RAMBOLL

ENVIRONMENT
& HEALTH

Mr. Luis and Mrs. Lisa Villarreal
1320 East Stanley Street
Mount Morris, MI 48458

VIA HAND DELIVERY

Quarterly Water Well PFAS Results

January 30, 2023

Dear Mr. and Mrs. Villarreal:

Ramboll Americas Engineering Solutions, Inc. (Ramboll), on behalf of Revitalizing Auto Communities Environmental Response Trust (RACER Trust) is providing the attached analytical results/report for the per- and polyfluoroalkyl substances (PFAS) sample collected from your outside spigot on January 4, 2023. It is our understanding that Michigan Department of Health and Human Services' (MDHHS) Division of Environmental Health (DEH) will be officially providing these results to you in the near future.

The water sample was submitted to Merit Laboratories, Inc. (Merit) located in East Lansing, Michigan for PFAS analysis by USEPA Method 537 version 1.1 under standard chain-of-custody procedures to maintain sample integrity. Merit is a National Environmental Laboratory Accreditation Program NELAP accredited laboratory.

In the raw water sample (i.e., before treatment), Perfluorooctanesulfonic acid (PFOS) was detected in the water sample at a concentration of 12 nanograms per liter (ng/l). The detections were below the Michigan Department of Environment, Great Lakes, and Energy (EGLE) drinking water criteria of 16 ng/l for PFOS. No post-treatment (i.e., sink) water sample was collected during this sampling event. The results are summarized in the attached table.

RACER Trust will continue monitoring your water on a quarterly basis and provide the results to you. The next event will include collection of a before treatment and post-treatment water samples.

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Ann Arbor, MI 48105
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https://ramboll.com

Ref
1088190/1940103462/Corres

If you have questions after receiving these results, feel free to call me or one of the following:

- EGLE Materials Management Division
  - Ms. Nicole Sanabria – 517-281-7726
  - Ms. Christina Hebert – 517-282-6092
- Genesee County Health Department Environmental Health Division
  - Mr. Jeffrey Kost – 810-257-3603
- MDHHS Environmental Public Health
  - Ms. Staci Bator – 517-243-1562
- RACER Trust
  - Mr. Brendan Mullen – 201-247-4890

Yours sincerely,
RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.

Clifford S. Yantz
Project Manager

M +1.313.333.0211
clifford.yantz@ramboll.com

Enclosures:
PFAS Sampling Results Summary Table
Laboratory Analytical Report

TABLE 1
RACER Trust - Coldwater Road
Per-and Polyfluoroalkyl Substances Sampling Results
1320 E. Stanley Road Residential Drinking Water Results

Coldwater Road - 1320 E. Stanley Road Residential Well

Perfluorinated Compound / Well/Sample ID: / Sample Date:	EGLE Part 201 Generic Cleanup Criteria and Screening Levels	1320 E. Stanley Rd	1320 E. Stanley Rd	1320 E. Stanley Rd	1320 E. Stanley Rd	1320 E. Stanley Rd	1320 E. Stanley Rd
	Drinking Water	*12/4/2018*	*12/18/2018*	*6/7/2019*	*12/19/2019*	*8/14/2020*	*12/18/2020*
Perfluorohexanoic Acid (PFHxA)	**400,000**	<2	<2	<2	<2	<2	<2
Perfluorobutane Sulfonic Acid (PFBS)	**420**	<2	<2	<2	<2	<2	<2
Perfluoroheptanoic Acid (PFHpA)	--	<2	<2	<2	<2	<2	<2
Perfluorooctanoic Acid (**PFOA**)	**8**	<2	<2	<2	<2	<2	<2
Perfluorohexane Sulfonic Acid (PFHxS)	**51**	<2	<2	<2	<2	<2	<2
Perfluorononanoic Acid (PFNA)	**6**	<2	<2	<2	<2	<2	<2
Perfluorodecanoic Acid (PFDA)	--	<2	<2	<2	<2	<2	<2
N-methyl Perfluorooctanesulfonamidoacetic Acid (N-MeFOSAA)	--	<2	<2	<2	<2	<2	<2
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid (EtFOSAA)	--	<2	<2	<2	<2	<2	<2
Perfluorooctane Sulfonic Acid (**PFOS**)	**16**	**7**	**8**	**8**	**6**	**10**	**5**
Perfluoroundecanoic Acid (PFUnDA)	--	<2	<2	<2	<2	<2	<2
Perfluorododecanoic Acid (PFDoDA)	--	<2	<2	<2	<2	<2	<2
Perfluorotridecanoic Acid (PFTrDA)	--	<2	<2	<2	<2	<2	<2
Perfluorotetradecanoic Acid (PFTeDA)	--	<2	<2	<2	<2	<2	<2
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	--	--	--	--	--	<2	<2
9-chlorohexadecafluoro-3-oxanone1-sulfonic acid (9Cl-PF3ONS)	--	--	--	--	--	<2	<2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	--	--	--	--	--	<2	<2
Hexafluoropropylene oxide dimer (HFPO-DA)	**370**	--	--	--	--	<2	<2
Total Per-and Polyfluoroalkyl Substances	--	**7.0**	**8.0**	**8.0**	**6.0**	**10.0**	**5.0**

