Schmenk, Colin R -DNR

From: Jeffrey Howard Danko <jeffrey.howard.danko@jci.com>
Sent: Wednesday, October 7, 2020 5:14 PM
To: Neste, David E - DNR; Kelly, Bridget B - DNR; Haag, Christine T - DNR
Cc: Katie McGinty; Tim Maciolek; John D Perkins; Scott D Wahl; Potter, Scott
Subject: Tyco Fire Technology Center Project - Fish Tissue Results
Attachments: FTC_FishTissue_10072020_final.pdf; FTC_FishTissue_10072020_final.xlsx; Figure 2 Prop Fish Sample Locs.pdf; J64243-1 UDS Level 2 Report Final Report.pdf

Dave, Bridget, and Christine:

Attached are the validated fish tissue data in a table (both a PDF format and an Excel format), the laboratory data report, and a figure showing the sample locations. The laboratory data report presents the fish tissue data on a dry weight basis. We converted the data to a wet weight basis using the laboratory reported percent solids. The data table presents both the dry weight (if you want to compare the results in the laboratory report and the data table) and the wet weight data.

The fish tissue samples were shipped to SGS in British Columbia yesterday for re-analysis. Of the 26 fish tissue samples, 22 samples will be re-analyzed. The remaining six samples (SW14-BG5, SW14-YP5, SW37-PS3, SW37-YP2, SW38-YP3, and SW38-YP5) did not have sufficient mass for re-analysis. The fish tissue samples arrived in British Columbia today and are clearing customs. Because sample receipt is expected at the end of day today (due to samples clearing customs), the laboratory due date for data shifted from Oct. 22 to Oct. 23. The laboratory is not certain that they can complete all the analyses by Oct. 23 because of the volume of samples. Therefore, we asked them to prioritize the samples from ponds SW37 and SW38, as the original results from these samples have the most uncertainty associated with them. The lab will make every effort to complete the analysis for the pond SW14 samples by Oct. 23 and have guaranteed the results for the pond SW14 samples by Oct. 30 at the latest. Data validation will be completed on Nov. 5 for the results issued on Oct. 23. Data validation on results issued after Oct. 23 will begin upon receipt of the results and completed within ten business days.

Please let me know if you have any questions.

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Table - Validated Fish Tissue Results

	Location	SW14-BG1				SW14-BG2			
	Sample ID	SW14-BG1 (082620)				SW14-BG2 (082620)			
	Sample Date	8/26/2020				8/26/2020			
Chemical Name	**Units**	**Result[1]**	**Result_WW[2]**	**Qualifier**	**Detect?**	**Result[1]**	**Result_WW[2]**	**Qualifier**	**Detect?**
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	ug/kg	0.73	0.14	J	Y	1.1	0.22	J	Y
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (F-53B Minor)	ug/kg	0.41	0.07995	U	N	0.45	0.09	U	N
2,3,3,3-Tetrafluoro-2-(heptafluoropropoxy)propanoic acid (HFPO-DA)	ug/kg	2	0.39	U	N	2.2	0.44	U	N
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	ug/kg	0.33	0.06435	U	N	0.37	0.074	U	N
4:2 Fluorotelomer sulfonate	ug/kg	6.9	1.3455	U	N	7.5	1.5	U	N
6:2 Fluorotelomer sulfonic acid (6:2 FTSA)	ug/kg	2.8	0.546	U	N	3.1	0.62	U	N
8:2 Fluorotelomer sulfonic acid (8:2 FTSA)	ug/kg	4.7	0.9165	U	N	5.1	1.02	U	N
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (F-53 Major)	ug/kg	1.3	0.2535	U	N	1.5	0.3	U	N
N-Ethyl perfluorooctane sulfonamide (N-EtFOSA)	ug/kg	3.6	0.702	U	N	3.9	0.78	U	N
N-Ethyl perfluorooctane sulfonamide ethanol (N-EtFOSE)	ug/kg	0.67	0.13065	U	N	0.73	0.146	U	N
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	ug/kg	6.9	1.3455	U	N	7.5	1.5	U	N
N-Methyl perfluorooctane sulfonamide (N-MeFOSA)	ug/kg	0.59	0.11505	U	N	0.65	0.13	U	N
N-Methyl perfluorooctane sulfonamidoethanol (N-MeFOSE)	ug/kg	1.3	0.2535	U	N	1.4	0.28	U	N
N-Methylperfluoroocatane sulfonamidoacetic acid (MeFOSAA)	ug/kg	7.2	1.404	U	N	7.9	1.58	U	N
Perfluorobutane sulfonic acid (PFBS)	ug/kg	0.46	0.0897	U	N	0.51	0.102	U	N
Perfluorobutanoic acid (PFBA)	ug/kg	3.7	0.7215	UB	N	4.1	0.82	UB	N
Perfluorodecane sulfonic acid (PFDS)	ug/kg	0.72	0.1404	U	N	0.79	0.158	U	N
Perfluorodecanoic acid (PFDA)	ug/kg	2.6	0.507	J	Y	3.4	0.68	J	Y
Perfluorododecane sulfonic acid (PFDOS)	ug/kg	1.1	0.2145	U	N	1.2	0.24	U	N
Perfluorododecanoic acid (PFDoA)	ug/kg	1.2	0.234	U	N	1.4	0.28	U	N
Perfluoroheptane sulfonic acid (PFHpS)	ug/kg	0.65	0.12675	U	N	0.71	0.142	U	N
Perfluoroheptanoic acid (PFHpA)	ug/kg	0.54	0.1053	U	N	0.59	0.118	U	N
Perfluorohexadecanoic acid (PFHxDA)	ug/kg	1.1	0.2145	U	N	0.9	0.18	U	N
Perfluorohexane sulfonic acid (PFHxS)	ug/kg	7.4	1.443	UY	N	29	5.8	UY	N
Perfluorohexanoic acid (PFHxA)	ug/kg	0.78	0.1521	U	N	0.86	0.172	U	N
Perfluorononane sulfonic acid (PFNS)	ug/kg	0.37	0.07215	U	N	0.41	0.082	U	N
Perfluorononanoic acid (PFNA)	ug/kg	1.1	0.2145	J	Y	1.6	0.32	J	Y
Perfluorooctadecanoic acid	ug/kg	0.67	0.13065	U	N	0.57	0.114	U	N
Perfluorooctane sulfonamide (PFOSA)	ug/kg	1.5	0.2925	U	N	1.7	0.34	U	N
Perfluorooctane sulfonic acid (PFOS)	ug/kg	380	74.1	UY	N	150	30	JN	Y
Perfluorooctanoic acid (PFOA)	ug/kg	1.6	0.312	U	N	1.8	0.36	U	N
Perfluoropentane sulfonic acid (PFPeS)	ug/kg	0.37	0.07215	U	N	0.41	0.082	U	N
Perfluoropentanoic acid (PFPeA)	ug/kg	1.4	0.273	U	N	1.6	0.32	U	N
Perfluorotetradecanoic acid (PFTeA)	ug/kg	R			Y	1.1	0.22	U	N
Perfluorotridecanoic acid (PFTrDA)	ug/kg	R			Y	1	0.2	U	N
Perfluoroundecanoic acid (PFUdA)	ug/kg	1.9	0.3705	J	Y	2.8	0.56	J	Y

