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ANALYTICAL REPORT

Eurofins Michigan
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Laboratory Job ID: 190-27870-1
Client Project/Site: Walled Lake - MUNDY-WWTP PFAS

For:
Oakland County Water Resources Commissioner
1 Public Works Drive
Waterford, Michigan 48328-1907

Attn: Gary Mundy

Sue Schafer

Authorized for release by:
2/11/2022 4:28:01 PM

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Sample Summary

Client: Oakland County Water Resources
Job ID: 190-27870-1
Project/Site: Walled Lake - MUNDY-WWTP PFAS

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
190-27870-1	Sludge Storage Tank No. 5	Solid	01/27/22 09:59	01/27/22 11:00
190-27870-2	Sludge Storage Tank No. 6	Solid	01/27/22 09:55	01/27/22 11:00

Case Narrative

Client: Oakland County Water Resources
Job ID: 190-27870-1
Project/Site: Walled Lake - MUNDY-WWTP PFAS

Job ID: 190-27870-1

Laboratory: Eurofins Michigan

Narrative

Job Narrative
190-27870-1

Comments
The PFC_IDA Perfluorinated Hydrocarbons analysis was performed at the Eurofins Environment Testing, Sacramento laboratory.

Receipt
The samples were received on 1/27/2022 11:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 6.9º C.

Receipt Exceptions

The container label for the following sample(s) did not match the information listed on the Chain-of-Custody (COC): samples 1 and 2. Both of the containers list the sample ID as Walled Lake WWTP, with either No. 5 or No. 6 in the location section.Distinguished samples using location. Logged and labeled according to COC.Sludge Storage Tank No. 5 (190-27870-1) and Sludge Storage Tank No. 6 (190-27870-2). \

LCMS
Method 537 (modified): The "I" qualifier means the transition mass ratio for the indicated analyte was below the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. However, analyst judgment was used to positively identify the analyte.

Sludge Storage Tank No. 5 (190-27870-1), Sludge Storage Tank No. 6 (190-27870-2), (190-27870-A-2-B MS) and (190-27870-A-2-C MSD)

Method 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following samples: Sludge Storage Tank No. 5 (190-27870-1), Sludge Storage Tank No. 6 (190-27870-2), (190-27870-A-2-B MS) and (190-27870-A-2-C MSD). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

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

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

Organic Prep
Method SHAKE: The following samples labels don't match. The phrase "Sludge Storage Tank" is missing on the client labels but are present in the Eurofins labels.Sludge Storage Tank No. 5 (190-27870-1), Sludge Storage Tank No. 6 (190-27870-2), (190-27870-A-2 MS) and (190-27870-A-2 MSD)

Method Code: Shake_Bath_14D/PFC_IDA
Matrix: Solid/Liquid
preparation batch 320-562039

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

Client Sample ID: Sludge Storage Tank No. 5
Lab Sample ID: 190-27870-1

Date Collected: 01/27/22 09:59
Matrix: Solid

Date Received: 01/27/22 11:00
Percent Solids: 2.9

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4:2 FTS	<1.65		6.48	1.65	ug/Kg	☼	01/31/22 11:39	02/02/22 20:22	1
6:2 FTS	**2.31**	**J**	6.48	0.875	ug/Kg	☼	01/31/22 11:39	02/02/22 20:22	1
8:2 FTS	<1.13		6.48	1.13	ug/Kg	☼	01/31/22 11:39	02/02/22 20:22	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	**4.31**	**J**	6.48	1.56	ug/Kg	☼	01/31/22 11:39	02/02/22 20:22	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	**15.9**		6.48	0.745	ug/Kg	☼	01/31/22 11:39	02/02/22 20:22	1
Perfluorobutanesulfonic acid (PFBS)	<1.23		6.48	1.23	ug/Kg	☼	01/31/22 11:39	02/02/22 20:22	1
Perfluorobutanoic acid (PFBA)	**2.81**	**J B**	6.48	1.49	ug/Kg	☼	01/31/22 11:39	02/02/22 20:22	1
Perfluorodecanesulfonic acid (PFDS)	<1.68		6.48	1.68	ug/Kg	☼	01/31/22 11:39	02/02/22 20:22	1
Perfluorodecanoic acid (PFDA)	**8.78**		6.48	1.56	ug/Kg	☼	01/31/22 11:39	02/02/22 20:22	1
Perfluorododecanoic acid (PFDoA)	**2.99**	**J**	6.48	0.972	ug/Kg	☼	01/31/22 11:39	02/02/22 20:22	1
Perfluoroheptanesulfonic Acid (PFHpS)	<1.59		6.48	1.59	ug/Kg	☼	01/31/22 11:39	02/02/22 20:22	1
Perfluoroheptanoic acid (PFHpA)	<1.23		6.48	1.23	ug/Kg	☼	01/31/22 11:39	02/02/22 20:22	1
Perfluorohexanesulfonic acid (PFHxS)	<0.940		6.48	0.940	ug/Kg	☼	01/31/22 11:39	02/02/22 20:22	1
Perfluorohexanoic acid (PFHxA)	**3.92**	**J**	6.48	1.00	ug/Kg	☼	01/31/22 11:39	02/02/22 20:22	1
Perfluorononanesulfonic acid (PFNS)	<0.940		6.48	0.940	ug/Kg	☼	01/31/22 11:39	02/02/22 20:22	1
Perfluorononanoic acid (PFNA)	**1.23**	**J**	6.48	0.713	ug/Kg	☼	01/31/22 11:39	02/02/22 20:22	1
Perfluorooctanesulfonamide (FOSA)	**2.89**	**J**	6.48	1.07	ug/Kg	☼	01/31/22 11:39	02/02/22 20:22	1
Perfluorooctanesulfonic acid (PFOS)	**15.8**	**I**	6.48	1.39	ug/Kg	☼	01/31/22 11:39	02/02/22 20:22	1
Perfluorooctanoic acid (PFOA)	**3.10**	**J**	6.48	1.72	ug/Kg	☼	01/31/22 11:39	02/02/22 20:22	1
Perfluoropentanesulfonic acid (PFPeS)	<1.20		6.48	1.20	ug/Kg	☼	01/31/22 11:39	02/02/22 20:22	1
Perfluoropentanoic acid (PFPeA)	**3.20**	**J**	6.48	1.33	ug/Kg	☼	01/31/22 11:39	02/02/22 20:22	1
Perfluorotetradecanoic acid (PFTeA)	<1.20		6.48	1.20	ug/Kg	☼	01/31/22 11:39	02/02/22 20:22	1
Perfluorotridecanoic acid (PFTriA)	<0.680		6.48	0.680	ug/Kg	☼	01/31/22 11:39	02/02/22 20:22	1
Perfluoroundecanoic acid (PFUnA)	<1.36		6.48	1.36	ug/Kg	☼	01/31/22 11:39	02/02/22 20:22	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*100*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:22*	*1*
13C4 PFBA	*77*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:22*	*1*
13C3 PFBS	*107*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:22*	*1*
13C2 PFDA	*108*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:22*	*1*
13C2 PFDoA	*84*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:22*	*1*
13C4 PFHpA	*99*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:22*	*1*
13C2 PFHxA	*105*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:22*	*1*
13C5 PFNA	*106*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:22*	*1*
13C4 PFOA	*107*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:22*	*1*
13C4 PFOS	*107*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:22*	*1*
13C5 PFPeA	*99*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:22*	*1*
13C2 PFTeDA	*57*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:22*	*1*
13C2 PFUnA	*87*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:22*	*1*
d5-NEtFOSAA	*95*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:22*	*1*
d3-NMeFOSAA	*91*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:22*	*1*
M2-4:2 FTS	*137*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:22*	*1*
M2-6:2 FTS	*143*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:22*	*1*
M2-8:2 FTS	*167*	**5+*	*25 - 150*	*01/31/22 11:39*	*02/02/22 20:22*	*1*
18O2 PFHxS	*101*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:22*	*1*