Notes
1) Detections in **bold**.
2) Concentrations reported in nanograms per liter (ng/L).
3) < = Not detected at specified reporting limit.
4) -- = Not analyzed/No criteria.
5) Dup = Duplicate sample.
6) EGLE Part 201 Groundwater Generic Cleanup Criteria and Screening Levels, December 21, 2020.
7) Concentration above the drinking water criteria are highlighted in yellow.
8) Light gray header is most recent sampling event result.
9) QA/QC Samples were either not detected above the reporting limit or below the EGLE Part 201 Groundwater Generic Cleanup Criteria.
10) 1 - Suspect due to matrix effects.
11) 6-suspect -- contaminated Trizma. Trizma is a sample preservative for EPA Method 537.1.
12) z - Results for PFAS are suspect. Recovery for the surrogate d5-NEtFOSAA is outside method required quality control acceptance limits due to possible matrix interference. Sample was reanalyzed and reported per method requirements. Due to low bias surrogate recovery the result should be considered estimated.

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Coldwater Road - 1320 E. Stanley Road Residential Well

Perfluorinated Compound / Well/Sample ID: / Sample Date:	EGLE Part 201 Generic Cleanup Criteria and Screening Levels	1320 E. Stanley Rd	1320 E. Stanley Rd	1320 E. Stanley Rd	1320 E. Stanley Rd	1320 E. Stanley Rd	1320 E. Stanley Rd
	Drinking Water	*3/26/2021*	*7/22/2021*	*9/30/2021*	*1/5/2022*	*3/16/2022*	*7/7/2022*
Perfluorohexanoic Acid (PFHxA)	**400,000**	<2	<2	<2	<2	<2	<2
Perfluorobutane Sulfonic Acid (PFBS)	**420**	**0.2 J**	**0.17 J**	<2	<2	<2	<2
Perfluoroheptanoic Acid (PFHpA)	--	<2	<2	<2	<2	<2	<2
Perfluorooctanoic Acid (**PFOA**)	**8**	**0.5 J**	<2	<2	<2	<2	<2
Perfluorohexane Sulfonic Acid (PFHxS)	**51**	**1.6 J**	**0.86 J**	**2**	<2	<2	<2
Perfluorononanoic Acid (PFNA)	**6**	<2	<2	<2	<2	<2	<2
Perfluorodecanoic Acid (PFDA)	--	<2	<2	<2	<2	<2	<2
N-methyl Perfluorooctanesulfonamidoacetic Acid (N-MeFOSAA)	--	<2	<2	<2	<2	<2	<2
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid (EtFOSAA)	--	<2	<2	<2	<2	<2	<2
Perfluorooctane Sulfonic Acid (**PFOS**)	**16**	**9**	**5**	**12**	**8**	**7**	**6**
Perfluoroundecanoic Acid (PFUnDA)	--	<2	<2	<2	<2	<2	<2
Perfluorododecanoic Acid (PFDoDA)	--	<2	<2	<2	<2	<2	<2
Perfluorotridecanoic Acid (PFTrDA)	--	<2	<2	<2	<2	<2	<2
Perfluorotetradecanoic Acid (PFTeDA)	--	<2	<2	<2	<2	<2	<2
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	--	<2	<2	<2	<2	<2	<2
9-chlorohexadecafluoro-3-oxanone1-sulfonic acid (9Cl-PF3ONS)	--	<2	<2	<2	<2	<2	<2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	--	<2	<2	<2	<2	<2	<2
Hexafluoropropylene oxide dimer (HFPO-DA)	**370**	<2	<2	<2	<2	<2	<2
Total Per-and Polyfluoroalkyl Substances	--	**11.3**	**6.0**	**14.0**	**8.0**	**7.0**	**6.0**