Table - Validated Fish Tissue Results

	Location	SW14-BG3				SW14-BG4			
	Sample ID	SW14-BG3 (082620)				SW14-BG4 (082720)			
	Sample Date	8/26/2020				8/27/2020			
Chemical Name	Units	Result[1]	Result_WW[2]	Qualifier	Detect?	Result[1]	Result_WW[2]	Qualifier	Detect?
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	ug/kg	0.75	0.1635	J	Y	2.8	0.6356	J	Y
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (F-53B Minor)	ug/kg	0.5	0.109	U	N	0.43	0.09761	U	N
2,3,3,3-Tetrafluoro-2-(heptafluoropropoxy)propanoic acid (HFPO-DA)	ug/kg	2.5	0.545	U	N	2.1	0.4767	U	N
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	ug/kg	0.41	0.08938	U	N	0.35	0.07945	U	N
4:2 Fluorotelomer sulfonate	ug/kg	8.3	1.8094	U	N	7.2	1.6344	U	N
6:2 Fluorotelomer sulfonic acid (6:2 FTSA)	ug/kg	3.4	0.7412	U	N	2.9	0.6583	U	N
8:2 Fluorotelomer sulfonic acid (8:2 FTSA)	ug/kg	5.6	1.2208	U	N	4.8	1.0896	U	N
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (F-53 Major)	ug/kg	1.6	0.3488	U	N	1.4	0.3178	U	N
N-Ethyl perfluoroctane sulfonamide (N-EtFOSA)	ug/kg	4.3	0.9374	U	N	3.7	0.8399	U	N
N-Ethyl perfluorooctane sulfonamide ethanol (N-EtFOSE)	ug/kg	0.81	0.17658	U	N	0.7	0.1589	U	N
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	ug/kg	8.3	1.8094	U	N	7.2	1.6344	U	N
N-Methyl perfluorooctane sulfonamide (N-MeFOSA)	ug/kg	0.72	0.15696	U	N	0.62	0.14074	U	N
N-Methyl perfluorooctane sulfonamidoethanol (N-MeFOSE)	ug/kg	1.6	0.3488	U	N	1.4	0.3178	U	N
N-Methylperfluoroocatane sulfonamidoacetic acid (MeFOSAA)	ug/kg	8.8	1.9184	U	N	7.5	1.7025	U	N
Perfluorobutane sulfonic acid (PFBS)	ug/kg	0.56	0.12208	U	N	0.48	0.10896	U	N
Perfluorobutanoic acid (PFBA)	ug/kg	4.5	0.981	UB	N	3.9	0.8853	UB	N
Perfluorodecane sulfonic acid (PFDS)	ug/kg	0.88	0.19184	U	N	0.75	0.17025	U	N
Perfluorodecanoic acid (PFDA)	ug/kg	5.1	1.1118		Y	3.7	0.8399	J	Y
Perfluorododecane sulfonic acid (PFDOS)	ug/kg	1.4	0.3052	U	N	1.2	0.2724	U	N
Perfluorododecanoic acid (PFDoA)	ug/kg	1.5	0.327	U	N	1.4	0.3178	J	Y
Perfluoroheptane sulfonic acid (PFHpS)	ug/kg	0.79	0.17222	U	N	0.68	0.15436	U	N
Perfluoroheptanoic acid (PFHpA)	ug/kg	0.65	0.1417	U	N	0.56	0.12712	U	N
Perfluorohexadecanoic acid (PFHxDA)	ug/kg	0.99	0.21582	U	N	0.85	0.19295	U	N
Perfluorohexane sulfonic acid (PFHxS)	ug/kg	32	6.976	UY	N	15	3.405	UY	N
Perfluorohexanoic acid (PFHxA)	ug/kg	0.95	0.2071	U	N	0.81	0.18387	U	N
Perfluorononane sulfonic acid (PFNS)	ug/kg	0.45	0.0981	U	N	0.39	0.08853	U	N
Perfluorononanoic acid (PFNA)	ug/kg	1.5	0.327	J	Y	1.4	0.3178	J	Y
Perfluorooctadecanoic acid	ug/kg	0.63	0.13734	U	N	0.54	0.12258	U	N
Perfluorooctane sulfonamide (PFOSA)	ug/kg	1.8	0.3924	U	N	1.6	0.3632	U	N
Perfluorooctane sulfonic acid (PFOS)	ug/kg	120	26.16		Y	150	34.05		Y
Perfluorooctanoic acid (PFOA)	ug/kg	1.9	0.4142	U	N	1.7	0.3859	U	N
Perfluoropentane sulfonic acid (PFPeS)	ug/kg	0.45	0.0981	U	N	0.39	0.08853	U	N
Perfluoropentanoic acid (PFPeA)	ug/kg	1.7	0.3706	U	N	1.5	0.3405	U	N
Perfluorotetradecanoic acid (PFTeA)	ug/kg	1.2	0.2616	U	N	1	0.227	U	N
Perfluorotridecanoic acid (PFTrDA)	ug/kg	1.1	0.2398	U	N	0.99	0.22473	U	N
Perfluoroundecanoic acid (PFUdA)	ug/kg	3.8	0.8284	J	Y	3.2	0.7264	J	Y

