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ENVIRONMENT
& HEALTH

Transmitted via email

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Mr. Robert Ellis
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Ms. Melissa Glasgow
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RE: **Stanley Road Sanitary Sewer Update**
RACER Trust – Coldwater Road Facility
FILE: 15388/1940113233/Corres

Dear **Ms. Sanabria, Ms. Hebert, Mr. Ellis, & Ms. Glasgow**:

Ramboll Americas Engineering Solutions, Inc. (Ramboll), on behalf of the Revitalizing Auto Communities Environmental Response Trust (RACER Trust) is providing this letter to summarize the per- and polyfluoroalkyl substances (PFAS) sanitary sewer sample results collected from the Genesee Township sanitary sewer along the north side of Stanley Road and north of the RACER Trust Coldwater Road Facility (Site) located in Flint, Michigan.

The samples were collected on December 19, 2024, at sample locations SAN-2, SAN-8, SAN-9, SAN-21, and manhole 11-07C016. See **Figure 1** for sample and repair locations. As noted below, repairs to the sewer were completed in September 2020.

Sanitary sewer sampling was performed in accordance with the methods specified in EGLE's Wastewater PFAS Sampling Guidance.

Analytical Results

The sewer samples were analyzed for PFAS by method ASTMD7979-19 (no preservative). The analytical results for the recent sewer samples and historical samples are summarized in **Table 1**, and the analytical laboratory reports are included in **Appendix A**. The sample locations discussed below are presented upgradient to downgradient.

- SAN-09, which is upgradient of the PFAS-impacted shallow groundwater zone, had a detection of 9.0 nanograms per liter (ng/l) for perfluorooctane sulfonic acid (PFOS) on December 19, 2024, which is in the middle of the range of previously detected concentrations and is an increase compared to the previous result of 5.2 ng/l (6/27/2024) for PFOS.
- SAN-2 had a detection of 27 ng/l for PFOS on December 19, 2024, which is near the middle of the range of previously detected concentrations and is a slight increase compared to the previous result of 24 ng/l (6/27/2024) for PFOS.
- 11-07C016 had a detection of 22 ng/l for PFOS on December 19, 2024, which is near the low end of the range of previously detected concentrations and is similar to the previous result of 20 ng/l (6/27/2024) for PFOS.
- SAN-08 had a detection of 25 ng/l for PFOS on December 19, 2024, which is near the middle of the range of previously detected concentrations and is an increase compared to the previous result of 9.4 ng/l (6/27/2024) for PFOS.
- SAN-21, which is downgradient of the PFAS-impacted shallow groundwater zone, had a detection of 19 ng/l for PFOS on December 19, 2024, which is near the middle of the range of previously detected concentrations and is an increase compared to the previous result of 9.9 ng/l (6/27/20243) for PFOS.

The observed flow rates during sampling were consistent with flow rates observed during previous post-repair (repairs completed, September 2020) sampling events and continue to be much lower than before sewer line repairs were completed. PFOS concentrations appear to be variable at a given sampling location but are within a concentration range that is lower than before repairs were implemented.

Based on these results and to continue to allow for evaluation of concentration variability and trends, we propose to collect another round of samples in June 2025 from the upstream sample location SAN-09, SAN-2, 11-07C016, SAN-08, and downstream sample location SAN-21. An update similar to this one will be provided within approximately four weeks of receipt of the analytical results from the laboratory.

Please contact me at 313-333-0211 or clifford.yantz@ramboll.com or Brendan Mullen at bmullen@racertrust.org or 201-247-4890, if you have any questions.

Very truly yours,
RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.

Clifford S. Yantz
Project Manager
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ENCLOSURES:

Table 1 – Sanitary Sewer Analytical Results – Stanley Road
Figure 1 – Stanley Road Sanitary Sewer/Manhole Point Repairs and Sample Locations
Appendix A – Laboratory Analytical Reports

cc: Mr. Daniel K Eashoo - Genesee Township Supervisor (via email)
Mr. Thad Domick – GCDCWWS (via email)
Mr. Kevin DePottey – GCDCWWS (via email)
Mr. Brent Pittenger – GCDCWWS (via email)
Ms. Carla Davidson – EGLE (via email)
Mr. Brian Zuber – EGLE (via email)
Mr. Brendan Mullen – RACER Trust (via email)
Mr. David Favero – RACER Trust (via email)
Mr. Kevin Schneider – Ramboll (via email)

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TABLES

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TABLE 1
RACER Trust - Coldwater Road
Per-and Polyfluoroalkyl Substances Sampling Results
Sanitary Sewer Samples - Stanley Road

Coldwater Rd - Sanitary Sewer Samples - Stanley Road

Perfluorinated Compound	Well/Sample ID:	EGLE Part 201 Generic Cleanup Criteria and Screening Levels GSI	II-07C016 (Sanitary Sewer)	II-07C016 (Sanitary Sewer)	II-07C016 (Sanitary Sewer)	II-07C016 (Sanitary Sewer)	II-07C016 (Sanitary Sewer)	II-07C016 (Sanitary Sewer)	II-07C016 (Sanitary Sewer)	II-07C016 (Sanitary Sewer)	II-07C016 (Sanitary Sewer)	II-07C016 (Sanitary Sewer)	SAN-1 (Sanitary Sewer)	SAN-1 (Sanitary Sewer)	SAN-1 (Sanitary Sewer)
	Sample Date:		5/20/2021	8/25/2021	12/9/2021	3/31/2022	9/7/2022	12/13/2022	4/6/2023	6/27/2023	12/19/2023	6/27/2024	12/19/2024	11/5/2019	3/17/2020	12/18/2020
Perfluorobutanoic Acid (PFBA)		--	<10	<10	<9.8 X	<21 X	<11	<10	<10	<9.6	<29 X	<9.8	<9.5	<20	<21	<10
Perfluoropentanoic Acid (PFPeA)		--	**1.1 J**	**1.9 J**	**2.2 J**	<4.1	<4.3	<4.1	**1.5 J**	<3.8	<3.8	<3.9	<3.8	<9.9	<11	<4.1
4:2 Fluorotelomer Sulfonic Acid (4:2 FTSA)		--	<2.0	<2.0	<2.0	<2.1	<2.2	<2.0	<2.0	<1.9	<1.9	<2.0	<1.9	<9.9	<11	<2.1
Perfluorohexanoic Acid (PFHxA)		--	<2.0	<2.0	**2.0**	<2.1	<2.2	<2.0	**1.3 J**	**1.5 J**	<1.9	<2.0	**3.5**	<9.9	<11	<2.1
Perfluorobutane Sulfonic Acid (PFBS)		**670,000**	**2.0 J**	<2.0	**2.4**	**2.8**	**2.0 J**	**1.6 J**	**6.6**	**4.0**	**2.0**	**2.0**	**1.2 J**	<9.9	<11	**1.7 J**
Perfluoroheptanoic Acid (PFHpA)		--	<2.0	<2.0	<2.0	<2.1	<2.2	<2.0	**1.2 J**	<1.9	<3.8	<2.0	**0.96 J**	<9.9	<11	<2.1
Perfluoropentane Sulfonic Acid (PFPeS)		--	<2.0	<2.0	<2.0	<2.1	<2.2	<2.0	**1.0 J**	<1.9	<1.9	<2.0	<1.9	<9.9	<11	<2.1
6:2 Fluorotelomer Sulfonic Acid (6:2 FTSA)		--	<4.1	<4.1	<3.9	<2.1	<2.2	<2.0	<2.0	<1.9	<1.9	<2.0	<1.9	<9.9	<11	<2.1
Perfluorooctanoic Acid (**PFOA**)		**170**	<2.0	**1.8 J**	**2.3**	<2.1	**3.1**	**1.8 J**	<2.0	**3.2**	**1.3 J**	**1.7 J**	**1.3 J**	<9.9	<11	<2.1
Perfluorohexane Sulfonic Acid (PFHxS)		**210**	**2.9**	**3.2**	**3.6**	<2.1	**4.7**	**4.0**	**2.5**	**2.2**	**2.6**	**2.0**	**3.4**	<9.9	<11	**2.3**
Perfluorohexane Sulfonic Acid - LN (PFHxS-LN)		--	**2.2**	**2.2**	**2.9**	<2.1	**3.7**	**3.0**	**2.1**	**2.2**	**2.1**	**2.0**	**2.2**	<9.9	<11	**1.7 J**
Perfluorohexane Sulfonic Acid - BR (PFHxS-BR)		--	<2.0	<2.0	<2.0	<2.1	<2.2	<2.0	<2.0	<1.9	<1.9	<2.0	<1.9	<9.9	<11	<2.1
Perfluorononanoic Acid (PFNA)		**30**	<2.0	<2.0	<2.0	<2.1	<2.2	<2.0	**1.0 J**	<1.9	<1.9	<2.0	<1.9	<9.9	<11	<2.1
8:2 Fluorotelomer Sulfonic Acid (8:2 FTSA)		--	<2.0	<4.1	<3.9	<2.1	<2.2	<2.0	<2.0	<1.9	<1.9	<2.0	<1.9	<9.9	<11	<2.1
Perfluoroheptane Sulfonic Acid (PFHpS)		--	<2.0	<2.0	<2.0	<2.1	<2.2	<2.0	<2.0	<1.9	<1.9	**0.86 J**	<1.9	<9.9	<11	<2.1
Perfluorodecanoic Acid (PFDA)		--	<2.0	<2.0	<2.0	<2.1	<2.2	<2.0	<2.0	<1.9	<1.9	<2.0	<1.9	<9.9	<11	<2.1
N-methyl Perfluorooctanesulfonamidoacetic Acid (N-MeFOSAA)		--	<2.0	<2.0	<2.0	<2.1	<2.2	<2.0	<2.0	<1.9	<1.9	<2.0	<1.9	<9.9	<11	<2.1
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid (EtFOSAA)		--	<4.1	<4.1	<3.9	<4.1	<4.3	<4.1	<4.0	<3.8	<3.8	<3.9	<3.8	<9.9	<11	<4.1
Perfluorooctane Sulfonic Acid (**PFOS**)		**12**	**24**	**27**	**19**	**19**	**43**	**31**	**27**	**27**	**19**	**20**	**22**	**55**	**59**	**24**
Perfluorooctane Sulfonic Acid (**PFOS**-LN)		--	**7.0**	**9.4**	**5.8**	**3.2**	**13**	**8.6**	**12**	**8.2**	**6.0**	**4.9**	**5.9**	**18**	**18**	**6.9**
Perfluorooctane Sulfonic Acid (**PFOS**-BR)		--	**17**	**18**	**14**	**15**	**30**	**22**	**13**	**19**	**13**	**13**	**15**	**36**	**42**	**16**
Perfluoroundecanoic Acid (PFUnDA)		--	<2.0	<2.0	<2.0	<2.1	<2.2	<2.0	<2.0	<1.9	<1.9	<2.0	<1.9	<9.9	<11	<2.1
Perfluorononane Sulfonic Acid (PFNS)		--	<2.0	<2.0	<2.0	<2.1	<2.2	<2.0	<2.0	<1.9	<1.9	<2.0	<1.9	<9.9	<11	<2.1
Perfluorododecanoic Acid (PFDoDA)		--	<2.0	<2.0	<2.0	<2.1	<2.2	<2.0	<2.0	<1.9	<1.9	<2.0	<1.9	<9.9	<11	<2.1
Perfluorodecane Sulfonic Acid (PFDS)		--	<2.0	<2.0	<2.0	<2.1	<2.2	<2.0	<2.0	<1.9	<1.9	<2.0	<1.9	<9.9	<11	<2.1
Perfluorotridecanoic Acid (PFTrDA)		--	<2.0	<2.0	<2.0	<2.1	<2.2	<2.0	<2.0	<1.9	<1.9	<2.0	<1.9	<9.9	<11	<2.1
Perfluorooctane Sulfonamide (FOSA)		--	<2.0	<2.0	<2.0	<2.1	<2.2	<2.0	<2.0	<1.9	<1.9	<2.0	<1.9	<9.9	<11	<2.1
Perfluorotetradecanoic Acid (PFTeDA)		--	<4.1	<4.1	<3.9	<4.1	<4.3	<4.1	<4.0	<3.8	<3.8	<3.9	<3.8	<9.9	<11	<4.1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)		--	<2.0	<2.0	<2.0	<2.1	<2.2	<2.0	<2.0	<1.9	<1.9	<2.0	<1.9	<9.9	<11	<2.1
9-chlorohexadecafluoro-3-oxanone1-sulfonic acid (9Cl-PF3ONS)		--	<2.0	<2.0	<2.0	<2.1	<2.2	<2.0	<2.0	<1.9	<1.9	<2.0	<1.9	<9.9	<11	<2.1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)		--	<2.0	<2.0	<2.0	<2.1	<2.2	<2.0	<2.0	<1.9	<1.9	<2.0	<1.9	<9.9	<11	<2.1
Hexafluoropropylene oxide dimer (HFPO-DA)		--	<10	<10	<9.8	<4.1	<11	<10	<2.0	<1.9	<9.6	<9.8	<9.5	<9.9	<11	<2.1
3-Perfluoroheptyl propanoic acid (FHpPA (7:3 FTCA))		--	--	--	--	--	--	--	--	<3.8	<9.6	<9.8	<9.5	--	--	--
3-Perfluoropentyl propanoic acid (FPePA (5:3 FTCA))		--	--	--	--	--	--	--	--	<3.8	<9.6	<9.8	<9.5	--	--	--
3-Perfluoropropyl propanoic acid (FPrPA (3:3 FTCA))		--	--	--	--	--	--	--	--	<3.8	<9.6	<9.8	<9.5	--	--	--
Perfluorobutanesulfonamide (PFBSA)		--	--	--	--	--	--	--	--	<1.9	**0.60 J**	<2.0	<1.9	--	--	--
Perfluoro-4-ethylcyclohexanesulfonate (PFECHS)		--	--	--	--	--	--	--	--	**140**	**65**	**86**	**76**	--	--	--
Perfluorohexanesulfonamide (PFHxSA)		--	--	--	--	--	--	--	--	<1.9	<1.9	<2.0	<1.9	--	--	--
Total Per-and Polyfluoroalkyl Substances		--	**30.0**	**33.9**	**31.5**	**21.8**	**52.8**	**38.4**	**42.1**	**177.9**	**90.5**	**112.6**	**108.4**	**55.0**	**59.0**	**28.0**

Notes
1) Detections in **bold**.
2) Concentrations in 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, October 12, 2023.
7) Concentration above the groundwater surface water interface (GSI) criteria are highlighted in yellow.
8) B - Compound also found in associated method blank.
9) I - Matrix interference with internal standard.
10) J - Estimated value less than reporting limit, but greater than MDL.
11) X - Elevated reporting limit due to matrix interference.
12) Light gray header is most recent sampling event result.
13) QA/QC Samples were either not detected above the reporting limit or below the EGLE Part 201 Groundwater Generic Cleanup Criteria.