Notes
1) Detections in **bold**.
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TABLE 1
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Per-and Polyfluoroalkyl Substances Sampling Results
1320 E. Stanley Road Residential Drinking Water Results

Coldwater Road - 1320 E. Stanley Road Residential Well

Perfluorinated Compound / Well/Sample ID: / Sample Date:	EGLE Part 201 Generic Cleanup Criteria and Screening Levels Drinking Water	1320 E. Stanley Rd 10/6/2022	1320 E. Stanley Rd 1/4/2023	1320 E. Stanley Rd 4/6/2023	1320 E. Stanley Rd 7/7/2023	1320 E. Stanley Rd - SINK 10/11/2023	1320 E. Stanley Rd - RAW 10/11/2023	1320 E. Stanley Rd - RAW Replicate 01 10/11/2023	**1320 E. Stanley Rd - RAW** 1/4/2024
Perfluorohexanoic Acid (PFHxA)	**400,000**	<2	<2	<2	<2	<2	<2 z	<2 z	<2
Perfluorobutane Sulfonic Acid (PFBS)	**420**	<2	<2	<2	<2	<2	<2 z	<2 z	<2
Perfluoroheptanoic Acid (PFHpA)	--	<2	<2	<2	<2	<2	<2 z	<2 z	<2
Perfluorooctanoic Acid (**PFOA**)	**8**	<2	<2	<2	<2	<2	**2** 6z	<2 z	<2
Perfluorohexane Sulfonic Acid (PFHxS)	**51**	<2	<2	<2	<2	<2	<2 z	<2 z	<2
Perfluorononanoic Acid (PFNA)	**6**	<2	<2	<2	<2	<2	<2 z	<2 z	<2
Perfluorodecanoic Acid (PFDA)	--	<2	<2	<2	<2	<2	<2 z	<2 z	<2
N-methyl Perfluorooctanesulfonamidoacetic Acid (N-MeFOSAA)	--	<2	<2	<2	<2	<2	<2 z	<2 z	<2
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid (EtFOSAA)	--	<2	<2	<2	<2 1	<2	<2 z	<2 z	<2
Perfluorooctane Sulfonic Acid (**PFOS**)	**16**	**6**	**6**	**7**	**5**	<2	**4** z	**4** z	**12**
Perfluoroundecanoic Acid (PFUnDA)	--	<2	<2	<2	<2	<2	<2 z	<2 z	<2
Perfluorododecanoic Acid (PFDoDA)	--	<2	<2	<2	<2	<2	<2 z	<2 z	<2
Perfluorotridecanoic Acid (PFTrDA)	--	<2	<2	<2	<2	<2	<2 z	<2 z	<2
Perfluorotetradecanoic Acid (PFTeDA)	--	<2	<2	<2	<2	<2	<2 z	<2 z	<2
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	--	<2	<2	<2	<2	<2	<2 z	<2 z	<2
9-chlorohexadecafluoro-3-oxanone1-sulfonic acid (9Cl-PF3ONS)	--	<2	<2	<2	<2	<2	<2 z	<2 z	<2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	--	<2	<2	<2	<2	<2	<2 z	<2 z	<2
Hexafluoropropylene oxide dimer (HFPO-DA)	**370**	<2	<2	<2	<2	<2	<2 z	<2 z	<2
Total Per-and Polyfluoroalkyl Substances	--	**6.0**	**6.0**	**7.0**	**5.0**	**0.0**	**6.0**	**4.0**	**12.0**

