0.97		2.0	0.97	ng/L		12/07/22 06:05	12/09/22 01:43	1
Perfluorooctanesulfonamide (FOSA)	<0.98		2.0	0.98	ng/L		12/07/22 06:05	12/09/22 01:43	1
NEtFOSA	<0.87		2.0	0.87	ng/L		12/07/22 06:05	12/09/22 01:43	1
NMeFOSA	<0.43		2.0	0.43	ng/L		12/07/22 06:05	12/09/22 01:43	1
NMeFOSAA	<1.2		5.0	1.2	ng/L		12/07/22 06:05	12/09/22 01:43	1
NEtFOSAA	<1.3		5.0	1.3	ng/L		12/07/22 06:05	12/09/22 01:43	1
NMeFOSE	<1.4		4.0	1.4	ng/L		12/07/22 06:05	12/09/22 01:43	1
NEtFOSE	<0.85		2.0	0.85	ng/L		12/07/22 06:05	12/09/22 01:43	1
4:2 FTS	<0.24		2.0	0.24	ng/L		12/07/22 06:05	12/09/22 01:43	1
6:2 FTS	<2.5		5.0	2.5	ng/L		12/07/22 06:05	12/09/22 01:43	1
8:2 FTS	<0.46		2.0	0.46	ng/L		12/07/22 06:05	12/09/22 01:43	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.40		2.0	0.40	ng/L		12/07/22 06:05	12/09/22 01:43	1
HFPO-DA (GenX)	<1.5		4.0	1.5	ng/L		12/07/22 06:05	12/09/22 01:43	1
9Cl-PF3ONS	<0.24		2.0	0.24	ng/L		12/07/22 06:05	12/09/22 01:43	1
11Cl-PF3OUdS	<0.32		2.0	0.32	ng/L		12/07/22 06:05	12/09/22 01:43	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*91*		*25 - 150*	*12/07/22 06:05*	*12/09/22 01:43*	*1*
13C5 PFPeA	*97*		*25 - 150*	*12/07/22 06:05*	*12/09/22 01:43*	*1*
13C2 PFHxA	*99*		*25 - 150*	*12/07/22 06:05*	*12/09/22 01:43*	*1*
13C4 PFHpA	*90*		*25 - 150*	*12/07/22 06:05*	*12/09/22 01:43*	*1*
13C4 PFOA	*94*		*25 - 150*	*12/07/22 06:05*	*12/09/22 01:43*	*1*
13C5 PFNA	*101*		*25 - 150*	*12/07/22 06:05*	*12/09/22 01:43*	*1*
13C2 PFDA	*95*		*25 - 150*	*12/07/22 06:05*	*12/09/22 01:43*	*1*
13C2 PFUnA	*97*		*25 - 150*	*12/07/22 06:05*	*12/09/22 01:43*	*1*
13C2 PFDoA	*93*		*25 - 150*	*12/07/22 06:05*	*12/09/22 01:43*	*1*
13C2 PFTeDA	*99*		*25 - 150*	*12/07/22 06:05*	*12/09/22 01:43*	*1*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-637962/1-A
Matrix: Water
Analysis Batch: 638552

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 637962

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFBS	92		25 - 150	12/07/22 06:05	12/09/22 01:43	1
18O2 PFHxS	100		25 - 150	12/07/22 06:05	12/09/22 01:43	1
13C4 PFOS	99		25 - 150	12/07/22 06:05	12/09/22 01:43	1
13C8 FOSA	92		10 - 150	12/07/22 06:05	12/09/22 01:43	1
d3-NMeFOSAA	71		25 - 150	12/07/22 06:05	12/09/22 01:43	1
d5-NEtFOSAA	76		25 - 150	12/07/22 06:05	12/09/22 01:43	1
d-N-MeFOSA-M	72		10 - 150	12/07/22 06:05	12/09/22 01:43	1
d-N-EtFOSA-M	70		10 - 150	12/07/22 06:05	12/09/22 01:43	1
d7-N-MeFOSE-M	88		10 - 150	12/07/22 06:05	12/09/22 01:43	1
d9-N-EtFOSE-M	98		10 - 150	12/07/22 06:05	12/09/22 01:43	1
M2-4:2 FTS	74		25 - 150	12/07/22 06:05	12/09/22 01:43	1
M2-6:2 FTS	70		25 - 150	12/07/22 06:05	12/09/22 01:43	1
M2-8:2 FTS	70		25 - 150	12/07/22 06:05	12/09/22 01:43	1
13C3 HFPO-DA	100		25 - 150	12/07/22 06:05	12/09/22 01:43	1
13C2 10:2 FTS	79		25 - 150	12/07/22 06:05	12/09/22 01:43	1

Lab Sample ID: LCS 320-637962/2-A
Matrix: Water
Analysis Batch: 638552

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 637962

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	40.0	41.1		ng/L		103	60 - 135
Perfluoropentanoic acid (PFPeA)	40.0	38.8		ng/L		97	60 - 135
Perfluorohexanoic acid (PFHxA)	40.0	40.0		ng/L		100	60 - 135
Perfluoroheptanoic acid (PFHpA)	40.0	41.4		ng/L		103	60 - 135
Perfluorooctanoic acid (PFOA)	40.0	43.9		ng/L		110	60 - 135
Perfluorononanoic acid (PFNA)	40.0	39.8		ng/L		99	60 - 135
Perfluorodecanoic acid (PFDA)	40.0	40.0		ng/L		100	60 - 135
Perfluoroundecanoic acid (PFUnA)	40.0	41.3		ng/L		103	60 - 135
Perfluorododecanoic acid (PFDoA)	40.0	45.9		ng/L		115	60 - 135
Perfluorotridecanoic acid (PFTrDA)	40.0	42.7		ng/L		107	60 - 135
Perfluorotetradecanoic acid (PFTeA)	40.0	43.7		ng/L		109	60 - 135
Perfluorobutanesulfonic acid (PFBS)	35.5	36.2		ng/L		102	60 - 135
Perfluoropentanesulfonic acid (PFPeS)	37.6	39.7		ng/L		106	60 - 135
Perfluorohexanesulfonic acid (PFHxS)	36.5	38.9		ng/L		107	60 - 135
Perfluoroheptanesulfonic acid (PFHpS)	38.2	44.9		ng/L		118	60 - 135
Perfluorooctanesulfonic acid (PFOS)	37.2	40.6		ng/L		109	60 - 135
Perfluorononanesulfonic acid (PFNS)	38.5	45.1		ng/L		117	60 - 135
Perfluorodecanesulfonic acid (PFDS)	38.6	42.1		ng/L		109	60 - 135
Perfluorododecanesulfonic acid (PFDoS)	38.8	40.3		ng/L		104	60 - 135

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-637962/2-A
Matrix: Water
Analysis Batch: 638552

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 637962

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanesulfonamide (FOSA)	40.0	42.9		ng/L		107	60 - 135
NEtFOSA	40.0	41.0		ng/L		102	60 - 135
NMeFOSA	40.0	45.6		ng/L		114	60 - 135
NMeFOSAA	40.0	44.9		ng/L		112	60 - 135
NEtFOSAA	40.0	42.3		ng/L		106	60 - 135
NMeFOSE	40.0	44.5		ng/L		111	60 - 135
NEtFOSE	40.0	41.8		ng/L		105	60 - 135
4:2 FTS	37.5	37.5		ng/L		100	60 - 135
6:2 FTS	38.1	35.2		ng/L		93	60 - 135
8:2 FTS	38.4	39.9		ng/L		104	60 - 135
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	44.1		ng/L		117	60 - 135
HFPO-DA (GenX)	40.0	43.0		ng/L		107	60 - 135
9Cl-PF3ONS	37.4	39.8		ng/L		107	60 - 135
11Cl-PF3OUdS	37.8	42.2		ng/L		112	60 - 135

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*90*		*25 - 150*
13C5 PFPeA	*105*		*25 - 150*
13C2 PFHxA	*98*		*25 - 150*
13C4 PFHpA	*99*		*25 - 150*
13C4 PFOA	*95*		*25 - 150*
13C5 PFNA	*103*		*25 - 150*
13C2 PFDA	*102*		*25 - 150*
13C2 PFUnA	*105*		*25 - 150*
13C2 PFDoA	*93*		*25 - 150*
13C2 PFTeDA	*98*		*25 - 150*
13C3 PFBS	*98*		*25 - 150*
18O2 PFHxS	*102*		*25 - 150*
13C4 PFOS	*92*		*25 - 150*
13C8 FOSA	*91*		*10 - 150*
d3-NMeFOSAA	*73*		*25 - 150*
d5-NEtFOSAA	*76*		*25 - 150*
d-N-MeFOSA-M	*77*		*10 - 150*
d-N-EtFOSA-M	*78*		*10 - 150*
d7-N-MeFOSE-M	*85*		*10 - 150*
d9-N-EtFOSE-M	*92*		*10 - 150*
M2-4:2 FTS	*75*		*25 - 150*
M2-6:2 FTS	*84*		*25 - 150*
M2-8:2 FTS	*87*		*25 - 150*
13C3 HFPO-DA	*96*		*25 - 150*
13C2 10:2 FTS	*85*		*25 - 150*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 500-225866-1 MS
Matrix: Water
Analysis Batch: 638552

Client Sample ID: 1750-E
Prep Type: Total/NA
Prep Batch: 637962

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	<2.2		36.1	37.6		ng/L		104	70 - 130
Perfluoropentanoic acid (PFPeA)	<0.44		36.1	36.4		ng/L		101	70 - 130
Perfluorohexanoic acid (PFHxA)	<0.52		36.1	36.2		ng/L		100	70 - 130
Perfluoroheptanoic acid (PFHpA)	<0.22		36.1	37.5		ng/L		104	70 - 130
Perfluorooctanoic acid (PFOA)	<0.76		36.1	41.6		ng/L		115	70 - 130
Perfluorononanoic acid (PFNA)	<0.24		36.1	33.3		ng/L		92	70 - 130
Perfluorodecanoic acid (PFDA)	<0.28		36.1	39.1		ng/L		108	70 - 130
Perfluoroundecanoic acid (PFUnA)	<0.99		36.1	37.8		ng/L		105	70 - 130
Perfluorododecanoic acid (PFDoA)	<0.49		36.1	39.6		ng/L		110	70 - 130
Perfluorotridecanoic acid (PFTrDA)	<1.2		36.1	39.1		ng/L		108	70 - 130
Perfluorotetradecanoic acid (PFTeA)	<0.65		36.1	35.8		ng/L		99	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<0.18		32.0	32.6		ng/L		102	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<0.27		33.9	38.8		ng/L		114	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<0.51		32.9	35.7		ng/L		108	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<0.17		34.4	37.2		ng/L		108	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<0.48		33.6	35.3		ng/L		105	70 - 130
Perfluorononanesulfonic acid (PFNS)	<0.33		34.7	38.9		ng/L		112	70 - 130
Perfluorodecanesulfonic acid (PFDS)	<0.29		34.8	39.3		ng/L		113	70 - 130
Perfluorododecanesulfonic acid (PFDoS)	<0.87		35.0	36.6		ng/L		105	70 - 130
Perfluorooctanesulfonamide (FOSA)	<0.88		36.1	36.8		ng/L		102	70 - 130
NEtFOSA	<0.78		36.1	37.1		ng/L		103	70 - 130
NMeFOSA	<0.39		36.1	41.9		ng/L		116	70 - 130
NMeFOSAA	<1.1		36.1	40.9		ng/L		113	70 - 130
NEtFOSAA	<1.2		36.1	39.9		ng/L		111	70 - 130
NMeFOSE	<1.3		36.1	42.7		ng/L		118	70 - 130
NEtFOSE	<0.76		36.1	37.1		ng/L		103	70 - 130
4:2 FTS	<0.22		33.9	36.8		ng/L		109	70 - 130
6:2 FTS	<2.2		34.4	35.1		ng/L		102	70 - 130
8:2 FTS	<0.41		34.6	33.2		ng/L		96	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.36		34.1	39.6		ng/L		116	70 - 130
HFPO-DA (GenX)	<1.3		36.1	37.4		ng/L		104	70 - 130
9Cl-PF3ONS	<0.22		33.7	35.5		ng/L		105	70 - 130
11Cl-PF3OUdS	<0.29		34.1	37.4		ng/L		110	70 - 130

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C4 PFBA	*106*		*25 - 150*
13C5 PFPeA	*113*		*25 - 150*
13C2 PFHxA	*107*		*25 - 150*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 500-225866-1 MS
Matrix: Water
Analysis Batch: 638552

Client Sample ID: 1750-E
Prep Type: Total/NA
Prep Batch: 637962

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C4 PFHpA	*102*		*25 - 150*
13C4 PFOA	*95*		*25 - 150*
13C5 PFNA	*115*		*25 - 150*
13C2 PFDA	*102*		*25 - 150*
13C2 PFUnA	*103*		*25 - 150*
13C2 PFDoA	*98*		*25 - 150*
13C2 PFTeDA	*116*		*25 - 150*
13C3 PFBS	*103*		*25 - 150*
18O2 PFHxS	*104*		*25 - 150*
13C4 PFOS	*99*		*25 - 150*
13C8 FOSA	*108*		*10 - 150*
d3-NMeFOSAA	*82*		*25 - 150*
d5-NEtFOSAA	*87*		*25 - 150*
d-N-MeFOSA-M	*74*		*10 - 150*
d-N-EtFOSA-M	*74*		*10 - 150*
d7-N-MeFOSE-M	*89*		*10 - 150*
d9-N-EtFOSE-M	*96*		*10 - 150*
M2-4:2 FTS	*84*		*25 - 150*
M2-6:2 FTS	*83*		*25 - 150*
M2-8:2 FTS	*93*		*25 - 150*
13C3 HFPO-DA	*106*		*25 - 150*
13C2 10:2 FTS	*82*		*25 - 150*

Lab Sample ID: 500-225866-1 MSD
Matrix: Water
Analysis Batch: 638552

Client Sample ID: 1750-E
Prep Type: Total/NA
Prep Batch: 637962

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	<2.2		35.8	36.4		ng/L		102	70 - 130	3	30
Perfluoropentanoic acid (PFPeA)	<0.44		35.8	37.0		ng/L		103	70 - 130	2	30
Perfluorohexanoic acid (PFHxA)	<0.52		35.8	34.6		ng/L		97	70 - 130	5	30
Perfluoroheptanoic acid (PFHpA)	<0.22		35.8	36.0		ng/L		100	70 - 130	4	30
Perfluorooctanoic acid (PFOA)	<0.76		35.8	37.5		ng/L		105	70 - 130	10	30
Perfluorononanoic acid (PFNA)	<0.24		35.8	35.8		ng/L		100	70 - 130	7	30
Perfluorodecanoic acid (PFDA)	<0.28		35.8	37.9		ng/L		106	70 - 130	3	30
Perfluoroundecanoic acid (PFUnA)	<0.99		35.8	37.7		ng/L		105	70 - 130	0	30
Perfluorododecanoic acid (PFDoA)	<0.49		35.8	41.6		ng/L		116	70 - 130	5	30
Perfluorotridecanoic acid (PFTrDA)	<1.2		35.8	41.5		ng/L		116	70 - 130	6	30
Perfluorotetradecanoic acid (PFTeA)	<0.65		35.8	38.8		ng/L		108	70 - 130	8	30
Perfluorobutanesulfonic acid (PFBS)	<0.18		31.8	34.6		ng/L		109	70 - 130	6	30
Perfluoropentanesulfonic acid (PFPeS)	<0.27		33.7	38.4		ng/L		114	70 - 130	1	30
Perfluorohexanesulfonic acid (PFHxS)	<0.51		32.7	35.3		ng/L		108	70 - 130	1	30
Perfluoroheptanesulfonic acid (PFHpS)	<0.17		34.2	38.4		ng/L		112	70 - 130	3	30

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 500-225866-1 MSD
Matrix: Water
Analysis Batch: 638552

Client Sample ID: 1750-E
Prep Type: Total/NA
Prep Batch: 637962

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorooctanesulfonic acid (PFOS)	<0.48		33.3	36.4		ng/L		109	70 - 130	3	30
Perfluorononanesulfonic acid (PFNS)	<0.33		34.4	34.3		ng/L		100	70 - 130	13	30
Perfluorodecanesulfonic acid (PFDS)	<0.29		34.5	34.2		ng/L		99	70 - 130	14	30
Perfluorododecanesulfonic acid (PFDoS)	<0.87		34.7	37.0		ng/L		106	70 - 130	1	30
Perfluorooctanesulfonamide (FOSA)	<0.88		35.8	38.2		ng/L		107	70 - 130	4	30
NEtFOSA	<0.78		35.8	37.9		ng/L		106	70 - 130	2	30
NMeFOSA	<0.39		35.8	38.6		ng/L		108	70 - 130	8	30
NMeFOSAA	<1.1		35.8	40.3		ng/L		113	70 - 130	1	30
NEtFOSAA	<1.2		35.8	39.8		ng/L		111	70 - 130	0	30
NMeFOSE	<1.3		35.8	40.1		ng/L		112	70 - 130	6	30
NEtFOSE	<0.76		35.8	36.4		ng/L		102	70 - 130	2	30
4:2 FTS	<0.22		33.6	34.9		ng/L		104	70 - 130	5	30
6:2 FTS	<2.2		34.1	34.0		ng/L		100	70 - 130	3	30
8:2 FTS	<0.41		34.4	36.8		ng/L		107	70 - 130	10	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.36		33.8	40.7		ng/L		120	70 - 130	3	30
HFPO-DA (GenX)	<1.3		35.8	37.9		ng/L		106	70 - 130	1	30
9Cl-PF3ONS	<0.22		33.4	35.9		ng/L		107	70 - 130	1	30
11Cl-PF3OUdS	<0.29		33.8	36.0		ng/L		106	70 - 130	4	30

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C4 PFBA	*86*		*25 - 150*
13C5 PFPeA	*105*		*25 - 150*
13C2 PFHxA	*105*		*25 - 150*
13C4 PFHpA	*102*		*25 - 150*
13C4 PFOA	*94*		*25 - 150*
13C5 PFNA	*108*		*25 - 150*
13C2 PFDA	*95*		*25 - 150*
13C2 PFUnA	*94*		*25 - 150*
13C2 PFDoA	*87*		*25 - 150*
13C2 PFTeDA	*105*		*25 - 150*
13C3 PFBS	*95*		*25 - 150*
18O2 PFHxS	*98*		*25 - 150*
13C4 PFOS	*90*		*25 - 150*
13C8 FOSA	*95*		*10 - 150*
d3-NMeFOSAA	*77*		*25 - 150*
d5-NEtFOSAA	*76*		*25 - 150*
d-N-MeFOSA-M	*81*		*10 - 150*
d-N-EtFOSA-M	*78*		*10 - 150*
d7-N-MeFOSE-M	*89*		*10 - 150*
d9-N-EtFOSE-M	*97*		*10 - 150*
M2-4:2 FTS	*85*		*25 - 150*
M2-6:2 FTS	*76*		*25 - 150*
M2-8:2 FTS	*77*		*25 - 150*
13C3 HFPO-DA	*102*		*25 - 150*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 500-225866-1 MSD
Matrix: Water
Analysis Batch: 638552

Client Sample ID: 1750-E
Prep Type: Total/NA
Prep Batch: 637962

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C2 10:2 FTS	83		25 - 150

Lab Chronicle

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225866-1

Client Sample ID: 1750-E
Date Collected: 11/21/22 07:53
Date Received: 11/22/22 09:20

Lab Sample ID: 500-225866-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			637962	EJR	EET SAC	12/07/22 06:05
Total/NA	Analysis	537 (modified)		1	638552	D1R	EET SAC	12/09/22 02:03

Client Sample ID: 1750-E-FB
Date Collected: 11/21/22 08:00
Date Received: 11/22/22 09:20

Lab Sample ID: 500-225866-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			637962	EJR	EET SAC	12/07/22 06:05
Total/NA	Analysis	537 (modified)		1	638552	D1R	EET SAC	12/09/22 02:34

Laboratory References:

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

Accreditation/Certification Summary

Client: Ramboll US Corporation
Job ID: 500-225866-1
Project/Site: Fmr Mirro Plt 2 - 1690026073

Laboratory: Eurofins Sacramento

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

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998204680	08-31-23

Eurofins Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone: 916-373-5600 Fax: 916-372-1059

Chain of Custody Record

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Client Information	Sampler: K. HEIMSTEAD	Lab PM: Fredrick, Sandie	Carrier Tracking No(s):	COC No: 500-107645-45320.3
Client Contact: Paul Lindquist	Phone: 262-901-0129	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin:	Page: Page 3 of 3
Company: Ramboll US Corporation	PWSID:			Job #:
Address: 234 W. Florida Street Fifth Floor	Due Date Requested: STANDARD			
City: Milwaukee	TAT Requested (days):			
State, Zip: WI, 53204	Compliance Project: Δ Yes Δ No			
Phone: 262-901-3510(Tel)	PO #: MIRRO 2			
Email: plindquist@ramboll.com	WO #:			
Project Name: Fmr Mirro Plt 2 - 1690026073	Project #: 50020429			
Site:	SSOW#:			

Analysis Requested

500-225866 Chain of Custody

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC_IDA_WI - PFAS, Standard List (33 analytes)	Special Instructions/Note:
1750 - E	11/21/2022	0753	G	Water	N	Y	X	ADD'L VOL FOR MS/MSD
1750 - E - FB	11/21/2022	0800	G	Water	N	N	X	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
		11/21/2022 1815	RAMBOLL	FEDEX	11/21/2022	
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 11/22/22 920	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.: 2110573	Cooler Temperature(s) °C and Other Remarks: 3.2

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Ramboll US Corporation

Job Number: 500-225866-1

Login Number: 225866
List Number: 1
Creator: Fredrick, Sandie

List Source: Eurofins Chicago

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

Login Sample Receipt Checklist

Client: Ramboll US Corporation

Job Number: 500-225866-1

Login Number: 225866
List Number: 2
Creator: Simmons, Jason C

List Source: Eurofins Sacramento
List Creation: 11/22/22 05:07 PM

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	2110573
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	3.2c
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.	True	
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	

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Sacramento Sample Receiving Notes

500-225866 Field Sheet

Job:

Tracking # : 6155 6317 1312

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier

GSO / OnTrac / Goldstreak / USPS / Other

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations.
File in the job folder with the COC.

