



Ms. Jade Chapman
1278 East Stanley Street
Mount Morris, MI 48458

VIA HAND DELIVERY

Quarterly Water Well PFAS Results

April 18, 2024

Dear Ms. Chapman:

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) samples collected from your water system before and after treatment on March 20, 2024. The Michigan Department of Health and Human Services' (MDHHS) Division of Environmental Health (DEH) should be officially providing these results to you in the near future.

Ramboll
2090 Commonwealth Blvd.
Ann Arbor, MI 48105
USA

Both the before treatment water sample (*i.e.*, before the whole house PFAS removal unit) (Treatment Unit) and the after treatment water sample were submitted to Merit Laboratories, Inc. (Merit) located in East Lansing, Michigan for PFAS analysis by United States Environmental Protection Agency (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.

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Ref
1088190/1940103462/Corres

PFAS were not detected in the after treatment (*i.e.*, sink) water sample nor in the field blank (Field Blank-032024) associated with this sample, which is collected as a sampling and laboratory quality control sample.

We understand that the after treatment sample represents the water available at all faucets, including the two outside spigots, at the residence except for the before treatment water sampling spigot immediately adjacent to expansion tank in your basement.

In the before treatment (*i.e.*, raw) water sample, perfluorooctane sulfonic acid (PFOS) was detected at a concentration of 38 ng/l. The PFOS detection was above the EGLE drinking water criteria of 16 ng/l for PFOS. The USEPA has enacted a new maximum contaminant level (MCL) for PFOS of 4 ng/l; however, EGLE has not yet adopted the standard. No other PFAS were detected in the

before treatment water sample above the EGLE drinking water criteria. The results are summarized in the attached table.

Arsenic was not detected in the after treatment (*i.e.*, sink) water sample. In the before treatment (*i.e.*, raw) water sample, arsenic was detected at a concentration of 13 micrograms per liter ($\mu\text{g/l}$), which is above the EGLE drinking water criteria of 10 $\mu\text{g/l}$.

RACER Trust will continue monitoring your water on a quarterly frequency and provide the results to you.

If you have any 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. Jeffery 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

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Enclosures:

PFAS Sampling Results Summary Table
Laboratory Analytical Report



**TABLE 1
RACER Trust - Coldwater Road
Per-and Polyfluoroalkyl Substances Sampling Results
1278 E. Stanley Rd Residential Drinking Water Results**

Coldwater Road - 1278 E. Stanley Rd Residential Well

Perfluorinated Compound	Well/Sample ID:	USEPA PFAS National Primary Drinking Water Regulation (NPDWR)	EGLE Part 201 Generic Cleanup Criteria and Screening Levels	1278 E. Stanley Rd - RAW	1278 E. Stanley Rd - SINK	1278 E. Stanley Rd - RAW	1278 E. Stanley Rd - SINK	1278 E. Stanley Rd - RAW	1278 E. Stanley Rd - SINK	1278 E. Stanley Rd - RAW	1278 E. Stanley Rd - SINK
		Drinking Water	Drinking Water	3/20/2024	3/20/2024	1/4/2024	1/4/2024	10/4/2023	10/4/2023	7/7/2023	7/7/2023
Perfluorohexanoic Acid (PFHxA)		--	400,000	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorobutane Sulfonic Acid (PFBS)		--	420	<2	<2	<2	<2	<2	<2	<2	<2
Perfluoroheptanoic Acid (PFHpA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorooctanoic Acid (PFOA)		4	8	<2	<2	<2	<2	2 1	<2	<2	<2
Perfluorohexane Sulfonic Acid (PFHxS)		10	51	<2	<2	2	<2	2	<2	3	<2
Perfluorononanoic Acid (PFNA)		10	6	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorodecanoic Acid (PFDA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
N-methyl Perfluorooctanesulfonamidoacetic Acid (N-MeFOSAA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid (EtFOSAA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorooctane Sulfonic Acid (PFOS)		4	16	38	<2	42	<2	51	<2	51	4
Perfluoroundecanoic Acid (PFUnDA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorododecanoic Acid (PFDoDA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorotridecanoic Acid (PFTTrDA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorotetradecanoic Acid (PFTeDA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
9-chlorohexadecafluoro-3-oxanone1-sulfonic acid (9Cl-PF3ONS)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
Hexafluoropropylene oxide dimer (HFPO-DA)		10	370	<2	<2	<2	<2	<2	<2	<2	<2
Mixtures containing two or more of PFHxS, PFNA, HFPO-DA, & PFBS		Hazard Index of 1 (unitless)	--	--	--	--	--	--	--	--	--
Total Other Per-and Polyfluoroalkyl Substances		--	--	38.0	0.0	44.0	0.0	55.0	0.0	54.0	4.0
Metals											
Arsenic		--	10 (A)	13	<2	12	<2	12	3	13	<2