TABLE 1
RACER Trust - Coldwater Road
Per-and Polyfluoroalkyl Substances Sampling Results
Sanitary Sewer Samples - Stanley Road

Coldwater Rd - Sanitary Sewer Samples - Stanley Road

Perfluorinated Compound	Well/Sample ID:	EGLE Part 201 Generic Cleanup Criteria and Screening Levels GSI	SAN-2 (Sanitary Sewer)	SAN-2 (Sanitary Sewer)	SAN-2 (Sanitary Sewer)	SAN-2 (Sanitary Sewer)	SAN-2 (Sanitary Sewer)	SAN-DUP-033122 SAN-2 (Sanitary Sewer)	SAN-2 (Sanitary Sewer)	SAN-2 (Sanitary Sewer)	SAN-2 (Sanitary Sewer)	SAN-2 (Sanitary Sewer)	SAN-2 (Sanitary Sewer)	SAN-2 (Sanitary Sewer)	**SAN-2 (Sanitary Sewer)**
	Sample Date:		*11/5/2019*	*5/20/2021*	*8/25/2021*	*12/9/2021*	*3/31/2022*	*3/31/2022*	*9/7/2022*	*12/13/2022*	*4/6/2023*	*6/27/2023*	*12/19/2023*	*6/27/2024*	*12/19/2024*
Perfluorobutanoic Acid (PFBA)		--	<20	<10	<10	**13**	<21 X	<20 X	<11	<10	<9.7	<10	<31 X	**5.4 J**	<9.7
Perfluoropentanoic Acid (PFPeA)		--	<9.9	<4.2	**4.3**	**1.5 J**	<4.2	<4.0	<4.2	**1.2 J**	**1.3 J**	<4.1	**1.2 J**	**1.5 J**	**1.4 J**
4:2 Fluorotelomer Sulfonic Acid (4:2 FTSA)		--	<9.9	<2.1	<2.0	<1.9	<2.1	<2.0	<2.1	<2.0	<1.9	<2.1	<2.0 I	<2.0	<1.9 I
Perfluorohexanoic Acid (PFHxA)		--	<9.9	<2.1	**7.4**	<1.9	<2.1	<2.0	<2.1	**1.5 J**	**1.2 J**	<2.1	<2.0	<2.0	**3.8**
Perfluorobutane Sulfonic Acid (PFBS)		**670,000**	<9.9	**1.8 J**	**1.9 J**	**2.4**	**3.1**	**3.9**	**2.2**	**1.6 J**	**7.1**	**2.0 J**	**2.3**	**2.7**	**2.8**
Perfluoroheptanoic Acid (PFHpA)		--	<9.9	<2.1	<2.0	<1.9	<2.1	<2.0	<2.1	<2.0	**1.1 J**	<2.1	<3.9	<2.0	**1.2 J**
Perfluoropentane Sulfonic Acid (PFPeS)		--	<9.9	<2.1	<2.0	<1.9	<2.1	<2.0	<2.1	<2.0	**1.0 J**	<2.1	<2.0	<2.0	<1.9
6:2 Fluorotelomer Sulfonic Acid (6:2 FTSA)		--	<9.9	<4.2	<4.1	<3.8	<2.1	<2.0	<2.1	<2.0	<1.9	<2.1	<2.0	<2.0	<1.9
Perfluorooctanoic Acid (**PFOA**)		**170**	<9.9	<2.1	**3.2**	**2.3**	<2.1	<2.0	**2.5**	**1.8 J**	<1.9	**2.4**	**1.0 J**	**2.9**	**2.7**
Perfluorohexane Sulfonic Acid (PFHxS)		**210**	<9.9	**2.8**	**4.0**	**4.1**	**3.5**	**3.4**	**4.0**	**3.3**	**2.1**	**1.9 J**	**1.7 J**	**3.0**	**5.0**
Perfluorohexane Sulfonic Acid - LN (PFHxS-LN)		--	<9.9	**1.7 J**	**3.1**	**2.5**	<2.1	<2.0	**3.0**	**2.5**	**1.7 J**	**1.9 J**	**1.3 J**	**2.0**	**3.4**
Perfluorohexane Sulfonic Acid - BR (PFHxS-BR)		--	<9.9	<2.1	<2.0	<1.9	<2.1	<2.0	<2.1	<2.0	<1.9	<2.1	<2.0	<2.0	**1.4 J**
Perfluorononanoic Acid (PFNA)		**30**	<9.9	<2.1	<2.0	<1.9	<2.1	<2.0	<2.1	<2.0	<1.9	<2.1	<2.0	<2.0	<1.9
8:2 Fluorotelomer Sulfonic Acid (8:2 FTSA)		--	<9.9	<2.1	<4.1	<3.8	<2.1	<2.0	<2.1 **I**	<2.0	<1.9	<2.1	<2.0	<2.0	<1.9
Perfluoroheptane Sulfonic Acid (PFHpS)		--	<9.9	<2.1	<2.0	<1.9	<2.1	<2.0	<2.1	<2.0	<1.9	<2.1	<2.0	<2.0	<1.9
Perfluorodecanoic Acid (PFDA)		--	<9.9	<2.1	<2.0	<1.9	<2.1	<2.0	<2.1	<2.0	<1.9	<2.1	<2.0	<2.0	<1.9
N-methyl Perfluorooctanesulfonamidoacetic Acid (N-MeFOSAA)		--	<9.9	<2.1	<2.0	<1.9	<2.1	<2.0	<2.1	<2.0	<1.9	<2.1	<2.0	<2.0	<1.9
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid (EtFOSAA)		--	<9.9	<4.2	<4.1	<3.8	<4.2	<4.0	<4.2	<4.0	<3.9	<4.1	<3.9	<3.9	<3.9
Perfluorooctane Sulfonic Acid (**PFOS**)		**12**	**37**	**22**	**31**	**20**	**24**	**24**	**43**	**29**	**9.8**	**17**	**17**	**24**	**27**
Perfluorooctane Sulfonic Acid (**PFOS**-LN)		--	**11**	**6.0**	**10**	**7.1**	**5.2**	**5.1**	**14**	**7.7**	**2.8**	**6.4**	**5.1**	**6.4**	**6.1**
Perfluorooctane Sulfonic Acid (**PFOS**-BR)		--	**23**	**16**	**21**	**13**	**19**	**20**	**29**	**20**	**7.2**	**11**	**11**	**17**	**19**
Perfluoroundecanoic Acid (PFUnDA)		--	<9.9	<2.1	<2.0	<1.9	<2.1	<2.0	<2.1	<2.0	<1.9	<2.1	<2.0	<2.0	<1.9
Perfluorononane Sulfonic Acid (PFNS)		--	<9.9	<2.1	<2.0	<1.9	<2.1	<2.0	<2.1	<2.0	<1.9	<2.1	<2.0	<2.0	<1.9
Perfluorododecanoic Acid (PFDoDA)		--	<9.9	<2.1	<2.0	<1.9	<2.1	<2.0	<2.1	<2.0	<1.9	<2.1	<2.0	<2.0	<1.9
Perfluorodecane Sulfonic Acid (PFDS)		--	<9.9	<2.1	<2.0	<1.9	<2.1	<2.0	<2.1	<2.0	<1.9	<2.1	<2.0	<2.0	<1.9
Perfluorotridecanoic Acid (PFTrDA)		--	<9.9	<2.1	<2.0	<1.9	<2.1	<2.0	<2.1	<2.0	<1.9	<2.1	<2.0	<2.0	<1.9
Perfluorooctane Sulfonamide (FOSA)		--	<9.9	<2.1	<2.0	<1.9	<2.1	<2.0	<2.1	<2.0	<1.9	<2.1	<2.0	<2.0	<1.9
Perfluorotetradecanoic Acid (PFTeDA)		--	<9.9	<4.2	<4.1	<3.8	<4.2	<4.0	**2.1 J**	<4.0	<3.9	<4.1	<4.0	<3.9	<3.9
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)		--	<9.9	<2.1	<2.0	<1.9	<2.1	<2.0	<2.1	<2.0	<1.9	<2.1	<2.0	<2.0	<1.9
9-chlorohexadecafluoro-3-oxanone1-sulfonic acid (9Cl-PF3ONS)		--	<9.9	<2.1	<2.0	<1.9	<2.1	<2.0	<2.1	<2.0	<1.9	<2.1	<2.0	<2.0	<1.9
4,8-dioxa-3H-perfluorononanoic acid (ADONA)		--	<9.9	<2.1	<2.0	<1.9	<2.1	<2.0	<2.1	<2.0	<1.9	<2.1	<2.0	<2.0	<1.9
Hexafluoropropylene oxide dimer (HFPO-DA)		--	<9.9	<10	<10	<9.6	<4.2	<4.0	<11	<10	<1.9	<2.1	<9.8	<9.8	<9.7
3-Perfluoroheptyl propanoic acid (FHpPA (7:3 FTCA))		--	--	--	--	--	--	--	--	--	--	<4.1	<9.8	<9.8	<9.7
3-Perfluoropentyl propanoic acid (FPePA (5:3 FTCA))		--	--	--	--	--	--	--	--	--	--	<4.1	<9.8	<9.8	<9.7
3-Perfluoropropyl propanoic acid (FPrPA (3:3 FTCA))		--	--	--	--	--	--	--	--	--	--	<4.1	<9.8	<9.8	<9.7
Perfluorobutanesulfonamide (PFBSA)		--	--	--	--	--	--	--	--	--	--	<2.1	**0.63 J**	<2.0	<1.9
Perfluoro-4-ethylcyclohexanesulfonate (PFECHS)		--	--	--	--	--	--	--	--	--	--	**90**	**52**	**100**	**100**
Perfluorohexanesulfonamide (PFHxSA)		--	--	--	--	--	--	--	--	--	--	<2.1	<2.0	<2.0	<1.9
Total Per-and Polyfluoroalkyl Substances		--	**37.0**	**26.6**	**51.8**	**43.3**	**30.6**	**31.3**	**53.8**	**38.4**	**23.6**	**113.3**	**75.8**	**139.5**	**143.9**

Notes
1) Detections in **bold**.
2) Concentrations in 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, October 12, 2023.
7) Concentration above the groundwater surface water interface (GSI) criteria are highlighted in yellow.
8) B - Compound also found in associated method blank.
9) I - Matrix interference with internal standard.
10) J - Estimated value less than reporting limit, but greater than MDL.
11) X - Elevated reporting limit due to matrix interference.
12) Light gray header is most recent sampling event result.
13) QA/QC Samples were either not detected above the reporting limit or below the EGLE Part 201 Groundwater Generic Cleanup Criteria.

RAMBOLL

TABLE 1
RACER Trust - Coldwater Road
Per-and Polyfluoroalkyl Substances Sampling Results
Sanitary Sewer Samples - Stanley Road