Table - Validated Fish Tissue Results

	Location	SW14-BG5 [4]				SW14-LB1			
	Sample ID	SW14-BG5 (082720)				SW14-LB1 (082620)			
	Sample Date	8/27/2020				8/26/2020			
Chemical Name	**Units**	**Result[1]**	**Result_WW[2]**	**Qualifier**	**Detect?**	**Result[1]**	**Result_WW[2]**	**Qualifier**	**Detect?**
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	ug/kg	1.3	0.2392	J	Y	4.3	0.8944	U	N
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (F-53B Minor)	ug/kg	0.44	0.08096	U	N	4.7	0.9776	U	N
2,3,3,3-Tetrafluoro-2-(heptafluoropropoxy)propanoic acid (HFPO-DA)	ug/kg	2.2	0.4048	U	N	23	4.784	U	N
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	ug/kg	0.36	0.06624	U	N	3.8	0.7904	U	N
4:2 Fluorotelomer sulfonate	ug/kg	7.3	1.3432	U	N	79	16.432	U	N
6:2 Fluorotelomer sulfonic acid (6:2 FTSA)	ug/kg	3	0.552	U	N	32	6.656	U	N
8:2 Fluorotelomer sulfonic acid (8:2 FTSA)	ug/kg	5	0.92	U	N	53	11.024	U	N
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (F-53 Major)	ug/kg	1.4	0.2576	U	N	15	3.12	U	N
N-Ethyl perfluoroctane sulfonamide (N-EtFOSA)	ug/kg	3.8	0.6992	U	N	41	8.528	U	N
N-Ethyl perfluorooctane sulfonamide ethanol (N-EtFOSE)	ug/kg	0.71	0.13064	U	N	7.6	1.5808	U	N
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	ug/kg	7.3	1.3432	U	N	79	16.432	U	N
N-Methyl perfluorooctane sulfonamide (N-MeFOSA)	ug/kg	0.64	0.11776	U	N	6.8	1.4144	U	N
N-Methyl perfluorooctane sulfonamidoethanol (N-MeFOSE)	ug/kg	1.4	0.2576	U	N	15	3.12	U	N
N-Methylperfluoroocatane sulfonamidoacetic acid (MeFOSAA)	ug/kg	7.7	1.4168	U	N	83	17.264	U	N
Perfluorobutane sulfonic acid (PFBS)	ug/kg	0.5	0.092	U	N	5.3	1.1024	U	N
Perfluorobutanoic acid (PFBA)	ug/kg	4	0.736	UB	N	5.9	1.2272	U	N
Perfluorodecane sulfonic acid (PFDS)	ug/kg	0.77	0.14168	U	N	8.3	1.7264	U	N
Perfluorodecanoic acid (PFDA)	ug/kg	2.9	0.5336	J	Y	25	5.2	J	Y
Perfluorododecane sulfonic acid (PFDOS)	ug/kg	1.2	0.2208	U	N	13	2.704	U	N
Perfluorododecanoic acid (PFDoA)	ug/kg	1.3	0.2392	U	N	14	2.912	U	N
Perfluoroheptane sulfonic acid (PFHpS)	ug/kg	0.69	0.12696	U	N	7.4	1.5392	U	N
Perfluoroheptanoic acid (PFHpA)	ug/kg	0.58	0.10672	U	N	6.2	1.2896	U	N
Perfluorohexadecanoic acid (PFHxDA)	ug/kg	0.87	0.16008	U	N	9.3	1.9344	U	N
Perfluorohexane sulfonic acid (PFHxS)	ug/kg	16	2.944	UY	N	64	13.312	UY	N
Perfluorohexanoic acid (PFHxA)	ug/kg	0.83	0.15272	U	N	8.9	1.8512	U	N
Perfluorononane sulfonic acid (PFNS)	ug/kg	0.4	0.0736	U	N	4.2	0.8736	U	N
Perfluorononanoic acid (PFNA)	ug/kg	1.1	0.2024	J	Y	11	2.288	J	Y
Perfluorooctadecanoic acid	ug/kg	0.56	0.10304	U	N	5.9	1.2272	U	N
Perfluorooctane sulfonamide (PFOSA)	ug/kg	1.6	0.2944	U	N	17	3.536	U	N
Perfluorooctane sulfonic acid (PFOS)	ug/kg	420	77.28	UY	N	950	197.6		Y
Perfluorooctanoic acid (PFOA)	ug/kg	1.7	0.3128	U	N	18	3.744	U	N
Perfluoropentane sulfonic acid (PFPeS)	ug/kg	0.4	0.0736	U	N	4.2	0.8736	U	N
Perfluoropentanoic acid (PFPeA)	ug/kg	1.5	0.276	U	N	16	3.328	U	N
Perfluorotetradecanoic acid (PFTeA)	ug/kg	1.1	0.2024	U	N	11	2.288	U	N
Perfluorotridecanoic acid (PFTrDA)	ug/kg	1	0.184	U	N	11	2.288	U	N
Perfluoroundecanoic acid (PFUdA)	ug/kg	2.6	0.4784	J	Y	14	2.912	J	Y