- Notes
- 1) Detections in **bold**.
 - 2) PFAS concentrations reported in nanograms per liter (ng/L).
Arsenic concentrations reported in micrograms per liter (µg/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 EGLE drinking water criteria are highlighted in yellow.
 - 8) Arsenic concentrations above the EGLE residential drinking water criteria (10 (A) µg/L) are highlighted in yellow.
 - 9) The United States Environmental Protection Agency (USEPA) enacted new maximum contaminant levels (MCLs) for PFOS of 4 ng/l; however, EGLE has not yet adopted those standards.
 - 10) The Hazard Index is a long-established approach that EPA regularly uses to understand health risk from a chemical mixture (i.e., exposure to multiple chemicals). The HI is made up of a sum of fractions. Each fraction compares the level of each PFAS measured in the water to the health-based water concentration.
 - 11) A - Criterion is the state of Michigan drinking water standard established pursuant to Section 5 of 1976 PA 399, MCL 325.1005.
 - 12) Samples collected on September 6, 2018 and September 25, 2018 were collected by EGLE.
 - 13) SINK samples collected at kitchen sink which is run through whole house filter system.
 - 14) The whole house PFAS filter was last changed on July 7, 2023.
 - 15) Light gray header is most recent sampling event result.
 - 16) QA/QC Samples were either not detected above the reporting limit or below the EGLE Part 201 Groundwater Generic Cleanup Criteria.
 - 17) 1 - suspect -- Trizma lot contaminated.



**TABLE 1
RACER Trust - Coldwater Road
Per-and Polyfluoroalkyl Substances Sampling Results
1278 E. Stanley Rd Residential Drinking Water Results**

Coldwater Road - 1278 E. Stanley Rd Residential Well

Perfluorinated Compound	Well/Sample ID:	USEPA PFAS National Primary Drinking Water Regulation (NPDWR)	EGLE Part 201 Generic Cleanup Criteria and Screening Levels	1278 E. Stanley Rd - RAW	1278 E. Stanley Rd - SINK	1278 E. Stanley Rd - RAW	1278 E. Stanley Rd - SINK	1278 E. Stanley Rd - RAW	1278 E. Stanley Rd - SINK	1278 E. Stanley Rd - RAW	1278 E. Stanley Rd - SINK
		Drinking Water	Drinking Water	4/6/2023	4/6/2023	1/4/2023	1/4/2023	10/6/2022	10/6/2022	7/7/2022	7/7/2022
	Sample Date:	Drinking Water	Drinking Water								
Perfluorohexanoic Acid (PFHxA)		--	400,000	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorobutane Sulfonic Acid (PFBS)		--	420	<2	<2	<2	<2	<2	<2	<2	<2
Perfluoroheptanoic Acid (PFHpA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorooctanoic Acid (PFOA)		4	8	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorohexane Sulfonic Acid (PFHxS)		10	51	2	<2	2	<2	3	<2	2	<2
Perfluorononanoic Acid (PFNA)		10	6	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorodecanoic Acid (PFDA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
N-methyl Perfluorooctanesulfonamidoacetic Acid (N-MeFOSAA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid (EtFOSAA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorooctane Sulfonic Acid (PFOS)		4	16	22	<2	37	<2	44	<2	41	<2
Perfluoroundecanoic Acid (PFUnDA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorododecanoic Acid (PFDoDA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorotridecanoic Acid (PFTTrDA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorotetradecanoic Acid (PFTeDA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
11-chloroicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
9-chlorohexadecafluoro-3-oxanone1-sulfonic acid (9Cl-PF3ONS)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
Hexafluoropropylene oxide dimer (HFPO-DA)		10	370	<2	<2	<2	<2	<2	<2	<2	<2
Mixtures containing two or more of PFHxS, PFNA, HFPO-DA, & PFBS		Hazard Index of 1 (unitless)	--	--	--	--	--	--	--	--	--
Total Other Per-and Polyfluoroalkyl Substances		--	--	24.0	0.0	39.0	0.0	47.0	0.0	43.0	0.0
Metals											
Arsenic		--	10 (A)	14	<2	15	<2	15	<2	17	<2

- Notes
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		Sample Date:	Drinking Water	Drinking Water	3/16/2022	3/16/2022	1/5/2022	1/5/2022	9/30/2021	9/30/2021	6/29/2021
Perfluorohexanoic Acid (PFHxA)		--	400,000	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorobutane Sulfonic Acid (PFBS)		--	420	<2	<2	<2	<2	<2	<2	0.42 J	<2
Perfluoroheptanoic Acid (PFHpA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorooctanoic Acid (PFOA)		4	8	<2	<2	<2	<2	<2	<2	0.66 J	<2
Perfluorohexane Sulfonic Acid (PFHxS)		10	51	<2	<2	<2	<2	3	<2	3	<2
Perfluorononanoic Acid (PFNA)		10	6	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorodecanoic Acid (PFDA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
N-methyl Perfluorooctanesulfonamidoacetic Acid (N-MeFOSAA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid (EtFOSAA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorooctane Sulfonic Acid (PFOS)		4	16	23	3	19	<2	49	<2	55	<2
Perfluoroundecanoic Acid (PFUnDA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorododecanoic Acid (PFDoDA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorotridecanoic Acid (PFTriDA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorotetradecanoic Acid (PFTeDA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
9-chlorohexadecafluoro-3-oxanone1-sulfonic acid (9Cl-PF3ONS)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
Hexafluoropropylene oxide dimer (HFPO-DA)		10	370	<2	<2	<2	<2	<2	<2	<2	<2
Mixtures containing two or more of PFHxS, PFNA, HFPO-DA, & PFBS		Hazard Index of 1 (unitless)	--	--	--	--	--	--	--	--	--
Total Other Per-and Polyfluoroalkyl Substances		--	--	23.0	3.0	19.0	0.0	52.0	0.0	59.1	0.0
Metals											
Arsenic		--	10 (A)	16	<2	22	<2	19	<2	16	10