Coldwater Rd - Sanitary Sewer Samples - Stanley Road

Perfluorinated Compound	Well/Sample ID:	EGLE Part 201 Generic Cleanup Criteria and Screening Levels GSI	SAN-08 (Sanitary Sewer)	SAN-08 (Sanitary Sewer)	SAN-08 (Sanitary Sewer)	SAN-08 (Sanitary Sewer)	SAN-08 (Sanitary Sewer)	SAN-08 (Sanitary Sewer)	SAN-08 (Sanitary Sewer)	SAN-08 (Sanitary Sewer)	SAN-08 (Sanitary Sewer)	SAN-08 (Sanitary Sewer)	SAN-08 (Sanitary Sewer)	SAN-08 (Sanitary Sewer)	SAN-08 (Sanitary Sewer)	**SAN-08 (Sanitary Sewer)**
	Sample Date:		*3/18/2020*	*9/22/2020*	*12/18/2020*	*5/20/2021*	*8/25/2021*	*12/9/2021*	*3/31/2022*	*9/7/2022*	*12/13/2022*	*4/6/2023*	*6/27/2023*	*12/19/2023*	*6/27/2024*	*12/19/2024*
Perfluorobutanoic Acid (PFBA)		--	<20	<9.9	<9.9	<10	<10	<10 X	<21 X	<10	<10	<10	<9.8	<24 X	<10	<10
Perfluoropentanoic Acid (PFPeA)		--	<10	<3.9	<4.0	<4.0	**1.3 J**	<4.1	<4.1	<4.0	<4.0	**2.0 J**	**1.4 J**	<4.0	<4.1	**2.0 J**
4:2 Fluorotelomer Sulfonic Acid (4:2 FTSA)		--	<10	<2.0	<2.0	<2.0	<2.0	<2.0	<2.1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorohexanoic Acid (PFHxA)		--	<10	<2.0	<2.0	<2.0	<2.0	<2.0	<2.1	<2.0	**1.7 J**	**2.0 J**	<2.0	<2.0	<2.0	**3.9**
Perfluorobutane Sulfonic Acid (PFBS)		**670,000**	<10	<2.0	**1.7 J**	**1.6 J**	**1.8 J**	**2.2**	**4.3**	**1.4 J**	**2.4**	**6.5**	**3.2**	**2.3**	**1.9 J**	**1.3 J**
Perfluoroheptanoic Acid (PFHpA)		--	<10	<2.0	<2.0	<2.0	<2.0	<2.0	<2.1	<2.0	<2.0	**1.3 J**	<2.0	<4.0	<2.0	**0.96 J**
Perfluoropentane Sulfonic Acid (PFPeS)		--	<10	<2.0	<2.0	<2.0	<2.0	<2.0	<2.1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
6:2 Fluorotelomer Sulfonic Acid (6:2 FTSA)		--	<10	<2.0	<2.0	<4.0	<4.0	<4.1	<2.1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorooctanoic Acid (**PFOA**)		**170**	<10	<2.0	<2.0	<2.0	**2.3**	**2.2**	<2.1	**2.6**	**2.3**	**2.2**	**1.9 J**	**1.2 J**	**1.6 J**	**1.5 J**
Perfluorohexane Sulfonic Acid (PFHxS)		**210**	<10	**2.8**	**2.4**	**2.3**	**2.0**	**3.1**	<2.1	**3.3**	**3.5**	**3.4**	**1.9 J**	**2.6**	**1.0 J**	**4.3**
Perfluorohexane Sulfonic Acid - LN (PFHxS-LN)		--	<10	**2.0**	**1.6 J**	**1.6 J**	<2.0	**2.5**	<2.1	**2.7**	**2.7**	**2.8**	**1.9 J**	**2.0**	**1.0 J**	**3.1**
Perfluorohexane Sulfonic Acid - BR (PFHxS-BR)		--	<10	<2.0	<2.0	<2.0	<2.0	<2.0	<2.1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorononanoic Acid (PFNA)		**30**	<10	<2.0	<2.0	<2.0	<2.0	<2.0	<2.1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
8:2 Fluorotelomer Sulfonic Acid (8:2 FTSA)		--	<10	<2.0	<2.0	<2.0	<4.0	<4.1	<2.1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluoroheptane Sulfonic Acid (PFHpS)		--	<10	<2.0	<2.0	<2.0	<2.0	<2.0	<2.1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorodecanoic Acid (PFDA)		--	<10	<2.0	<2.0	<2.0	<2.0	<2.0	<2.1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
N-methyl Perfluorooctanesulfonamidoacetic Acid (N-MeFOSAA)		--	<10	<2.0	<2.0	<2.0	<2.0	<2.0	<2.1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid (EtFOSAA)		--	<10	<3.9	<4.0	<4.0	<4.0	<4.1	<4.1	<4.0	<4.0	<4.0	<3.9	<4.0	<4.1	<4.1
Perfluorooctane Sulfonic Acid (**PFOS**)		**12**	**42**	**17**	**14**	**16**	**16**	**25**	**9.2**	**24**	**25**	**7.6**	**25**	**23**	**9.4**	**25**
Perfluorooctane Sulfonic Acid (**PFOS**-LN)		--	**12**	**5.0**	**3.6**	**4.1**	**5.3**	**8.7**	**2.5**	**6.0**	**6.4**	**2.0**	**7.3**	**8.8**	**2.1**	**7.9**
Perfluorooctane Sulfonic Acid (**PFOS**-BR)		--	**30**	**10**	**9.5**	**12**	**11**	**17**	**6.3**	**17**	**18**	**6.0**	**17**	**15**	**6.4**	**16.0**
Perfluoroundecanoic Acid (PFUnDA)		--	<10	<2.0	<2.0	<2.0	<2.0	<2.0	<2.1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorononane Sulfonic Acid (PFNS)		--	<10	<2.0	<2.0	<2.0	<2.0	<2.0	<2.1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorododecanoic Acid (PFDoDA)		--	<10	<2.0	<2.0	<2.0	<2.0	<2.0	<2.1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorodecane Sulfonic Acid (PFDS)		--	<10	<2.0	<2.0	<2.0	<2.0	<2.0	<2.1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorotridecanoic Acid (PFTrDA)		--	<10	<2.0	<2.0	<2.0	<2.0	<2.0	<2.1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorooctane Sulfonamide (FOSA)		--	<10	<2.0	<2.0	<2.0	<2.0	<2.0	<2.1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorotetradecanoic Acid (PFTeDA)		--	<10	<3.9	<4.0	<4.0	<4.0	<4.1	<4.1	<4.0	<4.0	<4.0	<3.9	<4.0	<4.1	<4.0
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)		--	<10	<2.0	<2.0	<2.0	<2.0	<2.0	<2.1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
9-chlorohexadecafluoro-3-oxanone1-sulfonic acid (9Cl-PF3ONS)		--	<10	<2.0	<2.0	<2.0	<2.0	<2.0	<2.1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
4,8-dioxa-3H-perfluorononanoic acid (ADONA)		--	<10	<2.0	<2.0	<2.0	<2.0	<2.0	<2.1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Hexafluoropropylene oxide dimer (HFPO-DA)		--	<10	<2.0	<2.0	<10	<10	<10	<4.1	<10	<10	<2.0	<2.0	<10	<10	<10
3-Perfluoroheptyl propanoic acid (FHpPA (7:3 FTCA))		--	--	--	--	--	--	--	--	--	--	--	<3.9	<10	<10	<10
3-Perfluoropentyl propanoic acid (FPePA (5:3 FTCA))		--	--	--	--	--	--	--	--	--	--	--	<3.9	<10	<10	<10
3-Perfluoropropyl propanoic acid (FPrPA (3:3 FTCA))		--	--	--	--	--	--	--	--	--	--	--	<3.9	<10	<10	<10
Perfluorobutanesulfonamide (PFBSA)		--	--	--	--	--	--	--	--	--	--	--	<2.0	<2.0	<2.0	<2.0
Perfluoro-4-ethylcyclohexanesulfonate (PFECHS)		--	--	--	--	--	--	--	--	--	--	--	**110**	**59**	**27**	**74**
Perfluorohexanesulfonamide (PFHxSA)		--	--	--	--	--	--	--	--	--	--	--	<2.0	<2.0	<2.0	<2.0
Total Per-and Polyfluoroalkyl Substances		--	**42.0**	**19.8**	**18.1**	**19.9**	**23.4**	**32.5**	**13.5**	**31.3**	**34.9**	**25.0**	**143.4**	**88.1**	**40.9**	**113.0**

Notes
1) Detections in **bold**.
2) Concentrations in 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, October 12, 2023.
7) Concentration above the groundwater surface water interface (GSI) criteria are highlighted in yellow.
8) B - Compound also found in associated method blank.
9) I - Matrix interference with internal standard.
10) J - Estimated value less than reporting limit, but greater than MDL.
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12) Light gray header is most recent sampling event result.
13) QA/QC Samples were either not detected above the reporting limit or below the EGLE Part 201 Groundwater Generic Cleanup Criteria.

TABLE 1
RACER Trust - Coldwater Road
Per-and Polyfluoroalkyl Substances Sampling Results
Sanitary Sewer Samples - Stanley Road

Coldwater Rd - Sanitary Sewer Samples - Stanley Road

Perfluorinated Compound	Well/Sample ID:	EGLE Part 201 Generic Cleanup Criteria and Screening Levels GSI	SAN-09 (Sanitary Sewer)	SAN-09 (Sanitary Sewer)	SAN-09 (Sanitary Sewer)	SAN-09 (Sanitary Sewer)	SAN-09 (Sanitary Sewer)	SAN-09 (Sanitary Sewer)	SAN-09 (Sanitary Sewer)	SAN-09 (Sanitary Sewer)	SAN-09 (Sanitary Sewer)	SAN-09 (Sanitary Sewer)	SAN-09 (Sanitary Sewer)	**SAN-09 (Sanitary Sewer)**
	Sample Date:		3/18/2020	5/20/2021	8/25/2021	12/9/2021	3/31/2022	9/7/2022	12/13/2022	4/6/2023	6/27/2023	12/19/2023	6/27/2024	12/19/2024
Perfluorobutanoic Acid (PFBA)		--	<19	<9.7	<10	<9.8	<9.9	<9.9	<9.9	<9.6	<9.6	<10	**7.1 J**	<9.9
Perfluoropentanoic Acid (PFPeA)		--	<9.7	**1.6 J**	**1.4 J**	<3.9	<3.9	<3.9	<4.0	**1.00 J**	<3.8	<4.1	<4.0	**1.9 J**
4:2 Fluorotelomer Sulfonic Acid (4:2 FTSA)		--	<9.7	<1.9	<2.1 I	<2.0 I	<2.0	<2.0	<2.0	<1.9	<1.9	<2.0	<2.0	<2.0
Perfluorohexanoic Acid (PFHxA)		--	<9.7	**2.6**	<2.1	<2.0	<2.0	<2.0	<2.0	**1.6 J**	<1.9	<2.0	<2.0	**2.5**
Perfluorobutane Sulfonic Acid (PFBS)		**670,000**	<9.7	<1.9	<2.1	**2.1**	**8.0**	<2.0	<2.0	**12**	**2.6**	**2.3**	**4.5**	**1.2 J**
Perfluoroheptanoic Acid (PFHpA)		--	<9.7	<1.9	<2.1	<2.0	<2.0	<2.0	<2.0	**1.2 J**	<1.9	<4.1	<2.0	<2.0
Perfluoropentane Sulfonic Acid (PFPeS)		--	<9.7	<1.9	<2.1	<2.0	<2.0	<2.0	<2.0	<1.9	<1.9	<2.0	<2.0	<2.0
6:2 Fluorotelomer Sulfonic Acid (6:2 FTSA)		--	<9.7	<3.9	<4.2 I	<3.9 I	<2.0	<2.0	<2.0	<1.9	**2.3**	<2.0	<2.0	<2.0
Perfluorooctanoic Acid (**PFOA**)		**170**	<9.7	<1.9	<2.1	<2.0	<2.0	<2.0	<2.0	<1.9	**2.9**	**0.85 J**	**1.3 J**	**0.97 J**
Perfluorohexane Sulfonic Acid (PFHxS)		**210**	<9.7	**3.0**	<2.1	<2.0	<2.0	**2.2**	**2.2**	**1.3**	**1.7 J**	<2.0	**1.1 J**	**1.9 J**
Perfluorohexane Sulfonic Acid - LN (PFHxS-LN)		--	<9.7	<1.9	<2.1	<2.0	<2.0	**1.7 J**	**1.7 J**	<1.9	**1.7 J**	<2.0	**1.1 J**	**1.1 J**
Perfluorohexane Sulfonic Acid - BR (PFHxS-BR)		--	<9.7	<1.9	<2.1	<2.0	<2.0	<2.0	<2.0	<1.9	<1.9	<2.0	<2.0	<2.0
Perfluorononanoic Acid (PFNA)		**30**	<9.7	<1.9	<2.1	<2.0	<2.0	<2.0	<2.0	<2.0	<1.9	<2.0	<2.0	<2.0
8:2 Fluorotelomer Sulfonic Acid (8:2 FTSA)		--	<9.7	<1.9	<4.2 I	<3.9	<2.0	<2.0 I	<2.0	<2.0	**2.0**	<2.0	<2.0	<2.0
Perfluoroheptane Sulfonic Acid (PFHpS)		--	<9.7	<1.9	<2.1	<2.0	<2.0	<2.0	<2.0	<2.0	<1.9	<2.0	<2.0	<2.0
Perfluorodecanoic Acid (PFDA)		--	<9.7	<1.9	<2.1	<2.0	<2.0	<2.0	<2.0	<2.0	<1.9	<2.0	<2.0	<2.0
N-methyl Perfluorooctanesulfonamidoacetic Acid (N-MeFOSAA)		--	<9.7	<1.9	<2.1	<2.0	<2.0	<2.0	<2.0	<2.0	<1.9	<2.0	<2.0	<2.0
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid (EtFOSAA)		--	<9.7	<3.9	<4.2	<3.9 I	<3.9	**2.0 J**	<4.0	<3.8	<3.8	<4.1	<4.0	<4.0
Perfluorooctane Sulfonic Acid (**PFOS**)		**12**	<9.7	**15**	**17**	**5.4**	**6.0**	**3.4**	**10**	**3.0**	**13**	**5.1**	**5.2**	**9.0**
Perfluorooctane Sulfonic Acid (**PFOS**-LN)		--	<9.7	<1.9	<2.1	<2.0	<2.0	<2.0	**4.8**	<1.9	**5.5**	**1.3 J**	<2.0	**1.1 J**
Perfluorooctane Sulfonic Acid (**PFOS**-BR)		--	<9.7	**13**	**15**	**4.6**	**5.0**	**2.6**	**5.2**	**2.3**	**7.6**	**3.6**	**3.3**	**7.0**
Perfluoroundecanoic Acid (PFUnDA)		--	<9.7	<1.9	<2.1	<2.0	<2.0	<2.0	<2.0	<1.9	<1.9	<2.0	<2.0	<2.0
Perfluorononane Sulfonic Acid (PFNS)		--	<9.7	<1.9	<2.1	<2.0	<2.0	<2.0	<2.0	<1.9	<1.9	<2.0	<2.0	<2.0
Perfluorododecanoic Acid (PFDoDA)		--	<9.7	<1.9	<2.1	<2.0	<2.0	<2.0	<2.0	<1.9	<1.9	<2.0	<2.0	<2.0
Perfluorodecane Sulfonic Acid (PFDS)		--	<9.7	<1.9	<2.1	<2.0	<2.0	<2.0	<2.0	<1.9	<1.9	<2.0	<2.0	<2.0
Perfluorotridecanoic Acid (PFTrDA)		--	<9.7	<1.9	<2.1	<2.0	<2.0	<2.0	<2.0	<2.0	<1.9	<2.0	<2.0	<2.0
Perfluorooctane Sulfonamide (FOSA)		--	<9.7	<1.9	<2.1	<2.0	<2.0	<2.0	<2.0	<2.0	<1.9	<2.0	<2.0	<2.0
Perfluorotetradecanoic Acid (PFTeDA)		--	<9.7	<3.9	<4.2	<3.9	<3.9	<3.9	<4.0	<3.8	<3.8	<4.1	<4.0	<3.9
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)		--	<9.7	<1.9	<2.1	<2.0	<2.0	<2.0	<2.0	<1.9	<1.9	<2.0	<2.0	<2.0
9-chlorohexadecafluoro-3-oxanone1-sulfonic acid (9Cl-PF3ONS)		--	<9.7	<1.9	<2.1	<2.0	<2.0	<2.0	<2.0	<1.9	<1.9	<2.0	<2.0	<2.0
4,8-dioxa-3H-perfluorononanoic acid (ADONA)		--	<9.7	<1.9	<2.1	<2.0	<2.0	<2.0	<2.0	<1.9	<1.9	<2.0	<2.0	<2.0
Hexafluoropropylene oxide dimer (HFPO-DA)		--	<9.7	<9.7	<10	<9.8	<3.9	<9.9	<9.9	<1.9	<1.9	<10	<9.9	<9.9
3-Perfluoroheptyl propanoic acid (FHpPA (7:3 FTCA))		--	--	--	--	--	--	--	--	--	<3.8	<10	<9.9	<9.9
3-Perfluoropentyl propanoic acid (FPePA (5:3 FTCA))		--	--	--	--	--	--	--	--	--	<3.8	<10	<9.9	**5.5 J**
3-Perfluoropropyl propanoic acid (FPrPA (3:3 FTCA))		--	--	--	--	--	--	--	--	--	<3.8	<10	<9.9	<9.9
Perfluorobutanesulfonamide (PFBSA)		--	--	--	--	--	--	--	--	--	<1.9	<2.0	<2.0	<2.0
Perfluoro-4-ethylcyclohexanesulfonate (PFECHS)		--	--	--	--	--	--	--	--	--	**33**	**18**	**23**	**37**
Perfluorohexanesulfonamide (PFHxSA)		--	--	--	--	--	--	--	--	--	<1.9	<2.0	<2.0	<2.0
Total Per-and Polyfluoroalkyl Substances		--	**0.0**	**22.2**	**18.4**	**7.5**	**14.0**	**7.6**	**12.2**	**20.1**	**57.5**	**26.3**	**42.2**	**60.0**

Notes
1) Detections in **bold**.
2) Concentrations in 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, October 12, 2023.
7) Concentration above the groundwater surface water interface (GSI) criteria are highlighted in yellow.
8) B - Compound also found in associated method blank.
9) I - Matrix interference with internal standard.
10) J - Estimated value less than reporting limit, but greater than MDL.
11) X - Elevated reporting limit due to matrix interference.
12) Light gray header is most recent sampling event result.
13) QA/QC Samples were either not detected above the reporting limit or below the EGLE Part 201 Groundwater Generic Cleanup Criteria.