Therm. ID: L-07 Corr. Factor: (+ / -) _____ °C

Ice Y Wet N Gel _____ Other _____

Cooler Custody Seal: _____

Cooler ID: 2110573

Temp Observed: 3.2 °C Corrected: 3.2 °C

From: Temp Blank ☐ Sample ☐

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	☐	☐	☐
Cooler Temperature is acceptable?	☐	☐	☐
Frozen samples show signs of thaw?	☐	☐	☐

Initials: DM Date: 11/22/22

Unpacking/Labeling The Samples	Yes	No	NA
COC is complete w/o discrepancies?	☐	☐	☐
Samples compromised/tampered with?	☐	☐	☐
Containers are not broken or leaking?	☐	☐	☐
Sample custody seal?	☐	☐	☐
Sample containers have legible labels?	☐	☐	☐
Sample date/times are provided?	☐	☐	☐
Appropriate containers are used?	☐	☐	☐
Sample bottles are completely filled?	☐	☐	☐
Sample preservatives verified?	☐	☐	☐
Is the Field Sampler's name on COC?	☐	☐	☐
Samples require splitting/compositing?	☐	☐	☐
Samples w/o discrepancies?	☐	☐	☐
Zero headspace?*	☐	☐	☐
Alkalinity has no headspace?	☐	☐	☐
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☐
Multiphasic samples are not present?	☐	☐	☐

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

Initials: KS Date: 11/22/22

Notes:

Trizma Lot #(s):

Login Completion	Yes	No	NA
Receipt Temperature on COC?	☐	☐	☐
Samples received within hold time?	☐	☐	☐
NCM Filed?	☐	☐	☐
Log Release checked in TALS?	☐	☐	☐

Initials: KS Date: 11/22/22

WR3284

Isotope Dilution Summary

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225866-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFUnA (25-150)
500-225866-1	1750-E	95	98	99	102	97	101	99	95
500-225866-1 MS	1750-E	106	113	107	102	95	115	102	103
500-225866-1 MSD	1750-E	86	105	105	102	94	108	95	94
500-225866-2	1750-E-FB	97	102	100	103	99	104	98	99
LCS 320-637962/2-A	Lab Control Sample	90	105	98	99	95	103	102	105
MB 320-637962/1-A	Method Blank	91	97	99	90	94	101	95	97

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFDoA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (10-150)	d3NMFOS (25-150)	d5NEFOS (25-150)
500-225866-1	1750-E	96	106	100	95	101	100	77	80
500-225866-1 MS	1750-E	98	116	103	104	99	108	82	87
500-225866-1 MSD	1750-E	87	105	95	98	90	95	77	76
500-225866-2	1750-E-FB	92	104	95	98	95	97	80	84
LCS 320-637962/2-A	Lab Control Sample	93	98	98	102	92	91	73	76
MB 320-637962/1-A	Method Blank	93	99	92	100	99	92	71	76

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	dMeFOSA (10-150)	dEtFOSA (10-150)	NMFM (10-150)	NEFM (10-150)	M242FTS (25-150)	M262FTS (25-150)	M282FTS (25-150)	HFPODA (25-150)
500-225866-1	1750-E	80	78	93	95	81	84	79	99
500-225866-1 MS	1750-E	74	74	89	96	84	83	93	106
500-225866-1 MSD	1750-E	81	78	89	97	85	76	77	102
500-225866-2	1750-E-FB	75	71	92	99	87	85	75	95
LCS 320-637962/2-A	Lab Control Sample	77	78	85	92	75	84	87	96
MB 320-637962/1-A	Method Blank	72	70	88	98	74	70	70	100

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	M102FTS (25-150)
500-225866-1	1750-E	90
500-225866-1 MS	1750-E	82
500-225866-1 MSD	1750-E	83
500-225866-2	1750-E-FB	86
LCS 320-637962/2-A	Lab Control Sample	85
MB 320-637962/1-A	Method Blank	79

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: Ramboll US Corporation
Job ID: 500-225866-1
Project/Site: Fmr Mirro Plt 2 - 1690026073

d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
dMeFOSA = d-N-MeFOSA-M
dEtFOSA = d-N-EtFOSA-M
NMFM = d7-N-MeFOSE-M
NEFM = d9-N-EtFOSE-M
M242FTS = M2-4:2 FTS
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
HFPODA = 13C3 HFPO-DA
M102FTS = 13C2 10:2 FTS

RAMBOLL

ENVIRONMENT
& HEALTH

Sent Via Overnight Delivery

[redacted]
2519 Woodland Drive
Manitowoc, WI 54220

POTABLE WELL SAMPLING RESULTS AT 2519 WOODLAND DRIVE
FORMER MIRRO PLANT NO. 2, 2009 MIRRO DRIVE
MANITOWOC, WISCONSIN, BRRTS NO. 02-36-588656

Dear [redacted]:

January 3, 2023

Ramboll
234 W. Florida Street
Fifth Floor
Milwaukee, WI 53204
USA

T +1 414 837 3607
F +1 414 837 3608
https://ramboll.com

Ref 1690026073

The purpose of this letter is to provide you with the results of the recent potable well testing from your property completed by Newell Operating Company (NOC) with the oversight of the Wisconsin Department of Natural Resources (WDNR). As you are aware, this testing was conducted because of the potential for per- and polyfluoroalkyl substances (PFAS) contaminated groundwater to migrate off site from the nearby former Mirro Plant No. 2 facility.

On November 21, 2022, NOC's environmental consultant, Ramboll US Consulting, Inc. (Ramboll), collected water samples from your potable well using the spigot prior to your pressure tank. Ramboll submitted the samples to Eurofins Environment Testing (Eurofins) in Sacramento, California, a State of Wisconsin PFAS certified laboratory.

Your Test Results

A copy of the laboratory report for your potable well sample is enclosed. The analyses did not detect any PFAS.

If you have any questions regarding the quality of your potable well water, please contact the following:

- Tauren Beggs, WDNR, (920) 510-3472, Tauren.Beggs@wisconsin.gov; or
- Nathan Kloczko, WDHS, (608) 267-3227, Nathan.Kloczko@dhs.wisconsin.gov.

For any other questions regarding this letter, please contact Lou Meschede at (219) 781-7177.

Sincerely,

Paul Lindquist
Managing Consultant

D +1 262 901 3510
plindquist@ramboll.com

Jeanne M. Tarvin, PG, CPG
E&H Americas Country Market Director

D +1 262 901 0085
jtarvin@ramboll.com

cc: Kristin Jones, NOC
Tauren Beggs, WDNR
Nathan Kloczko, WDHS

ENCLOSURE

EUROFINS LABORATORY ANALYTICAL REPORT

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Paul Lindquist
Ramboll US Corporation
234 W. Florida Street
Fifth Floor
Milwaukee, Wisconsin 53204

Generated 12/16/2022 4:04:24 PM

JOB DESCRIPTION

Fmr Mirro Plt 2 - 1690026073

JOB NUMBER

500-225864-1

Eurofins Chicago
2417 Bond Street
University Park IL 60484

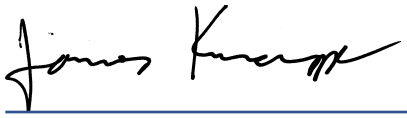
See page two for job notes and contact information.

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Authorization



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Authorized for release by
Jim Knapp, Project Manager II
Jim.Knapp@et.eurofinsus.com
Designee for
Sandie Fredrick, Project Manager II
Sandra.Fredrick@et.eurofinsus.com
(920)261-1660

Table of Contents

Job ID: 500-225864-1

Laboratory: Eurofins Chicago

Narrative

Job Narrative
500-225864-1

Comments
No additional comments.

Receipt
The samples were received on 11/22/2022 9:20 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 2.1º C.

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

Organic Prep
Method 3535: The following samples in preparation batch 320-637960 were light brown in color prior to extraction. 2519-E (500-225864-1), 2519-E (500-225864-1[MS]), 2519-E (500-225864-1[MSD]) and 2519-E (500-225864-3)

Method: 3535_PFC_28D
Matrix :Aqueous

Method 3535: The following samples in preparation batch 320-637960 were observed to have a thin layer of sediment present in the bottom of the bottle prior to extraction. 2519-E (500-225864-1), 2519-E (500-225864-1[MS]), 2519-E (500-225864-1[MSD]) and 2519-E (500-225864-3)

Method: 3535_PFC_28D
Matrix :Aqueous

Method 3535: Due to the amount of sediment present in the bottom of the bottle, the following samples were centrifuged and decanted into new 250 mL container: 2519-E (500-225864-1), 2519-E (500-225864-1[MS]), 2519-E (500-225864-1[MSD]) and 2519-E (500-225864-3). After centrifuging and decanting, the samples were fortified with IDA and then extracted. 320-637960

Method: 3535_PFC_28D
Matrix :Aqueous

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

Detection Summary

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225864-1

Client Sample ID: 2519-E — Lab Sample ID: 500-225864-1

No Detections.

Client Sample ID: 2519-E-FB — Lab Sample ID: 500-225864-2

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225864-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	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: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225864-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-225864-1	2519-E	Water	11/21/22 16:40	11/22/22 09:20
500-225864-2	2519-E-FB	Water	11/21/22 16:45	11/22/22 09:20

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225864-1

Client Sample ID: 2519-E
Date Collected: 11/21/22 16:40
Date Received: 11/22/22 09:20

Lab Sample ID: 500-225864-1
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.3		4.9	2.3	ng/L		12/07/22 05:52	12/09/22 10:00	1
Perfluoropentanoic acid (PFPeA)	<0.48		2.0	0.48	ng/L		12/07/22 05:52	12/09/22 10:00	1
Perfluorohexanoic acid (PFHxA)	<0.57		2.0	0.57	ng/L		12/07/22 05:52	12/09/22 10:00	1
Perfluoroheptanoic acid (PFHpA)	<0.24		2.0	0.24	ng/L		12/07/22 05:52	12/09/22 10:00	1
Perfluorooctanoic acid (PFOA)	<0.83		2.0	0.83	ng/L		12/07/22 05:52	12/09/22 10:00	1
Perfluorononanoic acid (PFNA)	<0.26		2.0	0.26	ng/L		12/07/22 05:52	12/09/22 10:00	1
Perfluorodecanoic acid (PFDA)	<0.30		2.0	0.30	ng/L		12/07/22 05:52	12/09/22 10:00	1
Perfluoroundecanoic acid (PFUnA)	<1.1		2.0	1.1	ng/L		12/07/22 05:52	12/09/22 10:00	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	0.54	ng/L		12/07/22 05:52	12/09/22 10:00	1
Perfluorotridecanoic acid (PFTrDA)	<1.3		2.0	1.3	ng/L		12/07/22 05:52	12/09/22 10:00	1
Perfluorotetradecanoic acid (PFTeA)	<0.71		2.0	0.71	ng/L		12/07/22 05:52	12/09/22 10:00	1
Perfluorobutanesulfonic acid (PFBS)	<0.20		2.0	0.20	ng/L		12/07/22 05:52	12/09/22 10:00	1
Perfluoropentanesulfonic acid (PFPeS)	<0.29		2.0	0.29	ng/L		12/07/22 05:52	12/09/22 10:00	1
Perfluorohexanesulfonic acid (PFHxS)	<0.56		2.0	0.56	ng/L		12/07/22 05:52	12/09/22 10:00	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.19		2.0	0.19	ng/L		12/07/22 05:52	12/09/22 10:00	1
Perfluorooctanesulfonic acid (PFOS)	<0.53		2.0	0.53	ng/L		12/07/22 05:52	12/09/22 10:00	1
Perfluorononanesulfonic acid (PFNS)	<0.36		2.0	0.36	ng/L		12/07/22 05:52	12/09/22 10:00	1
Perfluorodecanesulfonic acid (PFDS)	<0.31		2.0	0.31	ng/L		12/07/22 05:52	12/09/22 10:00	1
Perfluorododecanesulfonic acid (PFDoS)	<0.95		2.0	0.95	ng/L		12/07/22 05:52	12/09/22 10:00	1
Perfluorooctanesulfonamide (FOSA)	<0.96		2.0	0.96	ng/L		12/07/22 05:52	12/09/22 10:00	1
NEtFOSA	<0.85		2.0	0.85	ng/L		12/07/22 05:52	12/09/22 10:00	1
NMeFOSA	<0.42		2.0	0.42	ng/L		12/07/22 05:52	12/09/22 10:00	1
NMeFOSAA	<1.2		4.9	1.2	ng/L		12/07/22 05:52	12/09/22 10:00	1
NEtFOSAA	<1.3		4.9	1.3	ng/L		12/07/22 05:52	12/09/22 10:00	1
NMeFOSE	<1.4		3.9	1.4	ng/L		12/07/22 05:52	12/09/22 10:00	1
NEtFOSE	<0.83		2.0	0.83	ng/L		12/07/22 05:52	12/09/22 10:00	1
4:2 FTS	<0.23		2.0	0.23	ng/L		12/07/22 05:52	12/09/22 10:00	1
6:2 FTS	<2.4		4.9	2.4	ng/L		12/07/22 05:52	12/09/22 10:00	1
8:2 FTS	<0.45		2.0	0.45	ng/L		12/07/22 05:52	12/09/22 10:00	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.39		2.0	0.39	ng/L		12/07/22 05:52	12/09/22 10:00	1
HFPO-DA (GenX)	<1.5		3.9	1.5	ng/L		12/07/22 05:52	12/09/22 10:00	1
9Cl-PF3ONS	<0.23		2.0	0.23	ng/L		12/07/22 05:52	12/09/22 10:00	1
11Cl-PF3OUdS	<0.31		2.0	0.31	ng/L		12/07/22 05:52	12/09/22 10:00	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*83*		*25 - 150*	*12/07/22 05:52*	*12/09/22 10:00*	*1*
13C5 PFPeA	*91*		*25 - 150*	*12/07/22 05:52*	*12/09/22 10:00*	*1*
13C2 PFHxA	*91*		*25 - 150*	*12/07/22 05:52*	*12/09/22 10:00*	*1*
13C4 PFHpA	*93*		*25 - 150*	*12/07/22 05:52*	*12/09/22 10:00*	*1*
13C4 PFOA	*94*		*25 - 150*	*12/07/22 05:52*	*12/09/22 10:00*	*1*
13C5 PFNA	*98*		*25 - 150*	*12/07/22 05:52*	*12/09/22 10:00*	*1*
13C2 PFDA	*92*		*25 - 150*	*12/07/22 05:52*	*12/09/22 10:00*	*1*
13C2 PFUnA	*94*		*25 - 150*	*12/07/22 05:52*	*12/09/22 10:00*	*1*
13C2 PFDoA	*87*		*25 - 150*	*12/07/22 05:52*	*12/09/22 10:00*	*1*
13C2 PFTeDA	*95*		*25 - 150*	*12/07/22 05:52*	*12/09/22 10:00*	*1*
13C3 PFBS	*86*		*25 - 150*	*12/07/22 05:52*	*12/09/22 10:00*	*1*
18O2 PFHxS	*94*		*25 - 150*	*12/07/22 05:52*	*12/09/22 10:00*	*1*

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225864-1

Client Sample ID: 2519-E
Date Collected: 11/21/22 16:40
Date Received: 11/22/22 09:20

Lab Sample ID: 500-225864-1
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	90		25 - 150	12/07/22 05:52	12/09/22 10:00	1
13C8 FOSA	91		10 - 150	12/07/22 05:52	12/09/22 10:00	1
d3-NMeFOSAA	70		25 - 150	12/07/22 05:52	12/09/22 10:00	1
d5-NEtFOSAA	72		25 - 150	12/07/22 05:52	12/09/22 10:00	1
d-N-MeFOSA-M	66		10 - 150	12/07/22 05:52	12/09/22 10:00	1
d-N-EtFOSA-M	65		10 - 150	12/07/22 05:52	12/09/22 10:00	1
d7-N-MeFOSE-M	82		10 - 150	12/07/22 05:52	12/09/22 10:00	1
d9-N-EtFOSE-M	87		10 - 150	12/07/22 05:52	12/09/22 10:00	1
M2-4:2 FTS	78		25 - 150	12/07/22 05:52	12/09/22 10:00	1
M2-6:2 FTS	82		25 - 150	12/07/22 05:52	12/09/22 10:00	1
M2-8:2 FTS	80		25 - 150	12/07/22 05:52	12/09/22 10:00	1
13C3 HFPO-DA	93		25 - 150	12/07/22 05:52	12/09/22 10:00	1
13C2 10:2 FTS	82		25 - 150	12/07/22 05:52	12/09/22 10:00	1

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225864-1

Client Sample ID: 2519-E-FB
Date Collected: 11/21/22 16:45
Date Received: 11/22/22 09:20

Lab Sample ID: 500-225864-2
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.3		4.8	2.3	ng/L		12/07/22 05:52	12/09/22 11:01	1
Perfluoropentanoic acid (PFPeA)	<0.47		1.9	0.47	ng/L		12/07/22 05:52	12/09/22 11:01	1
Perfluorohexanoic acid (PFHxA)	<0.55		1.9	0.55	ng/L		12/07/22 05:52	12/09/22 11:01	1
Perfluoroheptanoic acid (PFHpA)	<0.24		1.9	0.24	ng/L		12/07/22 05:52	12/09/22 11:01	1
Perfluorooctanoic acid (PFOA)	<0.81		1.9	0.81	ng/L		12/07/22 05:52	12/09/22 11:01	1
Perfluorononanoic acid (PFNA)	<0.26		1.9	0.26	ng/L		12/07/22 05:52	12/09/22 11:01	1
Perfluorodecanoic acid (PFDA)	<0.30		1.9	0.30	ng/L		12/07/22 05:52	12/09/22 11:01	1
Perfluoroundecanoic acid (PFUnA)	<1.0		1.9	1.0	ng/L		12/07/22 05:52	12/09/22 11:01	1
Perfluorododecanoic acid (PFDoA)	<0.52		1.9	0.52	ng/L		12/07/22 05:52	12/09/22 11:01	1
Perfluorotridecanoic acid (PFTrDA)	<1.2		1.9	1.2	ng/L		12/07/22 05:52	12/09/22 11:01	1
Perfluorotetradecanoic acid (PFTeA)	<0.70		1.9	0.70	ng/L		12/07/22 05:52	12/09/22 11:01	1
Perfluorobutanesulfonic acid (PFBS)	<0.19		1.9	0.19	ng/L		12/07/22 05:52	12/09/22 11:01	1
Perfluoropentanesulfonic acid (PFPeS)	<0.29		1.9	0.29	ng/L		12/07/22 05:52	12/09/22 11:01	1
Perfluorohexanesulfonic acid (PFHxS)	<0.54		1.9	0.54	ng/L		12/07/22 05:52	12/09/22 11:01	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.18		1.9	0.18	ng/L		12/07/22 05:52	12/09/22 11:01	1
Perfluorooctanesulfonic acid (PFOS)	<0.51		1.9	0.51	ng/L		12/07/22 05:52	12/09/22 11:01	1
Perfluorononanesulfonic acid (PFNS)	<0.35		1.9	0.35	ng/L		12/07/22 05:52	12/09/22 11:01	1
Perfluorodecanesulfonic acid (PFDS)	<0.30		1.9	0.30	ng/L		12/07/22 05:52	12/09/22 11:01	1
Perfluorododecanesulfonic acid (PFDoS)	<0.92		1.9	0.92	ng/L		12/07/22 05:52	12/09/22 11:01	1
Perfluorooctanesulfonamide (FOSA)	<0.93		1.9	0.93	ng/L		12/07/22 05:52	12/09/22 11:01	1
NEtFOSA	<0.83		1.9	0.83	ng/L		12/07/22 05:52	12/09/22 11:01	1
NMeFOSA	<0.41		1.9	0.41	ng/L		12/07/22 05:52	12/09/22 11:01	1
NMeFOSAA	<1.1		4.8	1.1	ng/L		12/07/22 05:52	12/09/22 11:01	1
NEtFOSAA	<1.2		4.8	1.2	ng/L		12/07/22 05:52	12/09/22 11:01	1
NMeFOSE	<1.3		3.8	1.3	ng/L		12/07/22 05:52	12/09/22 11:01	1
NEtFOSE	<0.81		1.9	0.81	ng/L		12/07/22 05:52	12/09/22 11:01	1
4:2 FTS	<0.23		1.9	0.23	ng/L		12/07/22 05:52	12/09/22 11:01	1
6:2 FTS	<2.4		4.8	2.4	ng/L		12/07/22 05:52	12/09/22 11:01	1
8:2 FTS	<0.44		1.9	0.44	ng/L		12/07/22 05:52	12/09/22 11:01	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.38		1.9	0.38	ng/L		12/07/22 05:52	12/09/22 11:01	1
HFPO-DA (GenX)	<1.4		3.8	1.4	ng/L		12/07/22 05:52	12/09/22 11:01	1
9Cl-PF3ONS	<0.23		1.9	0.23	ng/L		12/07/22 05:52	12/09/22 11:01	1
11Cl-PF3OUdS	<0.30		1.9	0.30	ng/L		12/07/22 05:52	12/09/22 11:01	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*92*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:01*	*1*
13C5 PFPeA	*96*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:01*	*1*
13C2 PFHxA	*96*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:01*	*1*
13C4 PFHpA	*99*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:01*	*1*
13C4 PFOA	*95*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:01*	*1*
13C5 PFNA	*102*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:01*	*1*
13C2 PFDA	*103*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:01*	*1*
13C2 PFUnA	*97*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:01*	*1*
13C2 PFDoA	*96*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:01*	*1*
13C2 PFTeDA	*103*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:01*	*1*
13C3 PFBS	*97*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:01*	*1*
18O2 PFHxS	*104*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:01*	*1*

