

Report ID: S32979.01(01) Generated on 03/10/2022

Report to

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Report Summary

Lab Sample ID(s): S32979.01 Project: Yearly Bio-Solids Collected Date(s): 02/17/2022

Submitted Date/Time: 02/17/2022 10:10

Sampled by: Unknown P.O. #: D1848

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Naya Mushah

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#### **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 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.

Full accreditation certificates are available upon request. Starred (\*) analytes are not 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.

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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.

#### **Report Narrative**

There is no additional narrative for this analytical report



#### **Laboratory Certifications**

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

#### **Qualifier Descriptions**

Qualifier	Description
!	Result is outside of stated limit criteria
В	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
Н	Sample submitted and run outside of holding time
1	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
0	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
Т	No correction for total solids
X	Elevated reporting limit due to matrix interference
Υ	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
е	Reported value estimated due to interference
j	Analyte also found in associated method blank
р	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
х	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

ASTM D7968-17M ASTM Method D7968 - 17 Modified (Isotopic Dilution)

SM2540B Standard Method 2540 B 2011

#### **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
11CI-PF3OUdS	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	763051-92-9
9CI-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



Sample Summary (1 samples)

Sample ID Sample Tag Matrix Collected Date/Time

S32979.01 Bio-solids (Grab) Sludge 02/17/22 08:30

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Generated on 03/10/2022 Report ID: S32979.01(01)



Lab Sample ID: S32979.01

Sample Tag: Bio-solids (Grab)

Collected Date/Time: 02/17/2022 08:30

Matrix: Sludge

COC Reference: 144104

#### Sample Containers

#	Туре	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	250ml Plastic	None	Yes	4.9	IR
1	15ml Centrifuge Tube	None	Yes	4.9	IR

#### Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	10.12/7.06/10	ASTM D7968-17M	03/04/22 15:30	KCV	

#### Inorganics

Method: SM2540B, Run Date: 02/17/22 17:00, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	
Total Solids*	0.32	1		%	1			