Table - Validated Fish Tissue Results

	Location	SW14-LB2				SW14-LB3			
	Sample ID	SW14-LB2 (082620)				SW14-LB3 (082620)			
	Sample Date	8/26/2020				8/26/2020			
Chemical Name	Units	Result[1]	Result_WW[2]	Qualifier	Detect?	Result[1]	Result_WW[2]	Qualifier	Detect?
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	ug/kg	4.9	1.029	U	N	4.7	0.94	J	Y
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (F-53B Minor)	ug/kg	4.4	0.924	U	N	3.8	0.76	U	N
2,3,3,3-Tetrafluoro-2-(heptafluoropropoxy)propanoic acid (HFPO-DA)	ug/kg	22	4.62	U	N	19	3.8	U	N
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	ug/kg	3.6	0.756	U	N	3.1	0.62	U	N
4:2 Fluorotelomer sulfonate	ug/kg	74	15.54	U	N	65	13	U	N
6:2 Fluorotelomer sulfonic acid (6:2 FTSA)	ug/kg	30	6.3	U	N	26	5.2	U	N
8:2 Fluorotelomer sulfonic acid (8:2 FTSA)	ug/kg	50	10.5	U	N	44	8.8	U	N
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (F-53 Major)	ug/kg	14	2.94	U	N	13	2.6	U	N
N-Ethyl perfluoroctane sulfonamide (N-EtFOSA)	ug/kg	38	7.98	U	N	34	6.8	U	N
N-Ethyl perfluorooctane sulfonamide ethanol (N-EtFOSE)	ug/kg	7.2	1.512	U	N	6.3	1.26	U	N
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	ug/kg	74	15.54	U	N	65	13	U	N
N-Methyl perfluorooctane sulfonamide (N-MeFOSA)	ug/kg	6.4	1.344	U	N	5.6	1.12	U	N
N-Methyl perfluorooctane sulfonamidoethanol (N-MeFOSE)	ug/kg	14	2.94	U	N	12	2.4	U	N
N-Methylperfluoroocatane sulfonamidoacetic acid (MeFOSAA)	ug/kg	78	16.38	U	N	68	13.6	U	N
Perfluorobutane sulfonic acid (PFBS)	ug/kg	5	1.05	U	N	4.4	0.88	U	N
Perfluorobutanoic acid (PFBA)	ug/kg	5.6	1.176	U	N	4.9	0.98	U	N
Perfluorodecane sulfonic acid (PFDS)	ug/kg	7.8	1.638	U	N	6.8	1.36	U	N
Perfluorodecanoic acid (PFDA)	ug/kg	30	6.3	J	Y	17	3.4	J	Y
Perfluorododecane sulfonic acid (PFDOS)	ug/kg	12	2.52	U	N	10	2	U	N
Perfluorododecanoic acid (PFDoA)	ug/kg	13	2.73	U	N	12	2.4	U	N
Perfluoroheptane sulfonic acid (PFHpS)	ug/kg	7	1.47	U	N	6.1	1.22	U	N
Perfluoroheptanoic acid (PFHpA)	ug/kg	5.8	1.218	U	N	5.1	1.02	U	N
Perfluorohexadecanoic acid (PFHxDA)	ug/kg	8.3	1.743	U	N	7.7	1.54	U	N
Perfluorohexane sulfonic acid (PFHxS)	ug/kg	20	4.2	UY	N	52	10.4	UY	N
Perfluorohexanoic acid (PFHxA)	ug/kg	8.4	1.764	U	N	7.3	1.46	U	N
Perfluorononane sulfonic acid (PFNS)	ug/kg	4	0.84	U	N	3.5	0.7	U	N
Perfluorononanoic acid (PFNA)	ug/kg	18	3.78	J	Y	8.8	1.76	J	Y
Perfluorooctadecanoic acid	ug/kg	5.3	1.113	U	N	4.9	0.98	U	N
Perfluorooctane sulfonamide (PFOSA)	ug/kg	16	3.36	U	N	14	2.8	U	N
Perfluorooctane sulfonic acid (PFOS)	ug/kg	700	147		Y	430	86		Y
Perfluorooctanoic acid (PFOA)	ug/kg	17	3.57	U	N	15	3	U	N
Perfluoropentane sulfonic acid (PFPeS)	ug/kg	4	0.84	U	N	3.5	0.7	U	N
Perfluoropentanoic acid (PFPeA)	ug/kg	15	3.15	U	N	13	2.6	U	N
Perfluorotetradecanoic acid (PFTeA)	ug/kg	11	2.31	U	N	9.4	1.88	U	N
Perfluorotridecanoic acid (PFTrDA)	ug/kg	10	2.1	U	N	8.9	1.78	U	N
Perfluoroundecanoic acid (PFUdA)	ug/kg	12	2.52	J	Y	14	2.8	J	Y

