

From: Paul Lindquist <PLINDQUIST@ramboll.com>
Sent: Friday, August 18, 2023 2:41 PM
To: Amber Daus
Cc: Kristin Jones (Kristin.Jones@newellco.com); Beggs, Tauren R - DNR
Subject: NR 716.14 Data Transmittal BRRTS #: 02-36-545108 (MIRRO PLT 9 [Former] - LGU)
Attachments: NR 716.14 Data Transmittal_GrowItForwardInc_08 18 2023.pdf

Good afternoon Amber,

Attached for your records is a copy of the data transmittal letter for groundwater samples collected in July 2023 from the monitoring well (MW-228) located at 1501 Marshall Street in Manitowoc, Wisconsin. These samples were collected as part of the groundwater sampling activities for the site investigation of the former Mirro Plant No. 9 facility (BRRTS #02-36-545108) located at 1512 Washington Street in Manitowoc, WI.

Thank you and have a great weekend.

Paul Lindquist

Managing Consultant
1692722 - Great Lakes

D +1 262-901-3510
plindquist@ramboll.com

Connect with us 

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

Classification: Confidential

Sent via E-Mail

Ms. Amber Daug
Grow It Forward Inc.
1501 Marshall Street
Manitowoc, WI 54220

**NR 716.14 DATA TRANSMITTAL
JULY 2023 GROUNDWATER ANALYTICAL RESULTS
FORMER MIRRO PLANT NO. 9 FACILITY
1512 WASHINGTON STREET, MANITOWOC, WISCONSIN
WDNR BRRTS NO. 02-36-545108**

Dear Ms. Daug:

Ramboll US Consulting, Inc. (Ramboll), on behalf of Newell Operating Company (NOC), is providing Grow It Forward Inc. with the attached analytical results for groundwater samples collected in July 2023 from the monitoring well (MW-228) located at 1501 Marshall Street in Manitowoc, Wisconsin. The groundwater samples were collected on July 19, 2023, in accordance with the approved *Additional Site Investigation Work Plan* submitted to the Wisconsin Department of Natural Resources (WDNR) on June 6, 2022, and approved on July 12, 2022. The analytical results from these activities will also be provided to Tauren Beggs, the project-specific project manager at the WDNR. A figure showing the monitoring well location is attached along with draft tabulated results (Attachment A) and the laboratory analytical report (Attachment B).

If you have any questions, please feel contact us at the numbers listed below.

Yours sincerely,



Paul D. 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

August 18, 2023

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

T +1 414 837 3607
F +1 414 837 3608
www.ramboll.com

Ref. 1690019647

ATTACHMENT A

TABLE AND FIGURE

Table 1: July 2023 Groundwater Analytical Results

Figure 1: Monitoring Well Locations

Table 1. July 2023 Groundwater Analytical Results - PFAS

Former Mirro Plant No. 9
 1512 Washington Street, Manitowoc, WI 54220
 FID No.: 436033730 BRRTS No.: 02-36-545108



Sample Location	Sample Date	WI DHS Recommended Summation of 6 PFAS ¹	Fluorotelomer sulfonic acid (FTSA)					Perfluoroalkane sulfonamides (FASA) and derivatives							Perfluoroalkane sulfonic acid (PFSA)																											
			4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	4:2 Fluorotelomer sulfonic acid	6:2 Fluorotelomer sulfonic acid	8:2 Fluorotelomer sulfonic acid	HFPO-DA (GenX)	NETFOSA	NETFOSAA	NETFOSE	NMeFOSA	NMeFOSAA	NMeFOSE	Perfluorooctanesulfonamide (FOSA)	Perfluorobutanesulfonic acid (PFBS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorododecane sulfonic acid (PFDoS)	Perfluoroheptanesulfonic acid (PFHpS)	Perfluorohexanesulfonic acid (PFHxS)	Perfluorononanesulfonic acid (PFNS)	Perfluorooctanesulfonic acid (PFOS)	Perfluoropentanesulfonic acid (PFPeS)																				
Reporting Units:	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L																	
	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag																
WI DHS Recommended ES:	20		3,000		NS		NS		NS		300		20		20		20		NS		NS		NS		40		NS		20		NS											
WI DHS Recommended PAL:	2		600		NS		NS		NS		30		2		2		2		NS		NS		NS		4		NS		2		NS											
MW-228	07/19/2023	43	<1.U		<1.U		<4.U		<1.U		<3.U		<1.U		<4.U		<1.U		<1.U		<4.U		<3.U		<1.U		2.8		<1.U		<1.U		<1.U		0.8 J		<1.U		<1.U		<1.U	

Notes:

Bold	is equal to or greater than WI DHS Recommended Groundwater ES
<u>Underlined</u>	is equal to or greater than WI DHS Recommended Groundwater PAL
Gray Text	analyte not detected

Results & Flags:

< = Concentration is less than the Limit of Detection (LOD)
 J = Estimated concentration
 U = Concentration was not detected above the reported limit

Screening Levels:

Recommended PAL and ES from WI DHS developed groundwater standard recommendations.
 (https://www.dhs.wisconsin.gov/water/gws-cycle10.htm)
 (https://www.dhs.wisconsin.gov/water/gws-cycle11.htm)

Superscripts:

- PFAS (6) were calculated by Ramboll as follows:
 - Where detections were observed, only the detected results were added together for the total summation.
 - Where no detections were observed, the highest level of detection is presented as the sum
 - Analytes used for the calculation are NETFOSA, NETFOSAA, NETFOSE, FOSA, PFOS, and PFOA as identified in the "11th Cycle of Groundwater Standard Proposals"
 - Qualifiers are not included in the summation of the total.

Acronyms:

BRRTS = Bureau for Remediation and Redevelopment Tracking System
 ES = Enforcement Standard
 FID = facility identification number
 ng/L = nanograms per liter
 NS = No Screening Level
 PAL = Preventive Action Limit
 PFAS = per- and polyfluoroalkyl substances
 WDNR = Wisconsin Department of Natural Resources
 WI DHS = Wisconsin Department of Health Services

Lab comments, additional data qualifiers and definitions can be found in associated laboratory reports.

Table 1. July 2023 Groundwater Analytical Results - PFAS

Former Mirro Plant No. 9
 1512 Washington Street, Manitowoc, WI 54220
 FID No.: 436033730 BRRTS No.: 02-36-545108

Sample Location	Sample Date	Perfluoroalkyl carboxylic acid (PFCA)											Polyfluoroalkyl ether sulfonic acid (PFESA)														
		Perfluorobutanoic acid (PFBA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoA)	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctanoic acid (PFOA)	Perfluoropentanoic acid (PFPeA)	Perfluorotetradecanoic acid (PFTeA)	Perfluorotridecanoic acid (PFTriA)	Perfluoroundecanoic acid (PFUnA)	11Cl-PF3OUdS (F-53B Minor)	9Cl-PF3ONS (F-53B Major)														
		ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L													
		Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag								
		10,000		300		500		NS		150,000		30		20		NS		10,000		NS		3,000		NS		NS	
		<u>2,000</u>		<u>60</u>		<u>100</u>		<u>NS</u>		<u>30,000</u>		<u>3</u>		<u>2</u>		<u>NS</u>		<u>2,000</u>		<u>NS</u>		<u>600</u>		<u>NS</u>		<u>NS</u>	
MW-228	07/19/2023	6.8		<1.U		<1.U		3.6		3.1		<1.U		43		2.5		<1.U		<1.U		<1.U		<1.U		<1.U	

[O:MGP 8/7/23]

Notes:

Bold	is equal to or greater than WI DHS Recommended Groundwater ES
<u>Underlined</u>	is equal to or greater than WI DHS Recommended Groundwater PAL
Gray Text	analyte not detected

Results & Flags:

< = Concentration is less than the Limit of Detection (LOD)
 J = Estimated concentration
 U = Concentration was not detected above the reported limit

Screening Levels:

Recommended PAL and ES from WI DHS developed groundwater standard recommendations.
 (https://www.dhs.wisconsin.gov/water/gws-cycle10.htm)
 (https://www.dhs.wisconsin.gov/water/gws-cycle11.htm)

Superscripts:

- PFAS (6) were calculated by Ramboll as follows:
 - Where detections were observed, only the detected results were added together for the total summation.
 - Where no detections were observed, the highest level of detection is presented as the sum
 - Analytes used for the calculation are NETFOSA, NETFOSAA, NETFOSE, FOSA, PFOS, and PFOA as identified in the "11th Cycle of Groundwater Standard Proposals"
 - Qualifiers are not included in the summation of the total.

Acronyms:

BRRTS = Bureau for Remediation and Redevelopment Tracking System
 ES = Enforcement Standard
 FID = facility identification number
 ng/L = nanograms per liter
 NS = No Screening Level
 PAL = Preventive Action Limit
 PFAS = per- and polyfluoroalkyl substances
 WDNR = Wisconsin Department of Natural Resources
 WI DHS = Wisconsin Department of Health Services

Lab comments, additional data qualifiers and definitions can be found in associated laboratory reports.



- PROPERTY BOUNDARY (APPROXIMATE)
- ⊕ APPROXIMATE MONITORING WELL LOCATION

MONITORING WELL LOCATION

FIGURE 1

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY

1501 MARSHALL STREET
MANITOWOC, WISCONSIN





ATTACHMENT B
LABORATORY ANALYTICAL REPORT

ANALYTICAL REPORT

PREPARED FOR

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

Generated 7/31/2023 12:22:57 PM

JOB DESCRIPTION

Former Mirro Plant No 9 - 1690019647

JOB NUMBER

500-237072-1

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.

Results relate only to the items tested and the sample(s) as received by the laboratory. The results, detection limits (LOD) and Quantitation Limits (LOQ) have been adjusted for sample dilutions and/or solids content.

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
7/31/2023 12:22:57 PM

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



Table of Contents

Cover Page	1
Table of Contents	3
Case Narrative	4
Detection Summary	5
Method Summary	6
Sample Summary	7
Client Sample Results	8
Definitions	10
QC Association	11
QC Sample Results	12
Chronicle	17
Certification Summary	18
Chain of Custody	19
Receipt Checklists	21
Field Data Sheets	22
Isotope Dilution Summary	23

Case Narrative

Client: Ramboll US Corporation
Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237072-1

Job ID: 500-237072-1

Laboratory: Eurofins Chicago

Narrative

**Job Narrative
500-237072-1**

Receipt

The sample was received on 07/22/23 09:50. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.1° C.

LCMS

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

Organic Prep

Method 3535: The following sample in preparation batch 320-694112 was light-amber in color prior to extraction: MW-228 (500-237072-1)

Extract was yellowish in color.

3535_PFC_28D

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: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237072-1

Client Sample ID: MW-228

Lab Sample ID: 500-237072-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	6.8		4.5	2.2	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	2.5		1.8	0.44	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	3.1		1.8	0.53	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	3.6		1.8	0.23	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	43		1.8	0.77	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.8		1.8	0.18	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.86	J	1.8	0.52	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Chicago

Method Summary

Client: Ramboll US Corporation
Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237072-1

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

Sample Summary

Client: Ramboll US Corporation
Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237072-1

<u>Lab Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Collected</u>	<u>Received</u>
500-237072-1	MW-228	Water	07/19/23 08:04	07/22/23 09:50

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

Client Sample Results

Client: Ramboll US Corporation
 Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237072-1

Client Sample ID: MW-228

Lab Sample ID: 500-237072-1

Date Collected: 07/19/23 08:04

Matrix: Water

Date Received: 07/22/23 09:50

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	6.8		4.5	2.2	ng/L		07/26/23 20:59	07/28/23 07:26	1
Perfluoropentanoic acid (PFPeA)	2.5		1.8	0.44	ng/L		07/26/23 20:59	07/28/23 07:26	1
Perfluorohexanoic acid (PFHxA)	3.1		1.8	0.53	ng/L		07/26/23 20:59	07/28/23 07:26	1
Perfluoroheptanoic acid (PFHpA)	3.6		1.8	0.23	ng/L		07/26/23 20:59	07/28/23 07:26	1
Perfluorooctanoic acid (PFOA)	43		1.8	0.77	ng/L		07/26/23 20:59	07/28/23 07:26	1
Perfluorononanoic acid (PFNA)	<0.25		1.8	0.25	ng/L		07/26/23 20:59	07/28/23 07:26	1
Perfluorodecanoic acid (PFDA)	<0.28		1.8	0.28	ng/L		07/26/23 20:59	07/28/23 07:26	1
Perfluoroundecanoic acid (PFUnA)	<1.0		1.8	1.0	ng/L		07/26/23 20:59	07/28/23 07:26	1
Perfluorododecanoic acid (PFDoA)	<0.50		1.8	0.50	ng/L		07/26/23 20:59	07/28/23 07:26	1
Perfluorotridecanoic acid (PFTriA)	<1.2		1.8	1.2	ng/L		07/26/23 20:59	07/28/23 07:26	1
Perfluorotetradecanoic acid (PFTeA)	<0.66		1.8	0.66	ng/L		07/26/23 20:59	07/28/23 07:26	1
Perfluorobutanesulfonic acid (PFBS)	2.8		1.8	0.18	ng/L		07/26/23 20:59	07/28/23 07:26	1
Perfluoropentanesulfonic acid (PFPeS)	<0.27		1.8	0.27	ng/L		07/26/23 20:59	07/28/23 07:26	1
Perfluorohexanesulfonic acid (PFHxS)	0.86 J		1.8	0.52	ng/L		07/26/23 20:59	07/28/23 07:26	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.17		1.8	0.17	ng/L		07/26/23 20:59	07/28/23 07:26	1
Perfluorooctanesulfonic acid (PFOS)	<0.49		1.8	0.49	ng/L		07/26/23 20:59	07/28/23 07:26	1
Perfluorononanesulfonic acid (PFNS)	<0.34		1.8	0.34	ng/L		07/26/23 20:59	07/28/23 07:26	1
Perfluorodecanesulfonic acid (PFDS)	<0.29		1.8	0.29	ng/L		07/26/23 20:59	07/28/23 07:26	1
Perfluorododecanesulfonic acid (PFDoS)	<0.88		1.8	0.88	ng/L		07/26/23 20:59	07/28/23 07:26	1
Perfluorooctanesulfonamide (FOSA)	<0.89		1.8	0.89	ng/L		07/26/23 20:59	07/28/23 07:26	1
NEtFOSA	<0.79		1.8	0.79	ng/L		07/26/23 20:59	07/28/23 07:26	1
NMeFOSA	<0.39		1.8	0.39	ng/L		07/26/23 20:59	07/28/23 07:26	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<1.1		4.5	1.1	ng/L		07/26/23 20:59	07/28/23 07:26	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.2		4.5	1.2	ng/L		07/26/23 20:59	07/28/23 07:26	1
NMeFOSE	<1.3		3.6	1.3	ng/L		07/26/23 20:59	07/28/23 07:26	1
NEtFOSE	<0.77		1.8	0.77	ng/L		07/26/23 20:59	07/28/23 07:26	1
4:2 FTS	<0.22		1.8	0.22	ng/L		07/26/23 20:59	07/28/23 07:26	1
6:2 FTS	<2.3		4.5	2.3	ng/L		07/26/23 20:59	07/28/23 07:26	1
8:2 FTS	<0.42		1.8	0.42	ng/L		07/26/23 20:59	07/28/23 07:26	1
DONA	<0.36		1.8	0.36	ng/L		07/26/23 20:59	07/28/23 07:26	1
HFPO-DA (GenX)	<1.4		3.6	1.4	ng/L		07/26/23 20:59	07/28/23 07:26	1
F-53B Major	<0.22		1.8	0.22	ng/L		07/26/23 20:59	07/28/23 07:26	1
F-53B Minor	<0.29		1.8	0.29	ng/L		07/26/23 20:59	07/28/23 07:26	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	86		25 - 150				07/26/23 20:59	07/28/23 07:26	1
13C5 PFPeA	112		25 - 150				07/26/23 20:59	07/28/23 07:26	1
13C2 PFHxA	113		25 - 150				07/26/23 20:59	07/28/23 07:26	1
13C4 PFHpA	117		25 - 150				07/26/23 20:59	07/28/23 07:26	1
13C4 PFOA	108		25 - 150				07/26/23 20:59	07/28/23 07:26	1
13C5 PFNA	111		25 - 150				07/26/23 20:59	07/28/23 07:26	1
13C2 PFDA	115		25 - 150				07/26/23 20:59	07/28/23 07:26	1
13C2 PFUnA	107		25 - 150				07/26/23 20:59	07/28/23 07:26	1
13C2 PFDoA	97		25 - 150				07/26/23 20:59	07/28/23 07:26	1
13C2 PFTeDA	78		25 - 150				07/26/23 20:59	07/28/23 07:26	1