Client Sample Results

Client: Oakland County Water Resources
Job ID: 190-27870-1
Project/Site: Walled Lake - MUNDY-WWTP PFAS

Client Sample ID: Sludge Storage Tank No. 5
Lab Sample ID: 190-27870-1
Date Collected: 01/27/22 09:59
Matrix: Solid
Date Received: 01/27/22 11:00
Percent Solids: 2.9

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	97.1		0.1	0.1	%			01/28/22 16:39	1
Percent Solids	2.9		0.1	0.1	%			01/28/22 16:39	1

Client Sample ID: Sludge Storage Tank No. 6
Lab Sample ID: 190-27870-2

Date Collected: 01/27/22 09:55
Matrix: Solid

Date Received: 01/27/22 11:00
Percent Solids: 3.3

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4:2 FTS	<1.53		6.00	1.53	ug/Kg	☼	01/31/22 11:39	02/02/22 20:32	1
6:2 FTS	**1.16**	**J**	6.00	0.810	ug/Kg	☼	01/31/22 11:39	02/02/22 20:32	1
8:2 FTS	<1.05		6.00	1.05	ug/Kg	☼	01/31/22 11:39	02/02/22 20:32	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	**6.20**		6.00	1.44	ug/Kg	☼	01/31/22 11:39	02/02/22 20:32	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	**20.8**		6.00	0.690	ug/Kg	☼	01/31/22 11:39	02/02/22 20:32	1
Perfluorobutanesulfonic acid (PFBS)	<1.14		6.00	1.14	ug/Kg	☼	01/31/22 11:39	02/02/22 20:32	1
Perfluorobutanoic acid (PFBA)	**2.34**	**J B**	6.00	1.38	ug/Kg	☼	01/31/22 11:39	02/02/22 20:32	1
Perfluorodecanesulfonic acid (PFDS)	**2.39**	**J**	6.00	1.56	ug/Kg	☼	01/31/22 11:39	02/02/22 20:32	1
Perfluorodecanoic acid (PFDA)	**6.70**		6.00	1.44	ug/Kg	☼	01/31/22 11:39	02/02/22 20:32	1
Perfluorododecanoic acid (PFDoA)	**2.21**	**J**	6.00	0.900	ug/Kg	☼	01/31/22 11:39	02/02/22 20:32	1
Perfluoroheptanesulfonic Acid (PFHpS)	<1.47		6.00	1.47	ug/Kg	☼	01/31/22 11:39	02/02/22 20:32	1
Perfluoroheptanoic acid (PFHpA)	<1.14		6.00	1.14	ug/Kg	☼	01/31/22 11:39	02/02/22 20:32	1
Perfluorohexanesulfonic acid (PFHxS)	**1.19**	**J**	6.00	0.870	ug/Kg	☼	01/31/22 11:39	02/02/22 20:32	1
Perfluorohexanoic acid (PFHxA)	**5.46**	**J**	6.00	0.930	ug/Kg	☼	01/31/22 11:39	02/02/22 20:32	1
Perfluorononanesulfonic acid (PFNS)	<0.870		6.00	0.870	ug/Kg	☼	01/31/22 11:39	02/02/22 20:32	1
Perfluorononanoic acid (PFNA)	**1.31**	**J**	6.00	0.660	ug/Kg	☼	01/31/22 11:39	02/02/22 20:32	1
Perfluorooctanesulfonamide (FOSA)	**3.51**	**J**	6.00	0.990	ug/Kg	☼	01/31/22 11:39	02/02/22 20:32	1
Perfluorooctanesulfonic acid (PFOS)	**15.6**	**I**	6.00	1.29	ug/Kg	☼	01/31/22 11:39	02/02/22 20:32	1
Perfluorooctanoic acid (PFOA)	**3.29**	**J**	6.00	1.59	ug/Kg	☼	01/31/22 11:39	02/02/22 20:32	1
Perfluoropentanesulfonic acid (PFPeS)	<1.11		6.00	1.11	ug/Kg	☼	01/31/22 11:39	02/02/22 20:32	1
Perfluoropentanoic acid (PFPeA)	**2.36**	**J**	6.00	1.23	ug/Kg	☼	01/31/22 11:39	02/02/22 20:32	1
Perfluorotetradecanoic acid (PFTeA)	<1.11		6.00	1.11	ug/Kg	☼	01/31/22 11:39	02/02/22 20:32	1
Perfluorotridecanoic acid (PFTriA)	<0.630		6.00	0.630	ug/Kg	☼	01/31/22 11:39	02/02/22 20:32	1
Perfluoroundecanoic acid (PFUnA)	<1.26		6.00	1.26	ug/Kg	☼	01/31/22 11:39	02/02/22 20:32	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*98*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:32*	*1*
13C4 PFBA	*83*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:32*	*1*
13C3 PFBS	*106*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:32*	*1*
13C2 PFDA	*104*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:32*	*1*
13C2 PFDoA	*82*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:32*	*1*
13C4 PFHpA	*98*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:32*	*1*
13C2 PFHxA	*95*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:32*	*1*
13C5 PFNA	*107*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:32*	*1*
13C4 PFOA	*105*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:32*	*1*
13C4 PFOS	*101*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:32*	*1*
13C5 PFPeA	*94*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:32*	*1*
13C2 PFTeDA	*65*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:32*	*1*
13C2 PFUnA	*89*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:32*	*1*
d5-NEtFOSAA	*101*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:32*	*1*
d3-NMeFOSAA	*92*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:32*	*1*
M2-4:2 FTS	*129*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:32*	*1*
M2-6:2 FTS	*135*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:32*	*1*

Client: Oakland County Water Resources
Job ID: 190-27870-1
Project/Site: Walled Lake - MUNDY-WWTP PFAS

Client Sample ID: Sludge Storage Tank No. 6
Lab Sample ID: 190-27870-2
Date Collected: 01/27/22 09:55
Matrix: Solid
Date Received: 01/27/22 11:00
Percent Solids: 3.3

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

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-8:2 FTS	*174*	*5+	*25 - 150*	*01/31/22 11:39*	*02/02/22 20:32*	*1*
18O2 PFHxS	*94*		*25 - 150*	*01/31/22 11:39*	*02/02/22 20:32*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	96.7		0.1	0.1	%			01/28/22 16:39	1
Percent Solids	3.3		0.1	0.1	%			01/28/22 16:39	1

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-562039/1-A
Matrix: Solid
Analysis Batch: 563130