Table - Validated Fish Tissue Results

	Location	SW14-LB4				SW14-LB5			
	Sample ID	SW14-LB4 (082620)				SW14-LB5 (082620)			
	Sample Date	8/26/2020				8/26/2020			
Chemical Name	**Units**	**Result[1]**	**Result_WW[2]**	**Qualifier**	**Detect?**	**Result[1]**	**Result_WW[2]**	**Qualifier**	**Detect?**
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	ug/kg	14	2.73	J	Y	5.4	1.0746	U	N
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (F-53B Minor)	ug/kg	5.6	1.092	U	N	4.5	0.8955	U	N
2,3,3,3-Tetrafluoro-2-(heptafluoropropoxy)propanoic acid (HFPO-DA)	ug/kg	28	5.46	U	N	23	4.577	U	N
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	ug/kg	4.6	0.897	U	N	3.7	0.7363	U	N
4:2 Fluorotelomer sulfonate	ug/kg	94	18.33	U	N	76	15.124	U	N
6:2 Fluorotelomer sulfonic acid (6:2 FTSA)	ug/kg	38	7.41	U	N	31	6.169	U	N
8:2 Fluorotelomer sulfonic acid (8:2 FTSA)	ug/kg	64	12.48	U	N	52	10.348	U	N
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (F-53 Major)	ug/kg	18	3.51	U	N	15	2.985	U	N
N-Ethyl perfluoroctane sulfonamide (N-EtFOSA)	ug/kg	49	9.555	U	N	40	7.96	U	N
N-Ethyl perfluorooctane sulfonamide ethanol (N-EtFOSE)	ug/kg	9.1	1.7745	U	N	7.4	1.4726	U	N
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	ug/kg	94	18.33	U	N	76	15.124	U	N
N-Methyl perfluorooctane sulfonamide (N-MeFOSA)	ug/kg	8.1	1.5795	U	N	6.6	1.3134	U	N
N-Methyl perfluorooctane sulfonamidoethanol (N-MeFOSE)	ug/kg	18	3.51	U	N	14	2.786	U	N
N-Methylperfluoroocatane sulfonamidoacetic acid (MeFOSAA)	ug/kg	99	19.305	U	N	80	15.92	U	N
Perfluorobutane sulfonic acid (PFBS)	ug/kg	6.4	1.248	U	N	5.2	1.0348	U	N
Perfluorobutanoic acid (PFBA)	ug/kg	7.1	1.3845	U	N	5.8	1.1542	U	N
Perfluorodecane sulfonic acid (PFDS)	ug/kg	9.9	1.9305	U	N	8	1.592	U	N
Perfluorodecanoic acid (PFDA)	ug/kg	55	10.725		Y	30	5.97	J	Y
Perfluorododecane sulfonic acid (PFDOS)	ug/kg	15	2.925	U	N	12	2.388	U	N
Perfluorododecanoic acid (PFDoA)	ug/kg	28	5.46	J	Y	14	2.786	U	N
Perfluoroheptane sulfonic acid (PFHpS)	ug/kg	8.9	1.7355	U	N	7.2	1.4328	U	N
Perfluoroheptanoic acid (PFHpA)	ug/kg	7.4	1.443	U	N	6	1.194	U	N
Perfluorohexadecanoic acid (PFHxDA)	ug/kg	11	2.145	U	N	9.1	1.8109	U	N
Perfluorohexane sulfonic acid (PFHxS)	ug/kg	7.9	1.5405	JN	Y	16	3.184	JN	Y
Perfluorohexanoic acid (PFHxA)	ug/kg	11	2.145	U	N	8.7	1.7313	U	N
Perfluorononane sulfonic acid (PFNS)	ug/kg	5.1	0.9945	U	N	4.1	0.8159	U	N
Perfluorononanoic acid (PFNA)	ug/kg	9.6	1.872	J	Y	16	3.184	J	Y
Perfluorooctadecanoic acid	ug/kg	7.1	1.3845	U	N	5.8	1.1542	U	N
Perfluorooctane sulfonamide (PFOSA)	ug/kg	21	4.095	U	N	17	3.383	U	N
Perfluorooctane sulfonic acid (PFOS)	ug/kg	940	183.3		Y	1100	218.9		Y
Perfluorooctanoic acid (PFOA)	ug/kg	22	4.29	U	N	18	3.582	U	N
Perfluoropentane sulfonic acid (PFPeS)	ug/kg	5.1	0.9945	U	N	4.1	0.8159	U	N
Perfluoropentanoic acid (PFPeA)	ug/kg	20	3.9	U	N	16	3.184	U	N
Perfluorotetradecanoic acid (PFTeA)	ug/kg	14	2.73	UJ	N	11	2.189	U	N
Perfluorotridecanoic acid (PFTrDA)	ug/kg	13	2.535	UJ	N	11	2.189	U	N
Perfluoroundecanoic acid (PFUdA)	ug/kg	83	16.185		Y	12	2.388	J	Y