Client Sample ID: 2519-E-FB
Date Collected: 11/21/22 16:45
Date Received: 11/22/22 09:20

Lab Sample ID: 500-225864-2
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	94		25 - 150	12/07/22 05:52	12/09/22 11:01	1
13C8 FOSA	95		10 - 150	12/07/22 05:52	12/09/22 11:01	1
d3-NMeFOSAA	78		25 - 150	12/07/22 05:52	12/09/22 11:01	1
d5-NEtFOSAA	88		25 - 150	12/07/22 05:52	12/09/22 11:01	1
d-N-MeFOSA-M	75		10 - 150	12/07/22 05:52	12/09/22 11:01	1
d-N-EtFOSA-M	72		10 - 150	12/07/22 05:52	12/09/22 11:01	1
d7-N-MeFOSE-M	88		10 - 150	12/07/22 05:52	12/09/22 11:01	1
d9-N-EtFOSE-M	100		10 - 150	12/07/22 05:52	12/09/22 11:01	1
M2-4:2 FTS	89		25 - 150	12/07/22 05:52	12/09/22 11:01	1
M2-6:2 FTS	90		25 - 150	12/07/22 05:52	12/09/22 11:01	1
M2-8:2 FTS	85		25 - 150	12/07/22 05:52	12/09/22 11:01	1
13C3 HFPO-DA	99		25 - 150	12/07/22 05:52	12/09/22 11:01	1
13C2 10:2 FTS	92		25 - 150	12/07/22 05:52	12/09/22 11:01	1

Definitions/Glossary

Client: Ramboll US Corporation
Job ID: 500-225864-1
Project/Site: Fmr Mirro Plt 2 - 1690026073

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

QC Association Summary

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225864-1

LCMS

Prep Batch: 637960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-225864-1	2519-E	Total/NA	Water	3535	
500-225864-2	2519-E-FB	Total/NA	Water	3535	
MB 320-637960/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-637960/2-A	Lab Control Sample	Total/NA	Water	3535	
500-225864-1 MS	2519-E	Total/NA	Water	3535	
500-225864-1 MSD	2519-E	Total/NA	Water	3535	

Analysis Batch: 638571

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-225864-1	2519-E	Total/NA	Water	537 (modified)	637960
500-225864-2	2519-E-FB	Total/NA	Water	537 (modified)	637960
MB 320-637960/1-A	Method Blank	Total/NA	Water	537 (modified)	637960
LCS 320-637960/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	637960
500-225864-1 MS	2519-E	Total/NA	Water	537 (modified)	637960
500-225864-1 MSD	2519-E	Total/NA	Water	537 (modified)	637960

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-637960/1-A
Matrix: Water
Analysis Batch: 638571

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 637960

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.4		5.0	2.4	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluoropentanoic acid (PFPeA)	<0.49		2.0	0.49	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorohexanoic acid (PFHxA)	<0.58		2.0	0.58	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluoroheptanoic acid (PFHpA)	<0.25		2.0	0.25	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorooctanoic acid (PFOA)	<0.85		2.0	0.85	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorononanoic acid (PFNA)	<0.27		2.0	0.27	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	0.31	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluoroundecanoic acid (PFUnA)	<1.1		2.0	1.1	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorododecanoic acid (PFDoA)	<0.55		2.0	0.55	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorotridecanoic acid (PFTrDA)	<1.3		2.0	1.3	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorotetradecanoic acid (PFTeA)	<0.73		2.0	0.73	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorobutanesulfonic acid (PFBS)	<0.20		2.0	0.20	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluoropentanesulfonic acid (PFPeS)	<0.30		2.0	0.30	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorohexanesulfonic acid (PFHxS)	<0.57		2.0	0.57	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.19		2.0	0.19	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorooctanesulfonic acid (PFOS)	<0.54		2.0	0.54	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorononanesulfonic acid (PFNS)	<0.37		2.0	0.37	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorodecanesulfonic acid (PFDS)	<0.32		2.0	0.32	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorododecanesulfonic acid (PFDoS)	<0.97		2.0	0.97	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorooctanesulfonamide (FOSA)	<0.98		2.0	0.98	ng/L		12/07/22 05:52	12/09/22 08:49	1
NEtFOSA	<0.87		2.0	0.87	ng/L		12/07/22 05:52	12/09/22 08:49	1
NMeFOSA	<0.43		2.0	0.43	ng/L		12/07/22 05:52	12/09/22 08:49	1
NMeFOSAA	<1.2		5.0	1.2	ng/L		12/07/22 05:52	12/09/22 08:49	1
NEtFOSAA	<1.3		5.0	1.3	ng/L		12/07/22 05:52	12/09/22 08:49	1
NMeFOSE	<1.4		4.0	1.4	ng/L		12/07/22 05:52	12/09/22 08:49	1
NEtFOSE	<0.85		2.0	0.85	ng/L		12/07/22 05:52	12/09/22 08:49	1
4:2 FTS	<0.24		2.0	0.24	ng/L		12/07/22 05:52	12/09/22 08:49	1
6:2 FTS	<2.5		5.0	2.5	ng/L		12/07/22 05:52	12/09/22 08:49	1
8:2 FTS	<0.46		2.0	0.46	ng/L		12/07/22 05:52	12/09/22 08:49	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.40		2.0	0.40	ng/L		12/07/22 05:52	12/09/22 08:49	1
HFPO-DA (GenX)	<1.5		4.0	1.5	ng/L		12/07/22 05:52	12/09/22 08:49	1
9Cl-PF3ONS	<0.24		2.0	0.24	ng/L		12/07/22 05:52	12/09/22 08:49	1
11Cl-PF3OUdS	<0.32		2.0	0.32	ng/L		12/07/22 05:52	12/09/22 08:49	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*90*		*25 - 150*	*12/07/22 05:52*	*12/09/22 08:49*	*1*
13C5 PFPeA	*97*		*25 - 150*	*12/07/22 05:52*	*12/09/22 08:49*	*1*
13C2 PFHxA	*93*		*25 - 150*	*12/07/22 05:52*	*12/09/22 08:49*	*1*
13C4 PFHpA	*97*		*25 - 150*	*12/07/22 05:52*	*12/09/22 08:49*	*1*
13C4 PFOA	*93*		*25 - 150*	*12/07/22 05:52*	*12/09/22 08:49*	*1*
13C5 PFNA	*99*		*25 - 150*	*12/07/22 05:52*	*12/09/22 08:49*	*1*
13C2 PFDA	*90*		*25 - 150*	*12/07/22 05:52*	*12/09/22 08:49*	*1*
13C2 PFUnA	*90*		*25 - 150*	*12/07/22 05:52*	*12/09/22 08:49*	*1*
13C2 PFDoA	*84*		*25 - 150*	*12/07/22 05:52*	*12/09/22 08:49*	*1*
13C2 PFTeDA	*88*		*25 - 150*	*12/07/22 05:52*	*12/09/22 08:49*	*1*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-637960/1-A
Matrix: Water
Analysis Batch: 638571

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 637960

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFBS	92		25 - 150	12/07/22 05:52	12/09/22 08:49	1
18O2 PFHxS	101		25 - 150	12/07/22 05:52	12/09/22 08:49	1
13C4 PFOS	88		25 - 150	12/07/22 05:52	12/09/22 08:49	1
13C8 FOSA	84		10 - 150	12/07/22 05:52	12/09/22 08:49	1
d3-NMeFOSAA	67		25 - 150	12/07/22 05:52	12/09/22 08:49	1
d5-NEtFOSAA	72		25 - 150	12/07/22 05:52	12/09/22 08:49	1
d-N-MeFOSA-M	66		10 - 150	12/07/22 05:52	12/09/22 08:49	1
d-N-EtFOSA-M	67		10 - 150	12/07/22 05:52	12/09/22 08:49	1
d7-N-MeFOSE-M	83		10 - 150	12/07/22 05:52	12/09/22 08:49	1
d9-N-EtFOSE-M	86		10 - 150	12/07/22 05:52	12/09/22 08:49	1
M2-4:2 FTS	64		25 - 150	12/07/22 05:52	12/09/22 08:49	1
M2-6:2 FTS	67		25 - 150	12/07/22 05:52	12/09/22 08:49	1
M2-8:2 FTS	65		25 - 150	12/07/22 05:52	12/09/22 08:49	1
13C3 HFPO-DA	95		25 - 150	12/07/22 05:52	12/09/22 08:49	1
13C2 10:2 FTS	67		25 - 150	12/07/22 05:52	12/09/22 08:49	1

Lab Sample ID: LCS 320-637960/2-A
Matrix: Water
Analysis Batch: 638571

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 637960

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	40.0	40.8		ng/L		102	60 - 135
Perfluoropentanoic acid (PFPeA)	40.0	39.5		ng/L		99	60 - 135
Perfluorohexanoic acid (PFHxA)	40.0	41.2		ng/L		103	60 - 135
Perfluoroheptanoic acid (PFHpA)	40.0	43.5		ng/L		109	60 - 135
Perfluorooctanoic acid (PFOA)	40.0	43.9		ng/L		110	60 - 135
Perfluorononanoic acid (PFNA)	40.0	39.9		ng/L		100	60 - 135
Perfluorodecanoic acid (PFDA)	40.0	42.3		ng/L		106	60 - 135
Perfluoroundecanoic acid (PFUnA)	40.0	43.6		ng/L		109	60 - 135
Perfluorododecanoic acid (PFDoA)	40.0	46.6		ng/L		116	60 - 135
Perfluorotridecanoic acid (PFTrDA)	40.0	43.3		ng/L		108	60 - 135
Perfluorotetradecanoic acid (PFTeA)	40.0	42.0		ng/L		105	60 - 135
Perfluorobutanesulfonic acid (PFBS)	35.5	35.9		ng/L		101	60 - 135
Perfluoropentanesulfonic acid (PFPeS)	37.6	38.0		ng/L		101	60 - 135
Perfluorohexanesulfonic acid (PFHxS)	36.5	37.3		ng/L		102	60 - 135
Perfluoroheptanesulfonic acid (PFHpS)	38.2	43.7		ng/L		115	60 - 135
Perfluorooctanesulfonic acid (PFOS)	37.2	39.7		ng/L		107	60 - 135
Perfluorononanesulfonic acid (PFNS)	38.5	41.1		ng/L		107	60 - 135
Perfluorodecanesulfonic acid (PFDS)	38.6	42.2		ng/L		109	60 - 135
Perfluorododecanesulfonic acid (PFDoS)	38.8	37.7		ng/L		97	60 - 135

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-637960/2-A
Matrix: Water
Analysis Batch: 638571

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 637960

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanesulfonamide (FOSA)	40.0	41.5		ng/L		104	60 - 135
NEtFOSA	40.0	39.5		ng/L		99	60 - 135
NMeFOSA	40.0	40.6		ng/L		101	60 - 135
NMeFOSAA	40.0	46.0		ng/L		115	60 - 135
NEtFOSAA	40.0	42.4		ng/L		106	60 - 135
NMeFOSE	40.0	43.6		ng/L		109	60 - 135
NEtFOSE	40.0	40.6		ng/L		102	60 - 135
4:2 FTS	37.5	34.0		ng/L		91	60 - 135
6:2 FTS	38.1	37.4		ng/L		98	60 - 135
8:2 FTS	38.4	39.4		ng/L		102	60 - 135
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	43.5		ng/L		115	60 - 135
HFPO-DA (GenX)	40.0	43.0		ng/L		107	60 - 135
9Cl-PF3ONS	37.4	38.1		ng/L		102	60 - 135
11Cl-PF3OUdS	37.8	38.8		ng/L		103	60 - 135

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*95*		*25 - 150*
13C5 PFPeA	*100*		*25 - 150*
13C2 PFHxA	*103*		*25 - 150*
13C4 PFHpA	*98*		*25 - 150*
13C4 PFOA	*99*		*25 - 150*
13C5 PFNA	*106*		*25 - 150*
13C2 PFDA	*101*		*25 - 150*
13C2 PFUnA	*100*		*25 - 150*
13C2 PFDoA	*95*		*25 - 150*
13C2 PFTeDA	*99*		*25 - 150*
13C3 PFBS	*105*		*25 - 150*
18O2 PFHxS	*107*		*25 - 150*
13C4 PFOS	*102*		*25 - 150*
13C8 FOSA	*97*		*10 - 150*
d3-NMeFOSAA	*77*		*25 - 150*
d5-NEtFOSAA	*76*		*25 - 150*
d-N-MeFOSA-M	*81*		*10 - 150*
d-N-EtFOSA-M	*82*		*10 - 150*
d7-N-MeFOSE-M	*90*		*10 - 150*
d9-N-EtFOSE-M	*98*		*10 - 150*
M2-4:2 FTS	*76*		*25 - 150*
M2-6:2 FTS	*77*		*25 - 150*
M2-8:2 FTS	*77*		*25 - 150*
13C3 HFPO-DA	*101*		*25 - 150*
13C2 10:2 FTS	*78*		*25 - 150*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 500-225864-1 MS
Matrix: Water
Analysis Batch: 638571

Client Sample ID: 2519-E
Prep Type: Total/NA
Prep Batch: 637960

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	<2.3		37.7	37.3		ng/L		99	70 - 130
Perfluoropentanoic acid (PFPeA)	<0.48		37.7	36.5		ng/L		97	70 - 130
Perfluorohexanoic acid (PFHxA)	<0.57		37.7	37.9		ng/L		101	70 - 130
Perfluoroheptanoic acid (PFHpA)	<0.24		37.7	41.1		ng/L		109	70 - 130
Perfluorooctanoic acid (PFOA)	<0.83		37.7	39.1		ng/L		104	70 - 130
Perfluorononanoic acid (PFNA)	<0.26		37.7	38.0		ng/L		101	70 - 130
Perfluorodecanoic acid (PFDA)	<0.30		37.7	38.6		ng/L		102	70 - 130
Perfluoroundecanoic acid (PFUnA)	<1.1		37.7	40.8		ng/L		108	70 - 130
Perfluorododecanoic acid (PFDoA)	<0.54		37.7	42.3		ng/L		112	70 - 130
Perfluorotridecanoic acid (PFTrDA)	<1.3		37.7	40.9		ng/L		109	70 - 130
Perfluorotetradecanoic acid (PFTeA)	<0.71		37.7	37.8		ng/L		100	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<0.20		33.5	34.8		ng/L		104	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<0.29		35.5	37.1		ng/L		105	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<0.56		34.4	36.6		ng/L		106	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<0.19		36.0	37.2		ng/L		103	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<0.53		35.1	36.7		ng/L		105	70 - 130
Perfluorononanesulfonic acid (PFNS)	<0.36		36.3	36.2		ng/L		100	70 - 130
Perfluorodecanesulfonic acid (PFDS)	<0.31		36.4	38.2		ng/L		105	70 - 130
Perfluorododecanesulfonic acid (PFDoS)	<0.95		36.6	36.7		ng/L		100	70 - 130
Perfluorooctanesulfonamide (FOSA)	<0.96		37.7	37.6		ng/L		100	70 - 130
NEtFOSA	<0.85		37.7	41.4		ng/L		110	70 - 130
NMeFOSA	<0.42		37.7	44.0		ng/L		117	70 - 130
NMeFOSAA	<1.2		37.7	43.0		ng/L		114	70 - 130
NEtFOSAA	<1.3		37.7	38.7		ng/L		103	70 - 130
NMeFOSE	<1.4		37.7	42.0		ng/L		111	70 - 130
NEtFOSE	<0.83		37.7	38.4		ng/L		102	70 - 130
4:2 FTS	<0.23		35.4	37.0		ng/L		105	70 - 130
6:2 FTS	<2.4		35.9	37.0		ng/L		103	70 - 130
8:2 FTS	<0.45		36.2	38.0		ng/L		105	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.39		35.6	39.6		ng/L		111	70 - 130
HFPO-DA (GenX)	<1.5		37.7	39.8		ng/L		106	70 - 130
9Cl-PF3ONS	<0.23		35.2	36.5		ng/L		104	70 - 130
11Cl-PF3OUdS	<0.31		35.6	38.4		ng/L		108	70 - 130

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C4 PFBA	*91*		*25 - 150*
13C5 PFPeA	*101*		*25 - 150*
13C2 PFHxA	*98*		*25 - 150*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 500-225864-1 MS
Matrix: Water
Analysis Batch: 638571

Client Sample ID: 2519-E
Prep Type: Total/NA
Prep Batch: 637960

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C4 PFHpA	100		25 - 150
13C4 PFOA	97		25 - 150
13C5 PFNA	105		25 - 150
13C2 PFDA	102		25 - 150
13C2 PFUnA	98		25 - 150
13C2 PFDoA	98		25 - 150
13C2 PFTeDA	111		25 - 150
13C3 PFBS	101		25 - 150
18O2 PFHxS	100		25 - 150
13C4 PFOS	98		25 - 150
13C8 FOSA	98		10 - 150
d3-NMeFOSAA	75		25 - 150
d5-NEtFOSAA	84		25 - 150
d-N-MeFOSA-M	72		10 - 150
d-N-EtFOSA-M	72		10 - 150
d7-N-MeFOSE-M	93		10 - 150
d9-N-EtFOSE-M	104		10 - 150
M2-4:2 FTS	80		25 - 150
M2-6:2 FTS	80		25 - 150
M2-8:2 FTS	84		25 - 150
13C3 HFPO-DA	100		25 - 150
13C2 10:2 FTS	86		25 - 150

Lab Sample ID: 500-225864-1 MSD
Matrix: Water
Analysis Batch: 638571

Client Sample ID: 2519-E
Prep Type: Total/NA
Prep Batch: 637960

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	<2.3		38.4	38.8		ng/L		101	70 - 130	4	30
Perfluoropentanoic acid (PFPeA)	<0.48		38.4	36.2		ng/L		94	70 - 130	1	30
Perfluorohexanoic acid (PFHxA)	<0.57		38.4	39.6		ng/L		103	70 - 130	4	30
Perfluoroheptanoic acid (PFHpA)	<0.24		38.4	39.0		ng/L		101	70 - 130	5	30
Perfluorooctanoic acid (PFOA)	<0.83		38.4	42.4		ng/L		110	70 - 130	8	30
Perfluorononanoic acid (PFNA)	<0.26		38.4	39.2		ng/L		102	70 - 130	3	30
Perfluorodecanoic acid (PFDA)	<0.30		38.4	39.5		ng/L		103	70 - 130	2	30
Perfluoroundecanoic acid (PFUnA)	<1.1		38.4	40.0		ng/L		104	70 - 130	2	30
Perfluorododecanoic acid (PFDoA)	<0.54		38.4	45.2		ng/L		118	70 - 130	7	30
Perfluorotridecanoic acid (PFTrDA)	<1.3		38.4	42.6		ng/L		111	70 - 130	4	30
Perfluorotetradecanoic acid (PFTeA)	<0.71		38.4	39.3		ng/L		102	70 - 130	4	30
Perfluorobutanesulfonic acid (PFBS)	<0.20		34.1	34.4		ng/L		101	70 - 130	1	30
Perfluoropentanesulfonic acid (PFPeS)	<0.29		36.1	36.3		ng/L		101	70 - 130	2	30
Perfluorohexanesulfonic acid (PFHxS)	<0.56		35.0	34.4		ng/L		98	70 - 130	6	30
Perfluoroheptanesulfonic acid (PFHpS)	<0.19		36.7	38.1		ng/L		104	70 - 130	2	30

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 500-225864-1 MSD
Matrix: Water
Analysis Batch: 638571