- Notes
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		Sample Date:	Drinking Water	Drinking Water	3/26/2021	3/26/2021	12/18/2020	12/18/2020	8/14/2020	8/14/2020	5/15/2020
Perfluorohexanoic Acid (PFHxA)		--	400,000	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorobutane Sulfonic Acid (PFBS)		--	420	<2	<2	<2	<2	<2	<2	<2	<2
Perfluoroheptanoic Acid (PFHpA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorooctanoic Acid (PFOA)		4	8	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorohexane Sulfonic Acid (PFHxS)		10	51	0.6 J	<2	<2	<2	<2	<2	<2	<2
Perfluorononanoic Acid (PFNA)		10	6	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorodecanoic Acid (PFDA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
N-methyl Perfluorooctanesulfonamidoacetic Acid (N-MeFOSAA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid (EtFOSAA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorooctane Sulfonic Acid (PFOS)		4	16	8	<2	20	<2	22	<2	22	<2
Perfluoroundecanoic Acid (PFUnDA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorododecanoic Acid (PFDoDA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorotridecanoic Acid (PFTTrDA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorotetradecanoic Acid (PFTeDA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
11-chloroeicosafuoro-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)		10	370	<2	<2	<2	<2	<2	<2	--	--
Mixtures containing two or more of PFHxS, PFNA, HFPO-DA, & PFBS		Hazard Index of 1 (unitless)	--	--	--	--	--	--	--	--	--
Total Other Per-and Polyfluoroalkyl Substances		--	--	8.6	0.0	20.0	0.0	22.0	0.0	22.0	0.0
Metals											
Arsenic		--	10 (A)	25	13	18	11	15	8	13	8

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		Sample Date:	Drinking Water	Drinking Water	12/19/2019	12/19/2019	8/22/2019	8/28/2019	6/28/2019	5/20/2019	10/30/2018
Perfluorohexanoic Acid (PFHxA)		--	400,000	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorobutane Sulfonic Acid (PFBS)		--	420	<2	<2	<2	<2	<2	<2	<2	<2
Perfluoroheptanoic Acid (PFHpA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorooctanoic Acid (PFOA)		4	8	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorohexane Sulfonic Acid (PFHxS)		10	51	3	<2	<2	<2	3	3	<2	4
Perfluorononanoic Acid (PFNA)		10	6	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorodecanoic Acid (PFDA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
N-methyl Perfluorooctanesulfonamidoacetic Acid (N-MeFOSAA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid (EtFOSAA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorooctane Sulfonic Acid (PFOS)		4	16	42	<2	24	<2	40	33	<2	69
Perfluoroundecanoic Acid (PFUnDA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorododecanoic Acid (PFDoDA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorotridecanoic Acid (PFTTrDA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorotetradecanoic Acid (PFTeDA)		--	--	<2	<2	<2	<2	<2	<2	<2	<2
11-chloroicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)		--	--	--	--	--	--	--	--	--	--
9-chlorohexadecafluoro-3-oxanone1-sulfonic acid (9Cl-PF3ONS)		--	--	--	--	--	--	--	--	--	--
4,8-dioxa-3H-perfluorononanoic acid (ADONA)		--	--	--	--	--	--	--	--	--	--
Hexafluoropropylene oxide dimer (HFPO-DA)		10	370	--	--	--	--	--	--	--	--
Mixtures containing two or more of PFHxS, PFNA, HFPO-DA, & PFBS		Hazard Index of 1 (unitless)	--	--	--	--	--	--	--	--	--
Total Other Per-and Polyfluoroalkyl Substances		--	--	45.0	0.0	24.0	0.0	43.0	36.0	0.0	73.0
Metals											
Arsenic		--	10 (A)	15	5	14	6	--	--	--	--

- Notes
- 1) Detections in **bold**.
 - 2) PFAS concentrations reported in nanograms per liter (ng/L).
Arsenic concentrations reported in micrograms per liter (µg/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 EGLE drinking water criteria are highlighted in yellow.
 - 8) Arsenic concentrations above the EGLE residential drinking water criteria (10 (A) µg/L) are highlighted in yellow.
 - 9) The United States Environmental Protection Agency (USEPA) enacted new maximum contaminant levels (MCLs) for PFOS of 4 ng/l; however, EGLE has not yet adopted those standards.
 - 10) The Hazard Index is a long-established approach that EPA regularly uses to understand health risk from a chemical mixture (i.e., exposure to multiple chemicals). The HI is made up of a sum of fractions. Each fraction compares the level of each PFAS measured in the water to the health-based water concentration.
 - 11) A - Criterion is the state of Michigan drinking water standard established pursuant to Section 5 of 1976 PA 399, MCL 325.1005.
 - 12) Samples collected on September 6, 2018 and September 25, 2018 were collected by EGLE.
 - 13) SINK samples collected at kitchen sink which is run through whole house filter system.
 - 14) The whole house PFAS filter was last changed on July 7, 2023.
 - 15) Light gray header is most recent sampling event result.
 - 16) QA/QC Samples were either not detected above the reporting limit or below the EGLE Part 201 Groundwater Generic Cleanup Criteria.
 - 17) 1 - suspect -- Trizma lot contaminated.