Table - Validated Fish Tissue Results

	Location	SW14-YP1				SW14-YP2			
	Sample ID	SW14-YP1 (082620)				SW14-YP2 (082620)			
	Sample Date	8/26/2020				8/26/2020			
Chemical Name	Units	Result[1]	Result_WW[2]	Qualifier	Detect?	Result[1]	Result_WW[2]	Qualifier	Detect?
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	ug/kg	54	12.798	UD	N	2	0.382	J	Y
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (F-53B Minor)	ug/kg	0.46	0.10902	U	N	0.45	0.08595	U	N
2,3,3,3-Tetrafluoro-2-(heptafluoropropoxy)propanoic acid (HFPO-DA)	ug/kg	2.3	0.5451	U	N	2.2	0.4202	U	N
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	ug/kg	0.37	0.08769	U	N	0.36	0.06876	U	N
4:2 Fluorotelomer sulfonate	ug/kg	770	182.49	UD	N	7.5	1.4325	U	N
6:2 Fluorotelomer sulfonic acid (6:2 FTSA)	ug/kg	3.1	0.7347	U	N	3	0.573	U	N
8:2 Fluorotelomer sulfonic acid (8:2 FTSA)	ug/kg	520	123.24	UD	N	11	2.101	J-	Y
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (F-53 Major)	ug/kg	1.5	0.3555	U	N	1.5	0.2865	U	N
N-Ethyl perfluoroctane sulfonamide (N-EtFOSA)	ug/kg	4	0.948	U	N	3.9	0.7449	U	N
N-Ethyl perfluorooctane sulfonamide ethanol (N-EtFOSE)	ug/kg	0.74	0.17538	U	N	0.73	0.13943	U	N
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	ug/kg	7.7	1.8249	U	N	7.5	1.4325	U	N
N-Methyl perfluorooctane sulfonamide (N-MeFOSA)	ug/kg	0.66	0.15642	U	N	0.65	0.12415	U	N
N-Methyl perfluorooctane sulfonamidoethanol (N-MeFOSE)	ug/kg	1.4	0.3318	U	N	1.4	0.2674	U	N
N-Methylperfluoroocatane sulfonamidoacetic acid (MeFOSAA)	ug/kg	8.1	1.9197	U	N	7.9	1.5089	U	N
Perfluorobutane sulfonic acid (PFBS)	ug/kg	0.52	0.12324	U	N	0.51	0.09741	U	N
Perfluorobutanoic acid (PFBA)	ug/kg	4.1	0.9717	UB	N	4.1	0.7831	UB	N
Perfluorodecane sulfonic acid (PFDS)	ug/kg	0.81	0.19197	U	N	0.79	0.15089	U	N
Perfluorodecanoic acid (PFDA)	ug/kg	12	2.844		Y	19	3.629		Y
Perfluorododecane sulfonic acid (PFDOS)	ug/kg	1.2	0.2844	U	N	1.2	0.2292	U	N
Perfluorododecanoic acid (PFDoA)	ug/kg	1.7	0.4029	J	Y	2.9	0.5539	J	Y
Perfluoroheptane sulfonic acid (PFHpS)	ug/kg	1.7	0.4029	J	Y	1.6	0.3056	J	Y
Perfluoroheptanoic acid (PFHpA)	ug/kg	0.6	0.1422	U	N	0.59	0.11269	U	N
Perfluorohexadecanoic acid (PFHxDA)	ug/kg	0.91	0.21567	U	N	0.89	0.16999	U	N
Perfluorohexane sulfonic acid (PFHxS)	ug/kg	50	11.85		Y	110	21.01		Y
Perfluorohexanoic acid (PFHxA)	ug/kg	0.87	0.20619	U	N	0.85	0.16235	U	N
Perfluorononane sulfonic acid (PFNS)	ug/kg	0.41	0.09717	U	N	0.41	0.07831	U	N
Perfluorononanoic acid (PFNA)	ug/kg	37	8.769		Y	33	6.303		Y
Perfluorooctadecanoic acid	ug/kg	0.58	0.13746	U	N	0.57	0.10887	U	N
Perfluorooctane sulfonamide (PFOSA)	ug/kg	1.7	0.4029	U	N	1.7	0.3247	U	N
Perfluorooctane sulfonic acid (PFOS)	ug/kg	240	56.88		Y	370	70.67		Y
Perfluorooctanoic acid (PFOA)	ug/kg	10	2.37		Y	19	3.629		Y
Perfluoropentane sulfonic acid (PFPeS)	ug/kg	0.94	0.22278	J	Y	1.2	0.2292	J	Y
Perfluoropentanoic acid (PFPeA)	ug/kg	1.6	0.3792	U	N	1.6	0.3056	U	N
Perfluorotetradecanoic acid (PFTeA)	ug/kg	1.1	0.2607	U	N	1.1	0.2101	U	N
Perfluorotridecanoic acid (PFTrDA)	ug/kg	1.1	0.2607	U	N	1.4	0.2674	J	Y
Perfluoroundecanoic acid (PFUdA)	ug/kg	6.7	1.5879		Y	12	2.292		Y