Notes
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Analytical Laboratory Report

Report ID: S57360.01(01)
Generated on 01/26/2024

Report to

Attention: Clifford Yantz
Ramboll Americas
2090 Commonwealth Blvd
Ann Arbor, MI 48105

Phone: 313-333-0211 FAX:
Email: Clifford.Yantz@ramboll.com

Addtional Contacts: Kevin Schneider

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
John Laverty (johnlaverty@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57360.01
Project: RACER - Coldwater Rd
Collected Date(s): 01/04/2024
Submitted Date/Time: 01/04/2024 12:10
Sampled by: Clifford Yantz
P.O. #: 1940006516 TASK 37

Table of Contents

Maya Murshak
Technical Director

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.
40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.
QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.
Starred (*) analytes are not NY NELAP accredited.
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)
PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."
Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.
Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.
All accreditations/certifications held by this laboratory are listed on page 3. Not all accreditations/certifications are applicable to this report.
For a specific list of accredited analytes, please feel free to contact the laboratory or visit https://www.meritlabs.com/certifications.

Report Narrative

There is no additional narrative for this analytical report

Laboratory Accreditations (For Reference Only)

Authority	Accreditation ID
Michigan DEQ	#9956
DOD ELAP & ISO/IEC 17025:2017	#69699 PJLA Testing
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched

Method Summary

Method	Version
E537.1	EPA Method 537.1 Version 1.0 November 2018
N/A	Not Applicable

Parameter Summary

Parameter	Synonym	Cas #
PFHxA	Perfluorohexanoic Acid	307-24-4
PFBS	Perfluorobutane sulfonic Acid	375-73-5
PFHpA	Perfluoroheptanoic Acid	375-85-9
PFOA	Perfluorooctanoic Acid	335-67-1
PFHxS	Perfluorohexane Sulfonic Acid	355-46-4
PFNA	Perfluorononanoic Acid	375-95-1
PFDA	Perfluorodecanoic Acid	335-76-2
N-MeFOSAA	N-methyl perfluorooctanesulfonamidoacetic acid	2355-31-9
EtFOSAA	N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	2991-50-6
PFOS	Perfluorooctane Sulfonic Acid	1763-23-1
PFUnDA	Perfluoroundecanoic Acid	2058-94-8
PFDoDA	Perfluorododecanoic Acid	307-55-1
PFTrDA	Perfluorotridecanoic Acid	72629-94-8
PFTeDA	Perfluorotetradecanoic Acid	376-06-7
11Cl-PF3OUdS	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	763051-92-9
9Cl-PF3ONS	9-chlorohexadecafluoro-3-oxanone1-sulfonic acid	756426-58-1
ADONA	4,8-dioxa-3H-perfluorononanoic acid	919005-14-4
HFPO-DA	Hexafluoropropylene oxide dimer	13252-13-6

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57360.01	1320 E Stanley Rd	Drinking Water	01/04/24 09:10

Analytical Laboratory Report

Lab Sample ID: S57360.01
Sample Tag: 1320 E Stanley Rd
Collected Date/Time: 01/04/2024 09:10
Matrix: Drinking Water
COC Reference: 170135

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	250ml Plastic	Trizma	Yes	2.8	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Sample Amount*	299.36 ml	E537.1	01/10/24 10:00	PTW	
pH check for DW PFAs*	7	N/A	01/10/24 10:00	PTW	

Organics

PFAs Drinking Water, Method: E537.1, Run Date: 01/11/24 18:01, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFHxA	Not detected	2		ng/L	1	307-24-4		400,000
PFBS	Not detected	2		ng/L	1	375-73-5		420
PFHpA	Not detected	2		ng/L	1	375-85-9		
PFOA	Not detected	2		ng/L	1	335-67-1		8
PFHxS	Not detected	2		ng/L	1	355-46-4		51
PFNA	Not detected	2		ng/L	1	375-95-1		6
PFDA	Not detected	2		ng/L	1	335-76-2		
N-MeFOSAA	Not detected	2		ng/L	1	2355-31-9		
EtFOSAA*	Not detected	2		ng/L	1	2991-50-6		
PFOS	12	2		ng/L	1	1763-23-1		16
PFUnDA	Not detected	2		ng/L	1	2058-94-8		
PFDoDA	Not detected	2		ng/L	1	307-55-1		
PFTrDA	Not detected	2		ng/L	1	72629-94-8		
PFTeDA	Not detected	2		ng/L	1	376-06-7		
11Cl-PF3OUdS	Not detected	2		ng/L	1	763051-92-9		
9Cl-PF3ONS	Not detected	2		ng/L	1	756426-58-1		
ADONA	Not detected	2		ng/L	1	919005-14-4		
HFPO-DA	Not detected	2		ng/L	1	13252-13-6		370