Eurofins Chicago

Client Sample Results

Client: Ramboll US Corporation
 Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237072-1

Client Sample ID: MW-228
Date Collected: 07/19/23 08:04
Date Received: 07/22/23 09:50

Lab Sample ID: 500-237072-1
Matrix: Water

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

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 PFBS	102		25 - 150	07/26/23 20:59	07/28/23 07:26	1
18O2 PFHxS	103		25 - 150	07/26/23 20:59	07/28/23 07:26	1
13C4 PFOS	104		25 - 150	07/26/23 20:59	07/28/23 07:26	1
13C8 FOSA	115		10 - 150	07/26/23 20:59	07/28/23 07:26	1
d3-NMeFOSAA	109		25 - 150	07/26/23 20:59	07/28/23 07:26	1
d5-NEtFOSAA	112		25 - 150	07/26/23 20:59	07/28/23 07:26	1
d-N-MeFOSA-M	86		10 - 150	07/26/23 20:59	07/28/23 07:26	1
d-N-EtFOSA-M	87		10 - 150	07/26/23 20:59	07/28/23 07:26	1
d7-N-MeFOSE-M	92		10 - 150	07/26/23 20:59	07/28/23 07:26	1
d9-N-EtFOSE-M	89		10 - 150	07/26/23 20:59	07/28/23 07:26	1
M2-4:2 FTS	119		25 - 150	07/26/23 20:59	07/28/23 07:26	1
M2-6:2 FTS	108		25 - 150	07/26/23 20:59	07/28/23 07:26	1
M2-8:2 FTS	107		25 - 150	07/26/23 20:59	07/28/23 07:26	1
13C3 HFPO-DA	97		25 - 150	07/26/23 20:59	07/28/23 07:26	1



Definitions/Glossary

Client: Ramboll US Corporation
Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237072-1

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.
α	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: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237072-1

LCMS

Prep Batch: 694112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-237072-1	MW-228	Total/NA	Water	3535	
MB 320-694112/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-694112/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-694112/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 694464

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-237072-1	MW-228	Total/NA	Water	537 (modified)	694112
MB 320-694112/1-A	Method Blank	Total/NA	Water	537 (modified)	694112
LCS 320-694112/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	694112
LCSD 320-694112/3-A	Lab Control Sample Dup	Total/NA	Water	537 (modified)	694112



QC Sample Results

Client: Ramboll US Corporation
 Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237072-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-694112/1-A
Matrix: Water
Analysis Batch: 694464

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 694112

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Perfluorobutanoic acid (PFBA)	<2.4		5.0	2.4	ng/L		07/26/23 20:59	07/28/23 04:16	1
Perfluoropentanoic acid (PFPeA)	<0.49		2.0	0.49	ng/L		07/26/23 20:59	07/28/23 04:16	1
Perfluorohexanoic acid (PFHxA)	<0.58		2.0	0.58	ng/L		07/26/23 20:59	07/28/23 04:16	1
Perfluoroheptanoic acid (PFHpA)	<0.25		2.0	0.25	ng/L		07/26/23 20:59	07/28/23 04:16	1
Perfluorooctanoic acid (PFOA)	<0.85		2.0	0.85	ng/L		07/26/23 20:59	07/28/23 04:16	1
Perfluorononanoic acid (PFNA)	<0.27		2.0	0.27	ng/L		07/26/23 20:59	07/28/23 04:16	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	0.31	ng/L		07/26/23 20:59	07/28/23 04:16	1
Perfluoroundecanoic acid (PFUnA)	<1.1		2.0	1.1	ng/L		07/26/23 20:59	07/28/23 04:16	1
Perfluorododecanoic acid (PFDoA)	<0.55		2.0	0.55	ng/L		07/26/23 20:59	07/28/23 04:16	1
Perfluorotridecanoic acid (PFTriA)	<1.3		2.0	1.3	ng/L		07/26/23 20:59	07/28/23 04:16	1
Perfluorotetradecanoic acid (PFTeA)	<0.73		2.0	0.73	ng/L		07/26/23 20:59	07/28/23 04:16	1
Perfluorobutanesulfonic acid (PFBS)	<0.20		2.0	0.20	ng/L		07/26/23 20:59	07/28/23 04:16	1
Perfluoropentanesulfonic acid (PFPeS)	<0.30		2.0	0.30	ng/L		07/26/23 20:59	07/28/23 04:16	1
Perfluorohexanesulfonic acid (PFHxS)	<0.57		2.0	0.57	ng/L		07/26/23 20:59	07/28/23 04:16	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.19		2.0	0.19	ng/L		07/26/23 20:59	07/28/23 04:16	1
Perfluorooctanesulfonic acid (PFOS)	<0.54		2.0	0.54	ng/L		07/26/23 20:59	07/28/23 04:16	1
Perfluorononanesulfonic acid (PFNS)	<0.37		2.0	0.37	ng/L		07/26/23 20:59	07/28/23 04:16	1
Perfluorodecanesulfonic acid (PFDS)	<0.32		2.0	0.32	ng/L		07/26/23 20:59	07/28/23 04:16	1
Perfluorododecanesulfonic acid (PFDoS)	<0.97		2.0	0.97	ng/L		07/26/23 20:59	07/28/23 04:16	1
Perfluorooctanesulfonamide (FOSA)	<0.98		2.0	0.98	ng/L		07/26/23 20:59	07/28/23 04:16	1
NEtFOSA	<0.87		2.0	0.87	ng/L		07/26/23 20:59	07/28/23 04:16	1
NMeFOSA	<0.43		2.0	0.43	ng/L		07/26/23 20:59	07/28/23 04:16	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<1.2		5.0	1.2	ng/L		07/26/23 20:59	07/28/23 04:16	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.3		5.0	1.3	ng/L		07/26/23 20:59	07/28/23 04:16	1
NMeFOSE	<1.4		4.0	1.4	ng/L		07/26/23 20:59	07/28/23 04:16	1
NEtFOSE	<0.85		2.0	0.85	ng/L		07/26/23 20:59	07/28/23 04:16	1
4:2 FTS	<0.24		2.0	0.24	ng/L		07/26/23 20:59	07/28/23 04:16	1
6:2 FTS	<2.5		5.0	2.5	ng/L		07/26/23 20:59	07/28/23 04:16	1
8:2 FTS	<0.46		2.0	0.46	ng/L		07/26/23 20:59	07/28/23 04:16	1
DONA	<0.40		2.0	0.40	ng/L		07/26/23 20:59	07/28/23 04:16	1
HFPO-DA (GenX)	<1.5		4.0	1.5	ng/L		07/26/23 20:59	07/28/23 04:16	1
F-53B Major	<0.24		2.0	0.24	ng/L		07/26/23 20:59	07/28/23 04:16	1
F-53B Minor	<0.32		2.0	0.32	ng/L		07/26/23 20:59	07/28/23 04:16	1

Isotope Dilution	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C4 PFBA	110		25 - 150	07/26/23 20:59	07/28/23 04:16	1
13C5 PFPeA	113		25 - 150	07/26/23 20:59	07/28/23 04:16	1
13C2 PFHxA	122		25 - 150	07/26/23 20:59	07/28/23 04:16	1
13C4 PFHpA	120		25 - 150	07/26/23 20:59	07/28/23 04:16	1
13C4 PFOA	114		25 - 150	07/26/23 20:59	07/28/23 04:16	1
13C5 PFNA	120		25 - 150	07/26/23 20:59	07/28/23 04:16	1
13C2 PFDA	124		25 - 150	07/26/23 20:59	07/28/23 04:16	1
13C2 PFUnA	116		25 - 150	07/26/23 20:59	07/28/23 04:16	1
13C2 PFDoA	111		25 - 150	07/26/23 20:59	07/28/23 04:16	1
13C2 PFTeDA	103		25 - 150	07/26/23 20:59	07/28/23 04:16	1

Eurofins Chicago

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237072-1

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

Lab Sample ID: MB 320-694112/1-A
Matrix: Water
Analysis Batch: 694464

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 694112

Isotope Dilution	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C3 PFBS	114		25 - 150	07/26/23 20:59	07/28/23 04:16	1
18O2 PFHxS	118		25 - 150	07/26/23 20:59	07/28/23 04:16	1
13C4 PFOS	112		25 - 150	07/26/23 20:59	07/28/23 04:16	1
13C8 FOSA	115		10 - 150	07/26/23 20:59	07/28/23 04:16	1
d3-NMeFOSAA	126		25 - 150	07/26/23 20:59	07/28/23 04:16	1
d5-NEtFOSAA	123		25 - 150	07/26/23 20:59	07/28/23 04:16	1
d-N-MeFOSA-M	90		10 - 150	07/26/23 20:59	07/28/23 04:16	1
d-N-EtFOSA-M	92		10 - 150	07/26/23 20:59	07/28/23 04:16	1
d7-N-MeFOSE-M	104		10 - 150	07/26/23 20:59	07/28/23 04:16	1
d9-N-EtFOSE-M	102		10 - 150	07/26/23 20:59	07/28/23 04:16	1
M2-4:2 FTS	113		25 - 150	07/26/23 20:59	07/28/23 04:16	1
M2-6:2 FTS	122		25 - 150	07/26/23 20:59	07/28/23 04:16	1
M2-8:2 FTS	123		25 - 150	07/26/23 20:59	07/28/23 04:16	1
13C3 HFPO-DA	106		25 - 150	07/26/23 20:59	07/28/23 04:16	1

Lab Sample ID: LCS 320-694112/2-A
Matrix: Water
Analysis Batch: 694464

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 694112

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec
							Limits
Perfluorobutanoic acid (PFBA)	40.0	39.2		ng/L		98	60 - 135
Perfluoropentanoic acid (PFPeA)	40.0	37.1		ng/L		93	60 - 135
Perfluorohexanoic acid (PFHxA)	40.0	36.4		ng/L		91	60 - 135
Perfluoroheptanoic acid (PFHpA)	40.0	34.4		ng/L		86	60 - 135
Perfluorooctanoic acid (PFOA)	40.0	35.6		ng/L		89	60 - 135
Perfluorononanoic acid (PFNA)	40.0	40.3		ng/L		101	60 - 135
Perfluorodecanoic acid (PFDA)	40.0	37.2		ng/L		93	60 - 135
Perfluoroundecanoic acid (PFUnA)	40.0	37.0		ng/L		93	60 - 135
Perfluorododecanoic acid (PFDoA)	40.0	39.2		ng/L		98	60 - 135
Perfluorotridecanoic acid (PFTriA)	40.0	36.8		ng/L		92	60 - 135
Perfluorotetradecanoic acid (PFTeA)	40.0	36.8		ng/L		92	60 - 135
Perfluorobutanesulfonic acid (PFBS)	35.5	32.1		ng/L		90	60 - 135
Perfluoropentanesulfonic acid (PFPeS)	37.6	35.5		ng/L		95	60 - 135
Perfluorohexanesulfonic acid (PFHxS)	36.5	32.9		ng/L		90	60 - 135
Perfluoroheptanesulfonic acid (PFHpS)	38.2	34.8		ng/L		91	60 - 135
Perfluorooctanesulfonic acid (PFOS)	37.2	35.4		ng/L		95	60 - 135
Perfluorononanesulfonic acid (PFNS)	38.5	38.4		ng/L		100	60 - 135
Perfluorodecanesulfonic acid (PFDS)	38.6	36.5		ng/L		95	60 - 135
Perfluorododecanesulfonic acid (PFDoS)	38.8	32.5		ng/L		84	60 - 135

Eurofins Chicago

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237072-1

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

Lab Sample ID: LCS 320-694112/2-A
Matrix: Water
Analysis Batch: 694464

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 694112

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanesulfonamide (FOSA)	40.0	35.4		ng/L		89	60 - 135
NEtFOSA	40.0	36.1		ng/L		90	60 - 135
NMeFOSA	40.0	37.7		ng/L		94	60 - 135
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	35.5		ng/L		89	60 - 135
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	36.4		ng/L		91	60 - 135
NMeFOSE	40.0	37.8		ng/L		95	60 - 135
NEtFOSE	40.0	35.0		ng/L		88	60 - 135
4:2 FTS	37.5	37.4		ng/L		100	60 - 135
6:2 FTS	38.1	36.1		ng/L		95	60 - 135
8:2 FTS	38.4	39.4		ng/L		103	60 - 135
DONA	37.8	37.4		ng/L		99	60 - 135
HFPO-DA (GenX)	40.0	39.6		ng/L		99	60 - 135
F-53B Major	37.4	33.1		ng/L		88	60 - 135
F-53B Minor	37.8	33.7		ng/L		89	60 - 135

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C4 PFBA	116		25 - 150
13C5 PFPeA	121		25 - 150
13C2 PFHxA	124		25 - 150
13C4 PFHpA	129		25 - 150
13C4 PFOA	121		25 - 150
13C5 PFNA	122		25 - 150
13C2 PFDA	125		25 - 150
13C2 PFUnA	114		25 - 150
13C2 PFDoA	110		25 - 150
13C2 PFTeDA	93		25 - 150
13C3 PFBS	120		25 - 150
18O2 PFHxS	127		25 - 150
13C4 PFOS	117		25 - 150
13C8 FOSA	117		10 - 150
d3-NMeFOSAA	129		25 - 150
d5-NEtFOSAA	120		25 - 150
d-N-MeFOSA-M	95		10 - 150
d-N-EtFOSA-M	101		10 - 150
d7-N-MeFOSE-M	107		10 - 150
d9-N-EtFOSE-M	106		10 - 150
M2-4:2 FTS	116		25 - 150
M2-6:2 FTS	111		25 - 150
M2-8:2 FTS	117		25 - 150
13C3 HFPO-DA	116		25 - 150

Lab Sample ID: LCSD 320-694112/3-A
Matrix: Water
Analysis Batch: 694464

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 694112

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	40.0	42.2		ng/L		105	60 - 135	7	30