TABLE 1
RACER Trust - Coldwater Road
Per-and Polyfluoroalkyl Substances Sampling Results
Sanitary Sewer Samples - Stanley Road

Coldwater Rd - Sanitary Sewer Samples - Stanley Road

Perfluorinated Compound / Well/Sample ID: / Sample Date:	EGLE Part 201 Generic Cleanup Criteria and Screening Levels GSI	SAN-21 (Sanitary Sewer) 6/25/2020	SAN-21 (Sanitary Sewer) 12/18/2020	SAN-21 (Sanitary Sewer) 12/19/2023	SAN-21 (Sanitary Sewer) 6/27/2024	SAN-21 (Sanitary Sewer) 12/19/2024
Perfluorobutanoic Acid (PFBA)	--	13 U	<10.0	<15 X	<16 X	**3.8 J**
Perfluoropentanoic Acid (PFPeA)	--	<4.0	<4.0	**1.2 J**	<4.1	**1.4 J**
4:2 Fluorotelomer Sulfonic Acid (4:2 FTSA)	--	<2.0	<2.0	<1.9	<2.0	<2.0
Perfluorohexanoic Acid (PFHxA)	--	<2.0	<2.0	<1.9	<2.0	**2.0 J**
Perfluorobutane Sulfonic Acid (PFBS)	**670,000**	<2.0	**2.4**	**2.9**	**2.4**	**2.7**
Perfluoroheptanoic Acid (PFHpA)	--	<2.0	<2.0	<3.9	<2.0	<2.0
Perfluoropentane Sulfonic Acid (PFPeS)	--	<2.0	<2.0	<1.9	<2.0	<2.0
6:2 Fluorotelomer Sulfonic Acid (6:2 FTSA)	--	<2.0	<2.0	<1.9	<2.0	**1.4 J**
Perfluorooctanoic Acid (**PFOA**)	**170**	<2.0	<2.0	**0.77 J**	**1.8 J**	**2.2**
Perfluorohexane Sulfonic Acid (PFHxS)	**210**	**2.0**	**2.0**	**1.2 J**	<2.0	**3.5**
Perfluorohexane Sulfonic Acid - LN (PFHxS-LN)	--	<2.0	<2.0	**1.2 J**	<2.0	**2.4**
Perfluorohexane Sulfonic Acid - BR (PFHxS-BR)	--	<2.0	<2.0	<1.9	<2.0	<2.0
Perfluorononanoic Acid (PFNA)	**30**	<2.0	<2.0	<1.9	<2.0	<2.0 **J**
8:2 Fluorotelomer Sulfonic Acid (8:2 FTSA)	--	<2.0	<2.0	<1.9	<2.0 I	<2.0
Perfluoroheptane Sulfonic Acid (PFHpS)	--	<2.0	<2.0	<1.9	<2.0	<2.0
Perfluorodecanoic Acid (PFDA)	--	<2.0	<2.0	<1.9	<2.0	<2.0
N-methyl Perfluorooctanesulfonamidoacetic Acid (N-MeFOSAA)	--	<2.0	<2.0	<1.9	<2.0	<2.0
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid (EtFOSAA)	--	<4.0	<4.0	<3.9 I	<4.1	<4.0
Perfluorooctane Sulfonic Acid (**PFOS**)	**12**	**33**	**34**	**13**	**9.9**	**19**
Perfluorooctane Sulfonic Acid (**PFOS**-LN)	--	**9.8**	**9.9**	**3.5**	**1.7 J**	**5.4**
Perfluorooctane Sulfonic Acid (**PFOS**-BR)	--	**22**	**24**	**9.6**	**6.3**	**13**
Perfluoroundecanoic Acid (PFUnDA)	--	<2.0	<2.0	<1.9	<2.0	<2.0
Perfluorononane Sulfonic Acid (PFNS)	--	<2.0	<2.0	<1.9	<2.0	<2.0
Perfluorododecanoic Acid (PFDoDA)	--	<2.0	<2.0	<1.9	<2.0	<2.0
Perfluorodecane Sulfonic Acid (PFDS)	--	<2.0	<2.0	<1.9	<2.0	<2.0
Perfluorotridecanoic Acid (PFTrDA)	--	<2.0	<2.0	<1.9	<2.0	<2.0
Perfluorooctane Sulfonamide (FOSA)	--	<2.0	<2.0	<1.9	<2.0	<2.0
Perfluorotetradecanoic Acid (PFTeDA)	--	<4.0	<4.0	<3.9	<4.1	<4.0
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	--	<2.0	<2.0	<1.9	<2.0	<2.0
9-chlorohexadecafluoro-3-oxanone1-sulfonic acid (9Cl-PF3ONS)	--	<2.0	<2.0	<1.9	<2.0	<2.0
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	--	<2.0	<2.0	<1.9	<2.0	<2.0
Hexafluoropropylene oxide dimer (HFPO-DA)	--	<2.0	<2.0	<9.7	<10	<10
3-Perfluoroheptyl propanoic acid (FHpPA (7:3 FTCA))	--	--	--	<9.7	<10	<10
3-Perfluoropentyl propanoic acid (FPePA (5:3 FTCA))	--	--	--	<9.7	<10	<10
3-Perfluoropropyl propanoic acid (FPrPA (3:3 FTCA))	--	--	--	<9.7	<10	<10
Perfluorobutanesulfonamide (PFBSA)	--	--	--	**0.66 J**	<2.0	<2.0
Perfluoro-4-ethylcyclohexanesulfonate (PFECHS)	--	--	--	**35**	**18**	**73**
Perfluorohexanesulfonamide (PFHxSA)	--	--	--	<1.9	<2.0	<2.0
Total Per-and Polyfluoroalkyl Substances	--	**48.0**	**38.4**	**54.7**	**32.1**	**109.0**

Notes
1) Detections in **bold**.
2) Concentrations in 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, October 12, 2023.
7) Concentration above the groundwater surface water interface (GSI) criteria are highlighted in yellow.
8) B - Compound also found in associated method blank.
9) I - Matrix interference with internal standard.
10) J - Estimated value less than reporting limit, but greater than MDL.
11) X - Elevated reporting limit due to matrix interference.
12) Light gray header is most recent sampling event result.
13) QA/QC Samples were either not detected above the reporting limit or below the EGLE Part 201 Groundwater Generic Cleanup Criteria.

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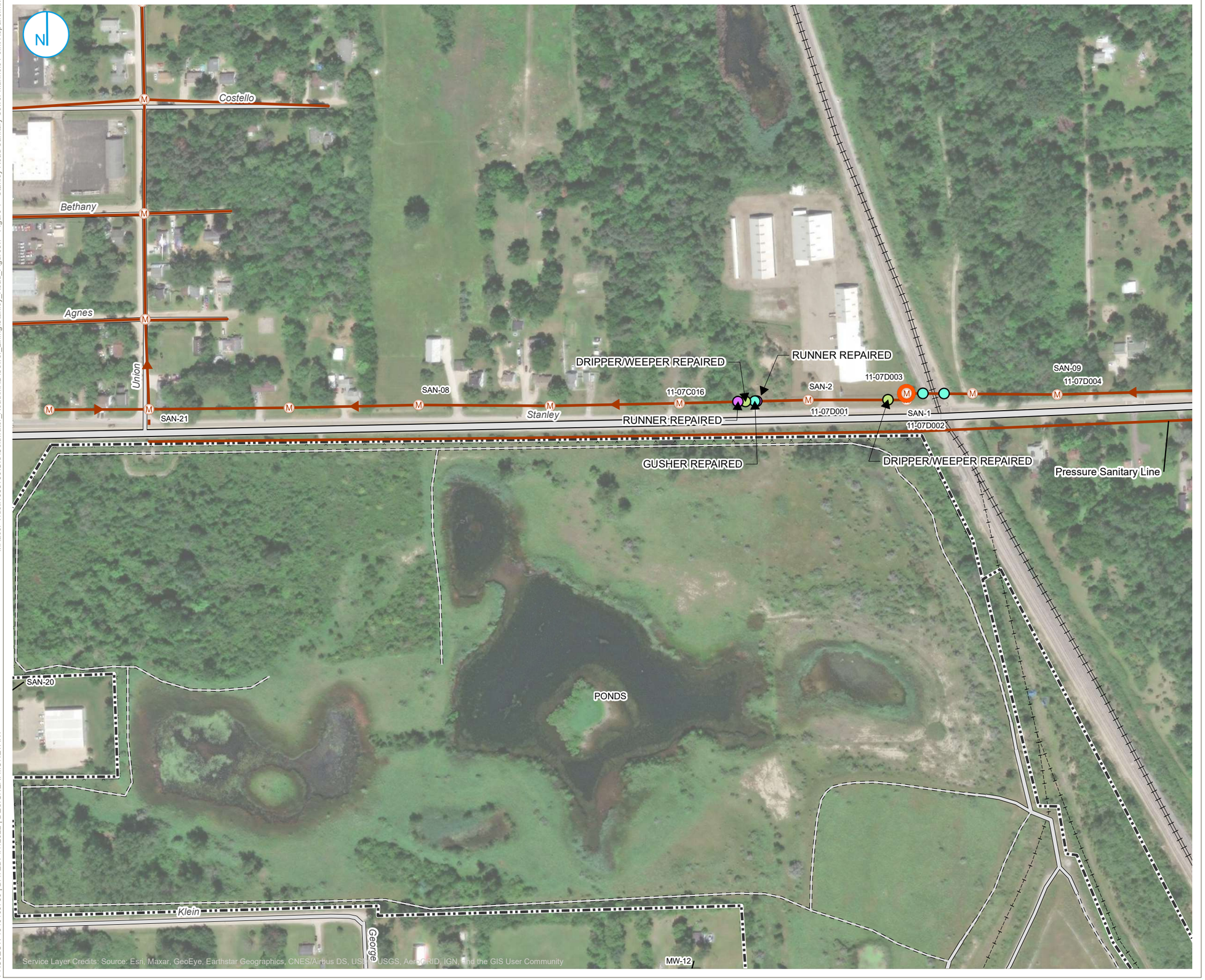
FIGURES



SANITARY SEWER MANHOLE - LINED
SANITARY SEWER MANHOLE
DRIPPER/WEEPER REPAIRED
GUSHER REPAIRED
RUNNER REPAIRED
PROPERTY BOUNDARY
SANITARY SEWER

Note
Repairs were completed in September 2020.

0 125 250
Feet

STANLEY ROAD SANITARY SEWER / MANHOLE POINT REPAIRS AND SAMPLE LOCATIONS

RACER TRUST
COLDWATER ROAD
FLINT, MICHIGAN

FIGURE 01

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.

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I:\Racer-Trust.1088190\GIS\Coldwater_Road\MXD\Sewer_Lining\Stanley_Road_Figures\1 - Figure 1 - Stanley Road Sanitary Sewer Manhole Point Repairs.mxd

PROJECT: 1940100783 | DATED: 1/7/2022 | DESIGNER: MONETANT

ATTACHMENT A
LABORATORY ANALYTICAL REPORTS

Analytical Laboratory Report

Report ID: S69830.01(01)
Generated on 12/30/2024

Report to

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

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

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)

Addtional Contacts: Kevin Schneider, Nicole Pitkorchemny

Report Summary

Lab Sample ID(s): S69830.01-S69830.05
Project: RACER Coldwater Road
Collected Date(s): 12/19/2024
Submitted Date/Time: 12/19/2024 13:10
Sampled by: Kevin Schneider
P.O. #: 1940008845 TASK37

Table of Contents

Cover Page (Page 1)
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Parameter Summary (Page 5)
Sample Summary (Page 6)

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.
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

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

Method Summary

Method	Version
ASTMD7979-19M	ASTM Method D7979 - 19 Modified (Isotopic Dilution)

Parameter Summary

Parameter	Synonym	Cas #
PFBA	Perfluorobutanoic Acid	375-22-4
PFPeA	Perfluoropentanoic Acid	2706-90-3
4:2 FTSA	4:2 Fluorotelomer Sulfonic Acid	757124-72-4
PFHxA	Perfluorohexanoic Acid	307-24-4
PFBS	Perfluorobutane sulfonic Acid	375-73-5
PFHpA	Perfluoroheptanoic Acid	375-85-9
PFPeS	Perfluoropentane Sulfonic Acid	2706-91-4
6:2 FTSA	6:2 Fluorotelomer Sulfonic Acid	27619-97-2
PFOA	Perfluorooctanoic Acid	335-67-1
PFHxS	Perfluorohexane Sulfonic Acid	355-46-4
PFHxS-LN	Perfluorohexane Sulfonic Acid - LN	355-46-4-LN
PFHxS-BR	Perfluorohexane Sulfonic Acid - BR	355-46-4-BR
PFNA	Perfluorononanoic Acid	375-95-1
8:2 FTSA	8:2 Fluorotelomer Sulfonic Acid	39108-34-4
PFHpS	Perfluoroheptane Sulfonic Acid	375-92-8
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
PFOS-LN	Perfluorooctane Sulfonic Acid - LN	1763-23-1-LN
PFOS-BR	Perfluorooctane Sulfonic Acid - BR	1763-23-1-BR
PFUnDA	Perfluoroundecanoic Acid	2058-94-8
PFNS	Perfluorononane Sulfonic Acid	68259-12-1
PFDoDA	Perfluorododecanoic Acid	307-55-1
PFDS	Perfluorodecane Sulfonic Acid	335-77-3
PFTrDA	Perfluorotridecanoic Acid	72629-94-8
FOSA	Perfluorooctane Sulfonamide	754-91-6
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
FHpPA (7:3 FTCA)	3-Perfluoroheptyl propanoic acid	812-70-4
FPePA (5:3 FTCA)	3-Perfluoropentyl propanoic acid	914637-49-3
FPrPA (3:3 FTCA)	3-Perfluoropropyl propanoic acid	356-02-5
PFBSA	Perfluorobutanesulfonamide	30334-69-1
PFECHS	Perfluoro-4-ethylcyclohexanesulfonate	67584-42-3
PFHxSA	Perfluorohexanesulfonamide	41997-13-1