Client Sample ID: 2519-E
Prep Type: Total/NA
Prep Batch: 637960

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorooctanesulfonic acid (PFOS)	<0.53		35.7	36.8		ng/L		103	70 - 130	0	30
Perfluorononanesulfonic acid (PFNS)	<0.36		37.0	38.7		ng/L		105	70 - 130	7	30
Perfluorodecanesulfonic acid (PFDS)	<0.31		37.0	38.9		ng/L		105	70 - 130	2	30
Perfluorododecanesulfonic acid (PFDoS)	<0.95		37.3	37.9		ng/L		102	70 - 130	3	30
Perfluorooctanesulfonamide (FOSA)	<0.96		38.4	37.3		ng/L		97	70 - 130	1	30
NEtFOSA	<0.85		38.4	40.6		ng/L		106	70 - 130	2	30
NMeFOSA	<0.42		38.4	43.9		ng/L		114	70 - 130	0	30
NMeFOSAA	<1.2		38.4	42.4		ng/L		110	70 - 130	1	30
NEtFOSAA	<1.3		38.4	41.1		ng/L		107	70 - 130	6	30
NMeFOSE	<1.4		38.4	40.1		ng/L		104	70 - 130	5	30
NEtFOSE	<0.83		38.4	39.0		ng/L		101	70 - 130	2	30
4:2 FTS	<0.23		36.0	37.4		ng/L		104	70 - 130	1	30
6:2 FTS	<2.4		36.6	35.2		ng/L		96	70 - 130	5	30
8:2 FTS	<0.45		36.9	36.4		ng/L		99	70 - 130	5	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.39		36.3	37.2		ng/L		103	70 - 130	6	30
HFPO-DA (GenX)	<1.5		38.4	40.1		ng/L		104	70 - 130	1	30
9Cl-PF3ONS	<0.23		35.9	35.2		ng/L		98	70 - 130	4	30
11Cl-PF3OUdS	<0.31		36.3	38.7		ng/L		107	70 - 130	1	30

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C4 PFBA	*87*		*25 - 150*
13C5 PFPeA	*98*		*25 - 150*
13C2 PFHxA	*95*		*25 - 150*
13C4 PFHpA	*96*		*25 - 150*
13C4 PFOA	*95*		*25 - 150*
13C5 PFNA	*101*		*25 - 150*
13C2 PFDA	*99*		*25 - 150*
13C2 PFUnA	*103*		*25 - 150*
13C2 PFDoA	*95*		*25 - 150*
13C2 PFTeDA	*110*		*25 - 150*
13C3 PFBS	*96*		*25 - 150*
18O2 PFHxS	*103*		*25 - 150*
13C4 PFOS	*96*		*25 - 150*
13C8 FOSA	*102*		*10 - 150*
d3-NMeFOSAA	*79*		*25 - 150*
d5-NEtFOSAA	*81*		*25 - 150*
d-N-MeFOSA-M	*74*		*10 - 150*
d-N-EtFOSA-M	*72*		*10 - 150*
d7-N-MeFOSE-M	*93*		*10 - 150*
d9-N-EtFOSE-M	*99*		*10 - 150*
M2-4:2 FTS	*82*		*25 - 150*
M2-6:2 FTS	*82*		*25 - 150*
M2-8:2 FTS	*84*		*25 - 150*
13C3 HFPO-DA	*101*		*25 - 150*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 500-225864-1 MSD
Matrix: Water
Analysis Batch: 638571

Client Sample ID: 2519-E
Prep Type: Total/NA
Prep Batch: 637960

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C2 10:2 FTS	85		25 - 150

Lab Chronicle

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225864-1

Client Sample ID: 2519-E
Date Collected: 11/21/22 16:40
Date Received: 11/22/22 09:20

Lab Sample ID: 500-225864-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			637960	EJR	EET SAC	12/07/22 05:52
Total/NA	Analysis	537 (modified)		1	638571	K1S	EET SAC	12/09/22 10:00

Client Sample ID: 2519-E-FB
Date Collected: 11/21/22 16:45
Date Received: 11/22/22 09:20

Lab Sample ID: 500-225864-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			637960	EJR	EET SAC	12/07/22 05:52
Total/NA	Analysis	537 (modified)		1	638571	K1S	EET SAC	12/09/22 11:01

Laboratory References:

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

Accreditation/Certification Summary

Client: Ramboll US Corporation
Job ID: 500-225864-1
Project/Site: Fmr Mirro Plt 2 - 1690026073

Laboratory: Eurofins Sacramento

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

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998204680	08-31-23

Eurofins Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone: 916-373-5600 Fax: 916-372-1059

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: K. HEDMSTEAD	Lab PM: Fredrick, Sandie	Carrier Tracking No(s):	COC No: 500-107645-45320.3
Client Contact: Paul Lindquist	Phone: 262-901-0129	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin:	Page: Page 3 of 3
Company: Ramboll US Corporation	PWSID:	Analysis Requested		Job #:
Address: 234 W. Florida Street Fifth Floor	Due Date Requested: STANDARD			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
City: Milwaukee	TAT Requested (days):			
State, Zip: WI, 53204	Compliance Project: Δ Yes Δ No			Other:
Phone: 262-901-3510(Tel)	PO #: MIRRO 2			
Email: plindquist@ramboll.com	WO #:			
Project Name: Fmr Mirro Plt 2 - 1690026073	Project #: 50020429			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	PFC_IDA_WI - PFAS, Standard List (33 analytes)	Perform MS/MSD (Yes or No)	Special Instructions/Note:
			Preservation Code:		N	Y		
2579-E	11/21/2022	1610	G	Water	N	Y	X	ADD'L VOL FOR MS/MSD
2579-E-FB	11/21/2022	1645	G	Water	N	N	X	

K. H 11/21/2022

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
K. H	11/21/2022 1815	RAMBOLL	FEDEX	11/21/2022	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 11/22/22 925	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact:	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
Yes Δ No	211057U	2-1 C

Ver: 06/08/2021

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12/16/2022

Login Sample Receipt Checklist

Client: Ramboll US Corporation

Job Number: 500-225864-1

Login Number: 225864
List Number: 1
Creator: Fredrick, Sandie

List Source: Eurofins Chicago

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

Login Sample Receipt Checklist

Client: Ramboll US Corporation

Job Number: 500-225864-1

Login Number: 225864
List Number: 2
Creator: Simmons, Jason C

List Source: Eurofins Sacramento
List Creation: 11/22/22 05:07 PM

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	2110570
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	2.1c
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.	True	
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	

eurofins | Environment Testing America

Sacramento Sample Receiving Notes

Job:__

Tracking # : 6155 6717 1323

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier

GSO / OnTrac / Goldstreak / USPS / Other_____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations. File in the job folder with the COC.

Therm. ID: IR 3 Corr. Factor: (+ / -) _____°C

Ice ✓ Wet ✓ Gel _____ Other _____

Cooler Custody Seal: _____

Cooler ID: 211570 Dot 11/22/22

Temp Observed: 2.1 °C Corrected: 2.1 °C

From: Temp Blank ☐ Sample ☐

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	☐	☒	☐
Cooler Temperature is acceptable?	☒	☐	☐
Frozen samples show signs of thaw?	☐	☐	☒

Initials: DH Date: 11/22/22

Unpacking/Labeling The Samples	Yes	No	NA
COC is complete w/o discrepancies?	☒	☐	☐
Samples compromised/tampered with?	☐	☒	☐
Containers are not broken or leaking?	☒	☐	☐
Sample custody seal?	☐	☐	☒
Sample containers have legible labels?	☒	☐	☐
Sample date/times are provided?	☒	☐	☐
Appropriate containers are used?	☒	☐	☐
Sample bottles are completely filled?	☒	☐	☐
Sample preservatives verified?	☐	☐	☒
Is the Field Sampler's name on COC?	☐	☐	☒
Samples require splitting/compositing?	☐	☐	☒
Samples w/o discrepancies?	☒	☐	☐
Zero headspace?*	☐	☐	☒
Alkalinity has no headspace?	☐	☐	☒
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☒
Multiphasic samples are not present?	☒	☐	☐

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

Initials: DH Date: 11/22/22

Notes:_____

Trizma Lot #(s): _____

Login Completion	Yes	No	NA
Receipt Temperature on COC?	☐	☐	☐
Samples received within hold time?	☐	☐	☐
NCM Filed?	☐	☐	☐
Log Release checked in TALS?	☐	☐	☐

Initials:_____ Date:_____

Isotope Dilution Summary

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225864-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFBA	PFPeA	PFHxA	C4PFHA	PFOA	PFNA	PFDA	PFUnA
Lab Sample ID	Client Sample ID	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)
500-225864-1	2519-E	83	91	91	93	94	98	92	94
500-225864-1 MS	2519-E	91	101	98	100	97	105	102	98
500-225864-1 MSD	2519-E	87	98	95	96	95	101	99	103
500-225864-2	2519-E-FB	92	96	96	99	95	102	103	97
LCS 320-637960/2-A	Lab Control Sample	95	100	103	98	99	106	101	100
MB 320-637960/1-A	Method Blank	90	97	93	97	93	99	90	90

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFDoA	PFTDA	C3PFBS	PFHxS	PFOS	PFOSA	d3NMFOS	d5NEFOS
Lab Sample ID	Client Sample ID	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(10-150)	(25-150)	(25-150)
500-225864-1	2519-E	87	95	86	94	90	91	70	72
500-225864-1 MS	2519-E	98	111	101	100	98	98	75	84
500-225864-1 MSD	2519-E	95	110	96	103	96	102	79	81
500-225864-2	2519-E-FB	96	103	97	104	94	95	78	88
LCS 320-637960/2-A	Lab Control Sample	95	99	105	107	102	97	77	76
MB 320-637960/1-A	Method Blank	84	88	92	101	88	84	67	72

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		dMeFOSA	dEtFOSA	NMFM	NEFM	M242FTS	M262FTS	M282FTS	HFPODA
Lab Sample ID	Client Sample ID	(10-150)	(10-150)	(10-150)	(10-150)	(25-150)	(25-150)	(25-150)	(25-150)
500-225864-1	2519-E	66	65	82	87	78	82	80	93
500-225864-1 MS	2519-E	72	72	93	104	80	80	84	100
500-225864-1 MSD	2519-E	74	72	93	99	82	82	84	101
500-225864-2	2519-E-FB	75	72	88	100	89	90	85	99
LCS 320-637960/2-A	Lab Control Sample	81	82	90	98	76	77	77	101
MB 320-637960/1-A	Method Blank	66	67	83	86	64	67	65	95

		Percent Isotope Dilution Recovery (Acceptance Limits)
		M102FTS
Lab Sample ID	Client Sample ID	(25-150)
500-225864-1	2519-E	82
500-225864-1 MS	2519-E	86
500-225864-1 MSD	2519-E	85
500-225864-2	2519-E-FB	92
LCS 320-637960/2-A	Lab Control Sample	78
MB 320-637960/1-A	Method Blank	67

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: Ramboll US Corporation
Job ID: 500-225864-1
Project/Site: Fmr Mirro Plt 2 - 1690026073

d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
dMeFOSA = d-N-MeFOSA-M
dEtFOSA = d-N-EtFOSA-M
NMFM = d7-N-MeFOSE-M
NEFM = d9-N-EtFOSE-M
M242FTS = M2-4:2 FTS
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
HFPODA = 13C3 HFPO-DA
M102FTS = 13C2 10:2 FTS

RAMBOLL

ENVIRONMENT
& HEALTH

Sent Via Overnight Delivery

[redacted]
2722 Woodland Drive
Manitowoc, WI 54220

POTABLE WELL SAMPLING RESULTS AT 2722 WOODLAND DRIVE
FORMER MIRRO PLANT NO. 2, 2009 MIRRO DRIVE
MANITOWOC, WISCONSIN, BRRTS NO. 02-36-588656

Dear [redacted]:

January 3, 2023

Ramboll
234 W. Florida Street
Fifth Floor
Milwaukee, WI 53204
USA

T +1 414 837 3607
F +1 414 837 3608
https://ramboll.com

Ref 1690026073

The purpose of this letter is to provide you with the results of the recent potable well testing from your property completed by Newell Operating Company (NOC) with the oversight of the Wisconsin Department of Natural Resources (WDNR). As you are aware, this testing was conducted because of the potential for per- and polyfluoroalkyl substances (PFAS) contaminated groundwater to migrate off site from the nearby former Mirro Plant No. 2 facility.

On November 21, 2022, NOC's environmental consultant, Ramboll US Consulting, Inc. (Ramboll), collected water samples from your potable well using the spigot prior to your pressure tank. Ramboll submitted the samples to Eurofins Environment Testing (Eurofins) in Sacramento, California, a State of Wisconsin PFAS certified laboratory.

Your Test Results

A copy of the laboratory report for your potable well sample is enclosed. The analyses did not detect any PFAS compounds above the established WDNR drinking water criteria applicable to public drinking water systems[1] or the Wisconsin Department of Health Services (WDHS) recommended groundwater criteria[2]. Perfluorooctanoic acid (PFOA) was detected at a concentration of 1.8 nanograms per liter (ng/L), below both the drinking water criteria and the recommended groundwater criteria. Perfluorobutanesulfonic acid (PFBS) was detected at a laboratory estimated concentration of 0.35 ng/L, below the recommended

[1] On August 1, 2022, Wisconsin Administrative Code (WAC) NR 809 drinking water criteria for PFOA and perfluorooctanesulfonic acid (PFOS) were promulgated. The WAC NR 809 criteria for PFOA and PFOS is 70 nanograms per liter (ng/L) or part per trillion (ppt) individually or combined. These criteria are applicable to public drinking water systems, but they do not apply to water from private potable wells.

[2] The WDHS recommended groundwater criteria of 20 ng/L for select PFAS is listed in Cycle 10 and 11 of Groundwater Standards Proposals submitted by the WDHS to the WDNR for promulgation. Please note that the Natural Resources Board rejected the Cycle 10 recommended groundwater criteria and, as of the date of this letter, has not approved the Cycle 11 recommended groundwater criteria.

groundwater criteria. There are currently no drinking water criteria for PFBS. No other PFAS were detected in the potable well sample.

If you have any questions regarding the quality of your potable well water, please contact the following:

- Tauren Beggs, WDNR, (920) 510-3472, Tauren.Beggs@wisconsin.gov; or
- Nathan Kloczko, WDHS, (608) 267-3227, Nathan.Kloczko@dhs.wisconsin.gov.

For any other questions regarding this letter, please contact Lou Meschede at (219) 781-7177.

Sincerely,

Paul Lindquist
Managing Consultant

D +1 262 901 3510
plindquist@ramboll.com

Jeanne M. Tarvin, PG, CPG
E&H Americas Country Market Director

D +1 262 901 0085
jtarvin@ramboll.com

cc: Kristin Jones, NOC
Tauren Beggs, WDNR
Nathan Kloczko, WDHS

ENCLOSURE

EUROFINS LABORATORY ANALYTICAL REPORT

ANALYTICAL REPORT

PREPARED FOR

Attn: Paul Lindquist
Ramboll US Corporation
234 W. Florida Street
Fifth Floor
Milwaukee, Wisconsin 53204

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JOB DESCRIPTION

Fmr Mirro Plt 2 - 1690026073

JOB NUMBER

500-225865-1

Eurofins Chicago
2417 Bond Street
University Park IL 60484

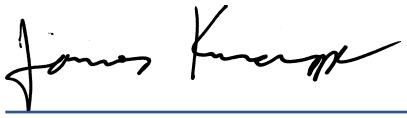
See page two for job notes and contact information.

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Authorization



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Authorized for release by
Jim Knapp, Project Manager II
Jim.Knapp@et.eurofinsus.com
Designee for
Sandie Fredrick, Project Manager II
Sandra.Fredrick@et.eurofinsus.com
(920)261-1660

Table of Contents

Job ID: 500-225865-1

Laboratory: Eurofins Chicago

Narrative

Job Narrative
500-225865-1

Comments
No additional comments.

Receipt
The samples were received on 11/22/2022 9:20 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 1.4º C.

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

Organic Prep
Method 3535: The following samples in preparation batch 320-637960 were light brown in color prior to extraction. 2722-E (500-225865-1), 2722-E (500-225865-1[MS]), 2722-E (500-225865-1[MSD]) and 2722-E (500-225865-3)

Method: 3535_PFC_28D
Matrix :Aqueous

Method 3535: The following samples in preparation batch 320-637960 were observed to have a thin layer of sediment present in the bottom of the bottle prior to extraction. 2722-E (500-225865-1), 2722-E (500-225865-1[MS]), 2722-E (500-225865-1[MSD]) and 2722-E (500-225865-3)

Method: 3535_PFC_28D
Matrix :Aqueous

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

Detection Summary

Client: Ramboll US Corporation
Job ID: 500-225865-1
Project/Site: Fmr Mirro Plt 2 - 1690026073

Client Sample ID: 2722-E
Lab Sample ID: 500-225865-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	1.8		1.8	0.77	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.35	J	1.8	0.18	ng/L	1		537 (modified)	Total/NA

Client Sample ID: 2722-E-FB
Lab Sample ID: 500-225865-2

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225865-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	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: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225865-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-225865-1	2722-E	Water	11/21/22 10:20	11/22/22 09:20
500-225865-2	2722-E-FB	Water	11/21/22 10:25	11/22/22 09:20

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225865-1

Client Sample ID: 2722-E
Date Collected: 11/21/22 10:20
Date Received: 11/22/22 09:20

Lab Sample ID: 500-225865-1
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.2		4.5	2.2	ng/L		12/07/22 05:52	12/09/22 11:21	1
Perfluoropentanoic acid (PFPeA)	<0.44		1.8	0.44	ng/L		12/07/22 05:52	12/09/22 11:21	1
Perfluorohexanoic acid (PFHxA)	<0.52		1.8	0.52	ng/L		12/07/22 05:52	12/09/22 11:21	1
Perfluoroheptanoic acid (PFHpA)	<0.23		1.8	0.23	ng/L		12/07/22 05:52	12/09/22 11:21	1
Perfluorooctanoic acid (PFOA)	**1.8**		1.8	0.77	ng/L		12/07/22 05:52	12/09/22 11:21	1
Perfluorononanoic acid (PFNA)	<0.24		1.8	0.24	ng/L		12/07/22 05:52	12/09/22 11:21	1
Perfluorodecanoic acid (PFDA)	<0.28		1.8	0.28	ng/L		12/07/22 05:52	12/09/22 11:21	1
Perfluoroundecanoic acid (PFUnA)	<0.99		1.8	0.99	ng/L		12/07/22 05:52	12/09/22 11:21	1
Perfluorododecanoic acid (PFDoA)	<0.50		1.8	0.50	ng/L		12/07/22 05:52	12/09/22 11:21	1
Perfluorotridecanoic acid (PFTrDA)	<1.2		1.8	1.2	ng/L		12/07/22 05:52	12/09/22 11:21	1
Perfluorotetradecanoic acid (PFTeA)	<0.66		1.8	0.66	ng/L		12/07/22 05:52	12/09/22 11:21	1
Perfluorobutanesulfonic acid (PFBS)	**0.35**	**J**	1.8	0.18	ng/L		12/07/22 05:52	12/09/22 11:21	1
Perfluoropentanesulfonic acid (PFPeS)	<0.27		1.8	0.27	ng/L		12/07/22 05:52	12/09/22 11:21	1
Perfluorohexanesulfonic acid (PFHxS)	<0.51		1.8	0.51	ng/L		12/07/22 05:52	12/09/22 11:21	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.17		1.8	0.17	ng/L		12/07/22 05:52	12/09/22 11:21	1
Perfluorooctanesulfonic acid (PFOS)	<0.49		1.8	0.49	ng/L		12/07/22 05:52	12/09/22 11:21	1
Perfluorononanesulfonic acid (PFNS)	<0.33		1.8	0.33	ng/L		12/07/22 05:52	12/09/22 11:21	1
Perfluorodecanesulfonic acid (PFDS)	<0.29		1.8	0.29	ng/L		12/07/22 05:52	12/09/22 11:21	1
Perfluorododecanesulfonic acid (PFDoS)	<0.87		1.8	0.87	ng/L		12/07/22 05:52	12/09/22 11:21	1
Perfluorooctanesulfonamide (FOSA)	<0.88		1.8	0.88	ng/L		12/07/22 05:52	12/09/22 11:21	1
NEtFOSA	<0.78		1.8	0.78	ng/L		12/07/22 05:52	12/09/22 11:21	1
NMeFOSA	<0.39		1.8	0.39	ng/L		12/07/22 05:52	12/09/22 11:21	1
NMeFOSAA	<1.1		4.5	1.1	ng/L		12/07/22 05:52	12/09/22 11:21	1
NEtFOSAA	<1.2		4.5	1.2	ng/L		12/07/22 05:52	12/09/22 11:21	1
NMeFOSE	<1.3		3.6	1.3	ng/L		12/07/22 05:52	12/09/22 11:21	1
NEtFOSE	<0.77		1.8	0.77	ng/L		12/07/22 05:52	12/09/22 11:21	1
4:2 FTS	<0.22		1.8	0.22	ng/L		12/07/22 05:52	12/09/22 11:21	1
6:2 FTS	<2.3		4.5	2.3	ng/L		12/07/22 05:52	12/09/22 11:21	1
8:2 FTS	<0.41		1.8	0.41	ng/L		12/07/22 05:52	12/09/22 11:21	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.36		1.8	0.36	ng/L		12/07/22 05:52	12/09/22 11:21	1
HFPO-DA (GenX)	<1.4		3.6	1.4	ng/L		12/07/22 05:52	12/09/22 11:21	1
9Cl-PF3ONS	<0.22		1.8	0.22	ng/L		12/07/22 05:52	12/09/22 11:21	1
11Cl-PF3OUdS	<0.29		1.8	0.29	ng/L		12/07/22 05:52	12/09/22 11:21	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*86*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:21*	*1*
13C5 PFPeA	*98*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:21*	*1*
13C2 PFHxA	*97*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:21*	*1*
13C4 PFHpA	*94*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:21*	*1*
13C4 PFOA	*94*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:21*	*1*
13C5 PFNA	*104*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:21*	*1*
13C2 PFDA	*96*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:21*	*1*
13C2 PFUnA	*99*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:21*	*1*
13C2 PFDoA	*92*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:21*	*1*
13C2 PFTeDA	*106*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:21*	*1*
13C3 PFBS	*98*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:21*	*1*