#### **Organics**

28 PFAs, Method: ASTM D7968-17M, Run Date: 03/07/22 14:33, Analyst: KCV
Parameter Result RL MDL

FFBA*	Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
42 FTSA*         Not detected         5.1         ug/kg         1020         757124-72-4         I           PFHxA*         Not detected         5.1         ug/kg         1020         307-24-4         P           PFBS*         Not detected         5.1         ug/kg         1020         375-35-5         P           PFHpA*         Not detected         5.1         ug/kg         1020         375-85-9         P           PFPeS*         Not detected         5.1         ug/kg         1020         2766-91-4         C         C         F         C         F         C         G         F         C         F         C         F         C         G         F         G         F         G         F         G         F         G         F         G         F         G         F         G         G         F         G         F         G         F         G         F         G         F         G         F         G         F         G         F         F         G         F         F         G         F         F         G         F         F         F         F         F         F         F         F	PFBA*	Not detected	20		ug/kg	1020	375-22-4	
PFHxA*         Not detected         5.1         ug/kg         1020         307-24-4           PFBS*         Not detected         5.1         ug/kg         1020         375-73-5           PFHpA*         Not detected         5.1         ug/kg         1020         375-85-9           PFPPS*         Not detected         5.1         ug/kg         1020         2766-91-4           6.2 FTSA*         Not detected         5.1         ug/kg         1020         27619-97-2         I           PFOA*         Not detected         5.1         ug/kg         1020         355-46-4           PFHXS*         Not detected         5.1         ug/kg         1020         355-46-4           PFHXS-BR*         Not detected         5.1         ug/kg         1020         355-46-4-LN           PFHXS-BR*         Not detected         5.1         ug/kg         1020         355-46-4-BR           PFNA*         Not detected         5.1         ug/kg         1020         375-95-1           PFNA*         Not detected         5.1         ug/kg         1020         375-92-8           PFDA*         Not detected         5.1         ug/kg         1020         335-93-1           PFDA*	PFPeA*	Not detected	5.1		ug/kg	1020	2706-90-3	
PFBS*         Not detected         5.1         ug/kg         1020         375-73-5           PFIhpA*         Not detected         5.1         ug/kg         1020         375-85-9           PFPBS*         Not detected         5.1         ug/kg         1020         276-91-4           6:2 FTSA*         Not detected         5.1         ug/kg         1020         27619-97-2         1           PFDA*         Not detected         5.1         ug/kg         1020         355-46-4           PFDA*         Not detected         5.1         ug/kg         1020         355-46-4           PFHXS-LN*         Not detected         5.1         ug/kg         1020         355-46-4           PFHXS-BR*         Not detected         5.1         ug/kg         1020         355-46-4 LN           PFHXS-BR*         Not detected         5.1         ug/kg         1020         355-46-4 LN           PFHXS-BR*         Not detected         5.1         ug/kg         1020         355-46-4 LN           PFNA*         Not detected         5.1         ug/kg         1020         375-95-1           8.2 FTSA*         Not detected         5.1         ug/kg         1020         375-92-8 <t< td=""><td>4:2 FTSA*</td><td>Not detected</td><td>5.1</td><td></td><td>ug/kg</td><td>1020</td><td>757124-72-4</td><td>1</td></t<>	4:2 FTSA*	Not detected	5.1		ug/kg	1020	757124-72-4	1
PFHpA*         Not detected         5.1         ug/kg         1020         375-85-9           PFPeS*         Not detected         5.1         ug/kg         1020         2706-91-4           6:2 FTSA*         Not detected         5.1         ug/kg         1020         27619-97-2         1           PFDA*         Not detected         5.1         ug/kg         1020         335-67-1           PFHxS*         Not detected         5.1         ug/kg         1020         355-46-4           PFHxS-LN*         Not detected         5.1         ug/kg         1020         355-46-4-LN           PFHxS-BR*         Not detected         5.1         ug/kg         1020         355-46-4-LN           PFNA*         Not detected         5.1         ug/kg         1020         375-92-8	PFHxA*	Not detected	5.1		ug/kg	1020	307-24-4	