Analytical Laboratory Report

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S69830.01	SAN-21-20241219	Liquid	12/19/24 10:10
S69830.02	SAN-08-20241219	Liquid	12/19/24 10:30
S69830.03	11-07C016-20241219	Liquid	12/19/24 10:45
S69830.04	SAN-2-20241219	Liquid	12/19/24 11:08
S69830.05	SAN-09-20241219	Liquid	12/19/24 11:22

Analytical Laboratory Report

Lab Sample ID: S69830.01
Sample Tag: SAN-21-20241219
Collected Date/Time: 12/19/2024 10:10
Matrix: Liquid
COC Reference: 172714

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15mL Centrifuge Tube	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.95/6.48/11	ASTMD7979-19M	12/23/24 11:00	CED	

Organics

34 PFAs, Method: ASTMD7979-19M, Run Date: 12/23/24 19:25, Analyst: CED

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	3.8	10	2.0	ng/L	2.01	375-22-4	J
PFPeA*	1.4	4.0	1.2	ng/L	2.01	2706-90-3	J
4:2 FTSA*	Not detected	2.0	0.20	ng/L	2.01	757124-72-4	
PFHxA*	2.0	2.0	1.2	ng/L	2.01	307-24-4	J
PFBS*	2.7	2.0	0.60	ng/L	2.01	375-73-5	
PFHpA*	Not detected	2.0	0.80	ng/L	2.01	375-85-9	
PFPeS*	Not detected	2.0	1.8	ng/L	2.01	2706-91-4	
6:2 FTSA*	1.4	2.0	1.0	ng/L	2.01	27619-97-2	J
PFOA*	2.2	2.0	0.80	ng/L	2.01	335-67-1	
PFHxS*	3.5	2.0	1.0	ng/L	2.01	355-46-4	
PFHxS-LN*	2.4	2.0	1.0	ng/L	2.01	355-46-4-LN	
PFHxS-BR*	Not detected	2.0	1.0	ng/L	2.01	355-46-4-BR	
PFNA*	Not detected	2.0	1.0	ng/L	2.01	375-95-1	J
8:2 FTSA*	Not detected	2.0	1.2	ng/L	2.01	39108-34-4	
PFHpS*	Not detected	2.0	0.80	ng/L	2.01	375-92-8	
PFDA*	Not detected	2.0	1.2	ng/L	2.01	335-76-2	
N-MeFOSAA*	Not detected	2.0	1.0	ng/L	2.01	2355-31-9	
EtFOSAA*	Not detected	4.0	1.0	ng/L	2.01	2991-50-6	
PFOS*	19	2.0	0.80	ng/L	2.01	1763-23-1	
PFOS-LN*	5.4	2.0	0.80	ng/L	2.01	1763-23-1-LN	
PFOS-BR*	13	2.0	0.80	ng/L	2.01	1763-23-1-BR	
PFUnDA*	Not detected	2.0	0.80	ng/L	2.01	2058-94-8	
PFNS*	Not detected	2.0	1.0	ng/L	2.01	68259-12-1	
PFDoDA*	Not detected	2.0	0.60	ng/L	2.01	307-55-1	
PFDS*	Not detected	2.0	1.0	ng/L	2.01	335-77-3	
PFTrDA*	Not detected	2.0	0.80	ng/L	2.01	72629-94-8	
FOSA*	Not detected	2.0	0.80	ng/L	2.01	754-91-6	
PFTeDA*	Not detected	4.0	0.60	ng/L	2.01	376-06-7	
11Cl-PF3OUdS*	Not detected	2.0	1.0	ng/L	2.01	763051-92-9	
9Cl-PF3ONS*	Not detected	2.0	1.0	ng/L	2.01	756426-58-1	
ADONA*	Not detected	2.0	0.60	ng/L	2.01	919005-14-4	
HFPO-DA*	Not detected	10	2.0	ng/L	2.01	13252-13-6	
FHpPA (7:3 FTCA)*	Not detected	10	8.0	ng/L	2.01	812-70-4	
FPePA (5:3 FTCA)*	Not detected	10	4.0	ng/L	2.01	914637-49-3	
FPrPA (3:3 FTCA)*	Not detected	10	4.0	ng/L	2.01	356-02-5	
PFBSA*	Not detected	2.0	0.60	ng/L	2.01	30334-69-1	

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S69830.01 (continued)

Sample Tag: SAN-21-20241219

34 PFAs, Method: ASTMD7979-19M, Run Date: 12/23/24 19:25, Analyst: CED (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFECHS*	73	2.0	0.80	ng/L	2.01	67584-42-3	
PFHxSA*	Not detected	2.0	0.60	ng/L	2.01	41997-13-1	

Analytical Laboratory Report

Lab Sample ID: S69830.02
Sample Tag: SAN-08-20241219
Collected Date/Time: 12/19/2024 10:30
Matrix: Liquid
COC Reference: 172714

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15mL Centrifuge Tube	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.98/6.48/11	ASTMD7979-19M	12/23/24 11:00	CED	

Organics

34 PFAs, Method: ASTMD7979-19M, Run Date: 12/23/24 19:45, Analyst: CED

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	10	2.0	ng/L	2	375-22-4	
PFPeA*	2.0	4.0	1.2	ng/L	2	2706-90-3	J
4:2 FTSA*	Not detected	2.0	0.20	ng/L	2	757124-72-4	
PFHxA*	3.9	2.0	1.2	ng/L	2	307-24-4	
PFBS*	1.3	2.0	0.60	ng/L	2	375-73-5	J
PFHpA*	0.96	2.0	0.80	ng/L	2	375-85-9	J
PFPeS*	Not detected	2.0	1.8	ng/L	2	2706-91-4	
6:2 FTSA*	Not detected	2.0	1.0	ng/L	2	27619-97-2	
PFOA*	1.5	2.0	0.80	ng/L	2	335-67-1	J
PFHxS*	4.3	2.0	1.0	ng/L	2	355-46-4	
PFHxS-LN*	3.1	2.0	1.0	ng/L	2	355-46-4-LN	
PFHxS-BR*	Not detected	2.0	1.0	ng/L	2	355-46-4-BR	
PFNA*	Not detected	2.0	1.0	ng/L	2	375-95-1	
8:2 FTSA*	Not detected	2.0	1.2	ng/L	2	39108-34-4	
PFHpS*	Not detected	2.0	0.80	ng/L	2	375-92-8	
PFDA*	Not detected	2.0	1.2	ng/L	2	335-76-2	
N-MeFOSAA*	Not detected	2.0	1.0	ng/L	2	2355-31-9	
EtFOSAA*	Not detected	4.0	1.0	ng/L	2	2991-50-6	
PFOS*	25	2.0	0.80	ng/L	2	1763-23-1	
PFOS-LN*	7.9	2.0	0.80	ng/L	2	1763-23-1-LN	
PFOS-BR*	16	2.0	0.80	ng/L	2	1763-23-1-BR	
PFUnDA*	Not detected	2.0	0.80	ng/L	2	2058-94-8	
PFNS*	Not detected	2.0	1.0	ng/L	2	68259-12-1	
PFDoDA*	Not detected	2.0	0.60	ng/L	2	307-55-1	
PFDS*	Not detected	2.0	1.0	ng/L	2	335-77-3	
PFTrDA*	Not detected	2.0	0.80	ng/L	2	72629-94-8	
FOSA*	Not detected	2.0	0.80	ng/L	2	754-91-6	
PFTeDA*	Not detected	4.0	0.60	ng/L	2	376-06-7	
11Cl-PF3OUdS*	Not detected	2.0	1.0	ng/L	2	763051-92-9	
9Cl-PF3ONS*	Not detected	2.0	1.0	ng/L	2	756426-58-1	
ADONA*	Not detected	2.0	0.60	ng/L	2	919005-14-4	
HFPO-DA*	Not detected	10	2.0	ng/L	2	13252-13-6	
FHpPA (7:3 FTCA)*	Not detected	10	8.0	ng/L	2	812-70-4	
FPePA (5:3 FTCA)*	Not detected	10	4.0	ng/L	2	914637-49-3	
FPrPA (3:3 FTCA)*	Not detected	10	4.0	ng/L	2	356-02-5	
PFBSA*	Not detected	2.0	0.60	ng/L	2	30334-69-1	

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S69830.02 (continued)

Sample Tag: SAN-08-20241219

34 PFAs, Method: ASTMD7979-19M, Run Date: 12/23/24 19:45, Analyst: CED (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFECHS*	74	2.0	0.80	ng/L	2	67584-42-3	
PFHxSA*	Not detected	2.0	0.60	ng/L	2	41997-13-1	

Analytical Laboratory Report

Lab Sample ID: S69830.03
Sample Tag: 11-07C016-20241219
Collected Date/Time: 12/19/2024 10:45
Matrix: Liquid
COC Reference: 172714

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15mL Centrifuge Tube	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	12.30/6.48/11	ASTMD7979-19M	12/23/24 11:00	CED	

Organics

34 PFAs, Method: ASTMD7979-19M, Run Date: 12/23/24 20:05, Analyst: CED

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	9.5	1.9	ng/L	1.89	375-22-4	
PFPeA*	Not detected	3.8	1.1	ng/L	1.89	2706-90-3	
4:2 FTSA*	Not detected	1.9	0.19	ng/L	1.89	757124-72-4	
PFHxA*	3.5	1.9	1.1	ng/L	1.89	307-24-4	
PFBS*	1.2	1.9	0.57	ng/L	1.89	375-73-5	J
PFHpA*	0.96	1.9	0.76	ng/L	1.89	375-85-9	J
PFPeS*	Not detected	1.9	1.7	ng/L	1.89	2706-91-4	
6:2 FTSA*	Not detected	1.9	0.95	ng/L	1.89	27619-97-2	
PFOA*	1.3	1.9	0.76	ng/L	1.89	335-67-1	J
PFHxS*	3.4	1.9	0.95	ng/L	1.89	355-46-4	
PFHxS-LN*	2.2	1.9	0.95	ng/L	1.89	355-46-4-LN	
PFHxS-BR*	Not detected	1.9	0.95	ng/L	1.89	355-46-4-BR	
PFNA*	Not detected	1.9	0.95	ng/L	1.89	375-95-1	
8:2 FTSA*	Not detected	1.9	1.1	ng/L	1.89	39108-34-4	
PFHpS*	Not detected	1.9	0.76	ng/L	1.89	375-92-8	
PFDA*	Not detected	1.9	1.1	ng/L	1.89	335-76-2	
N-MeFOSAA*	Not detected	1.9	0.95	ng/L	1.89	2355-31-9	
EtFOSAA*	Not detected	3.8	0.95	ng/L	1.89	2991-50-6	
PFOS*	22	1.9	0.76	ng/L	1.89	1763-23-1	
PFOS-LN*	5.9	1.9	0.76	ng/L	1.89	1763-23-1-LN	
PFOS-BR*	15	1.9	0.76	ng/L	1.89	1763-23-1-BR	
PFUnDA*	Not detected	1.9	0.76	ng/L	1.89	2058-94-8	
PFNS*	Not detected	1.9	0.95	ng/L	1.89	68259-12-1	
PFDoDA*	Not detected	1.9	0.57	ng/L	1.89	307-55-1	
PFDS*	Not detected	1.9	0.95	ng/L	1.89	335-77-3	
PFTrDA*	Not detected	1.9	0.76	ng/L	1.89	72629-94-8	
FOSA*	Not detected	1.9	0.76	ng/L	1.89	754-91-6	
PFTeDA*	Not detected	3.8	0.57	ng/L	1.89	376-06-7	
11Cl-PF3OUdS*	Not detected	1.9	0.95	ng/L	1.89	763051-92-9	
9Cl-PF3ONS*	Not detected	1.9	0.95	ng/L	1.89	756426-58-1	
ADONA*	Not detected	1.9	0.57	ng/L	1.89	919005-14-4	
HFPO-DA*	Not detected	9.5	1.9	ng/L	1.89	13252-13-6	
FHpPA (7:3 FTCA)*	Not detected	9.5	7.6	ng/L	1.89	812-70-4	
FPePA (5:3 FTCA)*	Not detected	9.5	3.8	ng/L	1.89	914637-49-3	
FPrPA (3:3 FTCA)*	Not detected	9.5	3.8	ng/L	1.89	356-02-5	
PFBSA*	Not detected	1.9	0.57	ng/L	1.89	30334-69-1	

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S69830.03 (continued)

Sample Tag: 11-07C016-20241219

34 PFAs, Method: ASTMD7979-19M, Run Date: 12/23/24 20:05, Analyst: CED (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFECHS*	76	1.9	0.76	ng/L	1.89	67584-42-3	
PFHxSA*	Not detected	1.9	0.57	ng/L	1.89	41997-13-1	

Lab Sample ID: S69830.04
Sample Tag: SAN-2-20241219
Collected Date/Time: 12/19/2024 11:08
Matrix: Liquid
COC Reference: 172714

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15mL Centrifuge Tube	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.63/6.48/10	ASTMD7979-19M	12/23/24 11:00	CED	