**TABLE 1
RACER Trust - Coldwater Road
Per-and Polyfluoroalkyl Substances Sampling Results
1278 E. Stanley Rd Residential Drinking Water Results**

Coldwater Road - 1278 E. Stanley Rd Residential Well

Perfluorinated Compound	Well/Sample ID:	USEPA PFAS National Primary Drinking Water Regulation (NPDWR)	EGLE Part 201 Generic Cleanup Criteria and Screening Levels	03216 1278 E. Stanley Rd (Duplicate)	03216 1278 E. Stanley Rd (Pre-Water Softener/Iron Treatment)	03216 1278 E. Stanley Rd
	Sample Date:	Drinking Water	Drinking Water	9/25/2018	9/25/2018	9/6/2018
Perfluorohexanoic Acid (PFHxA)		--	400,000	<2	<2	<2
Perfluorobutane Sulfonic Acid (PFBS)		--	420	<2	<2	<2
Perfluoroheptanoic Acid (PFHpA)		--	--	<2	<2	<2
Perfluorooctanoic Acid (PFOA)		4	8	<2	<2	<2
Perfluorohexane Sulfonic Acid (PFHxS)		10	51	4	4	4
Perfluorononanoic Acid (PFNA)		10	6	<2	<2	<2
Perfluorodecanoic Acid (PFDA)		--	--	<2	<2	<2
N-methyl Perfluorooctanesulfonamidoacetic Acid (N-MeFOSAA)		--	--	<2	<2	<2
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid (EtFOSAA)		--	--	<2	<2	<2
Perfluorooctane Sulfonic Acid (PFOS)		4	16	59	63	73
Perfluoroundecanoic Acid (PFUnDA)		--	--	<2	<2	<2
Perfluorododecanoic Acid (PFDoDA)		--	--	<2	<2	<2
Perfluorotridecanoic Acid (PFTrDA)		--	--	<2	<2	<2
Perfluorotetradecanoic Acid (PFTeDA)		--	--	<2	<2	<2
11-chloroicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)		--	--	--	--	--
9-chlorohexadecafluoro-3-oxanone1-sulfonic acid (9Cl-PF3ONS)		--	--	--	--	--
4,8-dioxa-3H-perfluorononanoic acid (ADONA)		--	--	--	--	--
Hexafluoropropylene oxide dimer (HFPO-DA)		10	370	--	--	--
Mixtures containing two or more of PFHxS, PFNA, HFPO-DA, & PFBS		Hazard Index of 1 (unitless)	--	--	--	--
Total Other Per-and Polyfluoroalkyl Substances		--	--	63.0	67.0	77.0
Metals						
Arsenic		--	10 (A)	--	--	--

Notes

- 1) Detections in **bold**.
- 2) PFAS concentrations reported in nanograms per liter (ng/L).
Arsenic concentrations reported in micrograms per liter (µg/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 EGLE drinking water criteria are highlighted in yellow.
- 8) Arsenic concentrations above the EGLE residential drinking water criteria (10 (A) µg/L) are highlighted in yellow.
- 9) The United States Environmental Protection Agency (USEPA) enacted new maximum contaminant levels (MCLs) for PFOS of 4 ng/l; however, EGLE has not yet adopted those standards.
- 10) The Hazard Index is a long-established approach that EPA regularly uses to understand health risk from a chemical mixture (i.e., exposure to multiple chemicals). The HI is made up of a sum of fractions. Each fraction compares the level of each PFAS measured in the water to the health-based water concentration.
- 11) A - Criterion is the state of Michigan drinking water standard established pursuant to Section 5 of 1976 PA 399, MCL 325.1005.
- 12) Samples collected on September 6, 2018 and September 25, 2018 were collected by EGLE.
- 13) SINK samples collected at kitchen sink which is run through whole house filter system.
- 14) The whole house PFAS filter was last changed on July 7, 2023.
- 15) Light gray header is most recent sampling event result.
- 16) QA/QC Samples were either not detected above the reporting limit or below the EGLE Part 201 Groundwater Generic Cleanup Criteria.
- 17) 1 - suspect -- Trizma lot contaminated.



Analytical Laboratory Report

Report ID: S60035.01(01)
Generated on 04/10/2024

Report to

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

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

Additional 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 Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S60035.01-S60035.03
Project: RACER - Coldwater Rd.
Collected Date(s): 03/20/2024
Submitted Date/Time: 03/20/2024 13:20
Sampled by: Kevin Schneider
P.O. #: 1940008845 TASK37

Table of Contents

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Maya Murshak
Technical Director



Analytical Laboratory Report

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.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

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



Analytical Laboratory 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
o	Associated EIS outside of control limits
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
q	Qualifier ion ratio outside of control limits
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



Analytical Laboratory Report

Method Summary

Method	Version
E200.8	EPA Method 200.8 Revision 5.4
E537.1	EPA Method 537.1 Version 1.0 November 2018
N/A	Not Applicable
SW3015A	SW 846 Method 3015A Revision 1 February 2007