Merit Laboratories Login Checklist

Lab Set ID: S57360
Client: RAMBOLL (Ramboll Americas)
Project: RACER - Coldwater Rd
Submitted: 01/04/2024 12:10 Login User: MMC

Attention: Clifford Yantz
Address: Ramboll Americas
2090 Commonwealth Blvd
Ann Arbor, MI 48105

Phone: 313-333-0211 FAX:
Email: Clifford.Yantz@ramboll.com

	Selection			Description	Note
Sample Receiving					
01.	[X] Yes	[ ] No	[ ] N/A	Samples are received at 4C +/- 2C Thermometer #	IR 2.8
02.	[X] Yes	[ ] No	[ ] N/A	Received on ice/ cooling process begun	
03.	[ ] Yes	[X] No	[ ] N/A	Samples shipped	
04.	[ ] Yes	[X] No	[ ] N/A	Samples left in 24 hr. drop box	
05.	[ ] Yes	[ ] No	[X] N/A	Are there custody seals/tape or is the drop box locked	
Chain of Custody					
06.	[X] Yes	[ ] No	[ ] N/A	COC adequately filled out	
07.	[X] Yes	[ ] No	[ ] N/A	COC signed and relinquished to the lab	
08.	[X] Yes	[ ] No	[ ] N/A	Sample tag on bottles match COC	
09.	[ ] Yes	[X] No	[ ] N/A	Subcontracting needed? Subcontacted to:	
Preservation					
10.	[X] Yes	[ ] No	[ ] N/A	Do sample have correct chemical preservation	
11.	[ ] Yes	[ ] No	[X] N/A	Completed pH checks on preserved samples? (no VOAs)	
12.	[ ] Yes	[X] No	[ ] N/A	Did any samples need to be preserved in the lab?	
Bottle Conditions					
13.	[X] Yes	[ ] No	[ ] N/A	All bottles intact	
14.	[X] Yes	[ ] No	[ ] N/A	Appropriate analytical bottles are used	
15.	[X] Yes	[ ] No	[ ] N/A	Merit bottles used	
16.	[X] Yes	[ ] No	[ ] N/A	Sufficient sample volume received	
17.	[ ] Yes	[X] No	[ ] N/A	Samples require laboratory filtration	
18.	[X] Yes	[ ] No	[ ] N/A	Samples submitted within holding time	
19.	[ ] Yes	[ ] No	[X] N/A	Do water VOC or TOX bottles contain headspace	

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____

Merit Laboratories, Inc.
2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1 170135

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Clifford Yantz / Kevin Schneider
COMPANY: Ramboll
ADDRESS: 2090 Commonwealth Blvd.
CITY: Ann Arbor STATE: MI ZIP CODE: 48105
PHONE NO.: 3133330211 CELL NO.:
P.O. NO.: 1940006516 Task 37
E-MAIL ADDRESS: Clifford.Yantz@Ramboll.com QUOTE NO.:

INVOICE TO

CONTACT NAME: X SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: RACER - Columbus Rd
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Clifford S. Yantz / Clifford Scott Yantz

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☒ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: W=WATER GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR WS=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	COLLECTION DATE	COLLECTION TIME	SAMPLE TAG . IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	PFAS (537)
57360.01	1/4/24	09:10	1320 E. Stanley Rd	DW	3							3	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Clifford Scott Yantz / Ramboll (Sampler) DATE: 1/4/24 TIME: 09:55
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: 1/4/24 TIME: 9:55
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: 1/4/24 TIME: 12:10
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: 1/4/24 TIME: 1210