Client: Ramboll US Corporation
Job ID: 500-225865-1
Project/Site: Fmr Mirro Plt 2 - 1690026073

Client Sample ID: 2722-E
Lab Sample ID: 500-225865-1
Date Collected: 11/21/22 10:20
Matrix: Water
Date Received: 11/22/22 09:20

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	98		25 - 150	12/07/22 05:52	12/09/22 11:21	1
13C4 PFOS	91		25 - 150	12/07/22 05:52	12/09/22 11:21	1
13C8 FOSA	97		10 - 150	12/07/22 05:52	12/09/22 11:21	1
d3-NMeFOSAA	75		25 - 150	12/07/22 05:52	12/09/22 11:21	1
d5-NEtFOSAA	83		25 - 150	12/07/22 05:52	12/09/22 11:21	1
d-N-MeFOSA-M	79		10 - 150	12/07/22 05:52	12/09/22 11:21	1
d-N-EtFOSA-M	78		10 - 150	12/07/22 05:52	12/09/22 11:21	1
d7-N-MeFOSE-M	90		10 - 150	12/07/22 05:52	12/09/22 11:21	1
d9-N-EtFOSE-M	100		10 - 150	12/07/22 05:52	12/09/22 11:21	1
M2-4:2 FTS	84		25 - 150	12/07/22 05:52	12/09/22 11:21	1
M2-6:2 FTS	76		25 - 150	12/07/22 05:52	12/09/22 11:21	1
M2-8:2 FTS	83		25 - 150	12/07/22 05:52	12/09/22 11:21	1
13C3 HFPO-DA	95		25 - 150	12/07/22 05:52	12/09/22 11:21	1
13C2 10:2 FTS	89		25 - 150	12/07/22 05:52	12/09/22 11:21	1

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225865-1

Client Sample ID: 2722-E-FB
Date Collected: 11/21/22 10:25
Date Received: 11/22/22 09:20

Lab Sample ID: 500-225865-2
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.2		4.5	2.2	ng/L		12/07/22 05:52	12/09/22 11:52	1
Perfluoropentanoic acid (PFPeA)	<0.44		1.8	0.44	ng/L		12/07/22 05:52	12/09/22 11:52	1
Perfluorohexanoic acid (PFHxA)	<0.52		1.8	0.52	ng/L		12/07/22 05:52	12/09/22 11:52	1
Perfluoroheptanoic acid (PFHpA)	<0.23		1.8	0.23	ng/L		12/07/22 05:52	12/09/22 11:52	1
Perfluorooctanoic acid (PFOA)	<0.77		1.8	0.77	ng/L		12/07/22 05:52	12/09/22 11:52	1
Perfluorononanoic acid (PFNA)	<0.24		1.8	0.24	ng/L		12/07/22 05:52	12/09/22 11:52	1
Perfluorodecanoic acid (PFDA)	<0.28		1.8	0.28	ng/L		12/07/22 05:52	12/09/22 11:52	1
Perfluoroundecanoic acid (PFUnA)	<0.99		1.8	0.99	ng/L		12/07/22 05:52	12/09/22 11:52	1
Perfluorododecanoic acid (PFDoA)	<0.50		1.8	0.50	ng/L		12/07/22 05:52	12/09/22 11:52	1
Perfluorotridecanoic acid (PFTrDA)	<1.2		1.8	1.2	ng/L		12/07/22 05:52	12/09/22 11:52	1
Perfluorotetradecanoic acid (PFTeA)	<0.66		1.8	0.66	ng/L		12/07/22 05:52	12/09/22 11:52	1
Perfluorobutanesulfonic acid (PFBS)	<0.18		1.8	0.18	ng/L		12/07/22 05:52	12/09/22 11:52	1
Perfluoropentanesulfonic acid (PFPeS)	<0.27		1.8	0.27	ng/L		12/07/22 05:52	12/09/22 11:52	1
Perfluorohexanesulfonic acid (PFHxS)	<0.51		1.8	0.51	ng/L		12/07/22 05:52	12/09/22 11:52	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.17		1.8	0.17	ng/L		12/07/22 05:52	12/09/22 11:52	1
Perfluorooctanesulfonic acid (PFOS)	<0.49		1.8	0.49	ng/L		12/07/22 05:52	12/09/22 11:52	1
Perfluorononanesulfonic acid (PFNS)	<0.33		1.8	0.33	ng/L		12/07/22 05:52	12/09/22 11:52	1
Perfluorodecanesulfonic acid (PFDS)	<0.29		1.8	0.29	ng/L		12/07/22 05:52	12/09/22 11:52	1
Perfluorododecanesulfonic acid (PFDoS)	<0.88		1.8	0.88	ng/L		12/07/22 05:52	12/09/22 11:52	1
Perfluorooctanesulfonamide (FOSA)	<0.88		1.8	0.88	ng/L		12/07/22 05:52	12/09/22 11:52	1
NEtFOSA	<0.79		1.8	0.79	ng/L		12/07/22 05:52	12/09/22 11:52	1
NMeFOSA	<0.39		1.8	0.39	ng/L		12/07/22 05:52	12/09/22 11:52	1
NMeFOSAA	<1.1		4.5	1.1	ng/L		12/07/22 05:52	12/09/22 11:52	1
NEtFOSAA	<1.2		4.5	1.2	ng/L		12/07/22 05:52	12/09/22 11:52	1
NMeFOSE	<1.3		3.6	1.3	ng/L		12/07/22 05:52	12/09/22 11:52	1
NEtFOSE	<0.77		1.8	0.77	ng/L		12/07/22 05:52	12/09/22 11:52	1
4:2 FTS	<0.22		1.8	0.22	ng/L		12/07/22 05:52	12/09/22 11:52	1
6:2 FTS	<2.3		4.5	2.3	ng/L		12/07/22 05:52	12/09/22 11:52	1
8:2 FTS	<0.42		1.8	0.42	ng/L		12/07/22 05:52	12/09/22 11:52	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.36		1.8	0.36	ng/L		12/07/22 05:52	12/09/22 11:52	1
HFPO-DA (GenX)	<1.4		3.6	1.4	ng/L		12/07/22 05:52	12/09/22 11:52	1
9Cl-PF3ONS	<0.22		1.8	0.22	ng/L		12/07/22 05:52	12/09/22 11:52	1
11Cl-PF3OUdS	<0.29		1.8	0.29	ng/L		12/07/22 05:52	12/09/22 11:52	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*95*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:52*	*1*
13C5 PFPeA	*96*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:52*	*1*
13C2 PFHxA	*100*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:52*	*1*
13C4 PFHpA	*98*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:52*	*1*
13C4 PFOA	*97*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:52*	*1*
13C5 PFNA	*105*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:52*	*1*
13C2 PFDA	*99*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:52*	*1*
13C2 PFUnA	*100*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:52*	*1*
13C2 PFDoA	*92*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:52*	*1*
13C2 PFTeDA	*100*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:52*	*1*
13C3 PFBS	*97*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:52*	*1*
18O2 PFHxS	*98*		*25 - 150*	*12/07/22 05:52*	*12/09/22 11:52*	*1*

Client Sample ID: 2722-E-FB
Date Collected: 11/21/22 10:25
Date Received: 11/22/22 09:20

Lab Sample ID: 500-225865-2
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	97		25 - 150	12/07/22 05:52	12/09/22 11:52	1
13C8 FOSA	95		10 - 150	12/07/22 05:52	12/09/22 11:52	1
d3-NMeFOSAA	78		25 - 150	12/07/22 05:52	12/09/22 11:52	1
d5-NEtFOSAA	82		25 - 150	12/07/22 05:52	12/09/22 11:52	1
d-N-MeFOSA-M	81		10 - 150	12/07/22 05:52	12/09/22 11:52	1
d-N-EtFOSA-M	80		10 - 150	12/07/22 05:52	12/09/22 11:52	1
d7-N-MeFOSE-M	95		10 - 150	12/07/22 05:52	12/09/22 11:52	1
d9-N-EtFOSE-M	100		10 - 150	12/07/22 05:52	12/09/22 11:52	1
M2-4:2 FTS	83		25 - 150	12/07/22 05:52	12/09/22 11:52	1
M2-6:2 FTS	83		25 - 150	12/07/22 05:52	12/09/22 11:52	1
M2-8:2 FTS	96		25 - 150	12/07/22 05:52	12/09/22 11:52	1
13C3 HFPO-DA	97		25 - 150	12/07/22 05:52	12/09/22 11:52	1
13C2 10:2 FTS	94		25 - 150	12/07/22 05:52	12/09/22 11:52	1

Definitions/Glossary

Client: Ramboll US Corporation
Job ID: 500-225865-1
Project/Site: Fmr Mirro Plt 2 - 1690026073

Qualifiers

LCMS

Qualifier	Qualifier Description
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

QC Association Summary

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225865-1

LCMS

Prep Batch: 637960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-225865-1	2722-E	Total/NA	Water	3535	
500-225865-2	2722-E-FB	Total/NA	Water	3535	
MB 320-637960/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-637960/2-A	Lab Control Sample	Total/NA	Water	3535	
500-225865-1 MS	2722-E	Total/NA	Water	3535	
500-225865-1 MSD	2722-E	Total/NA	Water	3535	

Analysis Batch: 638571

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-225865-1	2722-E	Total/NA	Water	537 (modified)	637960
500-225865-2	2722-E-FB	Total/NA	Water	537 (modified)	637960
MB 320-637960/1-A	Method Blank	Total/NA	Water	537 (modified)	637960
LCS 320-637960/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	637960
500-225865-1 MS	2722-E	Total/NA	Water	537 (modified)	637960
500-225865-1 MSD	2722-E	Total/NA	Water	537 (modified)	637960

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-637960/1-A
Matrix: Water
Analysis Batch: 638571

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 637960

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.4		5.0	2.4	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluoropentanoic acid (PFPeA)	<0.49		2.0	0.49	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorohexanoic acid (PFHxA)	<0.58		2.0	0.58	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluoroheptanoic acid (PFHpA)	<0.25		2.0	0.25	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorooctanoic acid (PFOA)	<0.85		2.0	0.85	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorononanoic acid (PFNA)	<0.27		2.0	0.27	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	0.31	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluoroundecanoic acid (PFUnA)	<1.1		2.0	1.1	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorododecanoic acid (PFDoA)	<0.55		2.0	0.55	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorotridecanoic acid (PFTrDA)	<1.3		2.0	1.3	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorotetradecanoic acid (PFTeA)	<0.73		2.0	0.73	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorobutanesulfonic acid (PFBS)	<0.20		2.0	0.20	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluoropentanesulfonic acid (PFPeS)	<0.30		2.0	0.30	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorohexanesulfonic acid (PFHxS)	<0.57		2.0	0.57	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.19		2.0	0.19	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorooctanesulfonic acid (PFOS)	<0.54		2.0	0.54	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorononanesulfonic acid (PFNS)	<0.37		2.0	0.37	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorodecanesulfonic acid (PFDS)	<0.32		2.0	0.32	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorododecanesulfonic acid (PFDoS)	<0.97		2.0	0.97	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorooctanesulfonamide (FOSA)	<0.98		2.0	0.98	ng/L		12/07/22 05:52	12/09/22 08:49	1
NEtFOSA	<0.87		2.0	0.87	ng/L		12/07/22 05:52	12/09/22 08:49	1
NMeFOSA	<0.43		2.0	0.43	ng/L		12/07/22 05:52	12/09/22 08:49	1
NMeFOSAA	<1.2		5.0	1.2	ng/L		12/07/22 05:52	12/09/22 08:49	1
NEtFOSAA	<1.3		5.0	1.3	ng/L		12/07/22 05:52	12/09/22 08:49	1
NMeFOSE	<1.4		4.0	1.4	ng/L		12/07/22 05:52	12/09/22 08:49	1
NEtFOSE	<0.85		2.0	0.85	ng/L		12/07/22 05:52	12/09/22 08:49	1
4:2 FTS	<0.24		2.0	0.24	ng/L		12/07/22 05:52	12/09/22 08:49	1
6:2 FTS	<2.5		5.0	2.5	ng/L		12/07/22 05:52	12/09/22 08:49	1
8:2 FTS	<0.46		2.0	0.46	ng/L		12/07/22 05:52	12/09/22 08:49	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.40		2.0	0.40	ng/L		12/07/22 05:52	12/09/22 08:49	1
HFPO-DA (GenX)	<1.5		4.0	1.5	ng/L		12/07/22 05:52	12/09/22 08:49	1
9Cl-PF3ONS	<0.24		2.0	0.24	ng/L		12/07/22 05:52	12/09/22 08:49	1
11Cl-PF3OUdS	<0.32		2.0	0.32	ng/L		12/07/22 05:52	12/09/22 08:49	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*90*		*25 - 150*	*12/07/22 05:52*	*12/09/22 08:49*	*1*
13C5 PFPeA	*97*		*25 - 150*	*12/07/22 05:52*	*12/09/22 08:49*	*1*
13C2 PFHxA	*93*		*25 - 150*	*12/07/22 05:52*	*12/09/22 08:49*	*1*
13C4 PFHpA	*97*		*25 - 150*	*12/07/22 05:52*	*12/09/22 08:49*	*1*
13C4 PFOA	*93*		*25 - 150*	*12/07/22 05:52*	*12/09/22 08:49*	*1*
13C5 PFNA	*99*		*25 - 150*	*12/07/22 05:52*	*12/09/22 08:49*	*1*
13C2 PFDA	*90*		*25 - 150*	*12/07/22 05:52*	*12/09/22 08:49*	*1*
13C2 PFUnA	*90*		*25 - 150*	*12/07/22 05:52*	*12/09/22 08:49*	*1*
13C2 PFDoA	*84*		*25 - 150*	*12/07/22 05:52*	*12/09/22 08:49*	*1*
13C2 PFTeDA	*88*		*25 - 150*	*12/07/22 05:52*	*12/09/22 08:49*	*1*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-637960/1-A
Matrix: Water
Analysis Batch: 638571

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 637960

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFBS	92		25 - 150	12/07/22 05:52	12/09/22 08:49	1
18O2 PFHxS	101		25 - 150	12/07/22 05:52	12/09/22 08:49	1
13C4 PFOS	88		25 - 150	12/07/22 05:52	12/09/22 08:49	1
13C8 FOSA	84		10 - 150	12/07/22 05:52	12/09/22 08:49	1
d3-NMeFOSAA	67		25 - 150	12/07/22 05:52	12/09/22 08:49	1
d5-NEtFOSAA	72		25 - 150	12/07/22 05:52	12/09/22 08:49	1
d-N-MeFOSA-M	66		10 - 150	12/07/22 05:52	12/09/22 08:49	1
d-N-EtFOSA-M	67		10 - 150	12/07/22 05:52	12/09/22 08:49	1
d7-N-MeFOSE-M	83		10 - 150	12/07/22 05:52	12/09/22 08:49	1
d9-N-EtFOSE-M	86		10 - 150	12/07/22 05:52	12/09/22 08:49	1
M2-4:2 FTS	64		25 - 150	12/07/22 05:52	12/09/22 08:49	1
M2-6:2 FTS	67		25 - 150	12/07/22 05:52	12/09/22 08:49	1
M2-8:2 FTS	65		25 - 150	12/07/22 05:52	12/09/22 08:49	1
13C3 HFPO-DA	95		25 - 150	12/07/22 05:52	12/09/22 08:49	1
13C2 10:2 FTS	67		25 - 150	12/07/22 05:52	12/09/22 08:49	1

Lab Sample ID: LCS 320-637960/2-A
Matrix: Water
Analysis Batch: 638571

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 637960

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	40.0	40.8		ng/L		102	60 - 135
Perfluoropentanoic acid (PFPeA)	40.0	39.5		ng/L		99	60 - 135
Perfluorohexanoic acid (PFHxA)	40.0	41.2		ng/L		103	60 - 135
Perfluoroheptanoic acid (PFHpA)	40.0	43.5		ng/L		109	60 - 135
Perfluorooctanoic acid (PFOA)	40.0	43.9		ng/L		110	60 - 135
Perfluorononanoic acid (PFNA)	40.0	39.9		ng/L		100	60 - 135
Perfluorodecanoic acid (PFDA)	40.0	42.3		ng/L		106	60 - 135
Perfluoroundecanoic acid (PFUnA)	40.0	43.6		ng/L		109	60 - 135
Perfluorododecanoic acid (PFDoA)	40.0	46.6		ng/L		116	60 - 135
Perfluorotridecanoic acid (PFTrDA)	40.0	43.3		ng/L		108	60 - 135
Perfluorotetradecanoic acid (PFTeA)	40.0	42.0		ng/L		105	60 - 135
Perfluorobutanesulfonic acid (PFBS)	35.5	35.9		ng/L		101	60 - 135
Perfluoropentanesulfonic acid (PFPeS)	37.6	38.0		ng/L		101	60 - 135
Perfluorohexanesulfonic acid (PFHxS)	36.5	37.3		ng/L		102	60 - 135
Perfluoroheptanesulfonic acid (PFHpS)	38.2	43.7		ng/L		115	60 - 135
Perfluorooctanesulfonic acid (PFOS)	37.2	39.7		ng/L		107	60 - 135
Perfluorononanesulfonic acid (PFNS)	38.5	41.1		ng/L		107	60 - 135
Perfluorodecanesulfonic acid (PFDS)	38.6	42.2		ng/L		109	60 - 135
Perfluorododecanesulfonic acid (PFDoS)	38.8	37.7		ng/L		97	60 - 135

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-637960/2-A
Matrix: Water
Analysis Batch: 638571

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 637960

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanesulfonamide (FOSA)	40.0	41.5		ng/L		104	60 - 135
NEtFOSA	40.0	39.5		ng/L		99	60 - 135
NMeFOSA	40.0	40.6		ng/L		101	60 - 135
NMeFOSAA	40.0	46.0		ng/L		115	60 - 135
NEtFOSAA	40.0	42.4		ng/L		106	60 - 135
NMeFOSE	40.0	43.6		ng/L		109	60 - 135
NEtFOSE	40.0	40.6		ng/L		102	60 - 135
4:2 FTS	37.5	34.0		ng/L		91	60 - 135
6:2 FTS	38.1	37.4		ng/L		98	60 - 135
8:2 FTS	38.4	39.4		ng/L		102	60 - 135
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	43.5		ng/L		115	60 - 135
HFPO-DA (GenX)	40.0	43.0		ng/L		107	60 - 135
9Cl-PF3ONS	37.4	38.1		ng/L		102	60 - 135
11Cl-PF3OUdS	37.8	38.8		ng/L		103	60 - 135

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*95*		*25 - 150*
13C5 PFPeA	*100*		*25 - 150*
13C2 PFHxA	*103*		*25 - 150*
13C4 PFHpA	*98*		*25 - 150*
13C4 PFOA	*99*		*25 - 150*
13C5 PFNA	*106*		*25 - 150*
13C2 PFDA	*101*		*25 - 150*
13C2 PFUnA	*100*		*25 - 150*
13C2 PFDoA	*95*		*25 - 150*
13C2 PFTeDA	*99*		*25 - 150*
13C3 PFBS	*105*		*25 - 150*
18O2 PFHxS	*107*		*25 - 150*
13C4 PFOS	*102*		*25 - 150*
13C8 FOSA	*97*		*10 - 150*
d3-NMeFOSAA	*77*		*25 - 150*
d5-NEtFOSAA	*76*		*25 - 150*
d-N-MeFOSA-M	*81*		*10 - 150*
d-N-EtFOSA-M	*82*		*10 - 150*
d7-N-MeFOSE-M	*90*		*10 - 150*
d9-N-EtFOSE-M	*98*		*10 - 150*
M2-4:2 FTS	*76*		*25 - 150*
M2-6:2 FTS	*77*		*25 - 150*
M2-8:2 FTS	*77*		*25 - 150*
13C3 HFPO-DA	*101*		*25 - 150*
13C2 10:2 FTS	*78*		*25 - 150*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 500-225865-1 MS
Matrix: Water
Analysis Batch: 638571