Analytical Laboratory Report

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
PFTTrDA	Perfluorotridecanoic Acid	72629-94-8
PFTeDA	Perfluorotetradecanoic Acid	376-06-7
11Cl-PF3OUdS	11-chloroeicosafuoro-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 (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S60035.01	Field Blank - 032024	Water	03/20/24 08:30
S60035.02	1278 E. Stanley Rd - SINK	Drinking Water	03/20/24 08:35
S60035.03	1278 E. Stanley Rd - RAW	Drinking Water	03/20/24 09:12



Analytical Laboratory Report

Lab Sample ID: S60035.01

Sample Tag: Field Blank - 032024

Collected Date/Time: 03/20/2024 08:30

Matrix: Water

COC Reference: 155550

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	250ml Plastic	Trizma	Yes	3.5	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Sample Amount*	289.93 ml	E537.1	03/25/24 10:30	PTW	
pH check for DW PFAs*	7	N/A	03/25/24 10:30	PTW	

Organics

PFAs Drinking Water, Method: E537.1, Run Date: 03/26/24 15:20, 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*	Not detected	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		
PFTTrDA*	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



Analytical Laboratory Report

Lab Sample ID: S60035.02

Sample Tag: 1278 E. Stanley Rd - SINK

Collected Date/Time: 03/20/2024 08:35

Matrix: Drinking Water

COC Reference: 155550

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	250ml Plastic	Trizma	Yes	3.5	IR
1	125ml Plastic	HNO3	Yes	3.5	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Sample Amount*	276.91 ml	E537.1	03/25/24 10:30	PTW	
pH check for DW PFAs*	7	N/A	03/25/24 10:30	PTW	
Metal Digestion	Completed	SW3015A	03/21/24 12:00	CCM	

Metals

Method: E200.8, Run Date: 03/21/24 13:15, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Arsenic	Not detected	0.002		mg/L	2	7440-38-2		

Organics

PFAs Drinking Water, Method: E537.1, Run Date: 03/26/24 15:35, 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	Not detected	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		
PFTTrDA	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



Analytical Laboratory Report

Lab Sample ID: S60035.03

Sample Tag: 1278 E. Stanley Rd - RAW

Collected Date/Time: 03/20/2024 09:12

Matrix: Drinking Water

COC Reference: 155550

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	250ml Plastic	Trizma	Yes	3.5	IR
1	125ml Plastic	HNO3	Yes	3.5	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Sample Amount*	262.63 ml	E537.1	03/25/24 10:30	PTW	
pH check for DW PFAs*	7	N/A	03/25/24 10:30	PTW	
Metal Digestion	Completed	SW3015A	03/21/24 12:00	CCM	

Metals

Method: E200.8, Run Date: 03/21/24 13:18, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Arsenic	0.013	0.002		mg/L	2	7440-38-2		

Organics

PFAs Drinking Water, Method: E537.1, Run Date: 03/26/24 15:50, 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	38	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		
PFTTrDA	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

!-Result is outside of stated limit criteria

Merit Laboratories Login Checklist

Lab Set ID:S60035

Client:RAMBOLL (Ramboll Americas)

Project: RACER - Coldwater Rd.

Submitted:03/20/2024 13:20 Login User: PFD

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. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples are received at 4C +/- 2C Thermometer # IR 3.5 |
| 02. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Received on ice/ cooling process begun |
| 03. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples shipped |
| 04. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples left in 24 hr. drop box |
| 05. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Are there custody seals/tape or is the drop box locked |

Chain of Custody

- | | | |
|-----|--|--|
| 06. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC adequately filled out |
| 07. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC signed and relinquished to the lab |
| 08. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sample tag on bottles match COC |
| 09. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Subcontracting needed? Subcontracted to: |

Preservation

- | | | |
|-----|--|---|
| 10. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Do sample have correct chemical preservation |
| 11. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Completed pH checks on preserved samples? (no VOAs) |
| 12. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Did any samples need to be preserved in the lab? |

Bottle Conditions

- | | | |
|-----|--|---|
| 13. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | All bottles intact |
| 14. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Appropriate analytical bottles are used |
| 15. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Merit bottles used |
| 16. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sufficient sample volume received |
| 17. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples require laboratory filtration |
| 18. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples submitted within holding time |
| 19. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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 Bottle Preservation Check

Lab Set ID: S60035 Submitted: 03/20/2024 13:20

Client: RAMBOLL (Ramboll Americas)

Project: RACER - Coldwater Rd.