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 562039

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4:2 FTS	<0.0510		0.200	0.0510	ug/Kg		01/31/22 11:39	02/02/22 19:19	1
6:2 FTS	<0.0270		0.200	0.0270	ug/Kg		01/31/22 11:39	02/02/22 19:19	1
8:2 FTS	<0.0350		0.200	0.0350	ug/Kg		01/31/22 11:39	02/02/22 19:19	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.0480		0.200	0.0480	ug/Kg		01/31/22 11:39	02/02/22 19:19	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.0230		0.200	0.0230	ug/Kg		01/31/22 11:39	02/02/22 19:19	1
Perfluorobutanesulfonic acid (PFBS)	<0.0380		0.200	0.0380	ug/Kg		01/31/22 11:39	02/02/22 19:19	1
Perfluorobutanoic acid (PFBA)	0.1113	J	0.200	0.0460	ug/Kg		01/31/22 11:39	02/02/22 19:19	1
Perfluorodecanesulfonic acid (PFDS)	<0.0520		0.200	0.0520	ug/Kg		01/31/22 11:39	02/02/22 19:19	1
Perfluorodecanoic acid (PFDA)	<0.0480		0.200	0.0480	ug/Kg		01/31/22 11:39	02/02/22 19:19	1
Perfluorododecanoic acid (PFDoA)	<0.0300		0.200	0.0300	ug/Kg		01/31/22 11:39	02/02/22 19:19	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.0490		0.200	0.0490	ug/Kg		01/31/22 11:39	02/02/22 19:19	1
Perfluoroheptanoic acid (PFHpA)	<0.0380		0.200	0.0380	ug/Kg		01/31/22 11:39	02/02/22 19:19	1
Perfluorohexanesulfonic acid (PFHxS)	<0.0290		0.200	0.0290	ug/Kg		01/31/22 11:39	02/02/22 19:19	1
Perfluorohexanoic acid (PFHxA)	<0.0310		0.200	0.0310	ug/Kg		01/31/22 11:39	02/02/22 19:19	1
Perfluorononanesulfonic acid (PFNS)	<0.0290		0.200	0.0290	ug/Kg		01/31/22 11:39	02/02/22 19:19	1
Perfluorononanoic acid (PFNA)	<0.0220		0.200	0.0220	ug/Kg		01/31/22 11:39	02/02/22 19:19	1
Perfluorooctanesulfonamide (FOSA)	<0.0330		0.200	0.0330	ug/Kg		01/31/22 11:39	02/02/22 19:19	1
Perfluorooctanesulfonic acid (PFOS)	<0.0430		0.200	0.0430	ug/Kg		01/31/22 11:39	02/02/22 19:19	1
Perfluorooctanoic acid (PFOA)	<0.0530		0.200	0.0530	ug/Kg		01/31/22 11:39	02/02/22 19:19	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0370		0.200	0.0370	ug/Kg		01/31/22 11:39	02/02/22 19:19	1
Perfluoropentanoic acid (PFPeA)	<0.0410		0.200	0.0410	ug/Kg		01/31/22 11:39	02/02/22 19:19	1
Perfluorotetradecanoic acid (PFTeA)	<0.0370		0.200	0.0370	ug/Kg		01/31/22 11:39	02/02/22 19:19	1
Perfluorotridecanoic acid (PFTriA)	<0.0210		0.200	0.0210	ug/Kg		01/31/22 11:39	02/02/22 19:19	1
Perfluoroundecanoic acid (PFUnA)	<0.0420		0.200	0.0420	ug/Kg		01/31/22 11:39	02/02/22 19:19	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*103*		*25 - 150*	*01/31/22 11:39*	*02/02/22 19:19*	*1*
13C4 PFBA	*87*		*25 - 150*	*01/31/22 11:39*	*02/02/22 19:19*	*1*
13C3 PFBS	*112*		*25 - 150*	*01/31/22 11:39*	*02/02/22 19:19*	*1*
13C2 PFDA	*108*		*25 - 150*	*01/31/22 11:39*	*02/02/22 19:19*	*1*
13C2 PFDoA	*97*		*25 - 150*	*01/31/22 11:39*	*02/02/22 19:19*	*1*