Eurofins Chicago

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237072-1

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

Lab Sample ID: LCSD 320-694112/3-A
Matrix: Water
Analysis Batch: 694464

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 694112

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluoropentanoic acid (PFPeA)	40.0	37.3		ng/L		93	60 - 135	0	30
Perfluorohexanoic acid (PFHxA)	40.0	36.5		ng/L		91	60 - 135	0	30
Perfluoroheptanoic acid (PFHpA)	40.0	37.0		ng/L		93	60 - 135	7	30
Perfluorooctanoic acid (PFOA)	40.0	35.2		ng/L		88	60 - 135	1	30
Perfluorononanoic acid (PFNA)	40.0	40.6		ng/L		102	60 - 135	1	30
Perfluorodecanoic acid (PFDA)	40.0	40.4		ng/L		101	60 - 135	8	30
Perfluoroundecanoic acid (PFUnA)	40.0	38.6		ng/L		97	60 - 135	4	30
Perfluorododecanoic acid (PFDoA)	40.0	37.2		ng/L		93	60 - 135	5	30
Perfluorotridecanoic acid (PFTriA)	40.0	36.9		ng/L		92	60 - 135	0	30
Perfluorotetradecanoic acid (PFTeA)	40.0	37.0		ng/L		92	60 - 135	1	30
Perfluorobutanesulfonic acid (PFBS)	35.5	31.3		ng/L		88	60 - 135	2	30
Perfluoropentanesulfonic acid (PFPeS)	37.6	37.4		ng/L		100	60 - 135	5	30
Perfluorohexanesulfonic acid (PFHxS)	36.5	31.6		ng/L		87	60 - 135	4	30
Perfluoroheptanesulfonic acid (PFHpS)	38.2	36.5		ng/L		96	60 - 135	5	30
Perfluorooctanesulfonic acid (PFOS)	37.2	34.1		ng/L		92	60 - 135	4	30
Perfluorononanesulfonic acid (PFNS)	38.5	35.8		ng/L		93	60 - 135	7	30
Perfluorodecanesulfonic acid (PFDS)	38.6	36.7		ng/L		95	60 - 135	1	30
Perfluorododecanesulfonic acid (PFDoS)	38.8	34.1		ng/L		88	60 - 135	5	30
Perfluorooctanesulfonamide (FOSA)	40.0	38.1		ng/L		95	60 - 135	7	30
NEtFOSA	40.0	36.5		ng/L		91	60 - 135	1	30
NMeFOSA	40.0	39.8		ng/L		100	60 - 135	5	30
N-methylperfluorooctanesulfonamide doacetic acid (NMeFOSAA)	40.0	35.5		ng/L		89	60 - 135	0	30
N-ethylperfluorooctanesulfonamide doacetic acid (NEtFOSAA)	40.0	35.6		ng/L		89	60 - 135	2	30
NMeFOSE	40.0	36.9		ng/L		92	60 - 135	2	30
NEtFOSE	40.0	37.4		ng/L		93	60 - 135	6	30
4:2 FTS	37.5	36.1		ng/L		96	60 - 135	4	30
6:2 FTS	38.1	35.7		ng/L		94	60 - 135	1	30
8:2 FTS	38.4	38.1		ng/L		99	60 - 135	3	30
DONA	37.8	37.4		ng/L		99	60 - 135	0	30
HFPO-DA (GenX)	40.0	38.4		ng/L		96	60 - 135	3	30
F-53B Major	37.4	34.4		ng/L		92	60 - 135	4	30
F-53B Minor	37.8	36.2		ng/L		96	60 - 135	7	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	LCSD Limits
13C4 PFBA	109		25 - 150
13C5 PFPeA	112		25 - 150
13C2 PFHxA	116		25 - 150

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237072-1

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

Lab Sample ID: LCSD 320-694112/3-A
 Matrix: Water
 Analysis Batch: 694464

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 694112

Isotope Dilution	LCSD		Limits
	%Recovery	Qualifier	
13C4 PFHpA	126		25 - 150
13C4 PFOA	119		25 - 150
13C5 PFNA	119		25 - 150
13C2 PFDA	118		25 - 150
13C2 PFUnA	111		25 - 150
13C2 PFDoA	115		25 - 150
13C2 PFTeDA	95		25 - 150
13C3 PFBS	113		25 - 150
18O2 PFHxS	119		25 - 150
13C4 PFOS	111		25 - 150
13C8 FOSA	112		10 - 150
d3-NMeFOSAA	123		25 - 150
d5-NEtFOSAA	123		25 - 150
d-N-MeFOSA-M	90		10 - 150
d-N-EtFOSA-M	96		10 - 150
d7-N-MeFOSE-M	114		10 - 150
d9-N-EtFOSE-M	103		10 - 150
M2-4:2 FTS	108		25 - 150
M2-6:2 FTS	112		25 - 150
M2-8:2 FTS	111		25 - 150
13C3 HFPO-DA	117		25 - 150



Lab Chronicle

Client: Ramboll US Corporation
Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237072-1

Client Sample ID: MW-228

Lab Sample ID: 500-237072-1

Date Collected: 07/19/23 08:04

Matrix: Water

Date Received: 07/22/23 09:50

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Analyst</u>	<u>Lab</u>	<u>Prepared or Analyzed</u>
Total/NA	Prep	3535			694112	JER	EET SAC	07/26/23 20:59
Total/NA	Analysis	537 (modified)		1	694464	S1M	EET SAC	07/28/23 07:26

Laboratory References:

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

Accreditation/Certification Summary

Client: Ramboll US Corporation
Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237072-1

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16


Eurofins Chicago

2417 Bond Street
 University Park, IL 60484
 Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record



Environmental Testing

Client Information		Sampler: <i>Sarah Jo Markens</i>		Lab PM: <i>Fredrick, Sandie</i>		Carrier Tracking No(s):		COC No: 500-114234-47117 1	
Client Contact: <i>Paul Lindquist</i>		Phone:		E-Mail: <i>Sandra.Fredrick@et.eurofinsus.com</i>		State of Origin: <i>WI</i>		Page: <i>Page 1 of 1</i>	
Company: <i>Ramboll US Corporation</i>		PWSID:		Analysis Requested		Job #:		Preservation Codes: A HCL M Hexane B NaOH N None C Zn Acetate O AsNaO2 D Nitric Acid P Na2O4S E NaHSO4 Q Na2SO3 F MeOH R Na2S2O3 G Amchlor S H2SO4 H Ascorbic Acid T TSP Dodecahydrate I Ice U Acetone J DI Water V MCAA K EDTA W pH 4-5 L EDA Y Trizma Z other (specify)	
Address: <i>234 W Florida Street Fifth Floor</i>		Due Date Requested:							
City: <i>Milwaukee</i>		FAT Requested (days): <i>Standard</i>							
State, Zip: <i>WI, 53204</i>		Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No							
Phone: <i>262-901-3510(Tel)</i>		PO #: <i>MIRRO 19</i>		PFAS, Standard List (33 analytes)		Special Instructions/Note:			
Email: <i>plindquist@ramboll.com</i>		WO #:							
Project Name: <i>Manitowoc at Former Mitro Plant No 9</i>		Project #: <i>50020429</i>							
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)	PFAS, Standard List (33 analytes)		Special Instructions/Note:	
<i>MW-228</i>		<i>7-19-23</i>	<i>0804</i>	<i>G</i>	<i>Water</i>	<i>NN</i>	<i>X</i>		
<i>Apn 7-20-23</i>					<i>Water</i>			 500-237072 Chain of Custody	
					<i>Water</i>				
					<i>Water</i>				
					<i>Water</i>				
					<i>Water</i>				
					<i>Water</i>				
					<i>Water</i>				
					<i>Water</i>				
Possible Hazard Identification					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)				
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological					<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> 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: <i>[Signature]</i>		Date/Time: <i>7-21-23 1245</i>		Company: <i>RAMBOLL</i>		Received by: <i>[Signature]</i>		Date/Time: <i>7-21-23 1245</i> Company: <i>Eurofins</i>	
Relinquished by: <i>[Signature]</i>		Date/Time: <i>7-21-23 1700</i>		Company: <i>Eurofins</i>		Received by: <i>[Signature]</i>		Date/Time: <i>7/22/23 900</i> Company: <i>EEI/SC</i>	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time: Company:	
Custody Seals Intact: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: <i>2100</i>					

Page 20 of 23

7/31/2023



Login Sample Receipt Checklist

Client: Ramboll US Corporation

Job Number: 500-237072-1

Login Number: 237072

List Number: 2

Creator: Fisher, Jamyiah L

List Source: Eurofins Sacramento

List Creation: 07/24/23 11:01 AM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	2330336
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	2.1
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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



500-237072 Field Sheet

Tracking # 6578-9771-0559

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 <u>L-09</u> Corr Factor (+/-) <u>0</u> °C	Notes _____ _____ _____ _____ _____ _____ _____ _____ _____ _____	
Ice <input checked="" type="checkbox"/> Wet <input checked="" type="checkbox"/> Gel _____ Other _____		
Cooler Custody Seal: <u>2330336</u>		
Cooler ID: <u>2052</u>		
Temp Observed: <u>21</u> °C Corrected: <u>21</u> °C From Temp Blank <input type="checkbox"/> Sample <input checked="" type="checkbox"/>		
Opening/Processing The Shipment Yes No NA		
Cooler compromised/tampered with? <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>		
Cooler Temperature is acceptable? <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
Frozen samples show signs of thaw? <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>		
Initials: <u>JL</u> Date: <u>7/22/23</u>		
Unpacking/Labeling The Samples Yes No NA	Trizma Lot #(s) _____ _____ _____	
COC is complete w/o discrepancies? <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
Samples compromised/tampered with? <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>		
Containers are not broken or leaking? <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
Sample custody seal? <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>		
Sample containers have legible labels? <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
Sample date/times are provided? <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
Appropriate containers are used? <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
Sample bottles are completely filled? <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
Sample preservatives verified? <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>		
Is the Field Sampler's name on COC? <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Login Completion Yes No NA Receipt Temperature on COC? <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Samples received within hold time? <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> NCM Filed? <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Log Release checked in TALS? <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
Samples require splitting/compositing? <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>		
Samples w/o discrepancies? <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
Zero headspace?* <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>		
Alkalinity has no headspace? <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>		
Perchlorate has headspace? <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> (Methods 314, 331 6850)		
Multiphasic samples are not present? <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
*Containers requiring zero headspace have no headspace, or bubble < 5 mm (1/4")		
Initials: <u>JL</u> Date: <u>7/24/23</u>		Initials: <u>JL</u> Date: <u>7/24/23</u>

Isotope Dilution Summary

Client: Ramboll US Corporation
 Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237072-1

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)
500-237072-1	MW-228	86	112	113	117	108	111	115	107
LCS 320-694112/2-A	Lab Control Sample	116	121	124	129	121	122	125	114
LCSD 320-694112/3-A	Lab Control Sample Dup	109	112	116	126	119	119	118	111
MB 320-694112/1-A	Method Blank	110	113	122	120	114	120	124	116

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFDaA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (10-150)	d3NMFOS (25-150)	d5NEFOS (25-150)
500-237072-1	MW-228	97	78	102	103	104	115	109	112
LCS 320-694112/2-A	Lab Control Sample	110	93	120	127	117	117	129	120
LCSD 320-694112/3-A	Lab Control Sample Dup	115	95	113	119	111	112	123	123
MB 320-694112/1-A	Method Blank	111	103	114	118	112	115	126	123

		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)
500-237072-1	MW-228	86	87	92	89	119	108	107	97
LCS 320-694112/2-A	Lab Control Sample	95	101	107	106	116	111	117	116
LCSD 320-694112/3-A	Lab Control Sample Dup	90	96	114	103	108	112	111	117
MB 320-694112/1-A	Method Blank	90	92	104	102	113	122	123	106

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
- PFDaA = 13C2 PFDaA
- PFTDA = 13C2 PFTeDA
- C3PFBS = 13C3 PFBS
- PFHxS = 18O2 PFHxS
- PFOS = 13C4 PFOS
- PFOSA = 13C8 FOSA
- 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

From: Paul Lindquist <PLINDQUIST@ramboll.com>
Sent: Friday, August 18, 2023 2:41 PM
To: Terry Fox
Cc: Kristin Jones (Kristin.Jones@newellco.com); Beggs, Tauren R - DNR
Subject: NR 716.14 Data Transmittal BRRTS #: 02-36-545108 (MIRRO PLT 9 [Former] - LGU)
Attachments: NR 716.14 Data Transmittal_901 S 17th St LLC_08 18 2023.pdf

Good afternoon Mr. Fox,

Attached for your records is a copy of the data transmittal letter for groundwater samples collected in July 2023 from the monitoring wells (MW-217 and MW-218) located at 901 S. 17th Street in Manitowoc, Wisconsin. These samples were collected as part of the groundwater sampling activities for the site investigation of the former Mirro Plant No. 9 facility (BRRTS #02-36-545108) located at 1512 Washington Street in Manitowoc, WI.

Thank you and have a great weekend.

Paul Lindquist

Managing Consultant
1692722 - Great Lakes

D +1 262-901-3510
plindquist@ramboll.com

Connect with us 

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

Classification: Confidential

Sent via E-Mail

Mr. Terrance P. Fox
Kummer, Lambert, Fox, Glandt & Nelson, LLP
927 South 8th Street, 2nd Floor
Manitowoc, WI 54220

**NR 716.14 DATA TRANSMITTAL
JULY 2023 GROUNDWATER ANALYTICAL RESULTS
FORMER MIRRO PLANT NO. 9 FACILITY
1512 WASHINGTON STREET, MANITOWOC, WISCONSIN
WDNR BRRTS NO. 02-36-545108**

Dear Mr. Fox:

Ramboll US Consulting, Inc. (Ramboll), on behalf of Newell Operating Company (NOC), is providing Kummer, Lambert, Fox, Glandt & Nelson, LLP, legal counsel to 901 S. 17th Street, LLC, with the attached analytical results for groundwater samples collected in July 2023 from the two monitoring wells (MW-217 and MW-218) located at 901 South 17th Street in Manitowoc, Wisconsin. The groundwater samples were collected on July 20, 2023, in accordance with the approved *Additional Site Investigation Work Plan* submitted to the Wisconsin Department of Natural Resources (WDNR) on June 6, 2022, and approved on July 12, 2022. The analytical results from these activities will be provided to Tauren Beggs, the project-specific project manager at the WDNR. A figure showing the monitoring well locations is attached along with draft tabulated results (Attachment A) and the laboratory analytical report (Attachment B).

If you have any questions, please feel contact us at the numbers listed below.