Initial Preservation Check: 03/20/2024 14:35 PFD

Preservation Recheck (E200.8): N/A

Attention: Clifford Yantz

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

Phone: 313-333-0211

FAX:

Email: Clifford.Yantz@ramboll.com

Sample ID	Bottle / Preservation	pH (Orig)	Add ml	pH (New)	Notes
S60035.02	125ml Plastic HNO3	<2			
S60035.03	125ml Plastic HNO3	<2			



Quality Control Report

Report ID: QC-S60035-01
Generated on 04/12/2024

Report to
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Report Summary

Lab Sample ID(s): S60035.01-S60035.03
Project: RACER - Coldwater Rd.
Submitted Date/Time: 03/20/2024 13:20
Sampled by: Kevin Schneider
P.O. #: 1940008845 TASK37

QC Report Sections

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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: S60035.01

Sample Tag: Field Blank - 032024

Collected Date/Time: 03/20/2024 08:30

Matrix: Water

COC Reference: 155550

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
Organics - Volatiles						
PFAs Drinking Water	E537.1	03/26/24 15:20	CI240326DW	PD240325W1	Yes	BLK/LCS/MS/DUP

QC Report - Analysis Summary

Lab Sample ID: S60035.02

Sample Tag: 1278 E. Stanley Rd - SINK

Collected Date/Time: 03/20/2024 08:35

Matrix: Drinking Water

COC Reference: 155550

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
Metals						
Arsenic	E200.8	03/21/24 13:15	MT4-24-0321B	MTD-032124-4	No	BLK/LCS/MS/MSD
Organics - Volatiles						
PFAs Drinking Water	E537.1	03/26/24 15:35	CI240326DW	PD240325W1	Yes	BLK/LCS/MS/DUP

QC Report - Analysis Summary

Lab Sample ID: S60035.03

Sample Tag: 1278 E. Stanley Rd - RAW

Collected Date/Time: 03/20/2024 09:12

Matrix: Drinking Water

COC Reference: 155550

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
Metals						
Arsenic	E200.8	03/21/24 13:18	MT4-24-0321B	MTD-032124-4	No	BLK/LCS/MS/MSD
Organics - Volatiles						
PFAs Drinking Water	E537.1	03/26/24 15:50	CI240326DW	PD240325W1	Yes	BLK/LCS/MS/DUP

QC Report - Prep Batch Summary

Metals, Prep Batch ID: MTD-032124-4

Surrogates: No, QC Types: BLK/LCS/MS/MSD

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S60035.02	Arsenic	E200.8	03/21/24 13:15	MT4-24-0321B
S60035.03	Arsenic	E200.8	03/21/24 13:18	MT4-24-0321B

Organics - Volatiles, Prep Batch ID: PD240325W1

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

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S60035.01	PFAs Drinking Water	E537.1	03/26/24 15:20	CI240326DW
S60035.02	PFAs Drinking Water	E537.1	03/26/24 15:35	CI240326DW
S60035.03	PFAs Drinking Water	E537.1	03/26/24 15:50	CI240326DW

QC Report - Surrogates per Lab Sample

Lab Sample ID: S60035.01

Sample Tag: Field Blank - 032024

Collected Date/Time: 03/20/2024 08:30

Matrix: Water

COC Reference: 155550

Organics - Volatiles, Analysis: PFAs Drinking Water

Run in Batch: CI240326DW, Run Date: 03/26/2024 15:20, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
C13PFDA		108.1	70.0	130.0
C13PFHxA		103.2	70.0	130.0
d5NEtFOSAA		104.5	70.0	130.0
13C-HFPO-DA		107.2	70.0	130.0

QC Report - Surrogates per Lab Sample

Lab Sample ID: S60035.02

Sample Tag: 1278 E. Stanley Rd - SINK

Collected Date/Time: 03/20/2024 08:35

Matrix: Drinking Water

COC Reference: 155550

Organics - Volatiles, Analysis: PFAs Drinking Water

Run in Batch: CI240326DW, Run Date: 03/26/2024 15:35, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
C13PFDA		108.7	70.0	130.0
C13PFHxA		105.1	70.0	130.0
d5NEtFOSAA		90.8	70.0	130.0
13C-HFPO-DA		103.4	70.0	130.0

QC Report - Surrogates per Lab Sample

Lab Sample ID: S60035.03

Sample Tag: 1278 E. Stanley Rd - RAW

Collected Date/Time: 03/20/2024 09:12

Matrix: Drinking Water

COC Reference: 155550

Organics - Volatiles, Analysis: PFAs Drinking Water

Run in Batch: CI240326DW, Run Date: 03/26/2024 15:50, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
C13PFDA		107.2	70.0	130.0
C13PFHxA		107.3	70.0	130.0
d5NEtFOSAA		90.0	70.0	130.0
13C-HFPO-DA		105.5	70.0	130.0

QC Report - Surrogates per QC Sample

Organics - Volatiles, Prep Batch ID: PD240325W1

QC Types: BLK/LCS/MS/DUP

Blank (BLK)

Lab Sample ID: CI240326DW.BLK240325

Run in Batch: CI240326DW, Run Date: 03/26/2024 13:07, Prep Date: 03/25/2024, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
C13PFDA		110.1	70.0	130.0
C13PFHxA		105.7	70.0	130.0
d5NEtFOSAA		103.4	70.0	130.0
13C-HFPO-DA		102.7	70.0	130.0

Laboratory Control Sample (LCS)

Lab Sample ID: CI240326DW.LCS240325

Run in Batch: CI240326DW, Run Date: 03/26/2024 13:37, Prep Date: 03/25/2024, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
C13PFDA		110.9	70.0	130.0
C13PFHxA		107.1	70.0	130.0
d5NEtFOSAA		97.6	70.0	130.0
13C-HFPO-DA		111.7	70.0	130.0

Matrix Spike (MS)