PFPeS*         Not detected         5.1         ug/kg         1020         2706-91-4           6:2 FTSA*         Not detected         5.1         ug/kg         1020         27619-97-2         1           PFOA*         Not detected         5.1         ug/kg         1020         335-67-1           PFHXS*         Not detected         5.1         ug/kg         1020         355-46-4           PFHXS-LN*         Not detected         5.1         ug/kg         1020         355-46-4-IN           PFHXS-BR*         Not detected         5.1         ug/kg         1020         355-46-4-IN           PFNA*         Not detected         5.1         ug/kg         1020         375-92-1           8:2 FTSA*         Not detected         5.1         ug/kg         1020         375-92-1           8:2 FTSA*         Not detected         5.1         ug/kg         1020         375-92-8           PFDA*         Not detected         5.1         ug/kg         1020         375-92-8           PFDA*         Not detected         5.1         ug/kg         1020         2955-31-9           EIFOSAA*         Not detected         5.1         ug/kg         1020         1763-23-1-IN           <	PFBS*	Not detected	5.1		ug/kg	1020	375-73-5	
6:2 FTSA* Not detected 5.1 ug/kg 1020 27619-97-2 I PFOA* Not detected 5.1 ug/kg 1020 335-67-1 PFHKS* Not detected 5.1 ug/kg 1020 355-46-4 PFHKS-LN* Not detected 5.1 ug/kg 1020 355-46-4 PFHKS-BR* Not detected 5.1 ug/kg 1020 355-46-4-BR PFNA* Not detected 5.1 ug/kg 1020 355-46-4-BR PFNA* Not detected 5.1 ug/kg 1020 375-95-1 8:2 FTSA* Not detected 5.1 ug/kg 1020 375-95-1 8:2 FTSA* Not detected 5.1 ug/kg 1020 375-92-8 PFDA* Not detected 5.1 ug/kg 1020 375-92-8 PFDA* Not detected 5.1 ug/kg 1020 375-92-8 PFDA* Not detected 5.1 ug/kg 1020 375-92-8 EIFOSAA* Not detected 5.1 ug/kg 1020 2355-31-9 EIFOSAA* Not detected 5.1 ug/kg 1020 2991-50-6 PFOS* Not detected 5.1 ug/kg 1020 2991-50-6 PFOS* Not detected 5.1 ug/kg 1020 1763-23-1-LN PFOS-LN* Not detected 5.1 ug/kg 1020 1763-23-1-LN PFOS-BR* Not detected 5.1 ug/kg 1020 2058-94-8 PFUNDA* Not detected 5.1 ug/kg 1020 307-55-1 PFOS* Not detected 5.1 ug/kg 1020 307-55-1 PFDS* Not detected 5.1 ug/kg 1020 72629-94-8 PFTDDA* Not detected 5.1 ug/kg 1020 754-91-6 PFTDDA* Not detected 5.1 ug/kg 1020 376-06-7 11CI-PF3OUdS* Not detected 5.1 ug/kg 1020 376-06-7	PFHpA*	Not detected	5.1		ug/kg	1020	375-85-9	
PFOA*         Not detected         5.1         ug/kg         1020         335-67-1           PFHXS*         Not detected         5.1         ug/kg         1020         355-46-4           PFHXS-LN*         Not detected         5.1         ug/kg         1020         355-46-4           PFHXS-BR*         Not detected         5.1         ug/kg         1020         355-46-4-LN           PFNA*         Not detected         5.1         ug/kg         1020         355-46-4-BR           PFNA*         Not detected         5.1         ug/kg         1020         375-92-1           8.2 FTSA*         Not detected         5.1         ug/kg         1020         39108-34-4         I           PFDA*         Not detected         5.1         ug/kg         1020         39108-34-4         I           PFDA*         Not detected         5.1         ug/kg         1020         395-82-8           PFDA*         Not detected         5.1         ug/kg         1020         335-76-2           N-MeFOSAA*         8.6         5.1         ug/kg         1020         295-531-9           EtFOSA*         Not detected         5.1         ug/kg         1020         1763-23-1-IN	PFPeS*	Not detected	5.1		ug/kg	1020	2706-91-4	
PFHxS*         Not detected         5.1         ug/kg         1020         355-46-4           PFHxS-LN*         Not detected         5.1         ug/kg         1020         355-46-4-LN           PFHxS-BR*         Not detected         5.1         ug/kg         1020         355-46-4-LN           PFNA*         Not detected         5.1         ug/kg         1020         355-46-4-BR           PFNA*         Not detected         5.1         ug/kg         1020         375-95-1           8:2 FTSA*         Not detected         5.1         ug/kg         1020         39108-34-4         I           PFDB*         Not detected         5.1         ug/kg         1020         375-92-8           PFDA*         Not detected         5.1         ug/kg         1020         335-76-2           N-MeFOSAA*         8.6         5.1         ug/kg         1020         2355-31-9           EtFOSAA*         Not detected         5.1         ug/kg         1020         2991-50-6           PFOS*         Not detected         5.1         ug/kg         1020         1763-23-1-LN           PFOS-LN*         Not detected         5.1         ug/kg         1020         1763-23-1-BR	6:2 FTSA*	Not detected	5.1		ug/kg	1020	27619-97-2	1
PFHxS-LN*         Not detected         5.1         ug/kg         1020         355-46-4-LN           PFHxS-BR*         Not detected         5.1         ug/kg         1020         355-46-4-BR           PFNA*         Not detected         5.1         ug/kg         1020         375-95-1           8:2 FTSA*         Not detected         5.1         ug/kg         1020         39108-34-4         I           PFHpS*         Not detected         5.1         ug/kg         1020         375-92-8           PFDA*         Not detected         5.1         ug/kg         1020         335-76-2           N-MeFOSAA*         8.6         5.1         ug/kg         1020         2355-31-9           EtFOSAA*         Not detected         5.1         ug/kg         1020         2991-50-6           PFOS*         Not detected         5.1         ug/kg         1020         2991-50-6           PFOS-LN*         Not detected         5.1         ug/kg         1020         1763-23-1-LN           PFOS-BR*         Not detected         5.1         ug/kg         1020         1763-23-1-BR           PFINDA*         Not detected         5.1         ug/kg         1020         2058-94-8	PFOA*	Not detected	5.1		ug/kg	1020	335-67-1	