Yours sincerely,



Paul D. 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
jtarkin@ramboll.com

cc: Kristin Jones, NOC
Tauren Beggs, WDNR

August 18, 2023

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

T +1 414 837 3607
F +1 414 837 3608
www.ramboll.com

Ref. 1690019647

ATTACHMENT A

TABLE AND FIGURE

Table 1: July 2023 Groundwater Analytical Results

Figure 1: Monitoring Well Locations

Table 1. July 2023 Groundwater Analytical Results - PFAS

Former Mirro Plant No. 9
 1512 Washington Street, Manitowoc, WI 54220
 FID No.: 436033730 BRRTS No.: 02-36-545108

DRAFT

Sample Location	Sample Date	WI DHS Recommended Summation of 6 PFAS ¹	Fluorotelomer sulfonic acid (FTSA)					Perfluoroalkane sulfonides (FASA) and derivatives							Perfluoroalkane sulfonic acid (PFSA)								Perfluoroalkyl carboxylic acid (PFCA)										Polyfluoroalkyl ether sulfonic acid (PFESA)				
			4,8-Dioxo-3H-perfluorononanoic acid (ADONA)	4:2 Fluorotelomer sulfonic acid	6:2 Fluorotelomer sulfonic acid	8:2 Fluorotelomer sulfonic acid	HFPO-DA (GenX)	NEFOSA	NEFOSAA	NEFOSE	NMeFOSA	NMeFOSAA	NMeFOSE	Perfluorooctanesulfonamide (FOSA)	Perfluorobutanesulfonic acid (PFBS)	Perfluorodecanesulfonic acid (PFDS)	Perfluorododecanesulfonic acid (PFDoS)	Perfluoroheptanesulfonic Acid (PFHpS)	Perfluorohexanesulfonic acid (PFHxS)	Perfluorononanesulfonic acid (PFNS)	Perfluorooctanesulfonic acid (PFOS)	Perfluoropentanesulfonic acid (PFPeS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoA)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctanoic acid (PFOA)	Perfluoropentanoic acid (PFPeA)	Perfluorotetradecanoic acid (PFTeA)	Perfluorotridecanoic acid (PFTriA)	Perfluoroundecanoic acid (PFUnA)	11C-PF3OUds (F-53B Minor)	9C-PF3ONS (F-53B Major)		
Reporting Units:	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	
Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
WI DHS Recommended ES:	20	3,000	NS	NS	NS	300	20	20	20	NS	NS	NS	20	450,000	NS	NS	NS	40	NS	20	NS	10,000	300	500	NS	150,000	30	20	NS	10,000	NS	3,000	NS	NS			
WI DHS Recommended PAL:	2	600	NS	NS	NS	30	2	2	2	NS	NS	NS	2	90,000	NS	NS	NS	4	NS	2	NS	2,000	60	100	NS	30,000	3	2	NS	2,000	NS	600	NS	NS			
MW-217	7/20/2023	<u>2.9</u>	<1.9 U	<1.9 U	<4.8 U	<1.9 U	<3.9 U	<1.9 U	<4.8 U	<1.9 U	<1.9 U	<4.8 U	<3.9 U	<1.9 U	<1.9 U	<1.9 U	<1.9 U	<1.9 U	<1.9 U	<1.9 U	<1.9 U	<4.8 U	<1.9 U	<1.9 U	0.97 J	1.3 J	<1.9 U	<u>2.9</u>	<1.9 U	<1.9 U	<1.9 U	<1.9 U	<1.9 U	<1.9 U			
MW-217 Dup	7/20/2023	<u>2.9</u>	<1.9 U	<1.9 U	<4.8 U	<1.9 U	<3.8 U	<1.9 U	<4.8 U	<1.9 U	<1.9 U	<4.8 U	<3.8 U	<1.9 U	<1.9 U	<1.9 U	<1.9 U	<1.9 U	<1.9 U	<1.9 U	<1.9 U	<4.8 U	<1.9 U	<1.9 U	1.1 J	1.3 J	<1.9 U	<u>2.9</u>	<1.9 U	<1.9 U	<1.9 U	<1.9 U	<1.9 U	<1.9 U			
MW-218	7/20/2023	70	<1.7 U	<1.7 U	<4.4 U	<1.7 U	<3.5 U	<1.7 U	<4.4 U	<1.7 U	<1.7 U	<4.4 U	<3.5 U	<1.7 U	1.8	<1.7 U	<1.7 U	<1.7 U	<1.7 U	<1.7 U	<1.7 U	4.0 J	<1.7 U	<1.7 U	1.8	1.9	<1.7 U	70	1.2 J	<1.7 U	<1.7 U	<1.7 U	<1.7 U	<1.7 U			

Bold is equal to or greater than WI DHS Recommended Groundwater ES
Underlined is equal to or greater than WI DHS Recommended Groundwater PAL
 Gray Text analyte not detected

See page 3 for additional footnotes.

Screening Levels:
 Recommended PAL and ES from WI DHS developed groundwater standard recommendations.
 (<https://www.dhs.wisconsin.gov/water/gws-cycle10.htm>)
 (<https://www.dhs.wisconsin.gov/water/gws-cycle11.htm>)



Table 1. July 2023 Groundwater Analytical Results - VOC

Former Mirro Plant No. 9
 1512 Washington Street, Manitowoc, WI 54220
 FID No.: 436033730 BRRTS No.: 02-36-545108

DRAFT

		VOC																													
Sample Location	Sample Date	Chloroform	Chloromethane	cis-1,2-Dichloroethene	Dibromochloromethane	Dibromomethane	Ethylbenzene	Freon 12	Hexachlorobutadiene	Isopropyl ether	Isopropylbenzene	Methylene chloride (Dichloromethane)	Methyl-tert-butyl-ether	n-Butylbenzene	n-Propylbenzene	Naphthalene	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Trichlorofluoromethane	Trimethylbenzenes, Total ³	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Xylenes, Total		
Reporting Units:		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
		Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
WI Groundwater ES:		6	30	70	60	NS	700	1,000	NS	NS	NS	5	60	NS	NS	100	NS	100	NS	5	800	100	5	NS	480	NS	NS	0.2	2,000		
WI Groundwater PAL:		0.6	3	7	6	NS	140	200	NS	NS	NS	0.5	12	NS	NS	10	NS	10	NS	0.5	160	20	0.5	NS	96	NS	NS	0.02	400		
MW-217	7/20/2023	<2 U	<5 U	<1 U	<1 U	<1 U	<0.5 U	<3 U	<1 U	<1 U	<1 U	<5 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<0.5 U	<1 U	<0.5 U	<1 U	<2 U	<1 U	<1 U	<1 U	<1 U		
MW-217 Dup	7/20/2023	<2 U	<5 U	<1 U	<1 U	<1 U	<0.5 U	<3 U	<1 U	<1 U	<1 U	<5 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<0.5 U	<1 U	<0.5 U	<1 U	<2 U	<1 U	<1 U	<1 U	<1 U		
MW-218	7/20/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		

[O:MGP 8/15/23]

Bold is equal to or greater than WI Groundwater ES
Underlined is equal to or greater than WI Groundwater PAL
 Gray Text analyte not detected

Lab comments, additional data qualifiers and definitions can be found in associated laboratory reports.

Results & Flags:
 -- = Analysis not performed
 < = Concentration is less than the Limit of Detection (LOD)
 J = Estimated concentration
 U = Concentration was not detected above the reported limit

Acronyms:
 µg/L = micrograms per liter
 BRRTS = Bureau for Remediation and Redevelopment Tracking System
 ES = Enforcement Standard
 FID = facility identification number
 ng/L = nanograms per liter
 NS = No Screening Level
 PAL = Preventive Action Limit
 PFAS = per- and polyfluoroalkyl substances
 VOC = Volatile Organic Compound
 WDNR = Wisconsin Department of Natural Resources
 WI = Wisconsin

Superscripts:
 1. PFAS (6) were calculated by Ramboll as follows:
 a. Where detections were observed, only the detected results were added together for the total summation.
 b. Where no detections were observed, the highest level of detection is presented as the sum
 c. Analytes used for the calculation are NETFOSA, NETFOSAA, NETFOSE, FOSA, PFOS, and PFOA as identified in the "11th Cycle of Groundwater Standard Proposals" published on Nov 6, 2020 by the WI DHS.
 d. Qualifiers are not included in the summation of the total.
 2. 1,3-Dichloropropene was calculated by Ramboll as follows:
 a. Where no detections were observed, the sum of the reporting limits is presented.
 b. Where detections were observed, the detected results were added together for the total summation.
 c. cis-1,3-Dichloropropene and trans-1,3-Dichloropropene were used for the calculation.
 d. Qualifiers are not included in the summation of the total.
 3. Total trimethylbenzenes were calculated by Ramboll as follows:
 a. Where no detections were observed, the sum of the reporting limits is presented.
 b. Where detections were observed, only the detected results were added together for the total summation.
 c. Analytes used for the calculation are 1,2,4-Trimethylbenzene and 1,3,5-Trimethylbenzene.
 d. Qualifiers are not included in the summation of the total.

Screening Levels:
 PAL and ES from WI Administrative Code NR 140 groundwater quality standard revised effective January 2020.





- PROPERTY BOUNDARY (APPROXIMATE)
- ⊕ SOIL BORING/MONITORING WELL LOCATION (APPROXIMATE)

SOIL BORING AND MONITORING WELL LOCATIONS

FIGURE 1

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY

901 S 17TH STREET
MANITOWOC, WISCONSIN





ATTACHMENT B
LABORATORY ANALYTICAL REPORT



ANALYTICAL REPORT

PREPARED FOR

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

Generated 8/15/2023 11:00:03 AM Revision 2

JOB DESCRIPTION

Former Mirro Plant No 9 - 1690019647

JOB NUMBER

500-237073-1

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.

Results relate only to the items tested and the sample(s) as received by the laboratory. The results, detection limits (LOD) and Quantitation Limits (LOQ) have been adjusted for sample dilutions and/or solids content.

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
8/15/2023 11:00:03 AM
Revision 2

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



Table of Contents

Cover Page	1
Table of Contents	3
Case Narrative	4
Detection Summary	5
Method Summary	6
Sample Summary	7
Client Sample Results	8
Definitions	16
QC Association	17
Surrogate Summary	18
QC Sample Results	19
Chronicle	28
Certification Summary	29
Chain of Custody	30
Receipt Checklists	33
Field Data Sheets	35
Isotope Dilution Summary	36

Case Narrative

Client: Ramboll US Corporation
Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237073-1

Job ID: 500-237073-1

Laboratory: Eurofins Chicago

Narrative

Job Narrative 500-237073-1

Revision

The report being provided is a revision of the original report sent on 8/8/2023. The report (revision 2) is being revised due to: Revised report to correct swapped sample times.

Report revision history

Revision 1 - 8/8/2023 - Reason - MB not showing up - QA request for update.

Receipt

The samples were received on 7/22/2023 9:50 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.1° C and 3.0° C.

GC/MS VOA

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

LCMS

Method 537 (modified): The "I" qualifier means the transition mass ratio for the indicated analyte was above the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty, and the reported value may have some high bias. However, analyst judgment was used to positively identify the analyte. MW-217 (500-237073-1)

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

Organic Prep

Method 3535: The following samples in preparation batch 320-695760 were observed to have a thin layer of sediment present in the bottom of the bottle prior to extraction. MW-218 (500-237073-2)

Method: 3535_PFC_28D

Matrix: Aqueous

Method 3535: During the solid phase extraction process, the following samples contain non-settleable particulates which clogged the solid phase extraction column: MW-217 (500-237073-1) and MW-218 (500-237073-2).

Method: 3535_PFC_28D

Matrix: Aqueous

preparation batch 320-695760

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: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237073-1

Client Sample ID: MW-217

Lab Sample ID: 500-237073-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	1.3	J I	1.9	0.56	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.97	J	1.9	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	2.9		1.9	0.82	ng/L	1		537 (modified)	Total/NA

Client Sample ID: MW-218

Lab Sample ID: 500-237073-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	4.0	J	4.4	2.1	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	1.2	J	1.7	0.43	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	1.9		1.7	0.51	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.8		1.7	0.22	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	70		1.7	0.74	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.8		1.7	0.17	ng/L	1		537 (modified)	Total/NA

Client Sample ID: MW-217 Dup

Lab Sample ID: 500-237073-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	1.3	J	1.9	0.56	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.1	J	1.9	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	2.9		1.9	0.81	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Chicago

Method Summary

Client: Ramboll US Corporation
Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237073-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	EET CHI
537 (modified)	Fluorinated Alkyl Substances	EPA	EET SAC
3535	Solid-Phase Extraction (SPE)	SW846	EET SAC
5030B	Purge and Trap	SW846	EET CHI

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 CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

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

Sample Summary

Client: Ramboll US Corporation
Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237073-1

<u>Lab Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Collected</u>	<u>Received</u>
500-237073-1	MW-217	Water	07/20/23 12:51	07/22/23 09:50
500-237073-2	MW-218	Water	07/20/23 10:33	07/22/23 09:50
500-237073-3	MW-217 Dup	Water	07/20/23 12:54	07/22/23 09:50

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17

Client Sample Results

Client: Ramboll US Corporation
 Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237073-1

Client Sample ID: MW-217

Lab Sample ID: 500-237073-1

Date Collected: 07/20/23 12:51

Matrix: Water

Date Received: 07/22/23 09:50

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			08/02/23 03:24	1
Bromobenzene	<0.36		1.0	0.36	ug/L			08/02/23 03:24	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			08/02/23 03:24	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			08/02/23 03:24	1
Bromoform	<0.48		1.0	0.48	ug/L			08/02/23 03:24	1
Bromomethane	<0.80		3.0	0.80	ug/L			08/02/23 03:24	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			08/02/23 03:24	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			08/02/23 03:24	1
Chloroethane	<0.51		1.0	0.51	ug/L			08/02/23 03:24	1
Chloroform	<0.37		2.0	0.37	ug/L			08/02/23 03:24	1
Chloromethane	<0.32		5.0	0.32	ug/L			08/02/23 03:24	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			08/02/23 03:24	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			08/02/23 03:24	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			08/02/23 03:24	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			08/02/23 03:24	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			08/02/23 03:24	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			08/02/23 03:24	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			08/02/23 03:24	1
Dibromomethane	<0.27		1.0	0.27	ug/L			08/02/23 03:24	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			08/02/23 03:24	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			08/02/23 03:24	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			08/02/23 03:24	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			08/02/23 03:24	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			08/02/23 03:24	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			08/02/23 03:24	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			08/02/23 03:24	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			08/02/23 03:24	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			08/02/23 03:24	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			08/02/23 03:24	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			08/02/23 03:24	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			08/02/23 03:24	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			08/02/23 03:24	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			08/02/23 03:24	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			08/02/23 03:24	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			08/02/23 03:24	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			08/02/23 03:24	1
Naphthalene	<0.34		1.0	0.34	ug/L			08/02/23 03:24	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			08/02/23 03:24	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			08/02/23 03:24	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			08/02/23 03:24	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			08/02/23 03:24	1
Styrene	<0.39		1.0	0.39	ug/L			08/02/23 03:24	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			08/02/23 03:24	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			08/02/23 03:24	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			08/02/23 03:24	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			08/02/23 03:24	1
Toluene	<0.15		0.50	0.15	ug/L			08/02/23 03:24	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			08/02/23 03:24	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			08/02/23 03:24	1

Eurofins Chicago

Client Sample Results

Client: Ramboll US Corporation
 Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237073-1

Client Sample ID: MW-217

Lab Sample ID: 500-237073-1

Date Collected: 07/20/23 12:51

Matrix: Water

Date Received: 07/22/23 09:50

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			08/02/23 03:24	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			08/02/23 03:24	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			08/02/23 03:24	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			08/02/23 03:24	1
Trichloroethene	<0.16		0.50	0.16	ug/L			08/02/23 03:24	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			08/02/23 03:24	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			08/02/23 03:24	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			08/02/23 03:24	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			08/02/23 03:24	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			08/02/23 03:24	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			08/02/23 03:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		72 - 124		08/02/23 03:24	1
Dibromofluoromethane (Surr)	97		75 - 120		08/02/23 03:24	1
1,2-Dichloroethane-d4 (Surr)	103		75 - 126		08/02/23 03:24	1
Toluene-d8 (Surr)	107		75 - 120		08/02/23 03:24	1