13C4 PFHpA	*105*		*25 - 150*	*01/31/22 11:39*	*02/02/22 19:19*	*1*
13C2 PFHxA	*106*		*25 - 150*	*01/31/22 11:39*	*02/02/22 19:19*	*1*
13C5 PFNA	*106*		*25 - 150*	*01/31/22 11:39*	*02/02/22 19:19*	*1*
13C4 PFOA	*104*		*25 - 150*	*01/31/22 11:39*	*02/02/22 19:19*	*1*
13C4 PFOS	*111*		*25 - 150*	*01/31/22 11:39*	*02/02/22 19:19*	*1*
13C5 PFPeA	*101*		*25 - 150*	*01/31/22 11:39*	*02/02/22 19:19*	*1*
13C2 PFTeDA	*103*		*25 - 150*	*01/31/22 11:39*	*02/02/22 19:19*	*1*
13C2 PFUnA	*119*		*25 - 150*	*01/31/22 11:39*	*02/02/22 19:19*	*1*
d5-NEtFOSAA	*118*		*25 - 150*	*01/31/22 11:39*	*02/02/22 19:19*	*1*
d3-NMeFOSAA	*108*		*25 - 150*	*01/31/22 11:39*	*02/02/22 19:19*	*1*
M2-4:2 FTS	*118*		*25 - 150*	*01/31/22 11:39*	*02/02/22 19:19*	*1*
M2-6:2 FTS	*110*		*25 - 150*	*01/31/22 11:39*	*02/02/22 19:19*	*1*
M2-8:2 FTS	*115*		*25 - 150*	*01/31/22 11:39*	*02/02/22 19:19*	*1*
18O2 PFHxS	*103*		*25 - 150*	*01/31/22 11:39*	*02/02/22 19:19*	*1*

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

Lab Sample ID: LCS 320-562039/2-A
Matrix: Solid
Analysis Batch: 563130

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 562039

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4:2 FTS	1.87	1.932		ug/Kg		103	68 - 143
6:2 FTS	1.90	2.039		ug/Kg		108	73 - 139
8:2 FTS	1.92	1.825		ug/Kg		95	75 - 135
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	1.897		ug/Kg		95	72 - 132
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	2.053		ug/Kg		103	72 - 132
Perfluorobutanesulfonic acid (PFBS)	1.77	1.757		ug/Kg		99	69 - 129
Perfluorobutanoic acid (PFBA)	2.00	1.972		ug/Kg		99	76 - 136
Perfluorodecanesulfonic acid (PFDS)	1.93	1.697		ug/Kg		88	71 - 131
Perfluorodecanoic acid (PFDA)	2.00	2.161		ug/Kg		108	72 - 132
Perfluorododecanoic acid (PFDoA)	2.00	2.106		ug/Kg		105	71 - 131
Perfluoroheptanesulfonic Acid (PFHpS)	1.90	1.835		ug/Kg		96	76 - 136
Perfluoroheptanoic acid (PFHpA)	2.00	2.003		ug/Kg		100	71 - 131
Perfluorohexanesulfonic acid (PFHxS)	1.82	1.754		ug/Kg		96	62 - 122
Perfluorohexanoic acid (PFHxA)	2.00	1.921		ug/Kg		96	71 - 131
Perfluorononanesulfonic acid (PFNS)	1.92	1.862		ug/Kg		97	72 - 132
Perfluorononanoic acid (PFNA)	2.00	1.879		ug/Kg		94	73 - 133
Perfluorooctanesulfonamide (FOSA)	2.00	2.020		ug/Kg		101	77 - 137
Perfluorooctanesulfonic acid (PFOS)	1.86	1.838		ug/Kg		99	68 - 141
Perfluorooctanoic acid (PFOA)	2.00	1.920		ug/Kg		96	72 - 132
Perfluoropentanesulfonic acid (PFPeS)	1.88	1.894		ug/Kg		101	66 - 126
Perfluoropentanoic acid (PFPeA)	2.00	1.870		ug/Kg		93	69 - 129
Perfluorotetradecanoic acid (PFTeA)	2.00	2.000		ug/Kg		100	67 - 127
Perfluorotridecanoic acid (PFTriA)	2.00	2.033		ug/Kg		102	71 - 131
Perfluoroundecanoic acid (PFUnA)	2.00	1.932		ug/Kg		97	66 - 126