PFHxS-BR*         Not detected         5.1         ug/kg         1020         355-46-4-BR           PFNA*         Not detected         5.1         ug/kg         1020         375-95-1           8:2 FTSA*         Not detected         5.1         ug/kg         1020         39108-34-4         I           PFHpS*         Not detected         5.1         ug/kg         1020         375-92-8           PFDA*         Not detected         5.1         ug/kg         1020         335-76-2           NMeFOSAA*         8.6         5.1         ug/kg         1020         2355-31-9           EtFOSAA*         Not detected         5.1         ug/kg         1020         2991-50-6           PFOS*         Not detected         5.1         ug/kg         1020         1763-23-1           PFOS-LN*         Not detected         5.1         ug/kg         1020         1763-23-1-LN           PFOS-BR*         Not detected         5.1         ug/kg         1020         1763-23-1-BR           PFUNDA*         Not detected         5.1         ug/kg         1020         2058-94-8           PFDS*         Not detected         5.1         ug/kg         1020         307-55-1           PFDS	PFHxS*	Not detected	5.1		ug/kg	1020	355-46-4	
PFNA*         Not detected         5.1         ug/kg         1020         375-95-1           8:2 FTSA*         Not detected         5.1         ug/kg         1020         39108-34-4         I           PFHpS*         Not detected         5.1         ug/kg         1020         375-92-8           PFDA*         Not detected         5.1         ug/kg         1020         335-76-2           N-MeFOSAA*         8.6         5.1         ug/kg         1020         2355-31-9           EtFOSAA*         Not detected         5.1         ug/kg         1020         2991-50-6           PFOS*         Not detected         5.1         ug/kg         1020         2991-50-6           PFOS-LN*         Not detected         5.1         ug/kg         1020         1763-23-1           PFOS-BR*         Not detected         5.1         ug/kg         1020         1763-23-1-LN           PFUnDA*         Not detected         5.1         ug/kg         1020         1763-23-1-LN           PFOS-BR*         Not detected         5.1         ug/kg         1020         2058-94-8           PFNS*         Not detected         5.1         ug/kg         1020         307-55-1           PFDS*<	PFHxS-LN*	Not detected	5.1		ug/kg	1020	355-46-4-LN	
8:2 FTSA*       Not detected       5.1       ug/kg       1020       39108-34-4       I         PFHpS*       Not detected       5.1       ug/kg       1020       375-92-8       I         PFDA*       Not detected       5.1       ug/kg       1020       335-76-2       I         N-MeFOSAA*       8.6       5.1       ug/kg       1020       2355-31-9       I         EtFOSAA*       Not detected       5.1       ug/kg       1020       2991-50-6       I         PFOS*       Not detected       5.1       ug/kg       1020       1763-23-1       I         PFOS-LN*       Not detected       5.1       ug/kg       1020       1763-23-1-LN       I         PFOS-BR*       Not detected       5.1       ug/kg       1020       1763-23-1-BR       I         PFUnDA*       Not detected       5.1       ug/kg       1020       2058-94-8       I         PFNS*       Not detected       5.1       ug/kg       1020       307-55-1       I         PFDS*       Not detected       5.1       ug/kg       1020       335-77-3       I         PFTrDA*       Not detected       5.1       ug/kg       1020       754-91-6	PFHxS-BR*	Not detected	5.1		ug/kg	1020	355-46-4-BR	
PFHpS*         Not detected         5.1         ug/kg         1020         375-92-8           PFDA*         Not detected         5.1         ug/kg         1020         335-76-2           N-MeFOSAA*         8.6         5.1         ug/kg         1020         2355-31-9           EtFOSAA*         Not detected         5.1         ug/kg         1020         2991-50-6           PFOS*         Not detected         5.1         ug/kg         1020         1763-23-1           PFOS-LN*         Not detected         5.1         ug/kg         1020         1763-23-1-LN           PFOS-BR*         Not detected         5.1         ug/kg         1020         1763-23-1-BR           PFUnDA*         Not detected         5.1         ug/kg         1020         2058-94-8           PFNS*         Not detected         5.1         ug/kg         1020         2058-94-8           PFDS*         Not detected         5.1         ug/kg         1020         307-55-1           PFTDS*         Not detected         5.1         ug/kg         1020         335-77-3           PFTrDA*         Not detected         5.1         ug/kg         1020         754-91-6           PFTeDA*         Not de	PFNA*	Not detected	5.1		ug/kg	1020	375-95-1	