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		08/03/23 04:27	08/03/23 17:31	1
Perfluoropentanoic acid (PFPeA)	<0.47		1.9	0.47	ng/L		08/03/23 04:27	08/03/23 17:31	1
Perfluorohexanoic acid (PFHxA)	1.3	J I	1.9	0.56	ng/L		08/03/23 04:27	08/03/23 17:31	1
Perfluoroheptanoic acid (PFHpA)	0.97	J	1.9	0.24	ng/L		08/03/23 04:27	08/03/23 17:31	1
Perfluorooctanoic acid (PFOA)	2.9		1.9	0.82	ng/L		08/03/23 04:27	08/03/23 17:31	1
Perfluorononanoic acid (PFNA)	<0.26		1.9	0.26	ng/L		08/03/23 04:27	08/03/23 17:31	1
Perfluorodecanoic acid (PFDA)	<0.30		1.9	0.30	ng/L		08/03/23 04:27	08/03/23 17:31	1
Perfluoroundecanoic acid (PFUnA)	<1.1		1.9	1.1	ng/L		08/03/23 04:27	08/03/23 17:31	1
Perfluorododecanoic acid (PFDoA)	<0.53		1.9	0.53	ng/L		08/03/23 04:27	08/03/23 17:31	1
Perfluorotridecanoic acid (PFTriA)	<1.3		1.9	1.3	ng/L		08/03/23 04:27	08/03/23 17:31	1
Perfluorotetradecanoic acid (PFTeA)	<0.71		1.9	0.71	ng/L		08/03/23 04:27	08/03/23 17:31	1
Perfluorobutanesulfonic acid (PFBS)	<0.19		1.9	0.19	ng/L		08/03/23 04:27	08/03/23 17:31	1
Perfluoropentanesulfonic acid (PFPeS)	<0.29		1.9	0.29	ng/L		08/03/23 04:27	08/03/23 17:31	1
Perfluorohexanesulfonic acid (PFHxS)	<0.55		1.9	0.55	ng/L		08/03/23 04:27	08/03/23 17:31	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.18		1.9	0.18	ng/L		08/03/23 04:27	08/03/23 17:31	1
Perfluorooctanesulfonic acid (PFOS)	<0.52		1.9	0.52	ng/L		08/03/23 04:27	08/03/23 17:31	1
Perfluorononanesulfonic acid (PFNS)	<0.36		1.9	0.36	ng/L		08/03/23 04:27	08/03/23 17:31	1
Perfluorodecanesulfonic acid (PFDS)	<0.31		1.9	0.31	ng/L		08/03/23 04:27	08/03/23 17:31	1
Perfluorododecanesulfonic acid (PFDoS)	<0.94		1.9	0.94	ng/L		08/03/23 04:27	08/03/23 17:31	1
Perfluorooctanesulfonamide (FOSA)	<0.95		1.9	0.95	ng/L		08/03/23 04:27	08/03/23 17:31	1
NEtFOSA	<0.84		1.9	0.84	ng/L		08/03/23 04:27	08/03/23 17:31	1
NMeFOSA	<0.42		1.9	0.42	ng/L		08/03/23 04:27	08/03/23 17:31	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<1.2		4.8	1.2	ng/L		08/03/23 04:27	08/03/23 17:31	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.3		4.8	1.3	ng/L		08/03/23 04:27	08/03/23 17:31	1
NMeFOSE	<1.4		3.9	1.4	ng/L		08/03/23 04:27	08/03/23 17:31	1
NEtFOSE	<0.82		1.9	0.82	ng/L		08/03/23 04:27	08/03/23 17:31	1

Eurofins Chicago

Client Sample Results

Client: Ramboll US Corporation
 Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237073-1

Client Sample ID: MW-217

Lab Sample ID: 500-237073-1

Date Collected: 07/20/23 12:51

Matrix: Water

Date Received: 07/22/23 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4:2 FTS	<0.23		1.9	0.23	ng/L		08/03/23 04:27	08/03/23 17:31	1
6:2 FTS	<2.4		4.8	2.4	ng/L		08/03/23 04:27	08/03/23 17:31	1
8:2 FTS	<0.45		1.9	0.45	ng/L		08/03/23 04:27	08/03/23 17:31	1
DONA	<0.39		1.9	0.39	ng/L		08/03/23 04:27	08/03/23 17:31	1
HFPO-DA (GenX)	<1.5		3.9	1.5	ng/L		08/03/23 04:27	08/03/23 17:31	1
F-53B Major	<0.23		1.9	0.23	ng/L		08/03/23 04:27	08/03/23 17:31	1
F-53B Minor	<0.31		1.9	0.31	ng/L		08/03/23 04:27	08/03/23 17:31	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	86		25 - 150				08/03/23 04:27	08/03/23 17:31	1
13C5 PFPeA	91		25 - 150				08/03/23 04:27	08/03/23 17:31	1
13C2 PFHxA	89		25 - 150				08/03/23 04:27	08/03/23 17:31	1
13C4 PFHpA	103		25 - 150				08/03/23 04:27	08/03/23 17:31	1
13C4 PFOA	93		25 - 150				08/03/23 04:27	08/03/23 17:31	1
13C5 PFNA	94		25 - 150				08/03/23 04:27	08/03/23 17:31	1
13C2 PFDA	93		25 - 150				08/03/23 04:27	08/03/23 17:31	1
13C2 PFUnA	83		25 - 150				08/03/23 04:27	08/03/23 17:31	1
13C2 PFDoA	79		25 - 150				08/03/23 04:27	08/03/23 17:31	1
13C2 PFTeDA	76		25 - 150				08/03/23 04:27	08/03/23 17:31	1
13C3 PFBS	100		25 - 150				08/03/23 04:27	08/03/23 17:31	1
18O2 PFHxS	101		25 - 150				08/03/23 04:27	08/03/23 17:31	1
13C4 PFOS	93		25 - 150				08/03/23 04:27	08/03/23 17:31	1
13C8 FOSA	99		10 - 150				08/03/23 04:27	08/03/23 17:31	1
d3-NMeFOSAA	85		25 - 150				08/03/23 04:27	08/03/23 17:31	1
d5-NEtFOSAA	92		25 - 150				08/03/23 04:27	08/03/23 17:31	1
d-N-MeFOSA-M	77		10 - 150				08/03/23 04:27	08/03/23 17:31	1
d-N-EtFOSA-M	80		10 - 150				08/03/23 04:27	08/03/23 17:31	1
d7-N-MeFOSE-M	82		10 - 150				08/03/23 04:27	08/03/23 17:31	1
d9-N-EtFOSE-M	82		10 - 150				08/03/23 04:27	08/03/23 17:31	1
M2-4:2 FTS	79		25 - 150				08/03/23 04:27	08/03/23 17:31	1
M2-6:2 FTS	102		25 - 150				08/03/23 04:27	08/03/23 17:31	1
M2-8:2 FTS	80		25 - 150				08/03/23 04:27	08/03/23 17:31	1
13C3 HFPO-DA	96		25 - 150				08/03/23 04:27	08/03/23 17:31	1

Client Sample Results

Client: Ramboll US Corporation
 Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237073-1

Client Sample ID: MW-218

Lab Sample ID: 500-237073-2

Date Collected: 07/20/23 10:33

Matrix: Water

Date Received: 07/22/23 09:50

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	4.0	J	4.4	2.1	ng/L		08/03/23 04:27	08/03/23 17:41	1
Perfluoropentanoic acid (PFPeA)	1.2	J	1.7	0.43	ng/L		08/03/23 04:27	08/03/23 17:41	1
Perfluorohexanoic acid (PFHxA)	1.9		1.7	0.51	ng/L		08/03/23 04:27	08/03/23 17:41	1
Perfluoroheptanoic acid (PFHpA)	1.8		1.7	0.22	ng/L		08/03/23 04:27	08/03/23 17:41	1
Perfluorooctanoic acid (PFOA)	70		1.7	0.74	ng/L		08/03/23 04:27	08/03/23 17:41	1
Perfluorononanoic acid (PFNA)	<0.24		1.7	0.24	ng/L		08/03/23 04:27	08/03/23 17:41	1
Perfluorodecanoic acid (PFDA)	<0.27		1.7	0.27	ng/L		08/03/23 04:27	08/03/23 17:41	1
Perfluoroundecanoic acid (PFUnA)	<0.96		1.7	0.96	ng/L		08/03/23 04:27	08/03/23 17:41	1
Perfluorododecanoic acid (PFDoA)	<0.48		1.7	0.48	ng/L		08/03/23 04:27	08/03/23 17:41	1
Perfluorotridecanoic acid (PFTriA)	<1.1		1.7	1.1	ng/L		08/03/23 04:27	08/03/23 17:41	1
Perfluorotetradecanoic acid (PFTeA)	<0.64		1.7	0.64	ng/L		08/03/23 04:27	08/03/23 17:41	1
Perfluorobutanesulfonic acid (PFBS)	1.8		1.7	0.17	ng/L		08/03/23 04:27	08/03/23 17:41	1
Perfluoropentanesulfonic acid (PFPeS)	<0.26		1.7	0.26	ng/L		08/03/23 04:27	08/03/23 17:41	1
Perfluorohexanesulfonic acid (PFHxS)	<0.50		1.7	0.50	ng/L		08/03/23 04:27	08/03/23 17:41	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.17		1.7	0.17	ng/L		08/03/23 04:27	08/03/23 17:41	1
Perfluorooctanesulfonic acid (PFOS)	<0.47		1.7	0.47	ng/L		08/03/23 04:27	08/03/23 17:41	1
Perfluorononanesulfonic acid (PFNS)	<0.32		1.7	0.32	ng/L		08/03/23 04:27	08/03/23 17:41	1
Perfluorodecanesulfonic acid (PFDS)	<0.28		1.7	0.28	ng/L		08/03/23 04:27	08/03/23 17:41	1
Perfluorododecanesulfonic acid (PFDoS)	<0.85		1.7	0.85	ng/L		08/03/23 04:27	08/03/23 17:41	1
Perfluorooctanesulfonamide (FOSA)	<0.86		1.7	0.86	ng/L		08/03/23 04:27	08/03/23 17:41	1
NEtFOSA	<0.76		1.7	0.76	ng/L		08/03/23 04:27	08/03/23 17:41	1
NMeFOSA	<0.38		1.7	0.38	ng/L		08/03/23 04:27	08/03/23 17:41	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<1.0		4.4	1.0	ng/L		08/03/23 04:27	08/03/23 17:41	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.1		4.4	1.1	ng/L		08/03/23 04:27	08/03/23 17:41	1
NMeFOSE	<1.2		3.5	1.2	ng/L		08/03/23 04:27	08/03/23 17:41	1
NEtFOSE	<0.74		1.7	0.74	ng/L		08/03/23 04:27	08/03/23 17:41	1
4:2 FTS	<0.21		1.7	0.21	ng/L		08/03/23 04:27	08/03/23 17:41	1
6:2 FTS	<2.2		4.4	2.2	ng/L		08/03/23 04:27	08/03/23 17:41	1
8:2 FTS	<0.40		1.7	0.40	ng/L		08/03/23 04:27	08/03/23 17:41	1
DONA	<0.35		1.7	0.35	ng/L		08/03/23 04:27	08/03/23 17:41	1
HFPO-DA (GenX)	<1.3		3.5	1.3	ng/L		08/03/23 04:27	08/03/23 17:41	1
F-53B Major	<0.21		1.7	0.21	ng/L		08/03/23 04:27	08/03/23 17:41	1
F-53B Minor	<0.28		1.7	0.28	ng/L		08/03/23 04:27	08/03/23 17:41	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	82		25 - 150				08/03/23 04:27	08/03/23 17:41	1
13C5 PFPeA	83		25 - 150				08/03/23 04:27	08/03/23 17:41	1
13C2 PFHxA	78		25 - 150				08/03/23 04:27	08/03/23 17:41	1
13C4 PFHpA	90		25 - 150				08/03/23 04:27	08/03/23 17:41	1
13C4 PFOA	84		25 - 150				08/03/23 04:27	08/03/23 17:41	1
13C5 PFNA	84		25 - 150				08/03/23 04:27	08/03/23 17:41	1
13C2 PFDA	84		25 - 150				08/03/23 04:27	08/03/23 17:41	1
13C2 PFUnA	79		25 - 150				08/03/23 04:27	08/03/23 17:41	1
13C2 PFDoA	76		25 - 150				08/03/23 04:27	08/03/23 17:41	1
13C2 PFTeDA	61		25 - 150				08/03/23 04:27	08/03/23 17:41	1
13C3 PFBS	90		25 - 150				08/03/23 04:27	08/03/23 17:41	1

Eurofins Chicago

Client Sample Results

Client: Ramboll US Corporation
 Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237073-1

Client Sample ID: MW-218

Lab Sample ID: 500-237073-2

Date Collected: 07/20/23 10:33

Matrix: Water

Date Received: 07/22/23 09:50

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

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
18O2 PFHxS	87		25 - 150	08/03/23 04:27	08/03/23 17:41	1
13C4 PFOS	86		25 - 150	08/03/23 04:27	08/03/23 17:41	1
13C8 FOSA	92		10 - 150	08/03/23 04:27	08/03/23 17:41	1
d3-NMeFOSAA	86		25 - 150	08/03/23 04:27	08/03/23 17:41	1
d5-NEtFOSAA	80		25 - 150	08/03/23 04:27	08/03/23 17:41	1
d-N-MeFOSA-M	64		10 - 150	08/03/23 04:27	08/03/23 17:41	1
d-N-EtFOSA-M	67		10 - 150	08/03/23 04:27	08/03/23 17:41	1
d7-N-MeFOSE-M	67		10 - 150	08/03/23 04:27	08/03/23 17:41	1
d9-N-EtFOSE-M	68		10 - 150	08/03/23 04:27	08/03/23 17:41	1
M2-4:2 FTS	78		25 - 150	08/03/23 04:27	08/03/23 17:41	1
M2-6:2 FTS	90		25 - 150	08/03/23 04:27	08/03/23 17:41	1
M2-8:2 FTS	75		25 - 150	08/03/23 04:27	08/03/23 17:41	1
13C3 HFPO-DA	82		25 - 150	08/03/23 04:27	08/03/23 17:41	1

Client Sample Results

Client: Ramboll US Corporation
 Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237073-1

Client Sample ID: MW-217 Dup

Lab Sample ID: 500-237073-3

Date Collected: 07/20/23 12:54

Matrix: Water

Date Received: 07/22/23 09:50

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			08/02/23 03:49	1
Bromobenzene	<0.36		1.0	0.36	ug/L			08/02/23 03:49	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			08/02/23 03:49	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			08/02/23 03:49	1
Bromoform	<0.48		1.0	0.48	ug/L			08/02/23 03:49	1
Bromomethane	<0.80		3.0	0.80	ug/L			08/02/23 03:49	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			08/02/23 03:49	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			08/02/23 03:49	1
Chloroethane	<0.51		1.0	0.51	ug/L			08/02/23 03:49	1
Chloroform	<0.37		2.0	0.37	ug/L			08/02/23 03:49	1
Chloromethane	<0.32		5.0	0.32	ug/L			08/02/23 03:49	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			08/02/23 03:49	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			08/02/23 03:49	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			08/02/23 03:49	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			08/02/23 03:49	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			08/02/23 03:49	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			08/02/23 03:49	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			08/02/23 03:49	1
Dibromomethane	<0.27		1.0	0.27	ug/L			08/02/23 03:49	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			08/02/23 03:49	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			08/02/23 03:49	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			08/02/23 03:49	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			08/02/23 03:49	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			08/02/23 03:49	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			08/02/23 03:49	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			08/02/23 03:49	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			08/02/23 03:49	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			08/02/23 03:49	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			08/02/23 03:49	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			08/02/23 03:49	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			08/02/23 03:49	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			08/02/23 03:49	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			08/02/23 03:49	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			08/02/23 03:49	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			08/02/23 03:49	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			08/02/23 03:49	1
Naphthalene	<0.34		1.0	0.34	ug/L			08/02/23 03:49	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			08/02/23 03:49	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			08/02/23 03:49	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			08/02/23 03:49	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			08/02/23 03:49	1
Styrene	<0.39		1.0	0.39	ug/L			08/02/23 03:49	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			08/02/23 03:49	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			08/02/23 03:49	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			08/02/23 03:49	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			08/02/23 03:49	1
Toluene	<0.15		0.50	0.15	ug/L			08/02/23 03:49	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			08/02/23 03:49	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			08/02/23 03:49	1

Eurofins Chicago

Client Sample Results

Client: Ramboll US Corporation
 Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237073-1

Client Sample ID: MW-217 Dup

Lab Sample ID: 500-237073-3

Date Collected: 07/20/23 12:54

Matrix: Water

Date Received: 07/22/23 09:50

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			08/02/23 03:49	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			08/02/23 03:49	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			08/02/23 03:49	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			08/02/23 03:49	1
Trichloroethene	<0.16		0.50	0.16	ug/L			08/02/23 03:49	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			08/02/23 03:49	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			08/02/23 03:49	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			08/02/23 03:49	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			08/02/23 03:49	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			08/02/23 03:49	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			08/02/23 03:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		72 - 124		08/02/23 03:49	1
Dibromofluoromethane (Surr)	101		75 - 120		08/02/23 03:49	1
1,2-Dichloroethane-d4 (Surr)	104		75 - 126		08/02/23 03:49	1
Toluene-d8 (Surr)	105		75 - 120		08/02/23 03:49	1