Lab Sample ID: CI240326DW.6003101M, Parent Sample ID: S60031.01

Run in Batch: CI240326DW, Run Date: 03/26/2024 14:06, Prep Date: 03/25/2024, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
C13PFDA		107.3	70.0	130.0
C13PFHxA		106.2	70.0	130.0
d5NEtFOSAA		83.0	70.0	130.0
13C-HFPO-DA		108.9	70.0	130.0

Duplicate (DUP)

Lab Sample ID: CI240326DW.6000201D, Parent Sample ID: S60002.01

Run in Batch: CI240326DW, Run Date: 03/26/2024 14:51, Prep Date: 03/25/2024, Matrix: WW, Dilution: 1

Surrogate	Flags	%Rec	LCL	UCL
C13PFDA		106.7	70.0	130.0
C13PFHxA		105.9	70.0	130.0
d5NEtFOSAA		99.5	70.0	130.0
13C-HFPO-DA		98.2	70.0	130.0

QC Report - Internal Standards per Lab Sample

Lab Sample ID: S60035.01

Sample Tag: Field Blank - 032024

Collected Date/Time: 03/20/2024 08:30

Matrix: Water

COC Reference: 155550

Organics - Volatiles, Analysis: PFAs Drinking Water

Run in Batch: CI240326DW, Run Date: 03/26/2024 15:20, Matrix: WW, Dilution: 1

Internal Standard	Flags	%Rec	LCL	UCL
C13PFOA		102.0	50.0	150.0
C13PFOS		97.4	50.0	150.0
d3NMeFOSAA		94.0	50.0	150.0

QC Report - Internal Standards per Lab Sample

Lab Sample ID: S60035.02

Sample Tag: 1278 E. Stanley Rd - SINK

Collected Date/Time: 03/20/2024 08:35

Matrix: Drinking Water

COC Reference: 155550

Organics - Volatiles, Analysis: PFAs Drinking Water

Run in Batch: CI240326DW, Run Date: 03/26/2024 15:35, Matrix: WW, Dilution: 1

Internal Standard	Flags	%Rec	LCL	UCL
C13PFOA		103.4	50.0	150.0
C13PFOS		99.0	50.0	150.0
d3NMeFOSAA		93.9	50.0	150.0

QC Report - Internal Standards per Lab Sample

Lab Sample ID: S60035.03

Sample Tag: 1278 E. Stanley Rd - RAW

Collected Date/Time: 03/20/2024 09:12

Matrix: Drinking Water

COC Reference: 155550

Organics - Volatiles, Analysis: PFAs Drinking Water

Run in Batch: CI240326DW, Run Date: 03/26/2024 15:50, Matrix: WW, Dilution: 1

Internal Standard	Flags	%Rec	LCL	UCL
C13PFOA		99.2	50.0	150.0
C13PFOS		93.0	50.0	150.0
d3NMeFOSAA		89.7	50.0	150.0

QC Report - Internal Standards per QC Sample

Organics - Volatiles, Prep Batch ID: PD240325W1

QC Types: BLK/LCS/MS/DUP

Blank (BLK)

Lab Sample ID: CI240326DW.BLK240325

Run in Batch: CI240326DW, Run Date: 03/26/2024 13:07, Prep Date: 03/25/2024, Matrix: WW, Dilution: 1

Internal Standard	Flags	%Rec	LCL	UCL
C13PFOA		93.3	50.0	150.0
C13PFOS		94.4	50.0	150.0
d3NMeFOSAA		89.1	50.0	150.0

Laboratory Control Sample (LCS)

Lab Sample ID: CI240326DW.LCS240325

Run in Batch: CI240326DW, Run Date: 03/26/2024 13:37, Prep Date: 03/25/2024, Matrix: WW, Dilution: 1

Internal Standard	Flags	%Rec	LCL	UCL
C13PFOA		91.0	50.0	150.0
C13PFOS		86.6	50.0	150.0
d3NMeFOSAA		87.0	50.0	150.0

Matrix Spike (MS)

Lab Sample ID: CI240326DW.6003101M, Parent Sample ID: S60031.01

Run in Batch: CI240326DW, Run Date: 03/26/2024 14:06, Prep Date: 03/25/2024, Matrix: WW, Dilution: 1

Internal Standard	Flags	%Rec	LCL	UCL
C13PFOA		94.2	50.0	150.0
C13PFOS		87.0	50.0	150.0
d3NMeFOSAA		89.4	50.0	150.0

Duplicate (DUP)

Lab Sample ID: CI240326DW.6000201D, Parent Sample ID: S60002.01

Run in Batch: CI240326DW, Run Date: 03/26/2024 14:51, Prep Date: 03/25/2024, Matrix: WW, Dilution: 1

Internal Standard	Flags	%Rec	LCL	UCL
C13PFOA		98.0	50.0	150.0
C13PFOS		98.5	50.0	150.0
d3NMeFOSAA		90.3	50.0	150.0

QC Report - Batch QC Results

Metals, Prep Batch ID: MTD-032124-4

Surrogates: No, QC Types: BLK/LCS/MS/MSD

Blank (BLK)

Lab Sample ID: MT4-24-0321B.018.LRB

Run in Batch: MT4-24-0321B, Run Date: 03/21/2024 13:05, Prep Date: 03/21/2024, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Arsenic		ND	0.000638	mg/L
Lead		ND	0.000198	mg/L