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 2.8

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 1.26.22

Quality Control Report

Report ID: QC-S57360-01
Generated on 01/26/2024

Report to

Attention: Clifford Yantz
Ramboll Americas
2090 Commonwealth Blvd
Ann Arbor, MI 48105

Phone: 313-333-0211 FAX:

Report Produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S57360.01
Project: RACER - Coldwater Rd
Submitted Date/Time: 01/04/2024 12:10
Sampled by: Clifford Yantz
P.O. #: 1940006516 TASK 37

QC Report Sections

Report Flag Descriptions

*: QC result is outside of indicated control limits
W: Surrogate result not applicable due to sample dilution

I certify that this data package is in compliance with the terms and conditions of the program, and project, and contractual requirements both technically and for completeness. Release of the data contained in this hardcopy data package and its computer-readable data submitted has been authorized by the Quality Assurance Manager and his/her designee, as verified by the following signature.

Barbara Ball
Quality Assurance Manager

QC Report - Analysis Summary

Lab Sample ID: S57360.01

Sample Tag: 1320 E Stanley Rd

Collected Date/Time: 01/04/2024 09:10

Matrix: Drinking Water

COC Reference: 170135

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
Organics - Volatiles						
PFAs Drinking Water	E537.1	01/11/24 18:01	CI240111DW	PD240110W1	Yes	BLK/LCS/MS/DUP

QC Report - Prep Batch Summary

Organics - Volatiles, Prep Batch ID: PD240110W1

Surrogates: Yes, QC Types: BLK/LCS/MS/DUP

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S57360.01	PFAs Drinking Water	E537.1	01/11/24 18:01	CI240111DW

QC Report - Surrogates per Lab Sample

Lab Sample ID: S57360.01

Sample Tag: 1320 E Stanley Rd

Collected Date/Time: 01/04/2024 09:10

Matrix: Drinking Water

COC Reference: 170135

Organics - Volatiles, Analysis: PFAs Drinking Water

Run in Batch: CI240111DW, Run Date: 01/11/2024 18:01, Matrix: WW, Dilution: 1

Surrogate	Flags	**%Rec**	LCL	UCL
C13PFDA		**102.7**	70.0	130.0
C13PFHxA		**102.8**	70.0	130.0
d5NEtFOSAA		**78.4**	70.0	130.0
13C-HFPO-DA		**101.2**	70.0	130.0

QC Report - Surrogates per QC Sample

Organics - Volatiles, Prep Batch ID: PD240110W1

QC Types: BLK/LCS/MS/DUP

Blank (BLK)

Lab Sample ID: CI240111DW.BLK231229

Run in Batch: CI240111DW, Run Date: 01/11/2024 15:47, Prep Date: 01/10/2024, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
C13PFDA		**106.2**	70.0	130.0
C13PFHxA		**101.6**	70.0	130.0
d5NEtFOSAA		**89.5**	70.0	130.0
13C-HFPO-DA		**97.0**	70.0	130.0

Laboratory Control Sample (LCS)

Lab Sample ID: CI240111DW.LCS231229

Run in Batch: CI240111DW, Run Date: 01/11/2024 16:02, Prep Date: 01/10/2024, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
C13PFDA		**99.0**	70.0	130.0
C13PFHxA		**99.4**	70.0	130.0
d5NEtFOSAA		**82.0**	70.0	130.0
13C-HFPO-DA		**90.3**	70.0	130.0

Matrix Spike (MS)

Lab Sample ID: CI240111DW.5735902M, Parent Sample ID: S57359.02

Run in Batch: CI240111DW, Run Date: 01/11/2024 17:31, Prep Date: 01/10/2024, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
C13PFDA		**103.3**	70.0	130.0
C13PFHxA		**100.7**	70.0	130.0
d5NEtFOSAA		**78.9**	70.0	130.0
13C-HFPO-DA		**90.2**	70.0	130.0

Duplicate (DUP)