PFDA*         Not detected         5.1         ug/kg         1020         335-76-2           N-MeFOSAA*         8.6         5.1         ug/kg         1020         2355-31-9           EtFOSAA*         Not detected         5.1         ug/kg         1020         2991-50-6           PFOS*         Not detected         5.1         ug/kg         1020         1763-23-1           PFOS-LN*         Not detected         5.1         ug/kg         1020         1763-23-1-LN           PFOS-BR*         Not detected         5.1         ug/kg         1020         1763-23-1-BR           PFUnDA*         Not detected         5.1         ug/kg         1020         2058-94-8           PFNS*         Not detected         5.1         ug/kg         1020         68259-12-1           PFDS*         Not detected         5.1         ug/kg         1020         307-55-1           PFTrDA*         Not detected         5.1         ug/kg         1020         72629-94-8           FOSA*         Not detected         5.1         ug/kg         1020         754-91-6           PFTeDA*         Not detected         5.1         ug/kg         1020         376-06-7           11CI-PF3OUdS*         <	8:2 FTSA*	Not detected	5.1		ug/kg	1020	39108-34-4	1
N-MeFOSAA*       8.6       5.1       ug/kg       1020       2355-31-9         EtFOSAA*       Not detected       5.1       ug/kg       1020       2991-50-6         PFOS*       Not detected       5.1       ug/kg       1020       1763-23-1         PFOS-LN*       Not detected       5.1       ug/kg       1020       1763-23-1-LN         PFOS-BR*       Not detected       5.1       ug/kg       1020       1763-23-1-BR         PFUnDA*       Not detected       5.1       ug/kg       1020       2058-94-8         PFNS*       Not detected       5.1       ug/kg       1020       68259-12-1         PFDS*       Not detected       5.1       ug/kg       1020       307-55-1         PFTDA*       Not detected       5.1       ug/kg       1020       335-77-3         PFTeDA*       Not detected       5.1       ug/kg       1020       72629-94-8         FOSA*       Not detected       5.1       ug/kg       1020       754-91-6         PFTeDA*       Not detected       5.1       ug/kg       1020       376-06-7         11CI-PF3OUdS*       Not detected       5.1       ug/kg       1020       763051-92-9	PFHpS*	Not detected	5.1		ug/kg	1020	375-92-8	
EtFOSAA*         Not detected         5.1         ug/kg         1020         2991-50-6           PFOS*         Not detected         5.1         ug/kg         1020         1763-23-1           PFOS-LN*         Not detected         5.1         ug/kg         1020         1763-23-1-LN           PFOS-BR*         Not detected         5.1         ug/kg         1020         1763-23-1-BR           PFUnDA*         Not detected         5.1         ug/kg         1020         2058-94-8           PFNS*         Not detected         5.1         ug/kg         1020         68259-12-1           PFDoDA*         Not detected         5.1         ug/kg         1020         307-55-1           PFDS*         Not detected         5.1         ug/kg         1020         335-77-3           PFTrDA*         Not detected         5.1         ug/kg         1020         72629-94-8           FOSA*         Not detected         5.1         ug/kg         1020         754-91-6           PFTeDA*         Not detected         5.1         ug/kg         1020         376-06-7           11CI-PF3OUdS*         Not detected         5.1         ug/kg         1020         763051-92-9	PFDA*	Not detected	5.1		ug/kg	1020	335-76-2	
PFOS*       Not detected       5.1       ug/kg       1020       1763-23-1         PFOS-LN*       Not detected       5.1       ug/kg       1020       1763-23-1-LN         PFOS-BR*       Not detected       5.1       ug/kg       1020       1763-23-1-BR         PFUNDA*       Not detected       5.1       ug/kg       1020       2058-94-8         PFNS*       Not detected       5.1       ug/kg       1020       68259-12-1         PFDODA*       Not detected       5.1       ug/kg       1020       307-55-1         PFDS*       Not detected       5.1       ug/kg       1020       335-77-3         PFTrDA*       Not detected       5.1       ug/kg       1020       72629-94-8         FOSA*       Not detected       5.1       ug/kg       1020       754-91-6         PFTeDA*       Not detected       5.1       ug/kg       1020       376-06-7         11CI-PF3OUdS*       Not detected       5.1       ug/kg       1020       763051-92-9	N-MeFOSAA*	8.6	5.1		ug/kg	1020	2355-31-9	
PFOS-LN*       Not detected       5.1       ug/kg       1020       1763-23-1-LN         PFOS-BR*       Not detected       5.1       ug/kg       1020       1763-23-1-BR         PFUnDA*       Not detected       5.1       ug/kg       1020       2058-94-8         PFNS*       Not detected       5.1       ug/kg       1020       68259-12-1         PFDS*       Not detected       5.1       ug/kg       1020       307-55-1         PFTrDA*       Not detected       5.1       ug/kg       1020       335-77-3         PFTrDA*       Not detected       5.1       ug/kg       1020       72629-94-8         FOSA*       Not detected       5.1       ug/kg       1020       754-91-6         PFTeDA*       Not detected       5.1       ug/kg       1020       376-06-7         11CI-PF3OUdS*       Not detected       5.1       ug/kg       1020       763051-92-9	EtFOSAA*	Not detected	5.1		ug/kg	1020	2991-50-6	