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		08/03/23 04:27	08/03/23 17:51	1
Perfluoropentanoic acid (PFPeA)	<0.47		1.9	0.47	ng/L		08/03/23 04:27	08/03/23 17:51	1
Perfluorohexanoic acid (PFHxA)	1.3	J	1.9	0.56	ng/L		08/03/23 04:27	08/03/23 17:51	1
Perfluoroheptanoic acid (PFHpA)	1.1	J	1.9	0.24	ng/L		08/03/23 04:27	08/03/23 17:51	1
Perfluorooctanoic acid (PFOA)	2.9		1.9	0.81	ng/L		08/03/23 04:27	08/03/23 17:51	1
Perfluorononanoic acid (PFNA)	<0.26		1.9	0.26	ng/L		08/03/23 04:27	08/03/23 17:51	1
Perfluorodecanoic acid (PFDA)	<0.30		1.9	0.30	ng/L		08/03/23 04:27	08/03/23 17:51	1
Perfluoroundecanoic acid (PFUnA)	<1.1		1.9	1.1	ng/L		08/03/23 04:27	08/03/23 17:51	1
Perfluorododecanoic acid (PFDoA)	<0.53		1.9	0.53	ng/L		08/03/23 04:27	08/03/23 17:51	1
Perfluorotridecanoic acid (PFTriA)	<1.2		1.9	1.2	ng/L		08/03/23 04:27	08/03/23 17:51	1
Perfluorotetradecanoic acid (PFTeA)	<0.70		1.9	0.70	ng/L		08/03/23 04:27	08/03/23 17:51	1
Perfluorobutanesulfonic acid (PFBS)	<0.19		1.9	0.19	ng/L		08/03/23 04:27	08/03/23 17:51	1
Perfluoropentanesulfonic acid (PFPeS)	<0.29		1.9	0.29	ng/L		08/03/23 04:27	08/03/23 17:51	1
Perfluorohexanesulfonic acid (PFHxS)	<0.55		1.9	0.55	ng/L		08/03/23 04:27	08/03/23 17:51	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.18		1.9	0.18	ng/L		08/03/23 04:27	08/03/23 17:51	1
Perfluorooctanesulfonic acid (PFOS)	<0.52		1.9	0.52	ng/L		08/03/23 04:27	08/03/23 17:51	1
Perfluorononanesulfonic acid (PFNS)	<0.35		1.9	0.35	ng/L		08/03/23 04:27	08/03/23 17:51	1
Perfluorodecanesulfonic acid (PFDS)	<0.31		1.9	0.31	ng/L		08/03/23 04:27	08/03/23 17:51	1
Perfluorododecanesulfonic acid (PFDoS)	<0.93		1.9	0.93	ng/L		08/03/23 04:27	08/03/23 17:51	1
Perfluorooctanesulfonamide (FOSA)	<0.94		1.9	0.94	ng/L		08/03/23 04:27	08/03/23 17:51	1
NEtFOSA	<0.83		1.9	0.83	ng/L		08/03/23 04:27	08/03/23 17:51	1
NMeFOSA	<0.41		1.9	0.41	ng/L		08/03/23 04:27	08/03/23 17:51	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<1.1		4.8	1.1	ng/L		08/03/23 04:27	08/03/23 17:51	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.2		4.8	1.2	ng/L		08/03/23 04:27	08/03/23 17:51	1
NMeFOSE	<1.3		3.8	1.3	ng/L		08/03/23 04:27	08/03/23 17:51	1
NEtFOSE	<0.81		1.9	0.81	ng/L		08/03/23 04:27	08/03/23 17:51	1

Eurofins Chicago

Client Sample Results

Client: Ramboll US Corporation
 Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237073-1

Client Sample ID: MW-217 Dup

Lab Sample ID: 500-237073-3

Date Collected: 07/20/23 12:54

Matrix: Water

Date Received: 07/22/23 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4:2 FTS	<0.23		1.9	0.23	ng/L		08/03/23 04:27	08/03/23 17:51	1
6:2 FTS	<2.4		4.8	2.4	ng/L		08/03/23 04:27	08/03/23 17:51	1
8:2 FTS	<0.44		1.9	0.44	ng/L		08/03/23 04:27	08/03/23 17:51	1
DONA	<0.38		1.9	0.38	ng/L		08/03/23 04:27	08/03/23 17:51	1
HFPO-DA (GenX)	<1.4		3.8	1.4	ng/L		08/03/23 04:27	08/03/23 17:51	1
F-53B Major	<0.23		1.9	0.23	ng/L		08/03/23 04:27	08/03/23 17:51	1
F-53B Minor	<0.31		1.9	0.31	ng/L		08/03/23 04:27	08/03/23 17:51	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	91		25 - 150				08/03/23 04:27	08/03/23 17:51	1
13C5 PFPeA	97		25 - 150				08/03/23 04:27	08/03/23 17:51	1
13C2 PFHxA	93		25 - 150				08/03/23 04:27	08/03/23 17:51	1
13C4 PFHpA	109		25 - 150				08/03/23 04:27	08/03/23 17:51	1
13C4 PFOA	97		25 - 150				08/03/23 04:27	08/03/23 17:51	1
13C5 PFNA	99		25 - 150				08/03/23 04:27	08/03/23 17:51	1
13C2 PFDA	96		25 - 150				08/03/23 04:27	08/03/23 17:51	1
13C2 PFUnA	90		25 - 150				08/03/23 04:27	08/03/23 17:51	1
13C2 PFDoA	87		25 - 150				08/03/23 04:27	08/03/23 17:51	1
13C2 PFTeDA	79		25 - 150				08/03/23 04:27	08/03/23 17:51	1
13C3 PFBS	106		25 - 150				08/03/23 04:27	08/03/23 17:51	1
18O2 PFHxS	109		25 - 150				08/03/23 04:27	08/03/23 17:51	1
13C4 PFOS	98		25 - 150				08/03/23 04:27	08/03/23 17:51	1
13C8 FOSA	106		10 - 150				08/03/23 04:27	08/03/23 17:51	1
d3-NMeFOSAA	90		25 - 150				08/03/23 04:27	08/03/23 17:51	1
d5-NEtFOSAA	90		25 - 150				08/03/23 04:27	08/03/23 17:51	1
d-N-MeFOSA-M	79		10 - 150				08/03/23 04:27	08/03/23 17:51	1
d-N-EtFOSA-M	86		10 - 150				08/03/23 04:27	08/03/23 17:51	1
d7-N-MeFOSE-M	84		10 - 150				08/03/23 04:27	08/03/23 17:51	1
d9-N-EtFOSE-M	83		10 - 150				08/03/23 04:27	08/03/23 17:51	1
M2-4:2 FTS	84		25 - 150				08/03/23 04:27	08/03/23 17:51	1
M2-6:2 FTS	100		25 - 150				08/03/23 04:27	08/03/23 17:51	1
M2-8:2 FTS	90		25 - 150				08/03/23 04:27	08/03/23 17:51	1
13C3 HFPO-DA	100		25 - 150				08/03/23 04:27	08/03/23 17:51	1

Definitions/Glossary

Client: Ramboll US Corporation
Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237073-1

Qualifiers

LCMS

Qualifier	Qualifier Description
I	Value is EMPC (estimated maximum possible concentration).
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.
α	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: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237073-1

GC/MS VOA

Analysis Batch: 725883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-237073-1	MW-217	Total/NA	Water	8260B	
500-237073-3	MW-217 Dup	Total/NA	Water	8260B	
MB 500-725883/10	Method Blank	Total/NA	Water	8260B	
LCS 500-725883/7	Lab Control Sample	Total/NA	Water	8260B	
500-237073-1 MS	MW-217	Total/NA	Water	8260B	
500-237073-1 MSD	MW-217	Total/NA	Water	8260B	

LCMS

Prep Batch: 695760

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-237073-1	MW-217	Total/NA	Water	3535	
500-237073-2	MW-218	Total/NA	Water	3535	
500-237073-3	MW-217 Dup	Total/NA	Water	3535	
MB 320-695760/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-695760/2-A	Lab Control Sample	Total/NA	Water	3535	

Analysis Batch: 696077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-237073-1	MW-217	Total/NA	Water	537 (modified)	695760
500-237073-2	MW-218	Total/NA	Water	537 (modified)	695760
500-237073-3	MW-217 Dup	Total/NA	Water	537 (modified)	695760
LCS 320-695760/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	695760

Analysis Batch: 696784

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-695760/1-A	Method Blank	Total/NA	Water	537 (modified)	695760

Surrogate Summary

Client: Ramboll US Corporation
Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237073-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB	DBFM	DCA	TOL
		(72-124)	(75-120)	(75-126)	(75-120)
500-237073-1	MW-217	112	97	103	107
500-237073-1 MS	MW-217	109	98	100	109
500-237073-1 MSD	MW-217	113	95	102	112
500-237073-3	MW-217 Dup	111	101	104	105
LCS 500-725883/7	Lab Control Sample	106	95	95	108
MB 500-725883/10	Method Blank	115	93	101	109

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

DCA = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237073-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 500-725883/10
Matrix: Water
Analysis Batch: 725883

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	<0.15		0.50	0.15	ug/L			08/01/23 22:48	1
Bromobenzene	<0.36		1.0	0.36	ug/L			08/01/23 22:48	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			08/01/23 22:48	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			08/01/23 22:48	1
Bromoform	<0.48		1.0	0.48	ug/L			08/01/23 22:48	1
Bromomethane	<0.80		3.0	0.80	ug/L			08/01/23 22:48	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			08/01/23 22:48	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			08/01/23 22:48	1
Chloroethane	<0.51		1.0	0.51	ug/L			08/01/23 22:48	1
Chloroform	<0.37		2.0	0.37	ug/L			08/01/23 22:48	1
Chloromethane	<0.32		5.0	0.32	ug/L			08/01/23 22:48	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			08/01/23 22:48	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			08/01/23 22:48	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			08/01/23 22:48	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			08/01/23 22:48	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			08/01/23 22:48	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			08/01/23 22:48	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			08/01/23 22:48	1
Dibromomethane	<0.27		1.0	0.27	ug/L			08/01/23 22:48	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			08/01/23 22:48	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			08/01/23 22:48	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			08/01/23 22:48	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			08/01/23 22:48	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			08/01/23 22:48	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			08/01/23 22:48	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			08/01/23 22:48	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			08/01/23 22:48	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			08/01/23 22:48	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			08/01/23 22:48	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			08/01/23 22:48	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			08/01/23 22:48	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			08/01/23 22:48	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			08/01/23 22:48	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			08/01/23 22:48	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			08/01/23 22:48	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			08/01/23 22:48	1
Naphthalene	<0.34		1.0	0.34	ug/L			08/01/23 22:48	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			08/01/23 22:48	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			08/01/23 22:48	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			08/01/23 22:48	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			08/01/23 22:48	1
Styrene	<0.39		1.0	0.39	ug/L			08/01/23 22:48	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			08/01/23 22:48	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			08/01/23 22:48	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			08/01/23 22:48	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			08/01/23 22:48	1
Toluene	<0.15		0.50	0.15	ug/L			08/01/23 22:48	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			08/01/23 22:48	1

Eurofins Chicago

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 500-725883/10
Matrix: Water
Analysis Batch: 725883

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			08/01/23 22:48	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			08/01/23 22:48	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			08/01/23 22:48	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			08/01/23 22:48	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			08/01/23 22:48	1
Trichloroethene	<0.16		0.50	0.16	ug/L			08/01/23 22:48	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			08/01/23 22:48	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			08/01/23 22:48	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			08/01/23 22:48	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			08/01/23 22:48	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			08/01/23 22:48	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			08/01/23 22:48	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	115		72 - 124		08/01/23 22:48	1
Dibromofluoromethane (Surr)	93		75 - 120		08/01/23 22:48	1
1,2-Dichloroethane-d4 (Surr)	101		75 - 126		08/01/23 22:48	1
Toluene-d8 (Surr)	109		75 - 120		08/01/23 22:48	1

Lab Sample ID: LCS 500-725883/7
Matrix: Water
Analysis Batch: 725883

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

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Benzene	50.0	47.0		ug/L		94	70 - 120
Bromobenzene	50.0	54.3		ug/L		109	70 - 122
Bromochloromethane	50.0	45.3		ug/L		91	65 - 122
Bromodichloromethane	50.0	48.4		ug/L		97	69 - 120
Bromoform	50.0	44.8		ug/L		90	56 - 132
Bromomethane	50.0	55.3		ug/L		111	40 - 152
Carbon tetrachloride	50.0	51.0		ug/L		102	59 - 133
Chlorobenzene	50.0	52.5		ug/L		105	70 - 120
Chloroethane	50.0	44.9		ug/L		90	48 - 136
Chloroform	50.0	45.1		ug/L		90	70 - 120
Chloromethane	50.0	37.2		ug/L		74	56 - 152
2-Chlorotoluene	50.0	53.1		ug/L		106	70 - 125
4-Chlorotoluene	50.0	53.2		ug/L		106	68 - 124
cis-1,2-Dichloroethene	50.0	46.8		ug/L		94	70 - 125
cis-1,3-Dichloropropene	50.0	56.1		ug/L		112	64 - 127
Dibromochloromethane	50.0	51.8		ug/L		104	68 - 125
1,2-Dibromo-3-Chloropropane	50.0	42.8		ug/L		86	56 - 123
1,2-Dibromoethane	50.0	54.5		ug/L		109	70 - 125
Dibromomethane	50.0	50.1		ug/L		100	70 - 120
1,2-Dichlorobenzene	50.0	51.2		ug/L		102	70 - 125
1,3-Dichlorobenzene	50.0	52.6		ug/L		105	70 - 125
1,4-Dichlorobenzene	50.0	50.1		ug/L		100	70 - 120
Dichlorodifluoromethane	50.0	38.3		ug/L		77	40 - 159
1,1-Dichloroethane	50.0	49.3		ug/L		99	70 - 125

Eurofins Chicago

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-725883/7
Matrix: Water
Analysis Batch: 725883

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dichloroethane	50.0	51.5		ug/L		103	68 - 127
1,1-Dichloroethene	50.0	48.8		ug/L		98	67 - 122
1,2-Dichloropropane	50.0	50.1		ug/L		100	67 - 130
1,3-Dichloropropane	50.0	57.1		ug/L		114	62 - 136
2,2-Dichloropropane	50.0	48.3		ug/L		97	58 - 139
1,1-Dichloropropene	50.0	51.3		ug/L		103	70 - 121
Ethylbenzene	50.0	48.5		ug/L		97	70 - 123
Hexachlorobutadiene	50.0	55.1		ug/L		110	51 - 150
Isopropylbenzene	50.0	54.6		ug/L		109	70 - 126
Methylene Chloride	50.0	49.1		ug/L		98	69 - 125
Methyl tert-butyl ether	50.0	48.8		ug/L		98	55 - 123
Naphthalene	50.0	45.7		ug/L		91	53 - 144
n-Butylbenzene	50.0	50.7		ug/L		101	68 - 125
N-Propylbenzene	50.0	54.5		ug/L		109	69 - 127
p-Isopropyltoluene	50.0	52.0		ug/L		104	70 - 125
sec-Butylbenzene	50.0	52.9		ug/L		106	70 - 123
Styrene	50.0	48.2		ug/L		96	70 - 120
tert-Butylbenzene	50.0	53.0		ug/L		106	70 - 121
1,1,1,2-Tetrachloroethane	50.0	51.7		ug/L		103	70 - 125
1,1,2,2-Tetrachloroethane	50.0	51.4		ug/L		103	62 - 140
Tetrachloroethene	50.0	55.1		ug/L		110	70 - 128
Toluene	50.0	52.6		ug/L		105	70 - 125
trans-1,2-Dichloroethene	50.0	47.7		ug/L		95	70 - 125
trans-1,3-Dichloropropene	50.0	53.5		ug/L		107	62 - 128
1,2,3-Trichlorobenzene	50.0	51.4		ug/L		103	51 - 145
1,2,4-Trichlorobenzene	50.0	50.9		ug/L		102	57 - 137
1,1,1-Trichloroethane	50.0	48.0		ug/L		96	70 - 125
1,1,2-Trichloroethane	50.0	53.0		ug/L		106	71 - 130
Trichloroethene	50.0	48.5		ug/L		97	70 - 125
Trichlorofluoromethane	50.0	43.1		ug/L		86	55 - 128
1,2,3-Trichloropropane	50.0	54.3		ug/L		109	50 - 133
1,2,4-Trimethylbenzene	50.0	51.2		ug/L		102	70 - 123
1,3,5-Trimethylbenzene	50.0	52.7		ug/L		105	70 - 123
Vinyl chloride	50.0	40.4		ug/L		81	64 - 126
Xylenes, Total	100	97.3		ug/L		97	70 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		72 - 124
Dibromofluoromethane (Surr)	95		75 - 120
1,2-Dichloroethane-d4 (Surr)	95		75 - 126
Toluene-d8 (Surr)	108		75 - 120