Organics

34 PFAs, Method: ASTMD7979-19M, Run Date: 12/23/24 20:25, Analyst: CED

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	9.7	1.9	ng/L	1.94	375-22-4	
PFPeA*	1.4	3.9	1.2	ng/L	1.94	2706-90-3	J
4:2 FTSA*	Not detected	1.9	0.19	ng/L	1.94	757124-72-4	I
PFHxA*	3.8	1.9	1.2	ng/L	1.94	307-24-4	
PFBS*	2.8	1.9	0.58	ng/L	1.94	375-73-5	
PFHpA*	1.2	1.9	0.78	ng/L	1.94	375-85-9	J
PFPeS*	Not detected	1.9	1.7	ng/L	1.94	2706-91-4	
6:2 FTSA*	Not detected	1.9	0.97	ng/L	1.94	27619-97-2	
PFOA*	2.7	1.9	0.78	ng/L	1.94	335-67-1	
PFHxS*	5.0	1.9	0.97	ng/L	1.94	355-46-4	
PFHxS-LN*	3.4	1.9	0.97	ng/L	1.94	355-46-4-LN	
PFHxS-BR*	1.4	1.9	0.97	ng/L	1.94	355-46-4-BR	J
PFNA*	Not detected	1.9	0.97	ng/L	1.94	375-95-1	
8:2 FTSA*	Not detected	1.9	1.2	ng/L	1.94	39108-34-4	
PFHpS*	Not detected	1.9	0.78	ng/L	1.94	375-92-8	
PFDA*	Not detected	1.9	1.2	ng/L	1.94	335-76-2	
N-MeFOSAA*	Not detected	1.9	0.97	ng/L	1.94	2355-31-9	
EtFOSAA*	Not detected	3.9	0.97	ng/L	1.94	2991-50-6	
PFOS*	27	1.9	0.78	ng/L	1.94	1763-23-1	
PFOS-LN*	6.1	1.9	0.78	ng/L	1.94	1763-23-1-LN	
PFOS-BR*	19	1.9	0.78	ng/L	1.94	1763-23-1-BR	
PFUnDA*	Not detected	1.9	0.78	ng/L	1.94	2058-94-8	
PFNS*	Not detected	1.9	0.97	ng/L	1.94	68259-12-1	
PFDoDA*	Not detected	1.9	0.58	ng/L	1.94	307-55-1	
PFDS*	Not detected	1.9	0.97	ng/L	1.94	335-77-3	
PFTrDA*	Not detected	1.9	0.78	ng/L	1.94	72629-94-8	
FOSA*	Not detected	1.9	0.78	ng/L	1.94	754-91-6	
PFTeDA*	Not detected	3.9	0.58	ng/L	1.94	376-06-7	
11Cl-PF3OUdS*	Not detected	1.9	0.97	ng/L	1.94	763051-92-9	
9Cl-PF3ONS*	Not detected	1.9	0.97	ng/L	1.94	756426-58-1	
ADONA*	Not detected	1.9	0.58	ng/L	1.94	919005-14-4	
HFPO-DA*	Not detected	9.7	1.9	ng/L	1.94	13252-13-6	
FHpPA (7:3 FTCA)*	Not detected	9.7	7.8	ng/L	1.94	812-70-4	
FPePA (5:3 FTCA)*	Not detected	9.7	3.9	ng/L	1.94	914637-49-3	
FPrPA (3:3 FTCA)*	Not detected	9.7	3.9	ng/L	1.94	356-02-5	

J-Estimated value less than reporting limit, but greater than MDL
I-Matrix interference with internal standard

Lab Sample ID: S69830.04 (continued)

Sample Tag: SAN-2-20241219

34 PFAs, Method: ASTMD7979-19M, Run Date: 12/23/24 20:25, Analyst: CED (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBSA*	Not detected	1.9	0.58	ng/L	1.94	30334-69-1	
PFECHS*	100	1.9	0.78	ng/L	1.94	67584-42-3	
PFHxSA*	Not detected	1.9	0.58	ng/L	1.94	41997-13-1	

Lab Sample ID: S69830.05
Sample Tag: SAN-09-20241219
Collected Date/Time: 12/19/2024 11:22
Matrix: Liquid
COC Reference: 172714

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15mL Centrifuge Tube	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.56/6.48/10	ASTMD7979-19M	12/23/24 11:00	CED	

Organics

34 PFAs, Method: ASTMD7979-19M, Run Date: 12/23/24 20:45, Analyst: CED

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	9.9	2.0	ng/L	1.97	375-22-4	
PFPeA*	1.9	3.9	1.2	ng/L	1.97	2706-90-3	J
4:2 FTSA*	Not detected	2.0	0.20	ng/L	1.97	757124-72-4	
PFHxA*	2.5	2.0	1.2	ng/L	1.97	307-24-4	
PFBS*	1.2	2.0	0.59	ng/L	1.97	375-73-5	J
PFHpA*	Not detected	2.0	0.79	ng/L	1.97	375-85-9	
PFPeS*	Not detected	2.0	1.8	ng/L	1.97	2706-91-4	
6:2 FTSA*	Not detected	2.0	0.99	ng/L	1.97	27619-97-2	
PFOA*	0.97	2.0	0.79	ng/L	1.97	335-67-1	J
PFHxS*	1.9	2.0	0.99	ng/L	1.97	355-46-4	J
PFHxS-LN*	1.1	2.0	0.99	ng/L	1.97	355-46-4-LN	J
PFHxS-BR*	Not detected	2.0	0.99	ng/L	1.97	355-46-4-BR	
PFNA*	Not detected	2.0	0.99	ng/L	1.97	375-95-1	
8:2 FTSA*	Not detected	2.0	1.2	ng/L	1.97	39108-34-4	
PFHpS*	Not detected	2.0	0.79	ng/L	1.97	375-92-8	
PFDA*	Not detected	2.0	1.2	ng/L	1.97	335-76-2	
N-MeFOSAA*	Not detected	2.0	0.99	ng/L	1.97	2355-31-9	
EtFOSAA*	Not detected	3.9	0.99	ng/L	1.97	2991-50-6	
PFOS*	9.0	2.0	0.79	ng/L	1.97	1763-23-1	
PFOS-LN*	1.1	2.0	0.79	ng/L	1.97	1763-23-1-LN	J
PFOS-BR*	7.0	2.0	0.79	ng/L	1.97	1763-23-1-BR	
PFUnDA*	Not detected	2.0	0.79	ng/L	1.97	2058-94-8	
PFNS*	Not detected	2.0	0.99	ng/L	1.97	68259-12-1	
PFDoDA*	Not detected	2.0	0.59	ng/L	1.97	307-55-1	
PFDS*	Not detected	2.0	0.99	ng/L	1.97	335-77-3	
PFTrDA*	Not detected	2.0	0.79	ng/L	1.97	72629-94-8	
FOSA*	Not detected	2.0	0.79	ng/L	1.97	754-91-6	
PFTeDA*	Not detected	3.9	0.59	ng/L	1.97	376-06-7	
11Cl-PF3OUdS*	Not detected	2.0	0.99	ng/L	1.97	763051-92-9	
9Cl-PF3ONS*	Not detected	2.0	0.99	ng/L	1.97	756426-58-1	
ADONA*	Not detected	2.0	0.59	ng/L	1.97	919005-14-4	
HFPO-DA*	Not detected	9.9	2.0	ng/L	1.97	13252-13-6	
FHpPA (7:3 FTCA)*	Not detected	9.9	7.9	ng/L	1.97	812-70-4	
FPePA (5:3 FTCA)*	5.5	9.9	3.9	ng/L	1.97	914637-49-3	J
FPrPA (3:3 FTCA)*	Not detected	9.9	3.9	ng/L	1.97	356-02-5	
PFBSA*	Not detected	2.0	0.59	ng/L	1.97	30334-69-1	

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S69830.05 (continued)

Sample Tag: SAN-09-20241219

34 PFAs, Method: ASTMD7979-19M, Run Date: 12/23/24 20:45, Analyst: CED (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFECHS*	37	2.0	0.79	ng/L	1.97	67584-42-3	
PFHxSA*	Not detected	2.0	0.59	ng/L	1.97	41997-13-1	

Merit Laboratories Login Checklist

Lab Set ID: S69830
Client: RAMBOLL (Ramboll Americas)
Project: RACER Coldwater Road
Submitted: 12/19/2024 13:10 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 4.2
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, TOX, DO or Alkalinity bottles contain	

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

172714

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.: CELL NO.: 313-333-0211 P.O. NO.: 1940008845 Task 37
E-MAIL ADDRESS: Kevin.Schneider@Ramboll.com; 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: RALER Coldwater Road
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Kevin Schneider

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

DELIVERABLES REQUIRED ☒ 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 (7075)	Special Instructions
698301	12/19/24	1010	SAN-21 - 20241219	L	3	X							X	low level reporting
.02		1030	SAN-08 - 20241219	L	3	X							X	with estimated values
.03		1045	11-07C016 - 20241219	L	3	X							X	
.04		1108	SAN-2 - 20241219	L	3	X							X	34 PFAS List
.05	↓	1122	SAN-09 - 20241219	L	3	X							X	
														Please Provide EDD

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☒ Sampler	DATE 12/19/24	TIME 1225
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 12/19/24	TIME 1842
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 12/19/24	TIME 1311
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 12/19/24	TIME 1310

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 4.2

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

Rev. 05/24

Quality Control Report

Report ID: QC-S69830-01
Generated on 01/02/2025

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): S69830.01-S69830.05
Project: RACER Coldwater Road
Submitted Date/Time: 12/19/2024 13:10
Sampled by: Kevin Schneider
P.O. #: 1940008845 TASK37

QC Report Sections

Cover Page (Page 1)
Analysis Summary (Pages 2-6)
Prep Batch Summary (Page 7)
Internal Standards per Lab Sample (Pages 8-12)
Internal Standards per QC Sample (Pages 13-17)
Batch QC Results (Pages 18-22)

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: S69830.01
Sample Tag: SAN-21-20241219
Collected Date/Time: 12/19/2024 10:10
Matrix: Liquid
COC Reference: 172714

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
Organics - Volatiles						
34 PFAs	ASTMD7979-19M	12/23/24 19:25	AK241223W1	PF241223W1	Yes	BLK/LCS/LCSD/MS/DU

QC Report - Analysis Summary

Lab Sample ID: S69830.02
Sample Tag: SAN-08-20241219
Collected Date/Time: 12/19/2024 10:30
Matrix: Liquid
COC Reference: 172714

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
Organics - Volatiles						
34 PFAs	ASTMD7979-19M	12/23/24 19:45	AK241223W1	PF241223W1	Yes	BLK/LCS/LCSD/MS/DU

QC Report - Analysis Summary

Lab Sample ID: S69830.03
Sample Tag: 11-07C016-20241219
Collected Date/Time: 12/19/2024 10:45
Matrix: Liquid
COC Reference: 172714

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
Organics - Volatiles						
34 PFAs	ASTMD7979-19M	12/23/24 20:05	AK241223W1	PF241223W1	Yes	BLK/LCS/LCSD/MS/DU

QC Report - Analysis Summary

Lab Sample ID: S69830.04
Sample Tag: SAN-2-20241219
Collected Date/Time: 12/19/2024 11:08
Matrix: Liquid
COC Reference: 172714

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
Organics - Volatiles						
34 PFAs	ASTMD7979-19M	12/23/24 20:25	AK241223	PF241223W1	Yes	BLK/LCS/LCSD/MS/DU

QC Report - Analysis Summary

Lab Sample ID: S69830.05
Sample Tag: SAN-09-20241219
Collected Date/Time: 12/19/2024 11:22
Matrix: Liquid
COC Reference: 172714

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
Organics - Volatiles						
34 PFAs	ASTMD7979-19M	12/23/24 20:45	AK241223W1	PF241223W1	Yes	BLK/LCS/LCSD/MS/DU

QC Report - Prep Batch Summary

Organics - Volatiles, Prep Batch ID: PF241223W1

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

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S69830.01	34 PFAs	ASTMD7979-19M	12/23/24 19:25	AK241223W1
S69830.02	34 PFAs	ASTMD7979-19M	12/23/24 19:45	AK241223W1
S69830.03	34 PFAs	ASTMD7979-19M	12/23/24 20:05	AK241223W1
S69830.04	34 PFAs	ASTMD7979-19M	12/23/24 20:25	AK241223
S69830.05	34 PFAs	ASTMD7979-19M	12/23/24 20:45	AK241223W1

QC Report - Internal Standards per Lab Sample

Lab Sample ID: S69830.01

Sample Tag: SAN-21-20241219

Collected Date/Time: 12/19/2024 10:10

Matrix: Liquid

COC Reference: 172714

Organics - Volatiles, Analysis: 34 PFAs

Run in Batch: AK241223W1, Run Date: 12/23/2024 19:25, Matrix: WW, Dilution: 2.01

Internal Standard	Flags	%Rec	LCL	UCL
M2-4:2FTSA		**105.6**	50.0	150.0
M2-6:2FTSA		**114.3**	50.0	150.0
M2-8:2FTSA		**130.1**	50.0	150.0
M2PFTeDA		**114.7**	12.0	218.0
M3PFBS		**116.9**	50.0	150.0
M3PFHxS		**120.6**	50.0	150.0
M4PFHpA		**107.7**	50.0	150.0
M5PFHxA		**114.7**	50.0	150.0
M5PFPeA		**112.8**	50.0	150.0
M6PFDA		**111.6**	50.0	150.0
M7PFUnDA		**111.1**	50.0	150.0
M8FOSA		**113.6**	50.0	150.0
M8PFOA		**104.1**	50.0	150.0
M8PFOS		**122.5**	50.0	150.0
M9-PFNA		**117.2**	50.0	150.0
MPFBA		**114.0**	50.0	150.0
MPFDoDA		**110.4**	50.0	150.0
d3N-MeFOSAA		**91.8**	50.0	150.0
d5EtFOSAA		**107.5**	50.0	150.0
MHFPO-DA		**130.6**	50.0	150.0
d-N-EtFOSA-M		**108.8**	50.0	150.0
d-N-MeFOSA-M		**102.2**	50.0	150.0
d7-N-MeFOSE-M		**115.8**	50.0	150.0
d9-N-EtFOSE-M		**103.9**	50.0	150.0

QC Report - Internal Standards per Lab Sample

Lab Sample ID: S69830.02

Sample Tag: SAN-08-20241219

Collected Date/Time: 12/19/2024 10:30

Matrix: Liquid

COC Reference: 172714

Organics - Volatiles, Analysis: 34 PFAs

Run in Batch: AK241223W1, Run Date: 12/23/2024 19:45, Matrix: WW, Dilution: 2

Internal Standard	Flags	%Rec	LCL	UCL
M2-4:2FTSA		**106.8**	50.0	150.0
M2-6:2FTSA		**124.8**	50.0	150.0
M2-8:2FTSA		**115.8**	50.0	150.0
M2PFTeDA		**139.6**	12.0	218.0
M3PFBS		**112.1**	50.0	150.0
M3PFHxS		**102.5**	50.0	150.0
M4PFHpA		**105.8**	50.0	150.0
M5PFHxA		**108.5**	50.0	150.0
M5PFPeA		**102.0**	50.0	150.0
M6PFDA		**104.1**	50.0	150.0
M7PFUnDA		**104.7**	50.0	150.0
M8FOSA		**109.1**	50.0	150.0
M8PFOA		**105.6**	50.0	150.0
M8PFOS		**125.7**	50.0	150.0
M9-PFNA		**118.7**	50.0	150.0
MPFBA		**110.3**	50.0	150.0
MPFDoDA		**110.0**	50.0	150.0
d3N-MeFOSAA		**99.6**	50.0	150.0
d5EtFOSAA		**103.7**	50.0	150.0
MHFPO-DA		**114.0**	50.0	150.0
d-N-EtFOSA-M		**102.2**	50.0	150.0
d-N-MeFOSA-M		**106.5**	50.0	150.0
d7-N-MeFOSE-M		**109.2**	50.0	150.0
d9-N-EtFOSE-M		**103.6**	50.0	150.0