PFOS-BR*       Not detected       5.1       ug/kg       1020       1763-23-1-BR         PFUnDA*       Not detected       5.1       ug/kg       1020       2058-94-8         PFNS*       Not detected       5.1       ug/kg       1020       68259-12-1         PFDoDA*       Not detected       5.1       ug/kg       1020       307-55-1         PFDS*       Not detected       5.1       ug/kg       1020       335-77-3         PFTrDA*       Not detected       5.1       ug/kg       1020       72629-94-8         FOSA*       Not detected       5.1       ug/kg       1020       754-91-6         PFTeDA*       Not detected       5.1       ug/kg       1020       376-06-7         11CI-PF3OUdS*       Not detected       5.1       ug/kg       1020       763051-92-9	PFOS*	Not detected	5.1		ug/kg	1020	1763-23-1	
PFUnDA*         Not detected         5.1         ug/kg         1020         2058-94-8           PFNS*         Not detected         5.1         ug/kg         1020         68259-12-1           PFDoDA*         Not detected         5.1         ug/kg         1020         307-55-1           PFDS*         Not detected         5.1         ug/kg         1020         335-77-3           PFTrDA*         Not detected         5.1         ug/kg         1020         72629-94-8           FOSA*         Not detected         5.1         ug/kg         1020         754-91-6           PFTeDA*         Not detected         5.1         ug/kg         1020         376-06-7           11CI-PF3OUdS*         Not detected         5.1         ug/kg         1020         763051-92-9	PFOS-LN*	Not detected	5.1		ug/kg	1020	1763-23-1-LN	
PFNS*         Not detected         5.1         ug/kg         1020         68259-12-1           PFDoDA*         Not detected         5.1         ug/kg         1020         307-55-1           PFDS*         Not detected         5.1         ug/kg         1020         335-77-3           PFTrDA*         Not detected         5.1         ug/kg         1020         72629-94-8           FOSA*         Not detected         5.1         ug/kg         1020         754-91-6           PFTeDA*         Not detected         5.1         ug/kg         1020         376-06-7           11CI-PF3OUdS*         Not detected         5.1         ug/kg         1020         763051-92-9	PFOS-BR*	Not detected	5.1		ug/kg	1020	1763-23-1-BR	
PFDoDA*         Not detected         5.1         ug/kg         1020         307-55-1           PFDS*         Not detected         5.1         ug/kg         1020         335-77-3           PFTrDA*         Not detected         5.1         ug/kg         1020         72629-94-8           FOSA*         Not detected         5.1         ug/kg         1020         754-91-6           PFTeDA*         Not detected         5.1         ug/kg         1020         376-06-7           11CI-PF3OUdS*         Not detected         5.1         ug/kg         1020         763051-92-9	PFUnDA*	Not detected	5.1		ug/kg	1020	2058-94-8	
PFDS*         Not detected         5.1         ug/kg         1020         335-77-3           PFTrDA*         Not detected         5.1         ug/kg         1020         72629-94-8           FOSA*         Not detected         5.1         ug/kg         1020         754-91-6           PFTeDA*         Not detected         5.1         ug/kg         1020         376-06-7           11CI-PF3OUdS*         Not detected         5.1         ug/kg         1020         763051-92-9	PFNS*	Not detected	5.1		ug/kg	1020	68259-12-1	
PFTrDA*         Not detected         5.1         ug/kg         1020         72629-94-8           FOSA*         Not detected         5.1         ug/kg         1020         754-91-6           PFTeDA*         Not detected         5.1         ug/kg         1020         376-06-7           11CI-PF3OUdS*         Not detected         5.1         ug/kg         1020         763051-92-9	PFDoDA*	Not detected	5.1		ug/kg	1020	307-55-1	
FOSA*         Not detected         5.1         ug/kg         1020         754-91-6           PFTeDA*         Not detected         5.1         ug/kg         1020         376-06-7           11CI-PF3OUdS*         Not detected         5.1         ug/kg         1020         763051-92-9	PFDS*	Not detected	5.1		ug/kg	1020	335-77-3	
PFTeDA* Not detected 5.1 ug/kg 1020 376-06-7 11CI-PF3OUdS* Not detected 5.1 ug/kg 1020 763051-92-9	PFTrDA*	Not detected	5.1		ug/kg	1020	72629-94-8	
11CI-PF3OUdS* Not detected 5.1 ug/kg 1020 763051-92-9	FOSA*	Not detected	5.1		ug/kg	1020	754-91-6	
	PFTeDA*	Not detected	5.1		ug/kg	1020	376-06-7	
9CI-PF3ONS* Not detected 5.1 ug/kg 1020 756426-58-1	11CI-PF3OUdS*	Not detected	5.1		ug/kg	1020	763051-92-9	
	9CI-PF3ONS*	Not detected	5.1		ug/kg	1020	756426-58-1	