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C8 FOSA	*106*		*25 - 150*
13C4 PFBA	*88*		*25 - 150*
13C3 PFBS	*104*		*25 - 150*
13C2 PFDA	*105*		*25 - 150*
13C2 PFDoA	*102*		*25 - 150*
13C4 PFHpA	*103*		*25 - 150*
13C2 PFHxA	*109*		*25 - 150*
13C5 PFNA	*108*		*25 - 150*
13C4 PFOA	*103*		*25 - 150*
13C4 PFOS	*108*		*25 - 150*
13C5 PFPeA	*105*		*25 - 150*
13C2 PFTeDA	*101*		*25 - 150*

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

Lab Sample ID: LCS 320-562039/2-A
Matrix: Solid
Analysis Batch: 563130

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 562039

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C2 PFUnA	*100*		*25 - 150*
d5-NEtFOSAA	*110*		*25 - 150*
d3-NMeFOSAA	*107*		*25 - 150*
M2-4:2 FTS	*107*		*25 - 150*
M2-6:2 FTS	*106*		*25 - 150*
M2-8:2 FTS	*119*		*25 - 150*
18O2 PFHxS	*104*		*25 - 150*

Lab Sample ID: 190-27870-2 MS
Matrix: Solid
Analysis Batch: 563130

Client Sample ID: Sludge Storage Tank No. 6
Prep Type: Total/NA
Prep Batch: 562039

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
4:2 FTS	<1.53		53.1	52.77		ug/Kg	☼	99	68 - 143
6:2 FTS	1.16	J	53.9	62.15		ug/Kg	☼	113	73 - 139
8:2 FTS	<1.05		54.5	55.44		ug/Kg	☼	102	75 - 135
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	6.20		56.9	66.55		ug/Kg	☼	106	72 - 132
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	20.8		56.9	79.20		ug/Kg	☼	103	72 - 132
Perfluorobutanesulfonic acid (PFBS)	<1.14		50.3	44.44		ug/Kg	☼	88	69 - 129
Perfluorobutanoic acid (PFBA)	2.34	J B	56.9	61.66		ug/Kg	☼	104	76 - 136
Perfluorodecanesulfonic acid (PFDS)	2.39	J	54.8	48.96		ug/Kg	☼	85	71 - 131
Perfluorodecanoic acid (PFDA)	6.70		56.9	64.46		ug/Kg	☼	102	72 - 132
Perfluorododecanoic acid (PFDoA)	2.21	J	56.9	59.28		ug/Kg	☼	100	71 - 131
Perfluoroheptanesulfonic Acid (PFHpS)	<1.47		54.2	54.40		ug/Kg	☼	100	76 - 136
Perfluoroheptanoic acid (PFHpA)	<1.14		56.9	54.95		ug/Kg	☼	97	71 - 131
Perfluorohexanesulfonic acid (PFHxS)	1.19	J	51.8	47.76		ug/Kg	☼	90	62 - 122
Perfluorohexanoic acid (PFHxA)	5.46	J	56.9	59.90		ug/Kg	☼	96	71 - 131
Perfluorononanesulfonic acid (PFNS)	<0.870		54.6	45.82		ug/Kg	☼	84	72 - 132
Perfluorononanoic acid (PFNA)	1.31	J	56.9	54.86		ug/Kg	☼	94	73 - 133
Perfluorooctanesulfonamide (FOSA)	3.51	J	56.9	67.96		ug/Kg	☼	113	77 - 137
Perfluorooctanesulfonic acid (PFOS)	15.6	I	52.8	62.48	I	ug/Kg	☼	89	68 - 141
Perfluorooctanoic acid (PFOA)	3.29	J	56.9	50.97		ug/Kg	☼	84	72 - 132
Perfluoropentanesulfonic acid (PFPeS)	<1.11		53.4	49.85		ug/Kg	☼	93	66 - 126
Perfluoropentanoic acid (PFPeA)	2.36	J	56.9	54.38		ug/Kg	☼	91	69 - 129
Perfluorotetradecanoic acid (PFTeA)	<1.11		56.9	52.50		ug/Kg	☼	92	67 - 127
Perfluorotridecanoic acid (PFTriA)	<0.630		56.9	53.21		ug/Kg	☼	94	71 - 131
Perfluoroundecanoic acid (PFUnA)	<1.26		56.9	56.59		ug/Kg	☼	99	66 - 126