QC Report - Internal Standards per Lab Sample

Lab Sample ID: S69830.03

Sample Tag: 11-07C016-20241219

Collected Date/Time: 12/19/2024 10:45

Matrix: Liquid

COC Reference: 172714

Organics - Volatiles, Analysis: 34 PFAs

Run in Batch: AK241223W1, Run Date: 12/23/2024 20:05, Matrix: WW, Dilution: 1.89

Internal Standard	Flags	%Rec	LCL	UCL
M2-4:2FTSA		**97.1**	50.0	150.0
M2-6:2FTSA		**102.5**	50.0	150.0
M2-8:2FTSA		**110.0**	50.0	150.0
M2PFTeDA		**103.3**	12.0	218.0
M3PFBS		**104.5**	50.0	150.0
M3PFHxS		**110.2**	50.0	150.0
M4PFHpA		**98.5**	50.0	150.0
M5PFHxA		**109.0**	50.0	150.0
M5PFPeA		**107.8**	50.0	150.0
M6PFDA		**102.1**	50.0	150.0
M7PFUnDA		**100.7**	50.0	150.0
M8FOSA		**109.6**	50.0	150.0
M8PFOA		**104.8**	50.0	150.0
M8PFOS		**110.8**	50.0	150.0
M9-PFNA		**107.4**	50.0	150.0
MPFBA		**113.5**	50.0	150.0
MPFDoDA		**97.6**	50.0	150.0
d3N-MeFOSAA		**102.5**	50.0	150.0
d5EtFOSAA		**104.7**	50.0	150.0
MHFPO-DA		**113.9**	50.0	150.0
d-N-EtFOSA-M		**88.4**	50.0	150.0
d-N-MeFOSA-M		**96.7**	50.0	150.0
d7-N-MeFOSE-M		**109.4**	50.0	150.0
d9-N-EtFOSE-M		**98.5**	50.0	150.0

QC Report - Internal Standards per Lab Sample

Lab Sample ID: S69830.04

Sample Tag: SAN-2-20241219

Collected Date/Time: 12/19/2024 11:08

Matrix: Liquid

COC Reference: 172714

Organics - Volatiles, Analysis: 34 PFAs

Run in Batch: AK241223, Run Date: 12/23/2024 20:25, Matrix: WW, Dilution: 1.94

Internal Standard	Flags	%Rec	LCL	UCL
M2-4:2FTSA	*	**165.4**	50.0	150.0
M2-6:2FTSA		**128.5**	50.0	150.0
M2-8:2FTSA		**112.1**	50.0	150.0
M2PFTeDA		**97.5**	12.0	218.0
M3PFBS		**113.4**	50.0	150.0
M3PFHxS		**109.3**	50.0	150.0
M4PFHpA		**111.4**	50.0	150.0
M5PFHxA		**127.4**	50.0	150.0
M5PFPeA		**118.2**	50.0	150.0
M6PFDA		**103.3**	50.0	150.0
M7PFUnDA		**109.2**	50.0	150.0
M8FOSA		**108.5**	50.0	150.0
M8PFOA		**100.2**	50.0	150.0
M8PFOS		**120.2**	50.0	150.0
M9-PFNA		**114.7**	50.0	150.0
MPFBA		**127.5**	50.0	150.0
MPFDoDA		**105.3**	50.0	150.0
d3N-MeFOSAA		**106.3**	50.0	150.0
d5EtFOSAA		**115.6**	50.0	150.0
MHFPO-DA		**116.2**	50.0	150.0
d-N-EtFOSA-M		**103.8**	50.0	150.0
d-N-MeFOSA-M		**102.0**	50.0	150.0
d7-N-MeFOSE-M		**117.6**	50.0	150.0
d9-N-EtFOSE-M		**102.0**	50.0	150.0

QC Report - Internal Standards per Lab Sample

Lab Sample ID: S69830.05

Sample Tag: SAN-09-20241219

Collected Date/Time: 12/19/2024 11:22

Matrix: Liquid

COC Reference: 172714

Organics - Volatiles, Analysis: 34 PFAs

Run in Batch: AK241223W1, Run Date: 12/23/2024 20:45, Matrix: WW, Dilution: 1.97

Internal Standard	Flags	**%Rec**	LCL	UCL
M2-4:2FTSA		**129.5**	50.0	150.0
M2-6:2FTSA		**114.0**	50.0	150.0
M2-8:2FTSA		**114.1**	50.0	150.0
M2PFTeDA		**116.1**	12.0	218.0
M3PFBS		**110.0**	50.0	150.0
M3PFHxS		**107.1**	50.0	150.0
M4PFHpA		**106.7**	50.0	150.0
M5PFHxA		**119.8**	50.0	150.0
M5PFPeA		**112.2**	50.0	150.0
M6PFDA		**101.1**	50.0	150.0
M7PFUnDA		**108.1**	50.0	150.0
M8FOSA		**107.6**	50.0	150.0
M8PFOA		**97.7**	50.0	150.0
M8PFOS		**111.8**	50.0	150.0
M9-PFNA		**105.7**	50.0	150.0
MPFBA		**114.2**	50.0	150.0
MPFDoDA		**108.6**	50.0	150.0
d3N-MeFOSAA		**98.4**	50.0	150.0
d5EtFOSAA		**94.8**	50.0	150.0
MHFPO-DA		**115.1**	50.0	150.0
d-N-EtFOSA-M		**105.5**	50.0	150.0
d-N-MeFOSA-M		**102.5**	50.0	150.0
d7-N-MeFOSE-M		**104.8**	50.0	150.0
d9-N-EtFOSE-M		**108.1**	50.0	150.0

QC Report - Internal Standards per QC Sample

Organics - Volatiles, Prep Batch ID: PF241223W1

QC Types: BLK/LCS/LCSD/MS/DUP

Blank (BLK)

Lab Sample ID: AK241223W1.BLK241223

Run in Batch: AK241223W1, Run Date: 12/23/2024 15:05, Prep Date: 12/23/2024, Matrix: WW, Dilution: 1

Internal Standard	Flags	%Rec	LCL	UCL
M2-4:2FTSA		**105.0**	50.0	150.0
M2-6:2FTSA		**111.0**	50.0	150.0
M2-8:2FTSA		**116.5**	50.0	150.0
M2PFTeDA		**83.5**	12.0	218.0
M3PFBS		**105.6**	50.0	150.0
M3PFHxS		**100.3**	50.0	150.0
M4PFHpA		**97.1**	50.0	150.0
M5PFHxA		**105.3**	50.0	150.0
M5PFPeA		**100.5**	50.0	150.0
M6PFDA		**100.8**	50.0	150.0
M7PFUnDA		**100.4**	50.0	150.0
M8FOSA		**96.6**	50.0	150.0
M8PFOA		**97.8**	50.0	150.0
M8PFOS		**117.5**	50.0	150.0
M9-PFNA		**93.4**	50.0	150.0
MPFBA		**103.2**	50.0	150.0
MPFDoDA		**93.7**	50.0	150.0
d3N-MeFOSAA		**101.3**	50.0	150.0
d5EtFOSAA		**103.8**	50.0	150.0
MHFPO-DA		**108.7**	50.0	150.0
d-N-EtFOSA-M		**92.1**	50.0	150.0
d-N-MeFOSA-M		**88.5**	50.0	150.0
d7-N-MeFOSE-M		**101.0**	50.0	150.0
d9-N-EtFOSE-M		**88.6**	50.0	150.0

Laboratory Control Sample (LCS)

Lab Sample ID: AK241223W1.LCS241223

Run in Batch: AK241223W1, Run Date: 12/23/2024 14:25, Prep Date: 12/23/2024, Matrix: WW, Dilution: 1

Internal Standard	Flags	%Rec	LCL	UCL
M2-4:2FTSA		**106.8**	50.0	150.0
M2-6:2FTSA		**112.9**	50.0	150.0
M2-8:2FTSA		**105.7**	50.0	150.0
M2PFTeDA		**90.9**	12.0	218.0
M3PFBS		**108.7**	50.0	150.0
M3PFHxS		**105.3**	50.0	150.0
M4PFHpA		**100.9**	50.0	150.0
M5PFHxA		**111.4**	50.0	150.0
M5PFPeA		**107.9**	50.0	150.0
M6PFDA		**104.4**	50.0	150.0
M7PFUnDA		**109.8**	50.0	150.0
M8FOSA		**102.1**	50.0	150.0
M8PFOA		**102.1**	50.0	150.0
M8PFOS		**107.3**	50.0	150.0
M9-PFNA		**104.8**	50.0	150.0
MPFBA		**102.6**	50.0	150.0
MPFDoDA		**96.8**	50.0	150.0
d3N-MeFOSAA		**108.9**	50.0	150.0
d5EtFOSAA		**110.5**	50.0	150.0
MHFPO-DA		**107.9**	50.0	150.0
d-N-EtFOSA-M		**103.0**	50.0	150.0
d-N-MeFOSA-M		**91.9**	50.0	150.0
d7-N-MeFOSE-M		**104.9**	50.0	150.0
d9-N-EtFOSE-M		**87.3**	50.0	150.0

Laboratory Control Sample Duplicate (LCSD)

Lab Sample ID: AK241223W1.LCSD241223, Parent Sample ID: AK241223W1.LCS241223

Run in Batch: AK241223W1, Run Date: 12/23/2024 14:45, Prep Date: 12/23/2024, Matrix: WW, Dilution: 1

Internal Standard	Flags	%Rec	LCL	UCL
M2-4:2FTSA		**100.8**	50.0	150.0
M2-6:2FTSA		**107.8**	50.0	150.0
M2-8:2FTSA		**115.0**	50.0	150.0
M2PFTeDA		**98.0**	12.0	218.0
M3PFBS		**106.0**	50.0	150.0
M3PFHxS		**104.1**	50.0	150.0
M4PFHpA		**103.7**	50.0	150.0
M5PFHxA		**112.0**	50.0	150.0
M5PFPeA		**105.6**	50.0	150.0
M6PFDA		**101.2**	50.0	150.0
M7PFUnDA		**98.9**	50.0	150.0
M8FOSA		**102.8**	50.0	150.0
M8PFOA		**106.2**	50.0	150.0
M8PFOS		**115.5**	50.0	150.0
M9-PFNA		**99.8**	50.0	150.0
MPFBA		**104.4**	50.0	150.0
MPFDoDA		**93.1**	50.0	150.0
d3N-MeFOSAA		**100.6**	50.0	150.0
d5EtFOSAA		**102.3**	50.0	150.0
MHFPO-DA		**104.1**	50.0	150.0
d-N-EtFOSA-M		**100.3**	50.0	150.0
d-N-MeFOSA-M		**100.5**	50.0	150.0
d7-N-MeFOSE-M		**97.7**	50.0	150.0
d9-N-EtFOSE-M		**91.8**	50.0	150.0

Matrix Spike (MS)

Lab Sample ID: AK241223W1.6982801M, Parent Sample ID: S69828.01

Run in Batch: AK241223W1, Run Date: 12/23/2024 18:25, Prep Date: 12/23/2024, Matrix: WW, Dilution: 1.92

Internal Standard	Flags	%Rec	LCL	UCL
M2-4:2FTSA		**126.2**	50.0	150.0
M2-6:2FTSA		**112.7**	50.0	150.0
M2-8:2FTSA		**98.7**	50.0	150.0
M2PFTeDA		**111.6**	12.0	218.0
M3PFBS		**106.2**	50.0	150.0
M3PFHxS		**109.0**	50.0	150.0
M4PFHpA		**96.0**	50.0	150.0
M5PFHxA		**109.3**	50.0	150.0
M5PFPeA		**100.6**	50.0	150.0
M6PFDA		**110.4**	50.0	150.0
M7PFUnDA		**94.8**	50.0	150.0
M8FOSA		**106.5**	50.0	150.0
M8PFOA		**100.2**	50.0	150.0
M8PFOS		**113.1**	50.0	150.0
M9-PFNA		**110.1**	50.0	150.0
MPFBA		**96.9**	50.0	150.0
MPFDoDA		**98.9**	50.0	150.0
d3N-MeFOSAA		**102.4**	50.0	150.0
d5EtFOSAA		**91.5**	50.0	150.0
MHFPO-DA		**103.5**	50.0	150.0
d-N-EtFOSA-M		**101.0**	50.0	150.0
d-N-MeFOSA-M		**99.9**	50.0	150.0
d7-N-MeFOSE-M		**104.2**	50.0	150.0
d9-N-EtFOSE-M		**100.1**	50.0	150.0

Duplicate (DUP)

Lab Sample ID: AK241223W1.6982802D, Parent Sample ID: S69828.02

Run in Batch: AK241223W1, Run Date: 12/23/2024 19:05, Prep Date: 12/23/2024, Matrix: WW, Dilution: 1.92

Internal Standard	Flags	%Rec	LCL	UCL
M2-4:2FTSA		**94.9**	50.0	150.0
M2-6:2FTSA		**114.2**	50.0	150.0
M2-8:2FTSA		**109.3**	50.0	150.0
M2PFTeDA		**104.9**	12.0	218.0
M3PFBS		**101.6**	50.0	150.0
M3PFHxS		**103.3**	50.0	150.0
M4PFHpA		**98.0**	50.0	150.0
M5PFHxA		**113.7**	50.0	150.0
M5PFPeA		**102.9**	50.0	150.0
M6PFDA		**101.5**	50.0	150.0
M7PFUnDA		**112.8**	50.0	150.0
M8FOSA		**107.5**	50.0	150.0
M8PFOA		**105.0**	50.0	150.0
M8PFOS		**119.4**	50.0	150.0
M9-PFNA		**101.0**	50.0	150.0
MPFBA		**100.0**	50.0	150.0
MPFDoDA		**106.7**	50.0	150.0
d3N-MeFOSAA		**90.2**	50.0	150.0
d5EtFOSAA		**102.5**	50.0	150.0
MHFPO-DA		**119.0**	50.0	150.0
d-N-EtFOSA-M		**106.8**	50.0	150.0
d-N-MeFOSA-M		**100.2**	50.0	150.0
d7-N-MeFOSE-M		**105.9**	50.0	150.0
d9-N-EtFOSE-M		**102.6**	50.0	150.0