Lab Sample ID: CI240111DW.5722101D, Parent Sample ID: S57221.01

Run in Batch: CI240111DW, Run Date: 01/11/2024 16:46, Prep Date: 01/10/2024, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
C13PFDA		**95.2**	70.0	130.0
C13PFHxA		**98.0**	70.0	130.0
d5NEtFOSAA		**74.0**	70.0	130.0
13C-HFPO-DA		**95.3**	70.0	130.0

QC Report - Internal Standards per Lab Sample

Lab Sample ID: S57360.01

Sample Tag: 1320 E Stanley Rd

Collected Date/Time: 01/04/2024 09:10

Matrix: Drinking Water

COC Reference: 170135

Organics - Volatiles, Analysis: PFAs Drinking Water

Run in Batch: CI240111DW, Run Date: 01/11/2024 18:01, Matrix: WW, Dilution: 1

Internal Standard	Flags	**%Rec**	LCL	UCL
C13PFOA		**70.2**	50.0	150.0
C13PFOS		**67.0**	50.0	150.0
d3NMeFOSAA		**63.6**	50.0	150.0

QC Report - Internal Standards per QC Sample

Organics - Volatiles, Prep Batch ID: PD240110W1

QC Types: BLK/LCS/MS/DUP

Blank (BLK)

Lab Sample ID: CI240111DW.BLK231229

Run in Batch: CI240111DW, Run Date: 01/11/2024 15:47, Prep Date: 01/10/2024, Matrix: WW, Dilution: 1

Internal Standard	Flags	%Rec	LCL	UCL
C13PFOA		**64.1**	50.0	150.0
C13PFOS		**63.8**	50.0	150.0
d3NMeFOSAA		**62.8**	50.0	150.0

Laboratory Control Sample (LCS)

Lab Sample ID: CI240111DW.LCS231229

Run in Batch: CI240111DW, Run Date: 01/11/2024 16:02, Prep Date: 01/10/2024, Matrix: WW, Dilution: 1

Internal Standard	Flags	%Rec	LCL	UCL
C13PFOA		**65.4**	50.0	150.0
C13PFOS		**64.1**	50.0	150.0
d3NMeFOSAA		**61.1**	50.0	150.0

Matrix Spike (MS)

Lab Sample ID: CI240111DW.5735902M, Parent Sample ID: S57359.02

Run in Batch: CI240111DW, Run Date: 01/11/2024 17:31, Prep Date: 01/10/2024, Matrix: WW, Dilution: 1

Internal Standard	Flags	%Rec	LCL	UCL
C13PFOA		**70.7**	50.0	150.0
C13PFOS		**64.8**	50.0	150.0
d3NMeFOSAA		**62.9**	50.0	150.0

Duplicate (DUP)

Lab Sample ID: CI240111DW.5722101D, Parent Sample ID: S57221.01

Run in Batch: CI240111DW, Run Date: 01/11/2024 16:46, Prep Date: 01/10/2024, Matrix: WW, Dilution: 1

Internal Standard	Flags	%Rec	LCL	UCL
C13PFOA		**68.5**	50.0	150.0
C13PFOS		**65.0**	50.0	150.0
d3NMeFOSAA		**65.1**	50.0	150.0

Organics - Volatiles, Prep Batch ID: PD240110W1

Surrogates: Yes, QC Types: BLK/LCS/MS/DUP

Blank (BLK)

Lab Sample ID: CI240111DW.BLK231229

Run in Batch: CI240111DW, Run Date: 01/11/2024 15:47, Prep Date: 01/10/2024, Matrix: WW, Dilution: 1

Analyte	Flags	Conc	RDL	Units
PFBS		ND	2	ng/l
PFHxA		ND	2	ng/l
HFPO-DA		ND	2	ng/l
PFHxS		ND	2	ng/l
PFHpA		ND	2	ng/l
ADONA		ND	2	ng/l
PFOA		ND	2	ng/l
PFOS		ND	2	ng/l
PFNA		ND	2	ng/l
9CL-PF3ONS		ND	2	ng/l
PFDA		ND	2	ng/l
N-MeFOSAA		ND	2	ng/l
EtFOSAA		ND	2	ng/l
PFUnDA		ND	2	ng/l
11CL-PF3OUdS		ND	2	ng/l
PFDoDA		ND	2	ng/l
PFTrDA		ND	2	ng/l
PFTeDA		ND	2	ng/l