Client Sample ID: 2722-E
Prep Type: Total/NA
Prep Batch: 637960

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	<2.2		36.3	36.6		ng/L		101	70 - 130
Perfluoropentanoic acid (PFPeA)	<0.44		36.3	34.9		ng/L		96	70 - 130
Perfluorohexanoic acid (PFHxA)	<0.52		36.3	34.2		ng/L		94	70 - 130
Perfluoroheptanoic acid (PFHpA)	<0.23		36.3	38.3		ng/L		105	70 - 130
Perfluorooctanoic acid (PFOA)	1.8		36.3	40.0		ng/L		105	70 - 130
Perfluorononanoic acid (PFNA)	<0.24		36.3	36.0		ng/L		99	70 - 130
Perfluorodecanoic acid (PFDA)	<0.28		36.3	40.4		ng/L		111	70 - 130
Perfluoroundecanoic acid (PFUnA)	<0.99		36.3	38.9		ng/L		107	70 - 130
Perfluorododecanoic acid (PFDoA)	<0.50		36.3	39.2		ng/L		108	70 - 130
Perfluorotridecanoic acid (PFTrDA)	<1.2		36.3	41.0		ng/L		113	70 - 130
Perfluorotetradecanoic acid (PFTeA)	<0.66		36.3	37.9		ng/L		104	70 - 130
Perfluorobutanesulfonic acid (PFBS)	0.35	J	32.2	33.6		ng/L		103	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<0.27		34.1	37.9		ng/L		111	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<0.51		33.1	35.4		ng/L		107	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<0.17		34.6	39.9		ng/L		115	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<0.49		33.8	35.9		ng/L		106	70 - 130
Perfluorononanesulfonic acid (PFNS)	<0.33		34.9	37.7		ng/L		108	70 - 130
Perfluorodecanesulfonic acid (PFDS)	<0.29		35.0	35.7		ng/L		102	70 - 130
Perfluorododecanesulfonic acid (PFDoS)	<0.87		35.2	35.3		ng/L		100	70 - 130
Perfluorooctanesulfonamide (FOSA)	<0.88		36.3	37.6		ng/L		103	70 - 130
NEtFOSA	<0.78		36.3	39.4		ng/L		108	70 - 130
NMeFOSA	<0.39		36.3	38.2		ng/L		105	70 - 130
NMeFOSAA	<1.1		36.3	40.5		ng/L		112	70 - 130
NEtFOSAA	<1.2		36.3	38.8		ng/L		107	70 - 130
NMeFOSE	<1.3		36.3	40.2		ng/L		111	70 - 130
NEtFOSE	<0.77		36.3	37.5		ng/L		103	70 - 130
4:2 FTS	<0.22		34.1	36.2		ng/L		106	70 - 130
6:2 FTS	<2.3		34.6	35.2		ng/L		102	70 - 130
8:2 FTS	<0.41		34.9	35.5		ng/L		102	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.36		34.3	38.4		ng/L		112	70 - 130
HFPO-DA (GenX)	<1.4		36.3	38.9		ng/L		107	70 - 130
9Cl-PF3ONS	<0.22		33.9	34.8		ng/L		103	70 - 130
11Cl-PF3OUdS	<0.29		34.3	34.0		ng/L		99	70 - 130

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C4 PFBA	*85*		*25 - 150*
13C5 PFPeA	*99*		*25 - 150*
13C2 PFHxA	*92*		*25 - 150*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 500-225865-1 MS
Matrix: Water
Analysis Batch: 638571

Client Sample ID: 2722-E
Prep Type: Total/NA
Prep Batch: 637960

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C4 PFHpA	*94*		*25 - 150*
13C4 PFOA	*92*		*25 - 150*
13C5 PFNA	*98*		*25 - 150*
13C2 PFDA	*90*		*25 - 150*
13C2 PFUnA	*93*		*25 - 150*
13C2 PFDoA	*89*		*25 - 150*
13C2 PFTeDA	*102*		*25 - 150*
13C3 PFBS	*91*		*25 - 150*
18O2 PFHxS	*88*		*25 - 150*
13C4 PFOS	*91*		*25 - 150*
13C8 FOSA	*93*		*10 - 150*
d3-NMeFOSAA	*74*		*25 - 150*
d5-NEtFOSAA	*76*		*25 - 150*
d-N-MeFOSA-M	*77*		*10 - 150*
d-N-EtFOSA-M	*74*		*10 - 150*
d7-N-MeFOSE-M	*91*		*10 - 150*
d9-N-EtFOSE-M	*95*		*10 - 150*
M2-4:2 FTS	*77*		*25 - 150*
M2-6:2 FTS	*79*		*25 - 150*
M2-8:2 FTS	*81*		*25 - 150*
13C3 HFPO-DA	*93*		*25 - 150*
13C2 10:2 FTS	*79*		*25 - 150*

Lab Sample ID: 500-225865-1 MSD
Matrix: Water
Analysis Batch: 638571

Client Sample ID: 2722-E
Prep Type: Total/NA
Prep Batch: 637960

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	<2.2		35.5	36.7		ng/L		103	70 - 130	0	30
Perfluoropentanoic acid (PFPeA)	<0.44		35.5	35.3		ng/L		100	70 - 130	1	30
Perfluorohexanoic acid (PFHxA)	<0.52		35.5	34.4		ng/L		97	70 - 130	0	30
Perfluoroheptanoic acid (PFHpA)	<0.23		35.5	36.8		ng/L		104	70 - 130	4	30
Perfluorooctanoic acid (PFOA)	1.8		35.5	41.7		ng/L		112	70 - 130	4	30
Perfluorononanoic acid (PFNA)	<0.24		35.5	36.3		ng/L		102	70 - 130	1	30
Perfluorodecanoic acid (PFDA)	<0.28		35.5	37.9		ng/L		107	70 - 130	6	30
Perfluoroundecanoic acid (PFUnA)	<0.99		35.5	37.4		ng/L		105	70 - 130	4	30
Perfluorododecanoic acid (PFDoA)	<0.50		35.5	40.1		ng/L		113	70 - 130	2	30
Perfluorotridecanoic acid (PFTrDA)	<1.2		35.5	41.1		ng/L		116	70 - 130	0	30
Perfluorotetradecanoic acid (PFTeA)	<0.66		35.5	37.6		ng/L		106	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)	0.35	J	31.5	32.6		ng/L		102	70 - 130	3	30
Perfluoropentanesulfonic acid (PFPeS)	<0.27		33.4	37.9		ng/L		113	70 - 130	0	30
Perfluorohexanesulfonic acid (PFHxS)	<0.51		32.4	33.5		ng/L		104	70 - 130	5	30
Perfluoroheptanesulfonic acid (PFHpS)	<0.17		33.9	37.0		ng/L		109	70 - 130	8	30

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 500-225865-1 MSD
Matrix: Water
Analysis Batch: 638571

Client Sample ID: 2722-E
Prep Type: Total/NA
Prep Batch: 637960

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorooctanesulfonic acid (PFOS)	<0.49		33.0	35.0		ng/L		106	70 - 130	3	30
Perfluorononanesulfonic acid (PFNS)	<0.33		34.2	34.5		ng/L		101	70 - 130	9	30
Perfluorodecanesulfonic acid (PFDS)	<0.29		34.2	33.4		ng/L		98	70 - 130	7	30
Perfluorododecanesulfonic acid (PFDoS)	<0.87		34.5	34.5		ng/L		100	70 - 130	2	30
Perfluorooctanesulfonamide (FOSA)	<0.88		35.5	37.6		ng/L		106	70 - 130	0	30
NEtFOSA	<0.78		35.5	35.9		ng/L		101	70 - 130	9	30
NMeFOSA	<0.39		35.5	39.3		ng/L		111	70 - 130	3	30
NMeFOSAA	<1.1		35.5	38.6		ng/L		109	70 - 130	5	30
NEtFOSAA	<1.2		35.5	38.3		ng/L		108	70 - 130	1	30
NMeFOSE	<1.3		35.5	37.8		ng/L		106	70 - 130	6	30
NEtFOSE	<0.77		35.5	37.1		ng/L		104	70 - 130	1	30
4:2 FTS	<0.22		33.3	36.5		ng/L		109	70 - 130	1	30
6:2 FTS	<2.3		33.8	33.7		ng/L		100	70 - 130	4	30
8:2 FTS	<0.41		34.1	33.9		ng/L		99	70 - 130	5	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.36		33.5	36.8		ng/L		110	70 - 130	4	30
HFPO-DA (GenX)	<1.4		35.5	36.5		ng/L		103	70 - 130	6	30
9Cl-PF3ONS	<0.22		33.2	33.5		ng/L		101	70 - 130	4	30
11Cl-PF3OUdS	<0.29		33.5	33.4		ng/L		100	70 - 130	2	30

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C4 PFBA	*95*		*25 - 150*
13C5 PFPeA	*103*		*25 - 150*
13C2 PFHxA	*104*		*25 - 150*
13C4 PFHpA	*104*		*25 - 150*
13C4 PFOA	*95*		*25 - 150*
13C5 PFNA	*111*		*25 - 150*
13C2 PFDA	*104*		*25 - 150*
13C2 PFUnA	*101*		*25 - 150*
13C2 PFDoA	*94*		*25 - 150*
13C2 PFTeDA	*109*		*25 - 150*
13C3 PFBS	*101*		*25 - 150*
18O2 PFHxS	*105*		*25 - 150*
13C4 PFOS	*103*		*25 - 150*
13C8 FOSA	*103*		*10 - 150*
d3-NMeFOSAA	*77*		*25 - 150*
d5-NEtFOSAA	*82*		*25 - 150*
d-N-MeFOSA-M	*87*		*10 - 150*
d-N-EtFOSA-M	*84*		*10 - 150*
d7-N-MeFOSE-M	*98*		*10 - 150*
d9-N-EtFOSE-M	*99*		*10 - 150*
M2-4:2 FTS	*86*		*25 - 150*
M2-6:2 FTS	*88*		*25 - 150*
M2-8:2 FTS	*85*		*25 - 150*
13C3 HFPO-DA	*104*		*25 - 150*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 500-225865-1 MSD
Matrix: Water
Analysis Batch: 638571

Client Sample ID: 2722-E
Prep Type: Total/NA
Prep Batch: 637960

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C2 10:2 FTS	89		25 - 150

Lab Chronicle

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225865-1

Client Sample ID: 2722-E
Date Collected: 11/21/22 10:20
Date Received: 11/22/22 09:20

Lab Sample ID: 500-225865-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			637960	EJR	EET SAC	12/07/22 05:52
Total/NA	Analysis	537 (modified)		1	638571	K1S	EET SAC	12/09/22 11:21

Client Sample ID: 2722-E-FB
Date Collected: 11/21/22 10:25
Date Received: 11/22/22 09:20

Lab Sample ID: 500-225865-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			637960	EJR	EET SAC	12/07/22 05:52
Total/NA	Analysis	537 (modified)		1	638571	K1S	EET SAC	12/09/22 11:52

Laboratory References:

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

Accreditation/Certification Summary

Client: Ramboll US Corporation
Job ID: 500-225865-1
Project/Site: Fmr Mirro Plt 2 - 1690026073

Laboratory: Eurofins Sacramento

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

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998204680	08-31-23

Eurofins Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone: 916-373-5600 Fax: 916-372-1059

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: K. HEIMSTEAD	Lab PM: Fredrick, Sandie	Carrier Tracking No(s):	COC No: 500-107645-45320 3
Client Contact: Paul Lindquist	Phone: 262-901-0129	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin:	Page: Page 3 of 3
Company: Ramboll US Corporation	PWSID:			Job #:
Address: 234 W. Florida Street Fifth Floor	Due Date Requested: STANDARD			Preservation Codes:
City: Milwaukee	TAT Requested (days):			A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
State, Zip: WI, 53204	Compliance Project: Δ Yes Δ No			
Phone: 262-901-3510(Tel)	PO #: MIRRO 2			Other:
Email: plindquist@ramboll.com	WO #:			
Project Name: Fmr Mirro Plt 2 - 1690026073	Project #: 50020429			
Site:	SSOW#:			

Analysis Requested

500-225865 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC_IDA_WI - PFAS, Standard List (33 analytes)	Total Number of containers	Special Instructions/Note:
			Preservation Code:		N				
2722 - E	11/21/2022	1020	G	Water	N	Y	X	8	ADD'L VOL FOR MS/MSD
2722 - E - FB	11/21/2022	1025	G	Water	N	N	X	2	

11/21/2022

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	11/21/2022 1815	RAMBOLL	FEDEX	11/21/2022	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
				11/22/22 920	Eurofins
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: 2160772

Cooler Temperature(s) °C and Other Remarks: 1.4 C

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Ramboll US Corporation

Job Number: 500-225865-1

Login Number: 225865
List Number: 1
Creator: Fredrick, Sandie

List Source: Eurofins Chicago

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

Login Sample Receipt Checklist

Client: Ramboll US Corporation

Job Number: 500-225865-1

Login Number: 225865
List Number: 2
Creator: Simmons, Jason C

List Source: Eurofins Sacramento
List Creation: 11/22/22 05:07 PM

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	2110572
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	1.4c
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.	True	
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	

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Sacramento
Sample Receiving Notes

500-225865 Field Sheet

Job: _____

Tracking # : 6155 6217 1301

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier

GSO / OnTrac / Goldstreak / USPS / Other _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations.
File in the job folder with the COC.

Therm. ID: IR-02 Corr. Factor: (+ / -) _____ °C

Ice X Wet W Gel _____ Other _____

Cooler Custody Seal: 210572

Cooler ID: _____

Temp Observed: 1.4 °C Corrected: 1.4 °C

From: Temp Blank ☐ Sample ☒

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	☐	☒	☐
Cooler Temperature is acceptable?	☒	☐	☐
Frozen samples show signs of thaw?	☐	☐	☒

Initials: DJ Date: 11/22/22

Unpacking/Labeling The Samples	Yes	No	NA
COC is complete w/o discrepancies?	☒	☐	☐
Samples compromised/tampered with?	☐	☒	☐
Containers are not broken or leaking?	☒	☐	☐
Sample custody seal?	☐	☐	☒
Sample containers have legible labels?	☒	☐	☐
Sample date/times are provided?	☒	☐	☐
Appropriate containers are used?	☒	☐	☐
Sample bottles are completely filled?	☒	☐	☐
Sample preservatives verified?	☐	☐	☒
Is the Field Sampler's name on COC?	☐	☐	☒
Samples require splitting/compositing?	☐	☐	☒
Samples w/o discrepancies?	☒	☐	☐
Zero headspace?*	☐	☐	☒
Alkalinity has no headspace?	☐	☐	☒
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☒
Multiphasic samples are not present?	☒	☐	☐

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

Initials: KS Date: 11.22.22

Notes: _____

Trizma Lot #(s): _____

Login Completion	Yes	No	NA
Receipt Temperature on COC?	☒	☐	☐
Samples received within hold time?	☒	☐	☐
NCM Filed?	☐	☐	☒
Log Release checked in TALS?	☐	☐	☒

Initials: KS Date: 11.22.22

Isotope Dilution Summary

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225865-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFUnA (25-150)
500-225865-1	2722-E	86	98	97	94	94	104	96	99
500-225865-1 MS	2722-E	85	99	92	94	92	98	90	93
500-225865-1 MSD	2722-E	95	103	104	104	95	111	104	101
500-225865-2	2722-E-FB	95	96	100	98	97	105	99	100
LCS 320-637960/2-A	Lab Control Sample	95	100	103	98	99	106	101	100
MB 320-637960/1-A	Method Blank	90	97	93	97	93	99	90	90

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFDoA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (10-150)	d3NMFOS (25-150)	d5NEFOS (25-150)
500-225865-1	2722-E	92	106	98	98	91	97	75	83
500-225865-1 MS	2722-E	89	102	91	88	91	93	74	76
500-225865-1 MSD	2722-E	94	109	101	105	103	103	77	82
500-225865-2	2722-E-FB	92	100	97	98	97	95	78	82
LCS 320-637960/2-A	Lab Control Sample	95	99	105	107	102	97	77	76
MB 320-637960/1-A	Method Blank	84	88	92	101	88	84	67	72

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	dMeFOSA (10-150)	dEtFOSA (10-150)	NMFM (10-150)	NEFM (10-150)	M242FTS (25-150)	M262FTS (25-150)	M282FTS (25-150)	HFPODA (25-150)
500-225865-1	2722-E	79	78	90	100	84	76	83	95
500-225865-1 MS	2722-E	77	74	91	95	77	79	81	93
500-225865-1 MSD	2722-E	87	84	98	99	86	88	85	104
500-225865-2	2722-E-FB	81	80	95	100	83	83	96	97
LCS 320-637960/2-A	Lab Control Sample	81	82	90	98	76	77	77	101
MB 320-637960/1-A	Method Blank	66	67	83	86	64	67	65	95

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	M102FTS (25-150)
500-225865-1	2722-E	89
500-225865-1 MS	2722-E	79
500-225865-1 MSD	2722-E	89
500-225865-2	2722-E-FB	94
LCS 320-637960/2-A	Lab Control Sample	78
MB 320-637960/1-A	Method Blank	67

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: Ramboll US Corporation
Job ID: 500-225865-1
Project/Site: Fmr Mirro Plt 2 - 1690026073

d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
dMeFOSA = d-N-MeFOSA-M
dEtFOSA = d-N-EtFOSA-M
NMFM = d7-N-MeFOSE-M
NEFM = d9-N-EtFOSE-M
M242FTS = M2-4:2 FTS
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
HFPODA = 13C3 HFPO-DA
M102FTS = 13C2 10:2 FTS

RAMBOLL

ENVIRONMENT
& HEALTH

Sent Via Overnight Delivery

[redacted]
3104 Woodland Drive
Manitowoc, WI 54220

POTABLE WELL SAMPLING RESULTS AT 3104 WOODLAND DRIVE
FORMER MIRRO PLANT NO. 2, 2009 MIRRO DRIVE
MANITOWOC, WISCONSIN, BRRTS NO. 02-36-588656

Dear [redacted]:

January 3, 2023

Ramboll
234 W. Florida Street
Fifth Floor
Milwaukee, WI 53204
USA

T +1 414 837 3607
F +1 414 837 3608
https://ramboll.com

Ref 1690026073

The purpose of this letter is to provide you with the results of the recent potable well testing from your property completed by Newell Operating Company (NOC) with the oversight of the Wisconsin Department of Natural Resources (WDNR). As you are aware, this testing was conducted because of the potential for per- and polyfluoroalkyl substances (PFAS) contaminated groundwater to migrate off-site from the nearby former Mirro Plant No. 2 facility.

On November 21, 2022, NOC's environmental consultant, Ramboll US Consulting, Inc. (Ramboll), collected water samples from your potable well using the spigot prior to your pressure tank. Ramboll submitted the samples to Eurofins Environment Testing (Eurofins) in Sacramento, California, a State of Wisconsin PFAS certified laboratory.

Your Test Results

A copy of the laboratory report for your potable well sample is enclosed. The analyses did not detect any PFAS in your potable well sample.

If you have any questions regarding the quality of your potable well water, please contact the following:

- Tauren Beggs, WDNR, (920) 510-3472, Tauren.Beggs@wisconsin.gov; or
- Nathan Kloczko, WDHS, (608) 267-3227, Nathan.Kloczko@dhs.wisconsin.gov.

For any other questions regarding this letter, please contact Lou Meschede at (219) 781-7177.

Sincerely,

Paul Lindquist
Managing Consultant

D +1 262 901 3510
plindquist@ramboll.com

Jeanne M. Tarvin, PG, CPG
E&H Americas Country Market Director

D +1 262 901 0085
jtarvin@ramboll.com

cc: Kristin Jones, NOC
Tauren Beggs, WDNR
Nathan Kloczko, WDHS

ENCLOSURE

EUROFINS LABORATORY ANALYTICAL REPORT

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Paul Lindquist
Ramboll US Corporation
234 W. Florida Street
Fifth Floor
Milwaukee, Wisconsin 53204

Generated 12/16/2022 4:02:40 PM

JOB DESCRIPTION

Fmr Mirro Plt 2 - 1690026073

JOB NUMBER

500-225862-1

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

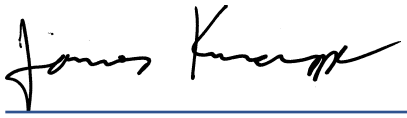
Eurofins Chicago

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Authorization



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Authorized for release by
Jim Knapp, Project Manager II
Jim.Knapp@et.eurofinsus.com
Designee for
Sandie Fredrick, Project Manager II
Sandra.Fredrick@et.eurofinsus.com
(920)261-1660

Table of Contents

Case Narrative

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225862-1

Job ID: 500-225862-1

Laboratory: Eurofins Chicago

Narrative

Job Narrative
500-225862-1

Comments
No additional comments.

Receipt
The samples were received on 11/22/2022 9:20 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 2.0º C.

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

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

Detection Summary

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225862-1

Client Sample ID: 3104-E — Lab Sample ID: 500-225862-1

No Detections.