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

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C8 FOSA	99		25 - 150
13C4 PFBA	89		25 - 150
13C3 PFBS	114		25 - 150
13C2 PFDA	114		25 - 150
13C2 PFDoA	88		25 - 150
13C4 PFHpA	109		25 - 150
13C2 PFHxA	110		25 - 150
13C5 PFNA	110		25 - 150
13C4 PFOA	114		25 - 150
13C4 PFOS	105		25 - 150
13C5 PFPeA	109		25 - 150
13C2 PFTeDA	68		25 - 150
13C2 PFUnA	96		25 - 150
d5-NEtFOSAA	101		25 - 150
d3-NMeFOSAA	97		25 - 150
M2-4:2 FTS	154	*5+	25 - 150
M2-6:2 FTS	137		25 - 150
M2-8:2 FTS	181	*5+	25 - 150
18O2 PFHxS	104		25 - 150

Lab Sample ID: 190-27870-2 MSD
Client Sample ID: Sludge Storage Tank No. 6
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 563130
Prep Batch: 562039

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4:2 FTS	<1.53		52.9	51.45		ug/Kg	☼	97	68 - 143	3	30
6:2 FTS	1.16	J	53.7	63.84		ug/Kg	☼	117	73 - 139	3	30
8:2 FTS	<1.05		54.3	54.11		ug/Kg	☼	100	75 - 135	2	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	6.20		56.7	64.13		ug/Kg	☼	102	72 - 132	4	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	20.8		56.7	71.72		ug/Kg	☼	90	72 - 132	10	30
Perfluorobutanesulfonic acid (PFBS)	<1.14		50.1	47.19		ug/Kg	☼	94	69 - 129	6	30
Perfluorobutanoic acid (PFBA)	2.34	J B	56.7	61.50		ug/Kg	☼	104	76 - 136	0	30
Perfluorodecanesulfonic acid (PFDS)	2.39	J	54.6	48.94		ug/Kg	☼	85	71 - 131	0	30
Perfluorodecanoic acid (PFDA)	6.70		56.7	63.90		ug/Kg	☼	101	72 - 132	1	30
Perfluorododecanoic acid (PFDoA)	2.21	J	56.7	61.36		ug/Kg	☼	104	71 - 131	3	30
Perfluoroheptanesulfonic Acid (PFHpS)	<1.47		54.0	52.79		ug/Kg	☼	98	76 - 136	3	30
Perfluoroheptanoic acid (PFHpA)	<1.14		56.7	57.14		ug/Kg	☼	101	71 - 131	4	30
Perfluorohexanesulfonic acid (PFHxS)	1.19	J	51.6	49.11		ug/Kg	☼	93	62 - 122	3	30
Perfluorohexanoic acid (PFHxA)	5.46	J	56.7	58.64		ug/Kg	☼	94	71 - 131	2	30
Perfluorononanesulfonic acid (PFNS)	<0.870		54.4	49.97		ug/Kg	☼	92	72 - 132	9	30
Perfluorononanoic acid (PFNA)	1.31	J	56.7	57.46		ug/Kg	☼	99	73 - 133	5	30
Perfluorooctanesulfonamide (FOSA)	3.51	J	56.7	66.46		ug/Kg	☼	111	77 - 137	2	30
Perfluorooctanesulfonic acid (PFOS)	15.6	I	52.6	63.90	I	ug/Kg	☼	92	68 - 141	2	30
Perfluorooctanoic acid (PFOA)	3.29	J	56.7	58.05		ug/Kg	☼	97	72 - 132	13	30

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

Lab Sample ID: 190-27870-2 MSD
Client Sample ID: Sludge Storage Tank No. 6
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 563130
Prep Batch: 562039

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluoropentanesulfonic acid (PFPeS)	<1.11		53.2	52.52		ug/Kg	☼	99	66 - 126	5	30
Perfluoropentanoic acid (PFPeA)	2.36	J	56.7	56.38		ug/Kg	☼	95	69 - 129	4	30
Perfluorotetradecanoic acid (PFTeA)	<1.11		56.7	50.70		ug/Kg	☼	89	67 - 127	3	30
Perfluorotridecanoic acid (PFTriA)	<0.630		56.7	51.75		ug/Kg	☼	91	71 - 131	3	30
Perfluoroundecanoic acid (PFUnA)	<1.26		56.7	58.49		ug/Kg	☼	103	66 - 126	3	30

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C8 FOSA	*96*		*25 - 150*
13C4 PFBA	*89*		*25 - 150*
13C3 PFBS	*101*		*25 - 150*
13C2 PFDA	*103*		*25 - 150*
13C2 PFDoA	*84*		*25 - 150*
13C4 PFHpA	*103*		*25 - 150*
13C2 PFHxA	*102*		*25 - 150*
13C5 PFNA	*104*		*25 - 150*
13C4 PFOA	*101*		*25 - 150*
13C4 PFOS	*100*		*25 - 150*
13C5 PFPeA	*98*		*25 - 150*
13C2 PFTeDA	*64*		*25 - 150*
13C2 PFUnA	*85*		*25 - 150*
d5-NEtFOSAA	*99*		*25 - 150*
d3-NMeFOSAA	*96*		*25 - 150*
M2-4:2 FTS	*147*		*25 - 150*
M2-6:2 FTS	*142*		*25 - 150*
M2-8:2 FTS	*176*	*5+	*25 - 150*
18O2 PFHxS	*98*		*25 - 150*

Definitions/Glossary

Client: Oakland County Water Resources
Job ID: 190-27870-1
Project/Site: Walled Lake - MUNDY-WWTP PFAS

Qualifiers

LCMS

Qualifier	Qualifier Description
*5+	Isotope dilution analyte is outside acceptance limits, high biased.
B	Compound was found in the blank and sample.
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Lab Chronicle

Client: Oakland County Water Resources
Job ID: 190-27870-1
Project/Site: Walled Lake - MUNDY-WWTP PFAS