Laboratory Control Sample (LCS)

Lab Sample ID: MT4-24-0321B.017.LCS

Run in Batch: MT4-24-0321B, Run Date: 03/21/2024 13:04, Prep Date: 03/21/2024, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Arsenic		100	85	115
Lead		94	85	115

Matrix Spike (MS)

Lab Sample ID: MT4-24-0321B.030.MS, Parent Sample ID: S59995.10

Run in Batch: MT4-24-0321B, Run Date: 03/21/2024 13:27, Prep Date: 03/21/2024, Matrix: Liquid, Dilution: 2

Analyte	Flags	% Rec	LCL	UCL
Arsenic		100	75	125
Lead		89	75	125

Matrix Spike (MS)

Lab Sample ID: MT4-24-0321B.040.MS, Parent Sample ID: S59995.12

Run in Batch: MT4-24-0321B, Run Date: 03/21/2024 13:38, Prep Date: 03/21/2024, Matrix: Liquid, Dilution: 2

Analyte	Flags	% Rec	LCL	UCL
Arsenic		102	75	125
Lead		91	75	125

Matrix Spike Duplicate (MSD)

Lab Sample ID: MT4-24-0321B.031.MSD, Parent Sample ID: MT4-24-0321B.030.MS

Run in Batch: MT4-24-0321B, Run Date: 03/21/2024 13:28, Prep Date: 03/21/2024, Matrix: Liquid, Dilution: 2

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
Arsenic		100	75	125	0	20
Lead		91	75	125	2	20

Matrix Spike Duplicate (MSD)

Lab Sample ID: MT4-24-0321B.041.MSD, Parent Sample ID: MT4-24-0321B.040.MS

Run in Batch: MT4-24-0321B, Run Date: 03/21/2024 13:39, Prep Date: 03/21/2024, Matrix: Liquid, Dilution: 2

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
Arsenic		107	75	125	5	20
Lead		91	75	125	0	20

QC Report - Batch QC Results

Organics - Volatiles, Prep Batch ID: PD240325W1

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

Blank (BLK)

Lab Sample ID: CI240326DW.BLK240325

Run in Batch: CI240326DW, Run Date: 03/26/2024 13:07, Prep Date: 03/25/2024, 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
PFHpA		ND	2	ng/l
PFHxS		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
PFOA		ND	2	ng/l
EtFOSAA		ND	2	ng/l
11CL-PF3OUdS		ND	2	ng/l
PFDoDA		ND	2	ng/l
PFTTrDA		ND	2	ng/l
PFTTeDA		ND	2	ng/l

Laboratory Control Sample (LCS)

Lab Sample ID: CI240326DW.LCS240325

Run in Batch: CI240326DW, Run Date: 03/26/2024 13:37, Prep Date: 03/25/2024, Matrix: WW, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
PFBS		101.0	70.0	130.0
PFHxA		100.0	70.0	130.0
HFPO-DA		101.0	70.0	130.0
PFHpA		98.5	70.0	130.0
PFHxS		99.0	70.0	130.0
ADONA		100.0	70.0	130.0
PFOA		103.5	70.0	130.0
PFOS		100.0	70.0	130.0
PFNA		103.0	70.0	130.0
9CL-PF3ONS		106.5	70.0	130.0
PFDA		101.5	70.0	130.0
N-MeFOSAA		98.0	70.0	130.0
PFOA		99.5	70.0	130.0
EtFOSAA		96.5	70.0	130.0
11CL-PF3OUdS		95.5	70.0	130.0
PFDoDA		98.0	70.0	130.0
PFTTrDA		94.0	70.0	130.0
PFTTeDA		95.0	70.0	130.0

QC Report - Batch QC Results

Organics - Volatiles, Prep Batch ID: PD240325W1 (continued)

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

Matrix Spike (MS)

Lab Sample ID: CI240326DW.6003101M, Parent Sample ID: S60031.01

Run in Batch: CI240326DW, Run Date: 03/26/2024 14:06, Prep Date: 03/25/2024, Matrix: WW, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
PFHxA		101.2	70.0	130.0
PFBS		102.9	70.0	130.0
PFHpA		101.2	70.0	130.0
PFOA		101.2	70.0	130.0
PFHxS		98.8	70.0	130.0
PFNA		101.2	70.0	130.0
PFDA		92.9	70.0	130.0
N-MeFOSAA		87.1	70.0	130.0
EtFOSAA		81.2	70.0	130.0
PFOS		95.3	70.0	130.0
PFUnDA		86.5	70.0	130.0
PFDoDA		92.9	70.0	130.0
PFTTrDA		84.7	70.0	130.0
PFTeDA		90.0	70.0	130.0
11CL-PF3OUdS		89.4	70.0	130.0
9CL-PF3ONS		95.9	70.0	130.0
ADONA		100.0	70.0	130.0
HFPO-DA		100.0	70.0	130.0

Duplicate (DUP)

Lab Sample ID: CI240326DW.6000201D, Parent Sample ID: S60002.01

Run in Batch: CI240326DW, Run Date: 03/26/2024 14:51, Prep Date: 03/25/2024, 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
PFTTrDA		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