Client Sample ID: 3104-E-FB — Lab Sample ID: 500-225862-2

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225862-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	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: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225862-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-225862-1	3104-E	Water	11/21/22 07:12	11/22/22 09:20
500-225862-2	3104-E-FB	Water	11/21/22 07:15	11/22/22 09:20

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225862-1

Client Sample ID: 3104-E
Date Collected: 11/21/22 07:12
Date Received: 11/22/22 09:20

Lab Sample ID: 500-225862-1
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.2		4.7	2.2	ng/L		12/07/22 05:52	12/09/22 09:09	1
Perfluoropentanoic acid (PFPeA)	<0.46		1.9	0.46	ng/L		12/07/22 05:52	12/09/22 09:09	1
Perfluorohexanoic acid (PFHxA)	<0.54		1.9	0.54	ng/L		12/07/22 05:52	12/09/22 09:09	1
Perfluoroheptanoic acid (PFHpA)	<0.23		1.9	0.23	ng/L		12/07/22 05:52	12/09/22 09:09	1
Perfluorooctanoic acid (PFOA)	<0.79		1.9	0.79	ng/L		12/07/22 05:52	12/09/22 09:09	1
Perfluorononanoic acid (PFNA)	<0.25		1.9	0.25	ng/L		12/07/22 05:52	12/09/22 09:09	1
Perfluorodecanoic acid (PFDA)	<0.29		1.9	0.29	ng/L		12/07/22 05:52	12/09/22 09:09	1
Perfluoroundecanoic acid (PFUnA)	<1.0		1.9	1.0	ng/L		12/07/22 05:52	12/09/22 09:09	1
Perfluorododecanoic acid (PFDoA)	<0.51		1.9	0.51	ng/L		12/07/22 05:52	12/09/22 09:09	1
Perfluorotridecanoic acid (PFTrDA)	<1.2		1.9	1.2	ng/L		12/07/22 05:52	12/09/22 09:09	1
Perfluorotetradecanoic acid (PFTeA)	<0.68		1.9	0.68	ng/L		12/07/22 05:52	12/09/22 09:09	1
Perfluorobutanesulfonic acid (PFBS)	<0.19		1.9	0.19	ng/L		12/07/22 05:52	12/09/22 09:09	1
Perfluoropentanesulfonic acid (PFPeS)	<0.28		1.9	0.28	ng/L		12/07/22 05:52	12/09/22 09:09	1
Perfluorohexanesulfonic acid (PFHxS)	<0.53		1.9	0.53	ng/L		12/07/22 05:52	12/09/22 09:09	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.18		1.9	0.18	ng/L		12/07/22 05:52	12/09/22 09:09	1
Perfluorooctanesulfonic acid (PFOS)	<0.50		1.9	0.50	ng/L		12/07/22 05:52	12/09/22 09:09	1
Perfluorononanesulfonic acid (PFNS)	<0.35		1.9	0.35	ng/L		12/07/22 05:52	12/09/22 09:09	1
Perfluorodecanesulfonic acid (PFDS)	<0.30		1.9	0.30	ng/L		12/07/22 05:52	12/09/22 09:09	1
Perfluorododecanesulfonic acid (PFDoS)	<0.91		1.9	0.91	ng/L		12/07/22 05:52	12/09/22 09:09	1
Perfluorooctanesulfonamide (FOSA)	<0.92		1.9	0.92	ng/L		12/07/22 05:52	12/09/22 09:09	1
NEtFOSA	<0.81		1.9	0.81	ng/L		12/07/22 05:52	12/09/22 09:09	1
NMeFOSA	<0.40		1.9	0.40	ng/L		12/07/22 05:52	12/09/22 09:09	1
NMeFOSAA	<1.1		4.7	1.1	ng/L		12/07/22 05:52	12/09/22 09:09	1
NEtFOSAA	<1.2		4.7	1.2	ng/L		12/07/22 05:52	12/09/22 09:09	1
NMeFOSE	<1.3		3.7	1.3	ng/L		12/07/22 05:52	12/09/22 09:09	1
NEtFOSE	<0.79		1.9	0.79	ng/L		12/07/22 05:52	12/09/22 09:09	1
4:2 FTS	<0.22		1.9	0.22	ng/L		12/07/22 05:52	12/09/22 09:09	1
6:2 FTS	<2.3		4.7	2.3	ng/L		12/07/22 05:52	12/09/22 09:09	1
8:2 FTS	<0.43		1.9	0.43	ng/L		12/07/22 05:52	12/09/22 09:09	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.37		1.9	0.37	ng/L		12/07/22 05:52	12/09/22 09:09	1
HFPO-DA (GenX)	<1.4		3.7	1.4	ng/L		12/07/22 05:52	12/09/22 09:09	1
9Cl-PF3ONS	<0.22		1.9	0.22	ng/L		12/07/22 05:52	12/09/22 09:09	1
11Cl-PF3OUdS	<0.30		1.9	0.30	ng/L		12/07/22 05:52	12/09/22 09:09	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*92*		*25 - 150*	*12/07/22 05:52*	*12/09/22 09:09*	*1*
13C5 PFPeA	*99*		*25 - 150*	*12/07/22 05:52*	*12/09/22 09:09*	*1*
13C2 PFHxA	*101*		*25 - 150*	*12/07/22 05:52*	*12/09/22 09:09*	*1*
13C4 PFHpA	*95*		*25 - 150*	*12/07/22 05:52*	*12/09/22 09:09*	*1*
13C4 PFOA	*95*		*25 - 150*	*12/07/22 05:52*	*12/09/22 09:09*	*1*
13C5 PFNA	*106*		*25 - 150*	*12/07/22 05:52*	*12/09/22 09:09*	*1*
13C2 PFDA	*95*		*25 - 150*	*12/07/22 05:52*	*12/09/22 09:09*	*1*
13C2 PFUnA	*103*		*25 - 150*	*12/07/22 05:52*	*12/09/22 09:09*	*1*
13C2 PFDoA	*95*		*25 - 150*	*12/07/22 05:52*	*12/09/22 09:09*	*1*
13C2 PFTeDA	*105*		*25 - 150*	*12/07/22 05:52*	*12/09/22 09:09*	*1*
13C3 PFBS	*103*		*25 - 150*	*12/07/22 05:52*	*12/09/22 09:09*	*1*
18O2 PFHxS	*95*		*25 - 150*	*12/07/22 05:52*	*12/09/22 09:09*	*1*

Client Sample ID: 3104-E
Date Collected: 11/21/22 07:12
Date Received: 11/22/22 09:20

Lab Sample ID: 500-225862-1
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	95		25 - 150	12/07/22 05:52	12/09/22 09:09	1
13C8 FOSA	101		10 - 150	12/07/22 05:52	12/09/22 09:09	1
d3-NMeFOSAA	73		25 - 150	12/07/22 05:52	12/09/22 09:09	1
d5-NEtFOSAA	79		25 - 150	12/07/22 05:52	12/09/22 09:09	1
d-N-MeFOSA-M	70		10 - 150	12/07/22 05:52	12/09/22 09:09	1
d-N-EtFOSA-M	68		10 - 150	12/07/22 05:52	12/09/22 09:09	1
d7-N-MeFOSE-M	88		10 - 150	12/07/22 05:52	12/09/22 09:09	1
d9-N-EtFOSE-M	90		10 - 150	12/07/22 05:52	12/09/22 09:09	1
M2-4:2 FTS	71		25 - 150	12/07/22 05:52	12/09/22 09:09	1
M2-6:2 FTS	79		25 - 150	12/07/22 05:52	12/09/22 09:09	1
M2-8:2 FTS	76		25 - 150	12/07/22 05:52	12/09/22 09:09	1
13C3 HFPO-DA	97		25 - 150	12/07/22 05:52	12/09/22 09:09	1
13C2 10:2 FTS	76		25 - 150	12/07/22 05:52	12/09/22 09:09	1

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225862-1

Client Sample ID: 3104-E-FB
Date Collected: 11/21/22 07:15
Date Received: 11/22/22 09:20

Lab Sample ID: 500-225862-2
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.2		4.7	2.2	ng/L		12/07/22 05:52	12/09/22 09:40	1
Perfluoropentanoic acid (PFPeA)	<0.46		1.9	0.46	ng/L		12/07/22 05:52	12/09/22 09:40	1
Perfluorohexanoic acid (PFHxA)	<0.54		1.9	0.54	ng/L		12/07/22 05:52	12/09/22 09:40	1
Perfluoroheptanoic acid (PFHpA)	<0.23		1.9	0.23	ng/L		12/07/22 05:52	12/09/22 09:40	1
Perfluorooctanoic acid (PFOA)	<0.79		1.9	0.79	ng/L		12/07/22 05:52	12/09/22 09:40	1
Perfluorononanoic acid (PFNA)	<0.25		1.9	0.25	ng/L		12/07/22 05:52	12/09/22 09:40	1
Perfluorodecanoic acid (PFDA)	<0.29		1.9	0.29	ng/L		12/07/22 05:52	12/09/22 09:40	1
Perfluoroundecanoic acid (PFUnA)	<1.0		1.9	1.0	ng/L		12/07/22 05:52	12/09/22 09:40	1
Perfluorododecanoic acid (PFDoA)	<0.51		1.9	0.51	ng/L		12/07/22 05:52	12/09/22 09:40	1
Perfluorotridecanoic acid (PFTrDA)	<1.2		1.9	1.2	ng/L		12/07/22 05:52	12/09/22 09:40	1
Perfluorotetradecanoic acid (PFTeA)	<0.68		1.9	0.68	ng/L		12/07/22 05:52	12/09/22 09:40	1
Perfluorobutanesulfonic acid (PFBS)	<0.19		1.9	0.19	ng/L		12/07/22 05:52	12/09/22 09:40	1
Perfluoropentanesulfonic acid (PFPeS)	<0.28		1.9	0.28	ng/L		12/07/22 05:52	12/09/22 09:40	1
Perfluorohexanesulfonic acid (PFHxS)	<0.53		1.9	0.53	ng/L		12/07/22 05:52	12/09/22 09:40	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.18		1.9	0.18	ng/L		12/07/22 05:52	12/09/22 09:40	1
Perfluorooctanesulfonic acid (PFOS)	<0.50		1.9	0.50	ng/L		12/07/22 05:52	12/09/22 09:40	1
Perfluorononanesulfonic acid (PFNS)	<0.34		1.9	0.34	ng/L		12/07/22 05:52	12/09/22 09:40	1
Perfluorodecanesulfonic acid (PFDS)	<0.30		1.9	0.30	ng/L		12/07/22 05:52	12/09/22 09:40	1
Perfluorododecanesulfonic acid (PFDoS)	<0.90		1.9	0.90	ng/L		12/07/22 05:52	12/09/22 09:40	1
Perfluorooctanesulfonamide (FOSA)	<0.91		1.9	0.91	ng/L		12/07/22 05:52	12/09/22 09:40	1
NEtFOSA	<0.81		1.9	0.81	ng/L		12/07/22 05:52	12/09/22 09:40	1
NMeFOSA	<0.40		1.9	0.40	ng/L		12/07/22 05:52	12/09/22 09:40	1
NMeFOSAA	<1.1		4.7	1.1	ng/L		12/07/22 05:52	12/09/22 09:40	1
NEtFOSAA	<1.2		4.7	1.2	ng/L		12/07/22 05:52	12/09/22 09:40	1
NMeFOSE	<1.3		3.7	1.3	ng/L		12/07/22 05:52	12/09/22 09:40	1
NEtFOSE	<0.79		1.9	0.79	ng/L		12/07/22 05:52	12/09/22 09:40	1
4:2 FTS	<0.22		1.9	0.22	ng/L		12/07/22 05:52	12/09/22 09:40	1
6:2 FTS	<2.3		4.7	2.3	ng/L		12/07/22 05:52	12/09/22 09:40	1
8:2 FTS	<0.43		1.9	0.43	ng/L		12/07/22 05:52	12/09/22 09:40	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.37		1.9	0.37	ng/L		12/07/22 05:52	12/09/22 09:40	1
HFPO-DA (GenX)	<1.4		3.7	1.4	ng/L		12/07/22 05:52	12/09/22 09:40	1
9Cl-PF3ONS	<0.22		1.9	0.22	ng/L		12/07/22 05:52	12/09/22 09:40	1
11Cl-PF3OUdS	<0.30		1.9	0.30	ng/L		12/07/22 05:52	12/09/22 09:40	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*93*		*25 - 150*	*12/07/22 05:52*	*12/09/22 09:40*	*1*
13C5 PFPeA	*98*		*25 - 150*	*12/07/22 05:52*	*12/09/22 09:40*	*1*
13C2 PFHxA	*99*		*25 - 150*	*12/07/22 05:52*	*12/09/22 09:40*	*1*
13C4 PFHpA	*96*		*25 - 150*	*12/07/22 05:52*	*12/09/22 09:40*	*1*
13C4 PFOA	*97*		*25 - 150*	*12/07/22 05:52*	*12/09/22 09:40*	*1*
13C5 PFNA	*101*		*25 - 150*	*12/07/22 05:52*	*12/09/22 09:40*	*1*
13C2 PFDA	*99*		*25 - 150*	*12/07/22 05:52*	*12/09/22 09:40*	*1*
13C2 PFUnA	*100*		*25 - 150*	*12/07/22 05:52*	*12/09/22 09:40*	*1*
13C2 PFDoA	*92*		*25 - 150*	*12/07/22 05:52*	*12/09/22 09:40*	*1*
13C2 PFTeDA	*104*		*25 - 150*	*12/07/22 05:52*	*12/09/22 09:40*	*1*
13C3 PFBS	*96*		*25 - 150*	*12/07/22 05:52*	*12/09/22 09:40*	*1*
18O2 PFHxS	*94*		*25 - 150*	*12/07/22 05:52*	*12/09/22 09:40*	*1*

Client: Ramboll US Corporation
Job ID: 500-225862-1
Project/Site: Fmr Mirro Plt 2 - 1690026073

Client Sample ID: 3104-E-FB
Lab Sample ID: 500-225862-2
Date Collected: 11/21/22 07:15
Matrix: Water
Date Received: 11/22/22 09:20

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	97		25 - 150	12/07/22 05:52	12/09/22 09:40	1
13C8 FOSA	96		10 - 150	12/07/22 05:52	12/09/22 09:40	1
d3-NMeFOSAA	77		25 - 150	12/07/22 05:52	12/09/22 09:40	1
d5-NEtFOSAA	81		25 - 150	12/07/22 05:52	12/09/22 09:40	1
d-N-MeFOSA-M	76		10 - 150	12/07/22 05:52	12/09/22 09:40	1
d-N-EtFOSA-M	73		10 - 150	12/07/22 05:52	12/09/22 09:40	1
d7-N-MeFOSE-M	90		10 - 150	12/07/22 05:52	12/09/22 09:40	1
d9-N-EtFOSE-M	98		10 - 150	12/07/22 05:52	12/09/22 09:40	1
M2-4:2 FTS	78		25 - 150	12/07/22 05:52	12/09/22 09:40	1
M2-6:2 FTS	78		25 - 150	12/07/22 05:52	12/09/22 09:40	1
M2-8:2 FTS	82		25 - 150	12/07/22 05:52	12/09/22 09:40	1
13C3 HFPO-DA	97		25 - 150	12/07/22 05:52	12/09/22 09:40	1
13C2 10:2 FTS	76		25 - 150	12/07/22 05:52	12/09/22 09:40	1

Definitions/Glossary

Client: Ramboll US Corporation
Job ID: 500-225862-1
Project/Site: Fmr Mirro Plt 2 - 1690026073

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

QC Association Summary

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225862-1

LCMS

Prep Batch: 637960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-225862-1	3104-E	Total/NA	Water	3535	
500-225862-2	3104-E-FB	Total/NA	Water	3535	
MB 320-637960/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-637960/2-A	Lab Control Sample	Total/NA	Water	3535	
500-225862-1 MS	3104-E	Total/NA	Water	3535	
500-225862-1 MSD	3104-E	Total/NA	Water	3535	

Analysis Batch: 638571

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-225862-1	3104-E	Total/NA	Water	537 (modified)	637960
500-225862-2	3104-E-FB	Total/NA	Water	537 (modified)	637960
MB 320-637960/1-A	Method Blank	Total/NA	Water	537 (modified)	637960
LCS 320-637960/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	637960
500-225862-1 MS	3104-E	Total/NA	Water	537 (modified)	637960
500-225862-1 MSD	3104-E	Total/NA	Water	537 (modified)	637960

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-637960/1-A
Matrix: Water
Analysis Batch: 638571

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 637960

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.4		5.0	2.4	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluoropentanoic acid (PFPeA)	<0.49		2.0	0.49	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorohexanoic acid (PFHxA)	<0.58		2.0	0.58	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluoroheptanoic acid (PFHpA)	<0.25		2.0	0.25	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorooctanoic acid (PFOA)	<0.85		2.0	0.85	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorononanoic acid (PFNA)	<0.27		2.0	0.27	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	0.31	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluoroundecanoic acid (PFUnA)	<1.1		2.0	1.1	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorododecanoic acid (PFDoA)	<0.55		2.0	0.55	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorotridecanoic acid (PFTrDA)	<1.3		2.0	1.3	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorotetradecanoic acid (PFTeA)	<0.73		2.0	0.73	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorobutanesulfonic acid (PFBS)	<0.20		2.0	0.20	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluoropentanesulfonic acid (PFPeS)	<0.30		2.0	0.30	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorohexanesulfonic acid (PFHxS)	<0.57		2.0	0.57	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.19		2.0	0.19	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorooctanesulfonic acid (PFOS)	<0.54		2.0	0.54	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorononanesulfonic acid (PFNS)	<0.37		2.0	0.37	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorodecanesulfonic acid (PFDS)	<0.32		2.0	0.32	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorododecanesulfonic acid (PFDoS)	<0.97		2.0	0.97	ng/L		12/07/22 05:52	12/09/22 08:49	1
Perfluorooctanesulfonamide (FOSA)	<0.98		2.0	0.98	ng/L		12/07/22 05:52	12/09/22 08:49	1
NEtFOSA	<0.87		2.0	0.87	ng/L		12/07/22 05:52	12/09/22 08:49	1
NMeFOSA	<0.43		2.0	0.43	ng/L		12/07/22 05:52	12/09/22 08:49	1
NMeFOSAA	<1.2		5.0	1.2	ng/L		12/07/22 05:52	12/09/22 08:49	1
NEtFOSAA	<1.3		5.0	1.3	ng/L		12/07/22 05:52	12/09/22 08:49	1
NMeFOSE	<1.4		4.0	1.4	ng/L		12/07/22 05:52	12/09/22 08:49	1
NEtFOSE	<0.85		2.0	0.85	ng/L		12/07/22 05:52	12/09/22 08:49	1
4:2 FTS	<0.24		2.0	0.24	ng/L		12/07/22 05:52	12/09/22 08:49	1
6:2 FTS	<2.5		5.0	2.5	ng/L		12/07/22 05:52	12/09/22 08:49	1
8:2 FTS	<0.46		2.0	0.46	ng/L		12/07/22 05:52	12/09/22 08:49	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.40		2.0	0.40	ng/L		12/07/22 05:52	12/09/22 08:49	1
HFPO-DA (GenX)	<1.5		4.0	1.5	ng/L		12/07/22 05:52	12/09/22 08:49	1
9Cl-PF3ONS	<0.24		2.0	0.24	ng/L		12/07/22 05:52	12/09/22 08:49	1
11Cl-PF3OUdS	<0.32		2.0	0.32	ng/L		12/07/22 05:52	12/09/22 08:49	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*90*		*25 - 150*	*12/07/22 05:52*	*12/09/22 08:49*	*1*
13C5 PFPeA	*97*		*25 - 150*	*12/07/22 05:52*	*12/09/22 08:49*	*1*
13C2 PFHxA	*93*		*25 - 150*	*12/07/22 05:52*	*12/09/22 08:49*	*1*
13C4 PFHpA	*97*		*25 - 150*	*12/07/22 05:52*	*12/09/22 08:49*	*1*
13C4 PFOA	*93*		*25 - 150*	*12/07/22 05:52*	*12/09/22 08:49*	*1*
13C5 PFNA	*99*		*25 - 150*	*12/07/22 05:52*	*12/09/22 08:49*	*1*
13C2 PFDA	*90*		*25 - 150*	*12/07/22 05:52*	*12/09/22 08:49*	*1*
13C2 PFUnA	*90*		*25 - 150*	*12/07/22 05:52*	*12/09/22 08:49*	*1*
13C2 PFDoA	*84*		*25 - 150*	*12/07/22 05:52*	*12/09/22 08:49*	*1*
13C2 PFTeDA	*88*		*25 - 150*	*12/07/22 05:52*	*12/09/22 08:49*	*1*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-637960/1-A
Matrix: Water
Analysis Batch: 638571

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 637960

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFBS	92		25 - 150	12/07/22 05:52	12/09/22 08:49	1
18O2 PFHxS	101		25 - 150	12/07/22 05:52	12/09/22 08:49	1
13C4 PFOS	88		25 - 150	12/07/22 05:52	12/09/22 08:49	1
13C8 FOSA	84		10 - 150	12/07/22 05:52	12/09/22 08:49	1
d3-NMeFOSAA	67		25 - 150	12/07/22 05:52	12/09/22 08:49	1
d5-NEtFOSAA	72		25 - 150	12/07/22 05:52	12/09/22 08:49	1
d-N-MeFOSA-M	66		10 - 150	12/07/22 05:52	12/09/22 08:49	1
d-N-EtFOSA-M	67		10 - 150	12/07/22 05:52	12/09/22 08:49	1
d7-N-MeFOSE-M	83		10 - 150	12/07/22 05:52	12/09/22 08:49	1
d9-N-EtFOSE-M	86		10 - 150	12/07/22 05:52	12/09/22 08:49	1
M2-4:2 FTS	64		25 - 150	12/07/22 05:52	12/09/22 08:49	1
M2-6:2 FTS	67		25 - 150	12/07/22 05:52	12/09/22 08:49	1
M2-8:2 FTS	65		25 - 150	12/07/22 05:52	12/09/22 08:49	1
13C3 HFPO-DA	95		25 - 150	12/07/22 05:52	12/09/22 08:49	1
13C2 10:2 FTS	67		25 - 150	12/07/22 05:52	12/09/22 08:49	1