Client Sample ID: Sludge Storage Tank No. 5
Lab Sample ID: 190-27870-1
Date Collected: 01/27/22 09:59
Matrix: Solid
Date Received: 01/27/22 11:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	561632	01/28/22 16:39	JP	TAL SAC

Client Sample ID: Sludge Storage Tank No. 5
Lab Sample ID: 190-27870-1
Date Collected: 01/27/22 09:59
Matrix: Solid
Date Received: 01/27/22 11:00
Percent Solids: 2.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			562039	01/31/22 11:39	OP	TAL SAC
Total/NA	Analysis	537 (modified)		1	563130	02/02/22 20:22	S1M	TAL SAC

Client Sample ID: Sludge Storage Tank No. 6
Lab Sample ID: 190-27870-2
Date Collected: 01/27/22 09:55
Matrix: Solid
Date Received: 01/27/22 11:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	561632	01/28/22 16:39	JP	TAL SAC

Client Sample ID: Sludge Storage Tank No. 6
Lab Sample ID: 190-27870-2
Date Collected: 01/27/22 09:55
Matrix: Solid
Date Received: 01/27/22 11:00
Percent Solids: 3.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			562039	01/31/22 11:39	OP	TAL SAC
Total/NA	Analysis	537 (modified)		1	563130	02/02/22 20:32	S1M	TAL SAC

Laboratory References:

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

Analyst References:

Lab: TAL SAC

Batch Type: Prep

OP = Oscar Pascual-Diaz

Batch Type: Analysis

JP = Jacob Panec

S1M = Sudarat Mongkol

Method Summary

Client: Oakland County Water Resources
Job ID: 190-27870-1
Project/Site: Walled Lake - MUNDY-WWTP PFAS

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC
SHAKE	Shake Extraction with Ultrasonic Bath Extraction	SW846	TAL SAC

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

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

MICHIGAN 190

Chain of Custody Record

Eurofins TestAmerica - Brighton — 10448 Citation Drive, Suite 200 / Brighton, MI 48116 / 810-229-2763

eurofins

Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other wastewater permit

Client Contact	Client Project Manager:	Site Contact:	Lab Contact:	COC No:
Company Name: Oakland County Water Resources	Gary Mundy	Kirk Miller	Sue Schafer	
Address: 1 Public Works Drive	Telephone: 248-669-4443	Telephone: 248-452-2273	Telephone: 810-919-2900	1 of 1 COCs
City/State/Zip: Waterford, MI 48328-1907	Email: mundyg@oakgov.com	Analysis Turnaround Time		For lab use only
Phone: 248-669-4443		TAT if different from below 10 bus		Walk-in client
Project Name: Walled Lake, Novi WWTP		☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		Lab sampling
	Method of Shipment/Carrier: Eurofins Field Services			Job/SDG No:
PO #	Shipping/Tracking No:			

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Unpres	Other:	Filtered Sample (Y / N)	Composite C / Grab G	Analyses: Solid-PFAS 24	Sample Specific Notes / Special Instructions:
Sludge Storage Tank No. 5	1/27/22	0959															X	DO NOT CENTRIFUGE
Sludge Storage Tank No. 6	1/27/22	0955															X	DO NOT CENTRIFUGE

190-27870 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☑ Disposal By Lab ☐ Archive For ☐ Months

Special Instructions/QC Requirements & Comments:

(Print Name) Eurofins TestAmerica Field Technician - J. Bertram

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	**Received in Laboratory by:**	**Company:**	**Date/Time:**
Relinquished by:	Company: EGTA	Date/Time: 1/27/22 1000	Received by:	Company: EETA	Date/Time: 1-27-22 1100

2/11/2022

eurofins | Environment Testing TestAmerica

☐ SDS or Known Hazard Information Supplied by Client
☐ Discrepancies
☐ Short Hold
☐ Rush ☐ 24 Hr ☐ 2-Day ☐ 3-Day ☐ 5-Day ☐ Other: _____

Client ID: DCWRC - Walled Lake
Work Oder #: 140-27870

Receipt Evaluation Performed by: Initials: TRH Date: 1-27-22 Time: 1100

Cooler / Sample Receipt

After hours receipt: complete gray areas. Place cooler in walk-in, place form in Receiving box. Date: _____ Time: _____

Method of Shipment:
Walk-In Client (Eurofins TA Field) Courier
Other Client / 3rd Party Courier: _____
Fed Ex Tracking #: _____
UPS Tracking #: _____
Other: _____

Shipping Container Type:
☑ Cooler ☐ Box
☐ None ☐ Other: _____

Packing Materials:
☑ Plastic Bags ☐ Foam
☐ Bubble Wrap ☐ Paper
☐ Packing Peanuts ☐ None
☐ Other: _____

Custody Seals Intact:
☐ Yes ☐ No
☑ NA (not used or required)

Cooling Materials:
☑ Ice (Solid) ☐ Ice (Melted)
☐ Blue Ice ☐ None
☐ Other: _____

Bacteriological Samples	Temp Corrected (°C)	Frozen? Yes	Frozen? No	Rec'd Within 2 Hrs? Yes	Rec'd Within 2 Hrs? No	Sample Flagged? Yes	Sample Flagged? No

Received on same day sampled? (Yes) No

Additional Sheets Required? (Yes) No

Receipt Temperatures

Thermometer ID	Observed (°C)	Corrected (°C)	Temp Blank	Sample Temp	Acceptable	Cooler ID	Affected Samples
CP3B3207	6.9	6.9		X	X Y _ N		
					_ Y _ N		
					_ Y _ N		