Lab Sample ID: 500-237073-1 MS
Matrix: Water
Analysis Batch: 725883

Client Sample ID: MW-217
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.15		50.0	42.5		ug/L		85	70 - 120

Eurolins Chicago

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 500-237073-1 MS
 Matrix: Water
 Analysis Batch: 725883

Client Sample ID: MW-217
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Bromobenzene	<0.36		50.0	49.3		ug/L		99	70 - 122
Bromochloromethane	<0.43		50.0	40.3		ug/L		81	65 - 122
Bromodichloromethane	<0.37		50.0	43.8		ug/L		88	69 - 120
Bromoform	<0.48		50.0	41.4		ug/L		83	56 - 132
Bromomethane	<0.80		50.0	47.0		ug/L		94	40 - 152
Carbon tetrachloride	<0.38		50.0	46.1		ug/L		92	59 - 133
Chlorobenzene	<0.39		50.0	46.5		ug/L		93	70 - 120
Chloroethane	<0.51		50.0	38.2		ug/L		76	48 - 136
Chloroform	<0.37		50.0	41.0		ug/L		82	70 - 120
Chloromethane	<0.32		50.0	31.9		ug/L		64	56 - 152
2-Chlorotoluene	<0.31		50.0	45.5		ug/L		91	70 - 125
4-Chlorotoluene	<0.35		50.0	46.2		ug/L		92	68 - 124
cis-1,2-Dichloroethene	<0.41		50.0	42.0		ug/L		84	70 - 125
cis-1,3-Dichloropropene	<0.42		50.0	50.1		ug/L		100	64 - 127
Dibromochloromethane	<0.49		50.0	47.7		ug/L		95	68 - 125
1,2-Dibromo-3-Chloropropane	<2.0		50.0	40.3		ug/L		81	56 - 123
1,2-Dibromoethane	<0.39		50.0	50.0		ug/L		100	70 - 125
Dibromomethane	<0.27		50.0	46.0		ug/L		92	70 - 120
1,2-Dichlorobenzene	<0.33		50.0	46.0		ug/L		92	70 - 125
1,3-Dichlorobenzene	<0.40		50.0	44.8		ug/L		90	70 - 125
1,4-Dichlorobenzene	<0.36		50.0	44.8		ug/L		90	70 - 120
Dichlorodifluoromethane	<0.67		50.0	34.5		ug/L		69	40 - 159
1,1-Dichloroethane	<0.41		50.0	43.8		ug/L		88	70 - 125
1,2-Dichloroethane	<0.39		50.0	47.7		ug/L		95	68 - 127
1,1-Dichloroethene	<0.39		50.0	42.4		ug/L		85	67 - 122
1,2-Dichloropropane	<0.43		50.0	47.0		ug/L		94	67 - 130
1,3-Dichloropropane	<0.36		50.0	53.3		ug/L		107	62 - 136
2,2-Dichloropropane	<0.44		50.0	41.2		ug/L		82	58 - 139
1,1-Dichloropropene	<0.30		50.0	45.5		ug/L		91	70 - 121
Ethylbenzene	<0.18		50.0	43.5		ug/L		87	70 - 123
Hexachlorobutadiene	<0.45		50.0	48.3		ug/L		97	51 - 150
Isopropylbenzene	<0.39		50.0	47.5		ug/L		95	70 - 126
Methylene Chloride	<1.6		50.0	41.7		ug/L		83	69 - 125
Methyl tert-butyl ether	<0.39		50.0	42.2		ug/L		84	55 - 123
Naphthalene	<0.34		50.0	40.6		ug/L		81	53 - 144
n-Butylbenzene	<0.39		50.0	41.6		ug/L		83	68 - 125
N-Propylbenzene	<0.41		50.0	47.1		ug/L		94	69 - 127
p-Isopropyltoluene	<0.36		50.0	44.0		ug/L		88	70 - 125
sec-Butylbenzene	<0.40		50.0	45.1		ug/L		90	70 - 123
Styrene	<0.39		50.0	43.4		ug/L		87	70 - 120
tert-Butylbenzene	<0.40		50.0	46.1		ug/L		92	70 - 121
1,1,1,2-Tetrachloroethane	<0.46		50.0	45.6		ug/L		91	70 - 125
1,1,1,2,2-Tetrachloroethane	<0.40		50.0	47.6		ug/L		95	62 - 140
Tetrachloroethene	<0.37		50.0	51.8		ug/L		104	70 - 128
Toluene	<0.15		50.0	46.7		ug/L		93	70 - 125
trans-1,2-Dichloroethene	<0.35		50.0	41.9		ug/L		84	70 - 125
trans-1,3-Dichloropropene	<0.36		50.0	46.8		ug/L		94	62 - 128
1,2,3-Trichlorobenzene	<0.46		50.0	44.2		ug/L		88	51 - 145
1,2,4-Trichlorobenzene	<0.34		50.0	43.4		ug/L		87	57 - 137

Eurofins Chicago

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 500-237073-1 MS
Matrix: Water
Analysis Batch: 725883

Client Sample ID: MW-217
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	<0.38		50.0	43.1		ug/L		86	70 - 125
1,1,2-Trichloroethane	<0.35		50.0	48.6		ug/L		97	71 - 130
Trichloroethene	<0.16		50.0	44.9		ug/L		90	70 - 125
Trichlorofluoromethane	<0.43		50.0	39.5		ug/L		79	55 - 128
1,2,3-Trichloropropane	<0.41		50.0	47.7		ug/L		95	50 - 133
1,2,4-Trimethylbenzene	<0.36		50.0	44.2		ug/L		88	70 - 123
1,3,5-Trimethylbenzene	<0.25		50.0	45.2		ug/L		90	70 - 123
Vinyl chloride	<0.20		50.0	34.8		ug/L		70	64 - 126
Xylenes, Total	<0.22		100	84.7		ug/L		85	70 - 125
Surrogate	MS %Recovery		MS Qualifier	MS Limits					
4-Bromofluorobenzene (Surr)	109			72 - 124					
Dibromofluoromethane (Surr)	98			75 - 120					
1,2-Dichloroethane-d4 (Surr)	100			75 - 126					
Toluene-d8 (Surr)	109			75 - 120					

Lab Sample ID: 500-237073-1 MSD
Matrix: Water
Analysis Batch: 725883

Client Sample ID: MW-217
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.15		50.0	44.8		ug/L		90	70 - 120	5	20
Bromobenzene	<0.36		50.0	57.0		ug/L		114	70 - 122	14	20
Bromochloromethane	<0.43		50.0	43.2		ug/L		86	65 - 122	7	20
Bromodichloromethane	<0.37		50.0	48.3		ug/L		97	69 - 120	10	20
Bromoform	<0.48		50.0	43.6		ug/L		87	56 - 132	5	20
Bromomethane	<0.80		50.0	45.5		ug/L		91	40 - 152	3	20
Carbon tetrachloride	<0.38		50.0	46.9		ug/L		94	59 - 133	2	20
Chlorobenzene	<0.39		50.0	50.0		ug/L		100	70 - 120	7	20
Chloroethane	<0.51		50.0	37.5		ug/L		75	48 - 136	2	20
Chloroform	<0.37		50.0	42.7		ug/L		85	70 - 120	4	20
Chloromethane	<0.32		50.0	31.6		ug/L		63	56 - 152	1	20
2-Chlorotoluene	<0.31		50.0	52.2		ug/L		104	70 - 125	14	20
4-Chlorotoluene	<0.35		50.0	52.7		ug/L		105	68 - 124	13	20
cis-1,2-Dichloroethene	<0.41		50.0	43.5		ug/L		87	70 - 125	4	20
cis-1,3-Dichloropropene	<0.42		50.0	56.5		ug/L		113	64 - 127	12	20
Dibromochloromethane	<0.49		50.0	52.4		ug/L		105	68 - 125	9	20
1,2-Dibromo-3-Chloropropane	<2.0		50.0	44.1		ug/L		88	56 - 123	9	20
1,2-Dibromoethane	<0.39		50.0	54.1		ug/L		108	70 - 125	8	20
Dibromomethane	<0.27		50.0	50.7		ug/L		101	70 - 120	10	20
1,2-Dichlorobenzene	<0.33		50.0	49.5		ug/L		99	70 - 125	7	20
1,3-Dichlorobenzene	<0.40		50.0	50.1		ug/L		100	70 - 125	11	20
1,4-Dichlorobenzene	<0.36		50.0	49.3		ug/L		99	70 - 120	10	20
Dichlorodifluoromethane	<0.67		50.0	34.9		ug/L		70	40 - 159	1	20
1,1-Dichloroethane	<0.41		50.0	45.4		ug/L		91	70 - 125	4	20
1,2-Dichloroethane	<0.39		50.0	52.7		ug/L		105	68 - 127	10	20
1,1-Dichloroethene	<0.39		50.0	39.4		ug/L		79	67 - 122	7	20
1,2-Dichloropropane	<0.43		50.0	50.6		ug/L		101	67 - 130	7	20

Eurofins Chicago

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 500-237073-1 MSD
 Matrix: Water
 Analysis Batch: 725883

Client Sample ID: MW-217
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,3-Dichloropropane	<0.36		50.0	57.5		ug/L		115	62 - 136	8	20
2,2-Dichloropropane	<0.44		50.0	40.8		ug/L		82	58 - 139	1	20
1,1-Dichloropropene	<0.30		50.0	50.7		ug/L		101	70 - 121	11	20
Ethylbenzene	<0.18		50.0	46.1		ug/L		92	70 - 123	6	20
Hexachlorobutadiene	<0.45		50.0	54.7		ug/L		109	51 - 150	12	20
Isopropylbenzene	<0.39		50.0	55.1		ug/L		110	70 - 126	15	20
Methylene Chloride	<1.6		50.0	41.4		ug/L		83	69 - 125	1	20
Methyl tert-butyl ether	<0.39		50.0	41.8		ug/L		84	55 - 123	1	20
Naphthalene	<0.34		50.0	45.2		ug/L		90	53 - 144	11	20
n-Butylbenzene	<0.39		50.0	46.0		ug/L		92	68 - 125	10	20
N-Propylbenzene	<0.41		50.0	53.8		ug/L		108	69 - 127	13	20
p-Isopropyltoluene	<0.36		50.0	49.6		ug/L		99	70 - 125	12	20
sec-Butylbenzene	<0.40		50.0	51.8		ug/L		104	70 - 123	14	20
Styrene	<0.39		50.0	45.3		ug/L		91	70 - 120	4	20
tert-Butylbenzene	<0.40		50.0	53.0		ug/L		106	70 - 121	14	20
1,1,1,2-Tetrachloroethane	<0.46		50.0	49.9		ug/L		100	70 - 125	9	20
1,1,2,2-Tetrachloroethane	<0.40		50.0	53.1		ug/L		106	62 - 140	11	20
Tetrachloroethene	<0.37		50.0	56.9		ug/L		114	70 - 128	9	20
Toluene	<0.15		50.0	51.5		ug/L		103	70 - 125	10	20
trans-1,2-Dichloroethene	<0.35		50.0	42.3		ug/L		85	70 - 125	1	20
trans-1,3-Dichloropropene	<0.36		50.0	51.5		ug/L		103	62 - 128	10	20
1,2,3-Trichlorobenzene	<0.46		50.0	50.5		ug/L		101	51 - 145	13	20
1,2,4-Trichlorobenzene	<0.34		50.0	46.4		ug/L		93	57 - 137	7	20
1,1,1-Trichloroethane	<0.38		50.0	43.5		ug/L		87	70 - 125	1	20
1,1,2-Trichloroethane	<0.35		50.0	55.3		ug/L		111	71 - 130	13	20
Trichloroethene	<0.16		50.0	48.2		ug/L		96	70 - 125	7	20
Trichlorofluoromethane	<0.43		50.0	39.8		ug/L		80	55 - 128	1	20
1,2,3-Trichloropropane	<0.41		50.0	54.9		ug/L		110	50 - 133	14	20
1,2,4-Trimethylbenzene	<0.36		50.0	49.3		ug/L		99	70 - 123	11	20
1,3,5-Trimethylbenzene	<0.25		50.0	51.1		ug/L		102	70 - 123	12	20
Vinyl chloride	<0.20		50.0	34.8		ug/L		70	64 - 126	0	20
Xylenes, Total	<0.22		100	89.9		ug/L		90	70 - 125	6	20

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
4-Bromofluorobenzene (Surr)	113		72 - 124
Dibromofluoromethane (Surr)	95		75 - 120
1,2-Dichloroethane-d4 (Surr)	102		75 - 126
Toluene-d8 (Surr)	112		75 - 120

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-695760/1-A
 Matrix: Water
 Analysis Batch: 696784

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 695760

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.4		5.0	2.4	ng/L		08/03/23 04:27	08/07/23 18:09	1
Perfluoropentanoic acid (PFPeA)	<0.49		2.0	0.49	ng/L		08/03/23 04:27	08/07/23 18:09	1
Perfluorohexanoic acid (PFHxA)	<0.58		2.0	0.58	ng/L		08/03/23 04:27	08/07/23 18:09	1