I-Matrix interference with internal standard



#### Lab Sample ID: S32979.01 (continued)

Sample Tag: Bio-solids (Grab)

28 PFAs, Method: ASTM D7968-17M, Run Date: 03/07/22 14:33, Analyst: KCV (continued)

	,	,	. ,					
Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	
ADONA*	Not detected	5.1		ug/kg	1020	919005-14-4		
HFPO-DA*	Not detected	5.1		ug/kg	1020	13252-13-6		

### **Merit Laboratories Login Checklist**

Lab Set ID:S32979

Client: AESMISC (City of Tecumseh )

Project: Yearly Bio-Solids

Submitted:02/17/2022 10:10 Login User: JRM

Attention: Todd Knepper Address: City of Tecumseh 710 E. Chicago Blvd Tecumseh, MI 49286

Phone: n/a FAX: Email: tknepper@tecumseh.mi.us

Selec	ction			Description	Note									
Sam	ple Receiv	/ing												
01.	X Yes	No	☐ N/A	Samples are received at 4C +/- 2C Thermometer #	IR 4.9									
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	there custody seals/tape or is the drop box locked									
Chai	n of Custo	ody												
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:										
Pres	ervation													
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?										
Bottl	e Conditio	ons												
13.	X Yes	No	□ N/A	All bottles intact										
14.	X Yes	No	□ N/A	Appropriate analytical bottles are used										
15.	X Yes	☐ No	N/A	Merit bottles used										
16.	X Yes	No	N/A	Sufficient sample volume received										
17.	Yes	X No	□ N/A	Samples require laboratory filtration										
18.	X Yes	☐ No	□ N/A	Samples submitted within holding time										
19.	Yes	☐ No	X N/A	Do water VOC or TOX bottles contain headspace										

Corrective action for all exceptions is to o	call the client and to notify the project manager.
Client Review By:	Date:



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

C.O.C. PAGE # \_\_\_\_\_ OF \_\_\_\_ 144104

REPOR	т то		Laboratories, Inc.	/	CHAIN	OF	CU	ST	OD	Y R	EC	ORE	)	r	0								INVO	ICE	ТО
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MERIT LAB NO.	YE			SAMPLE TA	AG # OF LES				HCI HRO3 H <sub>2</sub> SO <sub>4</sub> NaOH OTHER			THE C									0	☐ Other		nstructions	
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