Receipt Questions**	Y	N	NA	"No" answers require additional comment
CoC present and ETA receipt signature, date, and time properly documented?	X			
Containers and Labels in good condition? *(unbroken, not leaking, appropriately filled, labels legible & attached)*	X			
Appropriate containers used and adequate volume provided?	X			Preserved bottles checked for pH?* Yes No
Number of sample containers match CoC?	X			pH strip lot # _____
Samples received within hold?	X			
Samples submitted for GRO and Volatiles analysis (8260, 624, 524) received without headspace?			X	
Was a Trip Blank received with VOA samples?			X	
Were the samples free of any questionable physical conformities? (i.e.; field duplicates or multiple bottles of the same sample do not significantly vary in appearance – color, solid proportions, etc.)	X			
Were the CoC bottle labels and all other items free of all other discrepancies or issues that would need to be addressed with the Project Manager and/or Client?	X			
**May not be applicable if samples are not for compliance testing				*Excludes FOG, VOAs, TOC Vials, HEM

Client Contact Record

Contact Via: ☐ Phone ☐ Email ☐ Other: _____ Person Contacted: _____ Date/Time: _____

☐ Discrepancy allowance agreement is on record in the client project file

Discussion / Resolution

Any additional documentation and clarification from the client must be noted in the narrative and/or scanned into the CoC directory.

Reviewed by _____ Date: 1-27-22

WI-MI-010_020720

Eurofins Michigan
10448 Citation Drive Suite 200
Brighton, MI 48116
Phone: 810-229-2763 Fax: 810-229-0000

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Schafer, Sue	Carrier Tracking No(s):	COC No: 190-31351.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Sue.Schafer@Eurofinset.com	State of Origin: Michigan	Page: Page 1 of 1
Company: Eurofins Environment Testing Northern Ca		Accreditations Required (See note):		Job #: 190-27870-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 2/9/2022			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Walled Lake - MUNDY-WWTP PFAS	Project #: 19000168			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Moisture	PFC_IDA/Shake_Bath_14D (MOD) PFAS, Standard List (24 Analytes)	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
Sludge Storage Tank No. 5 (190-27870-1)	1/27/22	09:59 Eastern		Solid			X	X	2	
Sludge Storage Tank No. 6 (190-27870-2)	1/27/22	09:55 Eastern		Solid			X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Kevin Hall	1-27-22 1700			1/28/22 9:20	EST Kalamazoo
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact:	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
Yes	1855524	3.4

Isotope Dilution Summary

Client: Oakland County Water Resources
Job ID: 190-27870-1
Project/Site: Walled Lake - MUNDY-WWTP PFAS

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Solid **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFOSA (25-150)	PFBA (25-150)	C3PFBS (25-150)	PFDA (25-150)	PFDoA (25-150)	C4PFHA (25-150)	PFHxA (25-150)	PFNA (25-150)
190-27870-1	Sludge Storage Tank No. 5	100	77	107	108	84	99	105	106
190-27870-2	Sludge Storage Tank No. 6	98	83	106	104	82	98	95	107
190-27870-2 MS	Sludge Storage Tank No. 6	99	89	114	114	88	109	110	110
190-27870-2 MSD	Sludge Storage Tank No. 6	96	89	101	103	84	103	102	104
LCS 320-562039/2-A	Lab Control Sample	106	88	104	105	102	103	109	108
MB 320-562039/1-A	Method Blank	103	87	112	108	97	105	106	106

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFOA (25-150)	PFOS (25-150)	PFPeA (25-150)	PFTDA (25-150)	PFUnA (25-150)	d5NEFOS (25-150)	d3NMFOS (25-150)	M242FTS (25-150)
190-27870-1	Sludge Storage Tank No. 5	107	107	99	57	87	95	91	137
190-27870-2	Sludge Storage Tank No. 6	105	101	94	65	89	101	92	129
190-27870-2 MS	Sludge Storage Tank No. 6	114	105	109	68	96	101	97	154 *5+
190-27870-2 MSD	Sludge Storage Tank No. 6	101	100	98	64	85	99	96	147
LCS 320-562039/2-A	Lab Control Sample	103	108	105	101	100	110	107	107
MB 320-562039/1-A	Method Blank	104	111	101	103	119	118	108	118

		Percent Isotope Dilution Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	M262FTS (25-150)	M282FTS (25-150)	PFHxS (25-150)
190-27870-1	Sludge Storage Tank No. 5	143	167 *5+	101
190-27870-2	Sludge Storage Tank No. 6	135	174 *5+	94
190-27870-2 MS	Sludge Storage Tank No. 6	137	181 *5+	104
190-27870-2 MSD	Sludge Storage Tank No. 6	142	176 *5+	98
LCS 320-562039/2-A	Lab Control Sample	106	119	104
MB 320-562039/1-A	Method Blank	110	115	103

Surrogate Legend

PFOSA = 13C8 FOSA
PFBA = 13C4 PFBA
C3PFBS = 13C3 PFBS
PFDA = 13C2 PFDA
PFDoA = 13C2 PFDoA
C4PFHA = 13C4 PFHpA
PFHxA = 13C2 PFHxA
PFNA = 13C5 PFNA
PFOA = 13C4 PFOA
PFOS = 13C4 PFOS
PFPeA = 13C5 PFPeA
PFTDA = 13C2 PFTeDA
PFUnA = 13C2 PFUnA
d5NEFOS = d5-NEtFOSAA
d3NMFOS = d3-NMeFOSAA
M242FTS = M2-4:2 FTS
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
PFHxS = 18O2 PFHxS