Lab Sample ID: LCS 320-637960/2-A
Matrix: Water
Analysis Batch: 638571

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 637960

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	40.0	40.8		ng/L		102	60 - 135
Perfluoropentanoic acid (PFPeA)	40.0	39.5		ng/L		99	60 - 135
Perfluorohexanoic acid (PFHxA)	40.0	41.2		ng/L		103	60 - 135
Perfluoroheptanoic acid (PFHpA)	40.0	43.5		ng/L		109	60 - 135
Perfluorooctanoic acid (PFOA)	40.0	43.9		ng/L		110	60 - 135
Perfluorononanoic acid (PFNA)	40.0	39.9		ng/L		100	60 - 135
Perfluorodecanoic acid (PFDA)	40.0	42.3		ng/L		106	60 - 135
Perfluoroundecanoic acid (PFUnA)	40.0	43.6		ng/L		109	60 - 135
Perfluorododecanoic acid (PFDoA)	40.0	46.6		ng/L		116	60 - 135
Perfluorotridecanoic acid (PFTrDA)	40.0	43.3		ng/L		108	60 - 135
Perfluorotetradecanoic acid (PFTeA)	40.0	42.0		ng/L		105	60 - 135
Perfluorobutanesulfonic acid (PFBS)	35.5	35.9		ng/L		101	60 - 135
Perfluoropentanesulfonic acid (PFPeS)	37.6	38.0		ng/L		101	60 - 135
Perfluorohexanesulfonic acid (PFHxS)	36.5	37.3		ng/L		102	60 - 135
Perfluoroheptanesulfonic acid (PFHpS)	38.2	43.7		ng/L		115	60 - 135
Perfluorooctanesulfonic acid (PFOS)	37.2	39.7		ng/L		107	60 - 135
Perfluorononanesulfonic acid (PFNS)	38.5	41.1		ng/L		107	60 - 135
Perfluorodecanesulfonic acid (PFDS)	38.6	42.2		ng/L		109	60 - 135
Perfluorododecanesulfonic acid (PFDoS)	38.8	37.7		ng/L		97	60 - 135

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-637960/2-A
Matrix: Water
Analysis Batch: 638571

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 637960

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanesulfonamide (FOSA)	40.0	41.5		ng/L		104	60 - 135
NEtFOSA	40.0	39.5		ng/L		99	60 - 135
NMeFOSA	40.0	40.6		ng/L		101	60 - 135
NMeFOSAA	40.0	46.0		ng/L		115	60 - 135
NEtFOSAA	40.0	42.4		ng/L		106	60 - 135
NMeFOSE	40.0	43.6		ng/L		109	60 - 135
NEtFOSE	40.0	40.6		ng/L		102	60 - 135
4:2 FTS	37.5	34.0		ng/L		91	60 - 135
6:2 FTS	38.1	37.4		ng/L		98	60 - 135
8:2 FTS	38.4	39.4		ng/L		102	60 - 135
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	43.5		ng/L		115	60 - 135
HFPO-DA (GenX)	40.0	43.0		ng/L		107	60 - 135
9Cl-PF3ONS	37.4	38.1		ng/L		102	60 - 135
11Cl-PF3OUdS	37.8	38.8		ng/L		103	60 - 135

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*95*		*25 - 150*
13C5 PFPeA	*100*		*25 - 150*
13C2 PFHxA	*103*		*25 - 150*
13C4 PFHpA	*98*		*25 - 150*
13C4 PFOA	*99*		*25 - 150*
13C5 PFNA	*106*		*25 - 150*
13C2 PFDA	*101*		*25 - 150*
13C2 PFUnA	*100*		*25 - 150*
13C2 PFDoA	*95*		*25 - 150*
13C2 PFTeDA	*99*		*25 - 150*
13C3 PFBS	*105*		*25 - 150*
18O2 PFHxS	*107*		*25 - 150*
13C4 PFOS	*102*		*25 - 150*
13C8 FOSA	*97*		*10 - 150*
d3-NMeFOSAA	*77*		*25 - 150*
d5-NEtFOSAA	*76*		*25 - 150*
d-N-MeFOSA-M	*81*		*10 - 150*
d-N-EtFOSA-M	*82*		*10 - 150*
d7-N-MeFOSE-M	*90*		*10 - 150*
d9-N-EtFOSE-M	*98*		*10 - 150*
M2-4:2 FTS	*76*		*25 - 150*
M2-6:2 FTS	*77*		*25 - 150*
M2-8:2 FTS	*77*		*25 - 150*
13C3 HFPO-DA	*101*		*25 - 150*
13C2 10:2 FTS	*78*		*25 - 150*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 500-225862-1 MS
Matrix: Water
Analysis Batch: 638571

Client Sample ID: 3104-E
Prep Type: Total/NA
Prep Batch: 637960

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	<2.2		36.5	37.3		ng/L		102	70 - 130
Perfluoropentanoic acid (PFPeA)	<0.46		36.5	34.9		ng/L		96	70 - 130
Perfluorohexanoic acid (PFHxA)	<0.54		36.5	36.8		ng/L		101	70 - 130
Perfluoroheptanoic acid (PFHpA)	<0.23		36.5	37.6		ng/L		103	70 - 130
Perfluorooctanoic acid (PFOA)	<0.79		36.5	37.7		ng/L		103	70 - 130
Perfluorononanoic acid (PFNA)	<0.25		36.5	38.2		ng/L		105	70 - 130
Perfluorodecanoic acid (PFDA)	<0.29		36.5	38.0		ng/L		104	70 - 130
Perfluoroundecanoic acid (PFUnA)	<1.0		36.5	38.7		ng/L		106	70 - 130
Perfluorododecanoic acid (PFDoA)	<0.51		36.5	40.2		ng/L		110	70 - 130
Perfluorotridecanoic acid (PFTrDA)	<1.2		36.5	41.7		ng/L		114	70 - 130
Perfluorotetradecanoic acid (PFTeA)	<0.68		36.5	37.6		ng/L		103	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<0.19		32.4	34.7		ng/L		107	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<0.28		34.3	38.6		ng/L		113	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<0.53		33.3	32.9		ng/L		99	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<0.18		34.8	40.5		ng/L		116	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<0.50		33.9	37.2		ng/L		110	70 - 130
Perfluorononanesulfonic acid (PFNS)	<0.35		35.1	38.0		ng/L		108	70 - 130
Perfluorodecanesulfonic acid (PFDS)	<0.30		35.2	35.9		ng/L		102	70 - 130
Perfluorododecanesulfonic acid (PFDoS)	<0.91		35.4	37.8		ng/L		107	70 - 130
Perfluorooctanesulfonamide (FOSA)	<0.92		36.5	37.8		ng/L		104	70 - 130
NEtFOSA	<0.81		36.5	38.9		ng/L		107	70 - 130
NMeFOSA	<0.40		36.5	39.6		ng/L		109	70 - 130
NMeFOSAA	<1.1		36.5	38.3		ng/L		105	70 - 130
NEtFOSAA	<1.2		36.5	38.9		ng/L		107	70 - 130
NMeFOSE	<1.3		36.5	40.5		ng/L		111	70 - 130
NEtFOSE	<0.79		36.5	38.1		ng/L		104	70 - 130
4:2 FTS	<0.22		34.2	33.9		ng/L		99	70 - 130
6:2 FTS	<2.3		34.7	33.7		ng/L		97	70 - 130
8:2 FTS	<0.43		35.0	36.1		ng/L		103	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.37		34.4	40.3		ng/L		117	70 - 130
HFPO-DA (GenX)	<1.4		36.5	38.9		ng/L		107	70 - 130
9Cl-PF3ONS	<0.22		34.1	36.4		ng/L		107	70 - 130
11Cl-PF3OUdS	<0.30		34.4	36.2		ng/L		105	70 - 130

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C4 PFBA	*84*		*25 - 150*
13C5 PFPeA	*95*		*25 - 150*
13C2 PFHxA	*90*		*25 - 150*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 500-225862-1 MS
Matrix: Water
Analysis Batch: 638571

Client Sample ID: 3104-E
Prep Type: Total/NA
Prep Batch: 637960

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C4 PFHpA	89		25 - 150
13C4 PFOA	91		25 - 150
13C5 PFNA	94		25 - 150
13C2 PFDA	91		25 - 150
13C2 PFUnA	91		25 - 150
13C2 PFDoA	85		25 - 150
13C2 PFTeDA	98		25 - 150
13C3 PFBS	87		25 - 150
18O2 PFHxS	91		25 - 150
13C4 PFOS	86		25 - 150
13C8 FOSA	91		10 - 150
d3-NMeFOSAA	71		25 - 150
d5-NEtFOSAA	73		25 - 150
d-N-MeFOSA-M	76		10 - 150
d-N-EtFOSA-M	71		10 - 150
d7-N-MeFOSE-M	84		10 - 150
d9-N-EtFOSE-M	91		10 - 150
M2-4:2 FTS	75		25 - 150
M2-6:2 FTS	73		25 - 150
M2-8:2 FTS	66		25 - 150
13C3 HFPO-DA	91		25 - 150
13C2 10:2 FTS	71		25 - 150

Lab Sample ID: 500-225862-1 MSD
Matrix: Water
Analysis Batch: 638571

Client Sample ID: 3104-E
Prep Type: Total/NA
Prep Batch: 637960

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	<2.2		37.8	40.1		ng/L		106	70 - 130	7	30
Perfluoropentanoic acid (PFPeA)	<0.46		37.8	37.1		ng/L		98	70 - 130	6	30
Perfluorohexanoic acid (PFHxA)	<0.54		37.8	36.3		ng/L		96	70 - 130	1	30
Perfluoroheptanoic acid (PFHpA)	<0.23		37.8	42.0		ng/L		111	70 - 130	11	30
Perfluorooctanoic acid (PFOA)	<0.79		37.8	40.9		ng/L		108	70 - 130	8	30
Perfluorononanoic acid (PFNA)	<0.25		37.8	38.1		ng/L		101	70 - 130	0	30
Perfluorodecanoic acid (PFDA)	<0.29		37.8	43.1		ng/L		114	70 - 130	13	30
Perfluoroundecanoic acid (PFUnA)	<1.0		37.8	41.7		ng/L		110	70 - 130	8	30
Perfluorododecanoic acid (PFDoA)	<0.51		37.8	43.2		ng/L		114	70 - 130	7	30
Perfluorotridecanoic acid (PFTrDA)	<1.2		37.8	42.7		ng/L		113	70 - 130	2	30
Perfluorotetradecanoic acid (PFTeA)	<0.68		37.8	41.7		ng/L		110	70 - 130	10	30
Perfluorobutanesulfonic acid (PFBS)	<0.19		33.6	33.1		ng/L		99	70 - 130	5	30
Perfluoropentanesulfonic acid (PFPeS)	<0.28		35.5	36.6		ng/L		103	70 - 130	6	30
Perfluorohexanesulfonic acid (PFHxS)	<0.53		34.5	34.0		ng/L		99	70 - 130	3	30
Perfluoroheptanesulfonic acid (PFHpS)	<0.18		36.1	41.2		ng/L		114	70 - 130	2	30

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 500-225862-1 MSD
Matrix: Water
Analysis Batch: 638571

Client Sample ID: 3104-E
Prep Type: Total/NA
Prep Batch: 637960

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorooctanesulfonic acid (PFOS)	<0.50		35.1	37.6		ng/L		107	70 - 130	1	30
Perfluorononanesulfonic acid (PFNS)	<0.35		36.4	43.3		ng/L		119	70 - 130	13	30
Perfluorodecanesulfonic acid (PFDS)	<0.30		36.4	41.4		ng/L		114	70 - 130	14	30
Perfluorododecanesulfonic acid (PFDoS)	<0.91		36.7	42.5		ng/L		116	70 - 130	12	30
Perfluorooctanesulfonamide (FOSA)	<0.92		37.8	40.3		ng/L		107	70 - 130	6	30
NEtFOSA	<0.81		37.8	38.6		ng/L		102	70 - 130	1	30
NMeFOSA	<0.40		37.8	41.5		ng/L		110	70 - 130	5	30
NMeFOSAA	<1.1		37.8	41.8		ng/L		111	70 - 130	9	30
NEtFOSAA	<1.2		37.8	42.3		ng/L		112	70 - 130	8	30
NMeFOSE	<1.3		37.8	43.2		ng/L		114	70 - 130	7	30
NEtFOSE	<0.79		37.8	40.9		ng/L		108	70 - 130	7	30
4:2 FTS	<0.22		35.4	35.8		ng/L		101	70 - 130	6	30
6:2 FTS	<2.3		36.0	40.3		ng/L		112	70 - 130	18	30
8:2 FTS	<0.43		36.3	39.7		ng/L		109	70 - 130	9	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.37		35.7	41.9		ng/L		117	70 - 130	4	30
HFPO-DA (GenX)	<1.4		37.8	39.3		ng/L		104	70 - 130	1	30
9Cl-PF3ONS	<0.22		35.3	39.5		ng/L		112	70 - 130	8	30
11Cl-PF3OUdS	<0.30		35.7	41.2		ng/L		115	70 - 130	13	30

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C4 PFBA	*95*		*25 - 150*
13C5 PFPeA	*107*		*25 - 150*
13C2 PFHxA	*106*		*25 - 150*
13C4 PFHpA	*101*		*25 - 150*
13C4 PFOA	*93*		*25 - 150*
13C5 PFNA	*106*		*25 - 150*
13C2 PFDA	*97*		*25 - 150*
13C2 PFUnA	*97*		*25 - 150*
13C2 PFDoA	*94*		*25 - 150*
13C2 PFTeDA	*106*		*25 - 150*
13C3 PFBS	*102*		*25 - 150*
18O2 PFHxS	*101*		*25 - 150*
13C4 PFOS	*90*		*25 - 150*
13C8 FOSA	*101*		*10 - 150*
d3-NMeFOSAA	*72*		*25 - 150*
d5-NEtFOSAA	*77*		*25 - 150*
d-N-MeFOSA-M	*75*		*10 - 150*
d-N-EtFOSA-M	*74*		*10 - 150*
d7-N-MeFOSE-M	*88*		*10 - 150*
d9-N-EtFOSE-M	*93*		*10 - 150*
M2-4:2 FTS	*76*		*25 - 150*
M2-6:2 FTS	*69*		*25 - 150*
M2-8:2 FTS	*79*		*25 - 150*
13C3 HFPO-DA	*99*		*25 - 150*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 500-225862-1 MSD
Matrix: Water
Analysis Batch: 638571

Client Sample ID: 3104-E
Prep Type: Total/NA
Prep Batch: 637960

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C2 10:2 FTS	77		25 - 150

Lab Chronicle

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225862-1

Client Sample ID: 3104-E
Date Collected: 11/21/22 07:12
Date Received: 11/22/22 09:20

Lab Sample ID: 500-225862-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			637960	EJR	EET SAC	12/07/22 05:52
Total/NA	Analysis	537 (modified)		1	638571	K1S	EET SAC	12/09/22 09:09

Client Sample ID: 3104-E-FB
Date Collected: 11/21/22 07:15
Date Received: 11/22/22 09:20

Lab Sample ID: 500-225862-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			637960	EJR	EET SAC	12/07/22 05:52
Total/NA	Analysis	537 (modified)		1	638571	K1S	EET SAC	12/09/22 09:40

Laboratory References:

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

Accreditation/Certification Summary

Client: Ramboll US Corporation
Job ID: 500-225862-1
Project/Site: Fmr Mirro Plt 2 - 1690026073

Laboratory: Eurofins Sacramento

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

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998204680	08-31-23

Eurofins Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone: 916-373-5600 Fax: 916-372-1059

Chain of Custody Record

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Client Information	Sampler: K. HEIMSTEAD	Lab PM: Fredrick, Sandie	Carrier Tracking No(s):	COC No: 500-107645-45320.1
Client Contact: Paul Lindquist	Phone: 262-901-0129	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin:	Page: Page 1 of 3
Company: Ramboll US Corporation	PWSID:			Job #:
Address: 234 W. Florida Street Fifth Floor	Due Date Requested: STANDARD			
City: Milwaukee	TAT Requested (days):			
State, Zip: WI, 53204	Compliance Project: Δ Yes Δ No			
Phone: 262-901-3510(Tel)	PO #: MIRRO 2			
Email: plindquist@ramboll.com	WO #:			
Project Name: Fmr Mirro Plt 2 - 1690026073	Project #: 50020429			
Site:	SSOW#:			

Analysis Requested

500-225862 Chain of Custody

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Y - Trizma
Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC_IDA_WI - PFAS, Standard List (33 analytes)																Special Instructions/Note:
Preservation Code:							N																
3104-E	11/21/2022	0712	G	Water	N	Y	X															8	ADD 1 VOL. FOR MS/MSD
3104-E-FB	11/21/2022	0715	G	Water	N	N	X															2	
				Water																			
				Water																			
				Water																			
				Water																			
				Water																			
				Water																			
				Water																			
				Water																			
				Water																			
				Water																			

11/21/2022

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	11/21/2022 1815	RAMBOLL	FEDEX	11/21/2022	
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
				11/22/22 920	
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: ☐ Yes Δ No	Custody Seal No.: 2110571	Cooler Temperature(s) °C and Other Remarks: 2.0 i

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Ramboll US Corporation

Job Number: 500-225862-1

Login Number: 225862
List Number: 1
Creator: Fredrick, Sandie

List Source: Eurofins Chicago

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

Login Sample Receipt Checklist

Client: Ramboll US Corporation

Job Number: 500-225862-1

Login Number: 225862
List Number: 2
Creator: Simmons, Jason C

List Source: Eurofins Sacramento
List Creation: 11/22/22 05:07 PM

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	2110571
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	2.0c
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.	True	
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	

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Sacramento
Sample Receiving Notes

500-225862 Field Sheet

Tracking # : 6155 6317 1257

Job: _____

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier

GSO / OnTrac / Goldstreak / USPS / Other _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations.
File in the job folder with the COC.

Therm. ID: L-03 Corr. Factor: (+ / -) _____ °C

Ice X Wet X Gel _____ Other _____

Cooler Custody Seal: 241057

Cooler ID: _____

Temp Observed: 2.0 °C Corrected: 2.0 °C

From: Temp Blank ☐ Sample ☐

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	☐	☒	☐
Cooler Temperature is acceptable?	☒	☐	☐
Frozen samples show signs of thaw?	☐	☐	☒

Initials: DH Date: 11/22/22

Unpacking/Labeling The Samples	Yes	No	NA
COC is complete w/o discrepancies?	☒	☐	☐
Samples compromised/tampered with?	☐	☒	☐
Containers are not broken or leaking?	☒	☐	☐
Sample custody seal?	☐	☐	☒
Sample containers have legible labels?	☒	☐	☐
Sample date/times are provided?	☒	☐	☐
Appropriate containers are used?	☒	☐	☐
Sample bottles are completely filled?	☒	☐	☐
Sample preservatives verified?	☐	☐	☒
Is the Field Sampler's name on COC?	☐	☐	☒
Samples require splitting/compositing?	☐	☐	☒
Samples w/o discrepancies?	☒	☐	☐
Zero headspace?*	☐	☐	☒
Alkalinity has no headspace?	☐	☐	☒
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☒
Multiphasic samples are not present?	☒	☐	☐

Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

Initials: DH Date: 11/22/22

Notes: _____

Trizma Lot #(s): _____

Login Completion	Yes	No	NA
Receipt Temperature on COC?	☒	☐	☐
Samples received within hold time?	☒	☐	☐
NCM Filed?	☐	☐	☒
Log Release checked in TALS?	☐	☐	☒

Initials: DH Date: 11/22/22

Isotope Dilution Summary

Client: Ramboll US Corporation
Project/Site: Fmr Mirro Plt 2 - 1690026073

Job ID: 500-225862-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFUnA (25-150)
500-225862-1	3104-E	92	99	101	95	95	106	95	103
500-225862-1 MS	3104-E	84	95	90	89	91	94	91	91
500-225862-1 MSD	3104-E	95	107	106	101	93	106	97	97
500-225862-2	3104-E-FB	93	98	99	96	97	101	99	100
LCS 320-637960/2-A	Lab Control Sample	95	100	103	98	99	106	101	100
MB 320-637960/1-A	Method Blank	90	97	93	97	93	99	90	90

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFDoA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (10-150)	d3NMFOS (25-150)	d5NEFOS (25-150)
500-225862-1	3104-E	95	105	103	95	95	101	73	79
500-225862-1 MS	3104-E	85	98	87	91	86	91	71	73
500-225862-1 MSD	3104-E	94	106	102	101	90	101	72	77
500-225862-2	3104-E-FB	92	104	96	94	97	96	77	81
LCS 320-637960/2-A	Lab Control Sample	95	99	105	107	102	97	77	76
MB 320-637960/1-A	Method Blank	84	88	92	101	88	84	67	72

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	dMeFOSA (10-150)	dEtFOSA (10-150)	NMFM (10-150)	NEFM (10-150)	M242FTS (25-150)	M262FTS (25-150)	M282FTS (25-150)	HFPODA (25-150)
500-225862-1	3104-E	70	68	88	90	71	79	76	97
500-225862-1 MS	3104-E	76	71	84	91	75	73	66	91
500-225862-1 MSD	3104-E	75	74	88	93	76	69	79	99
500-225862-2	3104-E-FB	76	73	90	98	78	78	82	97
LCS 320-637960/2-A	Lab Control Sample	81	82	90	98	76	77	77	101
MB 320-637960/1-A	Method Blank	66	67	83	86	64	67	65	95

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	M102FTS (25-150)
500-225862-1	3104-E	76
500-225862-1 MS	3104-E	71
500-225862-1 MSD	3104-E	77
500-225862-2	3104-E-FB	76
LCS 320-637960/2-A	Lab Control Sample	78
MB 320-637960/1-A	Method Blank	67

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: Ramboll US Corporation
Job ID: 500-225862-1
Project/Site: Fmr Mirro Plt 2 - 1690026073

d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
dMeFOSA = d-N-MeFOSA-M
dEtFOSA = d-N-EtFOSA-M
NMFM = d7-N-MeFOSE-M
NEFM = d9-N-EtFOSE-M
M242FTS = M2-4:2 FTS
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
HFPODA = 13C3 HFPO-DA
M102FTS = 13C2 10:2 FTS