Table - Validated Fish Tissue Results

	Location	SW14-YP3				SW14-YP4			
	Sample ID	SW14-YP3 (082620)				SW14-YP4 (082620)			
	Sample Date	8/26/2020				8/26/2020			
Chemical Name	**Units**	**Result[1]**	**Result_WW[2]**	**Qualifier**	**Detect?**	**Result[1]**	**Result_WW[2]**	**Qualifier**	**Detect?**
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	ug/kg	3.9	0.8853	U	N	1.8	0.3744	J	Y
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (F-53B Minor)	ug/kg	3.5	0.7945	U	N	0.38	0.07904	U	N
2,3,3,3-Tetrafluoro-2-(heptafluoropropoxy)propanoic acid (HFPO-DA)	ug/kg	17	3.859	U	N	1.9	0.3952	U	N
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	ug/kg	2.8	0.6356	U	N	0.31	0.06448	U	N
4:2 Fluorotelomer sulfonate	ug/kg	58	13.166	U	N	6.4	1.3312	U	N
6:2 Fluorotelomer sulfonic acid (6:2 FTSA)	ug/kg	24	5.448	U	N	2.6	0.5408	U	N
8:2 Fluorotelomer sulfonic acid (8:2 FTSA)	ug/kg	39	8.853	U	N	6.2	1.2896	J-	Y
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (F-53 Major)	ug/kg	11	2.497	U	N	1.2	0.2496	U	N
N-Ethyl perfluoroctane sulfonamide (N-EtFOSA)	ug/kg		R		Y	3.3	0.6864	U	N
N-Ethyl perfluorooctane sulfonamide ethanol (N-EtFOSE)	ug/kg	5.7	1.2939	U	N	0.62	0.12896	U	N
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	ug/kg		R		Y	6.4	1.3312	U	N
N-Methyl perfluorooctane sulfonamide (N-MeFOSA)	ug/kg		R		Y	0.55	0.1144	U	N
N-Methyl perfluorooctane sulfonamidoethanol (N-MeFOSE)	ug/kg	11	2.497	U	N	1.2	0.2496	U	N
N-Methylperfluoroocatane sulfonamidoacetic acid (MeFOSAA)	ug/kg		R		Y	6.7	1.3936	U	N
Perfluorobutane sulfonic acid (PFBS)	ug/kg	3.9	0.8853	U	N	0.43	0.08944	U	N
Perfluorobutanoic acid (PFBA)	ug/kg	4.4	0.9988	U	N	3.5	0.728	UB	N
Perfluorodecane sulfonic acid (PFDS)	ug/kg	6.1	1.3847	U	N	0.67	0.13936	U	N
Perfluorodecanoic acid (PFDA)	ug/kg	15	3.405	J	Y	11	2.288		Y
Perfluorododecane sulfonic acid (PFDOS)	ug/kg	9.4	2.1338	U	N	1	0.208	U	N
Perfluorododecanoic acid (PFDoA)	ug/kg	11	2.497	U	N	1.8	0.3744	J	Y
Perfluoroheptane sulfonic acid (PFHpS)	ug/kg	5.5	1.2485	U	N	1	0.208	J	Y
Perfluoroheptanoic acid (PFHpA)	ug/kg	4.6	1.0442	U	N	0.5	0.104	U	N
Perfluorohexadecanoic acid (PFHxDA)	ug/kg	6.6	1.4982	UJ	N	0.71	0.14768	U	N
Perfluorohexane sulfonic acid (PFHxS)	ug/kg	150	34.05		Y	35	7.28		Y
Perfluorohexanoic acid (PFHxA)	ug/kg	6.6	1.4982	U	N	0.73	0.15184	U	N
Perfluorononane sulfonic acid (PFNS)	ug/kg	3.1	0.7037	U	N	0.35	0.0728	U	N
Perfluorononanoic acid (PFNA)	ug/kg	39	8.853		Y	15	3.12		Y
Perfluorooctadecanoic acid	ug/kg	4.2	0.9534	U	N	0.45	0.0936	U	N
Perfluorooctane sulfonamide (PFOSA)	ug/kg	13	2.951	U	N	1.4	0.2912	U	N
Perfluorooctane sulfonic acid (PFOS)	ug/kg	910	206.57	JN	Y	350	72.8	D	Y
Perfluorooctanoic acid (PFOA)	ug/kg	23	5.221	J	Y	5.1	1.0608		Y
Perfluoropentane sulfonic acid (PFPeS)	ug/kg	3.1	0.7037	U	N	0.35	0.0728	U	N
Perfluoropentanoic acid (PFPeA)	ug/kg	12	2.724	U	N	1.3	0.2704	U	N
Perfluorotetradecanoic acid (PFTeA)	ug/kg		R		Y		R		Y
Perfluorotridecanoic acid (PFTrDA)	ug/kg		R		Y		R		Y
Perfluoroundecanoic acid (PFUdA)	ug/kg	7.5	1.7025	J	Y	7	1.456		Y