Eurofins Chicago

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237073-1

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

Lab Sample ID: MB 320-695760/1-A
Matrix: Water
Analysis Batch: 696784

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 695760

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Perfluoroheptanoic acid (PFHpA)	<0.25		2.0	0.25	ng/L		08/03/23 04:27	08/07/23 18:09	1
Perfluorooctanoic acid (PFOA)	<0.85		2.0	0.85	ng/L		08/03/23 04:27	08/07/23 18:09	1
Perfluorononanoic acid (PFNA)	<0.27		2.0	0.27	ng/L		08/03/23 04:27	08/07/23 18:09	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	0.31	ng/L		08/03/23 04:27	08/07/23 18:09	1
Perfluoroundecanoic acid (PFUnA)	<1.1		2.0	1.1	ng/L		08/03/23 04:27	08/07/23 18:09	1
Perfluorododecanoic acid (PFDoA)	<0.55		2.0	0.55	ng/L		08/03/23 04:27	08/07/23 18:09	1
Perfluorotridecanoic acid (PFTriA)	<1.3		2.0	1.3	ng/L		08/03/23 04:27	08/07/23 18:09	1
Perfluorotetradecanoic acid (PFTeA)	<0.73		2.0	0.73	ng/L		08/03/23 04:27	08/07/23 18:09	1
Perfluorobutanesulfonic acid (PFBS)	<0.20		2.0	0.20	ng/L		08/03/23 04:27	08/07/23 18:09	1
Perfluoropentanesulfonic acid (PFPeS)	<0.30		2.0	0.30	ng/L		08/03/23 04:27	08/07/23 18:09	1
Perfluorohexanesulfonic acid (PFHxS)	<0.57		2.0	0.57	ng/L		08/03/23 04:27	08/07/23 18:09	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.19		2.0	0.19	ng/L		08/03/23 04:27	08/07/23 18:09	1
Perfluorooctanesulfonic acid (PFOS)	<0.54		2.0	0.54	ng/L		08/03/23 04:27	08/07/23 18:09	1
Perfluorononanesulfonic acid (PFNS)	<0.37		2.0	0.37	ng/L		08/03/23 04:27	08/07/23 18:09	1
Perfluorodecanesulfonic acid (PFDS)	<0.32		2.0	0.32	ng/L		08/03/23 04:27	08/07/23 18:09	1
Perfluorododecanesulfonic acid (PFDoS)	<0.97		2.0	0.97	ng/L		08/03/23 04:27	08/07/23 18:09	1
Perfluorooctanesulfonamide (FOSA)	<0.98		2.0	0.98	ng/L		08/03/23 04:27	08/07/23 18:09	1
NEtFOSA	<0.87		2.0	0.87	ng/L		08/03/23 04:27	08/07/23 18:09	1
NMeFOSA	<0.43		2.0	0.43	ng/L		08/03/23 04:27	08/07/23 18:09	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<1.2		5.0	1.2	ng/L		08/03/23 04:27	08/07/23 18:09	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.3		5.0	1.3	ng/L		08/03/23 04:27	08/07/23 18:09	1
NMeFOSE	<1.4		4.0	1.4	ng/L		08/03/23 04:27	08/07/23 18:09	1
NEtFOSE	<0.85		2.0	0.85	ng/L		08/03/23 04:27	08/07/23 18:09	1
4:2 FTS	<0.24		2.0	0.24	ng/L		08/03/23 04:27	08/07/23 18:09	1
6:2 FTS	<2.5		5.0	2.5	ng/L		08/03/23 04:27	08/07/23 18:09	1
8:2 FTS	<0.46		2.0	0.46	ng/L		08/03/23 04:27	08/07/23 18:09	1
DONA	<0.40		2.0	0.40	ng/L		08/03/23 04:27	08/07/23 18:09	1
HFPO-DA (GenX)	<1.5		4.0	1.5	ng/L		08/03/23 04:27	08/07/23 18:09	1
F-53B Major	<0.24		2.0	0.24	ng/L		08/03/23 04:27	08/07/23 18:09	1
F-53B Minor	<0.32		2.0	0.32	ng/L		08/03/23 04:27	08/07/23 18:09	1

Isotope Dilution	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C4 PFBA	105		25 - 150	08/03/23 04:27	08/07/23 18:09	1
13C5 PFPeA	103		25 - 150	08/03/23 04:27	08/07/23 18:09	1
13C2 PFHxA	103		25 - 150	08/03/23 04:27	08/07/23 18:09	1
13C4 PFHpA	115		25 - 150	08/03/23 04:27	08/07/23 18:09	1
13C4 PFOA	106		25 - 150	08/03/23 04:27	08/07/23 18:09	1
13C5 PFNA	116		25 - 150	08/03/23 04:27	08/07/23 18:09	1
13C2 PFDA	119		25 - 150	08/03/23 04:27	08/07/23 18:09	1
13C2 PFUnA	108		25 - 150	08/03/23 04:27	08/07/23 18:09	1
13C2 PFDoA	114		25 - 150	08/03/23 04:27	08/07/23 18:09	1
13C2 PFTeDA	110		25 - 150	08/03/23 04:27	08/07/23 18:09	1
13C3 PFBS	107		25 - 150	08/03/23 04:27	08/07/23 18:09	1
18O2 PFHxS	110		25 - 150	08/03/23 04:27	08/07/23 18:09	1
13C4 PFOS	117		25 - 150	08/03/23 04:27	08/07/23 18:09	1

Eurofins Chicago

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237073-1

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

Lab Sample ID: MB 320-695760/1-A
Matrix: Water
Analysis Batch: 696784

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 695760

Isotope Dilution	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
¹³ C8 FOSA	129		10 - 150	08/03/23 04:27	08/07/23 18:09	1
d3-NMeFOSAA	144		25 - 150	08/03/23 04:27	08/07/23 18:09	1
d5-NEtFOSAA	142		25 - 150	08/03/23 04:27	08/07/23 18:09	1
d-N-MeFOSA-M	107		10 - 150	08/03/23 04:27	08/07/23 18:09	1
d-N-EtFOSA-M	110		10 - 150	08/03/23 04:27	08/07/23 18:09	1
d7-N-MeFOSE-M	114		10 - 150	08/03/23 04:27	08/07/23 18:09	1
d9-N-EtFOSE-M	122		10 - 150	08/03/23 04:27	08/07/23 18:09	1
M2-4:2 FTS	105		25 - 150	08/03/23 04:27	08/07/23 18:09	1
M2-6:2 FTS	99		25 - 150	08/03/23 04:27	08/07/23 18:09	1
M2-8:2 FTS	109		25 - 150	08/03/23 04:27	08/07/23 18:09	1
¹³ C3 HFPO-DA	105		25 - 150	08/03/23 04:27	08/07/23 18:09	1

Lab Sample ID: LCS 320-695760/2-A
Matrix: Water
Analysis Batch: 696077

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 695760

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec
							Limits
Perfluorobutanoic acid (PFBA)	40.0	37.7		ng/L		94	60 - 135
Perfluoropentanoic acid (PFPeA)	40.0	37.3		ng/L		93	60 - 135
Perfluorohexanoic acid (PFHxA)	40.0	39.2		ng/L		98	60 - 135
Perfluoroheptanoic acid (PFHpA)	40.0	38.0		ng/L		95	60 - 135
Perfluorooctanoic acid (PFOA)	40.0	37.9		ng/L		95	60 - 135
Perfluorononanoic acid (PFNA)	40.0	38.7		ng/L		97	60 - 135
Perfluorodecanoic acid (PFDA)	40.0	41.2		ng/L		103	60 - 135
Perfluoroundecanoic acid (PFUnA)	40.0	38.9		ng/L		97	60 - 135
Perfluorododecanoic acid (PFDoA)	40.0	44.1		ng/L		110	60 - 135
Perfluorotridecanoic acid (PFTriA)	40.0	41.2		ng/L		103	60 - 135
Perfluorotetradecanoic acid (PFTeA)	40.0	39.2		ng/L		98	60 - 135
Perfluorobutanesulfonic acid (PFBS)	35.5	35.1		ng/L		99	60 - 135
Perfluoropentanesulfonic acid (PFPeS)	37.6	37.4		ng/L		100	60 - 135
Perfluorohexanesulfonic acid (PFHxS)	36.5	36.6		ng/L		100	60 - 135
Perfluoroheptanesulfonic acid (PFHpS)	38.2	35.0		ng/L		92	60 - 135
Perfluorooctanesulfonic acid (PFOS)	37.2	37.2		ng/L		100	60 - 135
Perfluorononanesulfonic acid (PFNS)	38.5	38.4		ng/L		100	60 - 135
Perfluorodecanesulfonic acid (PFDS)	38.6	35.2		ng/L		91	60 - 135
Perfluorododecanesulfonic acid (PFDoS)	38.8	37.7		ng/L		97	60 - 135
Perfluorooctanesulfonamide (FOSA)	40.0	36.5		ng/L		91	60 - 135
NEtFOSA	40.0	36.6		ng/L		92	60 - 135
NMeFOSA	40.0	39.2		ng/L		98	60 - 135

Eurofins Chicago

QC Sample Results

Client: Ramboll US Corporation
 Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237073-1

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

Lab Sample ID: LCS 320-695760/2-A
Matrix: Water
Analysis Batch: 696077

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 695760

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
N-methylperfluorooctanesulfona midoacetic acid (NMeFOSAA)	40.0	38.8		ng/L		97	60 - 135
N-ethylperfluorooctanesulfonami doacetic acid (NEtFOSAA)	40.0	38.1		ng/L		95	60 - 135
NMeFOSE	40.0	37.4		ng/L		93	60 - 135
NEtFOSE	40.0	36.3		ng/L		91	60 - 135
4:2 FTS	37.5	36.1		ng/L		96	60 - 135
6:2 FTS	38.1	35.0		ng/L		92	60 - 135
8:2 FTS	38.4	38.2		ng/L		99	60 - 135
DONA	37.8	36.5		ng/L		97	60 - 135
HFPO-DA (GenX)	40.0	40.1		ng/L		100	60 - 135
F-53B Major	37.4	37.4		ng/L		100	60 - 135
F-53B Minor	37.8	40.0		ng/L		106	60 - 135

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	93		25 - 150
13C5 PFPeA	94		25 - 150
13C2 PFHxA	94		25 - 150
13C4 PFHpA	101		25 - 150
13C4 PFOA	98		25 - 150
13C5 PFNA	93		25 - 150
13C2 PFDA	94		25 - 150
13C2 PFUnA	99		25 - 150
13C2 PFDoA	92		25 - 150
13C2 PFTeDA	96		25 - 150
13C3 PFBS	97		25 - 150
18O2 PFHxS	92		25 - 150
13C4 PFOS	98		25 - 150
13C8 FOSA	104		10 - 150
d3-NMeFOSAA	108		25 - 150
d5-NEtFOSAA	95		25 - 150
d-N-MeFOSA-M	80		10 - 150
d-N-EtFOSA-M	86		10 - 150
d7-N-MeFOSE-M	95		10 - 150
d9-N-EtFOSE-M	93		10 - 150
M2-4:2 FTS	101		25 - 150
M2-6:2 FTS	99		25 - 150
M2-8:2 FTS	88		25 - 150
13C3 HFPO-DA	92		25 - 150

Lab Chronicle

Client: Ramboll US Corporation
Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237073-1

Client Sample ID: MW-217

Date Collected: 07/20/23 12:51

Date Received: 07/22/23 09:50

Lab Sample ID: 500-237073-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		1	725883	EA	EET CHI	08/02/23 03:24
Total/NA	Prep	3535			695760	RLT	EET SAC	08/03/23 04:27
Total/NA	Analysis	537 (modified)		1	696077	K1S	EET SAC	08/03/23 17:31

Client Sample ID: MW-218

Date Collected: 07/20/23 10:33

Date Received: 07/22/23 09:50

Lab Sample ID: 500-237073-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			695760	RLT	EET SAC	08/03/23 04:27
Total/NA	Analysis	537 (modified)		1	696077	K1S	EET SAC	08/03/23 17:41

Client Sample ID: MW-217 Dup

Date Collected: 07/20/23 12:54

Date Received: 07/22/23 09:50

Lab Sample ID: 500-237073-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		1	725883	EA	EET CHI	08/02/23 03:49
Total/NA	Prep	3535			695760	RLT	EET SAC	08/03/23 04:27
Total/NA	Analysis	537 (modified)		1	696077	K1S	EET SAC	08/03/23 17:51

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

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

Accreditation/Certification Summary

Client: Ramboll US Corporation
Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237073-1

Laboratory: Eurofins Chicago

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

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999580010	08-31-23

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17

ORIGIN ID:RRLA (262) 2
IAN EVANS
EUROFINS TESTAMERICA
4125 N 124TH ST.
SUITE F (REAR)
BROOKFIELD, WI 53005
UNITED STATES US

DATE: 21JUL23
WT: 51.45 LB
REF: 69688/CAFE3709

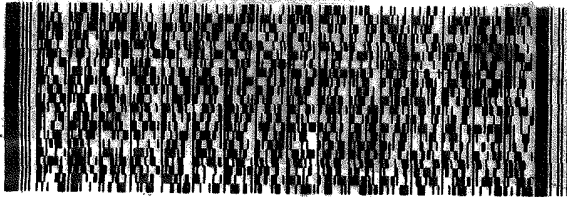
TO **SAMPLE RECEIPT**
EUROFINS
2417 BOND ST.

UNIVERSITY PARK IL 60484

(262) 202-6965
YNU:
PU:

REF:

DEPT:



FedEx
Express



12310221102010

2 of 2

MPS# 6578 9771 0570
0263

Mstr# 6578 9771 0560

0201

XO JOTA

SATURDAY 12:00P
PRIORITY OVERNIGHT

60484

IL US ORD



500-237073 Waybi

1897

3434 MTA

EXP 03/24

5837/CAF/PLAS

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17

Login Sample Receipt Checklist

Client: Ramboll US Corporation

Job Number: 500-237073-1

Login Number: 237073

List Number: 1

Creator: Hernandez, Stephanie

List Source: Eurofins Chicago

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	
Sample custody seals, if present, are intact.	True	
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	3.0
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.	True	
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	

Login Sample Receipt Checklist

Client: Ramboll US Corporation

Job Number: 500-237073-1

Login Number: 237073

List Number: 2

Creator: Fisher, Jamyiah L

List Source: Eurofins Sacramento

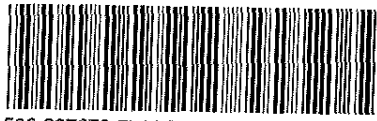
List Creation: 07/24/23 11:01 AM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	2330336
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	2.1
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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Environment Testing
TestAmerica

Sacramento
Sample Receiving Notes



500-237073 Field Sheet

Tracking # 6578-9771-0559

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-09 Corr Factor (+/-) 0 °C

Ice Wet Gel _____ Other _____

Cooler Custody Seal: 2330336

Cooler ID: 2052

Temp Observed: 21 °C Corrected 21 °C
From Temp Blank Sample

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cooler Temperature is acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Frozen samples show signs of thaw?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Initials JL Date 7/22/23

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

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

Initials JF Date: 7/24/23

Notes _____

Trizma Lot #(s) _____

Login Completion	Yes	No	NA
Receipt Temperature on COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within hold time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NCM Filed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Log Release checked in TALS?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Initials JF Date: 7/24/23

Isotope Dilution Summary

Client: Ramboll US Corporation
 Project/Site: Former Mirro Plant No 9 - 1690019647

Job ID: 500-237073-1

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)
500-237073-1	MW-217	86	91	89	103	93	94	93	83
500-237073-2	MW-218	82	83	78	90	84	84	84	79
500-237073-3	MW-217 Dup	91	97	93	109	97	99	96	90
LCS 320-695760/2-A	Lab Control Sample	93	94	94	101	98	93	94	99
MB 320-695760/1-A	Method Blank	105	103	103	115	106	116	119	108

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFDaA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (10-150)	d3NMFOS (25-150)	d5NEFOS (25-150)
500-237073-1	MW-217	79	76	100	101	93	99	85	92
500-237073-2	MW-218	76	61	90	87	86	92	86	80
500-237073-3	MW-217 Dup	87	79	106	109	98	106	90	90
LCS 320-695760/2-A	Lab Control Sample	92	96	97	92	98	104	108	95
MB 320-695760/1-A	Method Blank	114	110	107	110	117	129	144	142

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)
500-237073-1	MW-217	77	80	82	82	79	102	80	96
500-237073-2	MW-218	64	67	67	68	78	90	75	82
500-237073-3	MW-217 Dup	79	86	84	83	84	100	90	100
LCS 320-695760/2-A	Lab Control Sample	80	86	95	93	101	99	88	92
MB 320-695760/1-A	Method Blank	107	110	114	122	105	99	109	105

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
- PFDaA = 13C2 PFDaA
- PFTDA = 13C2 PFTeDA
- C3PFBS = 13C3 PFBS
- PFHxS = 18O2 PFHxS
- PFOS = 13C4 PFOS
- PFOSA = 13C8 FOSA
- 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