Organics - Volatiles, Prep Batch ID: PF241223W1

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

Blank (BLK)

Lab Sample ID: AK241223W1.BLK241223

Run in Batch: AK241223W1, Run Date: 12/23/2024 15:05, Prep Date: 12/23/2024, Matrix: WW, Dilution: 1

Analyte	Flags	Conc	RDL	Units
PFBA		ND	10	ng/l
PFMPA		ND	2	ng/l
FPrPA (3:3 FTCA)		ND	10	ng/l
PFPrS		ND	2	ng/l
PFPeA		ND	4	ng/l
PFMBA		ND	2	ng/l
4:2 FTSA		ND	2	ng/l
NFDHA		ND	2	ng/l
PFHxA		ND	2	ng/l
PFBS		ND	2	ng/l
HFPO-DA		ND	10	ng/l
FPePA (5:3 FTCA)		ND	10	ng/l
PFEESA		ND	2	ng/l
PFHpA		ND	2	ng/l
PFPeS		ND	2	ng/l
ADONA		ND	2	ng/l
6:2 FTSA		ND	2	ng/l
PFBSA		ND	2	ng/l
PFOA		ND	2	ng/l
PFHxS-BR		ND	2	ng/l
PFHxS		ND	2	ng/l
PFHxS-LN		ND	2	ng/l
FHpPA (7:3 FTCA)		ND	10	ng/l
PFNA		ND	2	ng/l
8:2 FTSA		ND	2	ng/l
PFECHS		ND	2	ng/l
PFHpS		ND	2	ng/l
N-MeFOSAA		ND	2	ng/l
PFDA		ND	2	ng/l
PFOS-BR		ND	2	ng/l
EtFOSAA		ND	4	ng/l
PFOS		ND	2	ng/l
PFOS-LN		ND	2	ng/l
PFHxSA		ND	2	ng/l
PFUnDA		ND	2	ng/l
9CL-PF3ONS		ND	2	ng/l
PFNS		ND	2	ng/l
PFDoDA		ND	2	ng/l
PFDS		ND	2	ng/l
PFTrDA		ND	2	ng/l
11CL-PF3OUdS		ND	2	ng/l
FOSA		ND	2	ng/l
PFTeDA		ND	4	ng/l
PFDOS		ND	6	ng/l
NMeFOSE		ND	4	ng/l
NMeFOSAM		ND	2	ng/l

Organics - Volatiles, Prep Batch ID: PF241223W1 (continued)

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

Blank (BLK) (continued)

Lab Sample ID: AK241223W1.BLK241223

Run in Batch: AK241223W1, Run Date: 12/23/2024 15:05, Prep Date: 12/23/2024, Matrix: WW, Dilution: 1

Analyte	Flags	Conc	RDL	Units
NEtFOSE		ND	4	ng/l
NEtFOSAM		ND	2	ng/l

Laboratory Control Sample (LCS)

Lab Sample ID: AK241223W1.LCS241223

Run in Batch: AK241223W1, Run Date: 12/23/2024 14:25, Prep Date: 12/23/2024, Matrix: WW, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
PFBA		96.2	70.0	130.0
PFMPA		88.0	70.0	130.0
FPrPA (3:3 FTCA)		87.4	70.0	130.0
PFPrS		97.8	70.0	130.0
PFPeA		89.8	70.0	130.0
PFMBA		88.6	70.0	130.0
4:2 FTSA		107.8	70.0	130.0
NFDHA		83.0	70.0	130.0
PFHxA		91.6	70.0	130.0
PFBS		87.6	70.0	130.0
HFPO-DA		102.0	70.0	130.0
FPePA (5:3 FTCA)		84.4	70.0	130.0
PFEESA		83.6	70.0	130.0
PFHpA		80.2	70.0	130.0
PFPeS		95.8	70.0	130.0
ADONA		81.4	70.0	130.0
6:2 FTSA		77.6	70.0	130.0
PFBSA		92.6	70.0	130.0
PFOA		78.8	70.0	130.0
PFHxS		88.8	70.0	130.0
FHpPA (7:3 FTCA)		71.0	70.0	130.0
PFNA		91.2	70.0	130.0
8:2 FTSA		94.2	70.0	130.0
PFECHS		95.8	70.0	130.0
PFHpS		82.8	70.0	130.0
N-MeFOSAA		95.4	70.0	130.0
PFDA		94.2	70.0	130.0
EtFOSAA		86.0	70.0	130.0
PFOS		93.2	70.0	130.0
PFHxSA		98.8	70.0	130.0
PFUnDA		102.2	70.0	130.0
9CL-PF3ONS		101.8	70.0	130.0
PFNS		103.0	70.0	130.0
PFDoDA		94.2	70.0	130.0
PFDS		107.8	70.0	130.0
PFTrDA		98.6	70.0	130.0
11CL-PF3OUdS		99.8	70.0	130.0
FOSA		96.6	70.0	130.0
PFTeDA		110.2	70.0	130.0

Organics - Volatiles, Prep Batch ID: PF241223W1 (continued)

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

Laboratory Control Sample (LCS) (continued)

Lab Sample ID: AK241223W1.LCS241223

Run in Batch: AK241223W1, Run Date: 12/23/2024 14:25, Prep Date: 12/23/2024, Matrix: WW, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
PFDOS		103.6	70.0	130.0
NMeFOSE		81.2	70.0	130.0
NMeFOSAM		84.4	70.0	130.0
NEtFOSE		101.2	70.0	130.0
NEtFOSAM		101.2	70.0	130.0

Laboratory Control Sample Duplicate (LCSD)

Lab Sample ID: AK241223W1.LCSD241223, Parent Sample ID: AK241223W1.LCS241223

Run in Batch: AK241223W1, Run Date: 12/23/2024 14:45, Prep Date: 12/23/2024, Matrix: WW, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
PFBA		95.8	70.0	130.0	0.4	30.0
PFMPA		87.0	70.0	130.0	1.1	30.0
FPrPA (3:3 FTCA)		90.8	70.0	130.0	3.8	30.0
PFPrS		98.2	70.0	130.0	0.4	30.0
PFPeA		94.6	70.0	130.0	5.2	30.0
PFMBA		88.6	70.0	130.0	0.0	30.0
4:2 FTSA		110.8	70.0	130.0	2.7	30.0
NFDHA		78.6	70.0	130.0	5.4	30.0
PFHxA		91.2	70.0	130.0	0.4	30.0
PFBS		95.0	70.0	130.0	8.1	30.0
HFPO-DA		102.8	70.0	130.0	0.8	30.0
FPePA (5:3 FTCA)		92.2	70.0	130.0	8.8	30.0
PFEESA		81.0	70.0	130.0	3.2	30.0
PFHpA		94.4	70.0	130.0	16.3	30.0
PFPeS		92.0	70.0	130.0	4.0	30.0
ADONA		81.2	70.0	130.0	0.2	30.0
6:2 FTSA		93.0	70.0	130.0	18.1	30.0
PFBSA		93.4	70.0	130.0	0.9	30.0
PFOA		88.6	70.0	130.0	11.7	30.0
PFHxS		89.8	70.0	130.0	1.1	30.0
FHpPA (7:3 FTCA)		84.6	70.0	130.0	17.5	30.0
PFNA		85.2	70.0	130.0	6.8	30.0
8:2 FTSA		85.6	70.0	130.0	9.6	30.0
PFECHS		98.8	70.0	130.0	3.1	30.0
PFHpS		87.6	70.0	130.0	5.6	30.0
N-MeFOSAA		96.6	70.0	130.0	1.2	30.0
PFDA		99.2	70.0	130.0	5.2	30.0
EtFOSAA		103.4	70.0	130.0	18.4	30.0
PFOS		84.2	70.0	130.0	10.1	30.0
PFHxSA		98.6	70.0	130.0	0.2	30.0
PFUnDA		116.2	70.0	130.0	12.8	30.0
9CL-PF3ONS		97.2	70.0	130.0	4.6	30.0
PFNS		99.2	70.0	130.0	3.8	30.0
PFDoDA		102.0	70.0	130.0	8.0	30.0
PFDS		105.8	70.0	130.0	1.9	30.0
PFTrDA		105.6	70.0	130.0	6.9	30.0

Organics - Volatiles, Prep Batch ID: PF241223W1 (continued)

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

Laboratory Control Sample Duplicate (LCSD) (continued)

Lab Sample ID: AK241223W1.LCSD241223, Parent Sample ID: AK241223W1.LCS241223

Run in Batch: AK241223W1, Run Date: 12/23/2024 14:45, Prep Date: 12/23/2024, Matrix: WW, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
11CL-PF3OUdS		102.2	70.0	130.0	2.4	30.0
FOSA		95.8	70.0	130.0	0.8	30.0
PFTeDA		110.6	70.0	130.0	0.4	30.0
PFDOS		96.6	70.0	130.0	7.0	30.0
NMeFOSE		89.0	70.0	130.0	9.2	30.0
NMeFOSAM		85.0	70.0	130.0	0.7	30.0
NEtFOSE		100.8	70.0	130.0	0.4	30.0
NEtFOSAM		105.8	70.0	130.0	4.4	30.0

Matrix Spike (MS)

Lab Sample ID: AK241223W1.6982801M, Parent Sample ID: S69828.01

Run in Batch: AK241223W1, Run Date: 12/23/2024 18:25, Prep Date: 12/23/2024, Matrix: WW, Dilution: 1.92

Analyte	Flags	% Rec	LCL	UCL
PFBA		80.2	70.0	130.0
PFPeA	*	145.8	70.0	130.0
4:2 FTSA		104.2	70.0	130.0
PFHxA		96.9	70.0	130.0
PFBS		95.8	70.0	130.0
PFHpA		89.6	70.0	130.0
PFPeS		102.1	70.0	130.0
6:2 FTSA		93.8	70.0	130.0
PFOA		76.0	70.0	130.0
PFHxS	*	52.1	70.0	130.0
PFNA		80.1	70.0	130.0
8:2 FTSA		93.8	70.0	130.0
PFHpS		78.1	70.0	130.0
PFDA		95.8	70.0	130.0
N-MeFOSAA		92.7	70.0	130.0
EtFOSAA		103.1	70.0	130.0
PFOS	*	-104.2	70.0	130.0
PFUnDA	*	135.4	70.0	130.0
PFNS		102.9	70.0	130.0
PFDoDA		96.9	70.0	130.0
PFDS		114.6	70.0	130.0
PFTrDA		114.6	70.0	130.0
FOSA		101.4	70.0	130.0
PFTeDA		114.6	70.0	130.0
11CL-PF3OUdS		100.0	70.0	130.0
9CL-PF3ONS		96.9	70.0	130.0
ADONA		84.4	70.0	130.0
HFPO-DA		104.2	70.0	130.0
FHpPA (7:3 FTCA)		88.5	70.0	130.0
FPePA (5:3 FTCA)		103.1	70.0	130.0
FPrPA (3:3 FTCA)		85.4	70.0	130.0
PFBSA		100.2	70.0	130.0
PFECHS	*	-416.7	70.0	130.0

Organics - Volatiles, Prep Batch ID: PF241223W1 (continued)

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

Matrix Spike (MS) (continued)

Lab Sample ID: AK241223W1.6982801M, Parent Sample ID: S69828.01

Run in Batch: AK241223W1, Run Date: 12/23/2024 18:25, Prep Date: 12/23/2024, Matrix: WW, Dilution: 1.92

Analyte	Flags	% Rec	LCL	UCL
PFHxSA		99.0	70.0	130.0

Duplicate (DUP)

Lab Sample ID: AK241223W1.6982802D, Parent Sample ID: S69828.02

Run in Batch: AK241223W1, Run Date: 12/23/2024 19:05, Prep Date: 12/23/2024, Matrix: WW, Dilution: 1.92

Analyte	Flags	RPD	RPD CL
PFBA	J	21.3	30.0
PFPeA		NC	30.0
4:2 FTSA		NC	30.0
PFHxA		NC	30.0
PFBS		NC	30.0
PFHpA		NC	30.0
PFPeS		NC	30.0
6:2 FTSA		NC	30.0
PFOA		NC	30.0
PFHxS		NC	30.0
PFHxS-LN		NC	30.0
PFHxS-BR		NC	30.0
PFNA		NC	30.0
8:2 FTSA		NC	30.0
PFHpS		NC	30.0
PFDA		NC	30.0
N-MeFOSAA		NC	30.0
EtFOSAA		NC	30.0
PFOS		16.7	30.0
PFOS-LN		17.8	30.0
PFOS-BR		14.0	30.0
PFUnDA		NC	30.0
PFNS		NC	30.0
PFDoDA		NC	30.0
PFDS		NC	30.0
PFTrDA		NC	30.0
FOSA		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
FHpPA (7:3 FTCA)		NC	30.0
FPePA (5:3 FTCA)		NC	30.0
FPrPA (3:3 FTCA)		NC	30.0
PFBSA		NC	30.0
PFECHS		9.3	30.0
PFHxSA		NC	30.0

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C.O.C. PAGE # 1 OF 1

172714

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.: CELL NO.: 313-333-0211 P.O. NO.: 1940008845 Task 37
E-MAIL ADDRESS: Kevin.Schneider@Ramboll.com; 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: RALER Coldwater Road
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Kevin Schneider

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

DELIVERABLES REQUIRED ☒ 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 (7075)	Special Instructions
698301	12/19/24	1010	SAN-21 - 20241219	L	3	X							X	low level reporting
.02		1030	SAN-08 - 20241219	L	3	X							X	with estimated values
.03		1045	11-07C016 - 20241219	L	3	X							X	
.04		1108	SAN-2 - 20241219	L	3	X							X	34 PFAS List
.05	↓	1122	SAN-09 - 20241219	L	3	X							X	
														Please Provide EDD

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☒ Sampler	DATE 12/19/24	TIME 1225
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 12/19/24	TIME 1842
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 12/19/24	TIME 1311
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 12/19/24	TIME 1310

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 4.2

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

Rev. 05/24