Laboratory Control Sample (LCS)

Lab Sample ID: CI240111DW.LCS231229

Run in Batch: CI240111DW, Run Date: 01/11/2024 16:02, Prep Date: 01/10/2024, Matrix: WW, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
PFBS		82.0	50	150
PFHxA		88.0	50	150
HFPO-DA		84.0	50	150
PFHxS		90.0	50	150
PFHpA		96.0	50	150
ADONA		78.0	50	150
PFOA		104.0	50	150
PFOS		98.0	50	150
PFNA		100.0	50	150
9CL-PF3ONS		74.0	50	150
PFDA		90.0	50	150
N-MeFOSAA		80.0	50	150
EtFOSAA		74.0	50	150
PFUnDA		94.0	50	150
11CL-PF3OUdS		80.0	50	150
PFDoDA		84.0	50	150
PFTrDA		86.0	50	150
PFTeDA		82.0	50	150

Organics - Volatiles, Prep Batch ID: PD240110W1 (continued)

Surrogates: Yes, QC Types: BLK/LCS/MS/DUP

Matrix Spike (MS)

Lab Sample ID: CI240111DW.5735902M, Parent Sample ID: S57359.02

Run in Batch: CI240111DW, Run Date: 01/11/2024 17:31, Prep Date: 01/10/2024, Matrix: WW, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
PFHxA		97.7	50	150
PFBS		100.0	50	150
PFHpA		100.0	50	150
PFOA		129.5	50	150
PFHxS		113.6	50	150
PFNA		89.8	50	150
PFDA		83.5	50	150
N-MeFOSAA		69.9	50	150
EtFOSAA		65.9	50	150
PFOS	*	293.8	50	150
PFUnDA		79.5	50	150
PFDoDA		65.9	50	150
PFTrDA		79.5	50	150
PFTeDA		73.9	50	150
11CL-PF3OUdS		81.8	50	150
9CL-PF3ONS		69.9	50	150
ADONA		73.9	50	150
HFPO-DA		77.8	50	150

Duplicate (DUP)

Lab Sample ID: CI240111DW.5722101D, Parent Sample ID: S57221.01

Run in Batch: CI240111DW, Run Date: 01/11/2024 16:46, Prep Date: 01/10/2024, Matrix: WW, Dilution: 1

Analyte	Flags	RPD	RPD CL
PFHxA		NC	30.0
PFBS		NC	30.0
PFHpA		NC	30.0
PFOA		NC	30.0
PFHxS		NC	30.0
PFNA		NC	30.0
PFDA		NC	30.0
N-MeFOSAA		NC	30.0
EtFOSAA		NC	30.0
PFOS		NC	30.0
PFUnDA		NC	30.0
PFDoDA		NC	30.0
PFTrDA		NC	30.0
PFTeDA		NC	30.0
11CL-PF3OUdS		NC	30.0
9CL-PF3ONS		NC	30.0
ADONA		NC	30.0
HFPO-DA		NC	30.0

Merit Laboratories, Inc.
2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1 170135

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Clifford Yantz / Kevin Schneider
COMPANY: Ramboll
ADDRESS: 2090 Commonwealth Blvd.
CITY: Ann Arbor STATE: MI ZIP CODE: 48105
PHONE NO.: 3133330211 CELL NO.:
P.O. NO.: 1940006516 Task 37
E-MAIL ADDRESS: Clifford.Yantz@Ramboll.com QUOTE NO.:

INVOICE TO

CONTACT NAME: X SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: RACER - Columbus Rd
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Clifford S. Yantz / Clifford Scott Yantz

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☒ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: W=WATER GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR WS=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	COLLECTION DATE	COLLECTION TIME	SAMPLE TAG . IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	PFAS (537)
57360.01	1/4/24	09:10	1320 E. Stanley Rd	DW	3							3	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Clifford Scott Yantz / Ramboll (Sampler) DATE: 1/4/24 TIME: 09:55
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: 1/4/24 TIME: 9:55
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RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 2.8

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 1.26.22