Table - Validated Fish Tissue Results

	Location	SW14-YP5 [4]				SW37-PS1			
	Sample ID	SW14-YP5 (082620)				SW37-PS1 (082620)			
	Sample Date	8/26/2020				8/26/2020			
Chemical Name	**Units**	**Result[1]**	**Result_WW[2]**	**Qualifier**	**Detect?**	**Result[1]**	**Result_WW[2]**	**Qualifier**	**Detect?**
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	ug/kg	1.3	0.2496	J	Y	61	12.322	UD	N
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (F-53B Minor)	ug/kg	0.47	0.09024	U	N	0.52	0.10504	U	N
2,3,3,3-Tetrafluoro-2-(heptafluoropropoxy)propanoic acid (HFPO-DA)	ug/kg	2.3	0.4416	U	N	2.6	0.5252	U	N
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	ug/kg	0.38	0.07296	U	N	0.42	0.08484	U	N
4:2 Fluorotelomer sulfonate	ug/kg	7.8	1.4976	U	N	8.7	1.7574	U	N
6:2 Fluorotelomer sulfonic acid (6:2 FTSA)	ug/kg	3.2	0.6144	U	N	3.5	0.707	U	N
8:2 Fluorotelomer sulfonic acid (8:2 FTSA)	ug/kg	5.3	1.0176	U	N	590	119.18	UD	N
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (F-53 Major)	ug/kg	1.5	0.288	U	N	1.7	0.3434	U	N
N-Ethyl perfluorooctane sulfonamide (N-EtFOSA)	ug/kg	4.1	0.7872	U	N	4.5	0.909	U	N
N-Ethyl perfluorooctane sulfonamide ethanol (N-EtFOSE)	ug/kg	0.76	0.14592	U	N	0.85	0.1717	U	N
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	ug/kg	7.8	1.4976	U	N	8.7	1.7574	U	N
N-Methyl perfluorooctane sulfonamide (N-MeFOSA)	ug/kg	0.68	0.13056	U	N	0.75	0.1515	U	N
N-Methyl perfluorooctane sulfonamidoethanol (N-MeFOSE)	ug/kg	1.5	0.288	U	N	1.6	0.3232	U	N
N-Methylperfluoroocatane sulfonamidoacetic acid (MeFOSAA)	ug/kg	8.3	1.5936	U	N	9.2	1.8584	U	N
Perfluorobutane sulfonic acid (PFBS)	ug/kg	0.53	0.10176	U	N	0.59	0.11918	U	N
Perfluorobutanoic acid (PFBA)	ug/kg	0.59	0.11328	UB	N	4.7	0.9494	UB	N
Perfluorodecane sulfonic acid (PFDS)	ug/kg	0.83	0.15936	U	N	0.92	0.18584	U	N
Perfluorodecanoic acid (PFDA)	ug/kg	14	2.688		Y	1.3	0.2626	J	Y
Perfluorododecane sulfonic acid (PFDOS)	ug/kg	1.3	0.2496	U	N	1.4	0.2828	U	N
Perfluorododecanoic acid (PFDoA)	ug/kg	2.2	0.4224	J	Y	1.6	0.3232	U	N
Perfluoroheptane sulfonic acid (PFHpS)	ug/kg	1.6	0.3072	J	Y	0.82	0.16564	U	N
Perfluoroheptanoic acid (PFHpA)	ug/kg	0.61	0.11712	U	N	0.68	0.13736	U	N
Perfluorohexadecanoic acid (PFHxDA)	ug/kg	0.93	0.17856	UJ	N	1	0.202	U	N
Perfluorohexane sulfonic acid (PFHxS)	ug/kg	21	4.032	UY	N	0.73	0.14746	U	N
Perfluorohexanoic acid (PFHxA)	ug/kg	0.89	0.17088	U	N	0.99	0.19998	U	N
Perfluorononane sulfonic acid (PFNS)	ug/kg	0.42	0.08064	U	N	0.47	0.09494	U	N
Perfluorononanoic acid (PFNA)	ug/kg	20	3.84		Y	0.85	0.1717	U	N
Perfluorooctadecanoic acid	ug/kg	0.59	0.11328	U	N	0.66	0.13332	U	N
Perfluorooctane sulfonamide (PFOSA)	ug/kg	1.7	0.3264	U	N	1.9	0.3838	U	N
Perfluorooctane sulfonic acid (PFOS)	ug/kg	350	67.2		Y	380	76.76	UY	N
Perfluorooctanoic acid (PFOA)	ug/kg	1.8	0.3456	U	N	2	0.404	U	N
Perfluoropentane sulfonic acid (PFPeS)	ug/kg	0.42	0.08064	U	N	0.47	0.09494	U	N
Perfluoropentanoic acid (PFPeA)	ug/kg	1.6	0.3072	U	N	1.8	0.3636	U	N
Perfluorotetradecanoic acid (PFTeA)	ug/kg	1.1	0.2112	UJ	N	1.3	0.2626	U	N
Perfluorotridecanoic acid (PFTrDA)	ug/kg	1.1	0.2112	UJ	N	1.2	0.2424	U	N
Perfluoroundecanoic acid (PFUdA)	ug/kg	8.9	1.7088		Y	1.9	0.3838	J	Y

Table - Validated Fish Tissue Results

	Location	SW37-PS2				SW37-PS3 [4]			
	Sample ID	SW37-PS2 (082620)				SW37-PS3 (082620)			
	Sample Date	8/26/2020				8/26/2020			
Chemical Name	**Units**	**Result[1]**	**Result_WW[2]**	**Qualifier**	**Detect?**	**Result[1]**	**Result_WW[2]**	**Qualifier**	**Detect?**
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	ug/kg	54	11.502	UD	N	6.1	1.2688	UD	N
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (F-53B Minor)	ug/kg	0.46	0.09798	U	N	0.52	0.10816	U	N
2,3,3,3-Tetrafluoro-2-(heptafluoropropoxy)propanoic acid (HFPO-DA)	ug/kg	2.3	0.4899	U	N	2.6	0.5408	U	N
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	ug/kg	0.38	0.08094	U	N	0.42	0.08736	U	N
4:2 Fluorotelomer sulfonate	ug/kg	7.7	1.6401	U	N	87	18.096	UD	N
6:2 Fluorotelomer sulfonic acid (6:2 FTSA)	ug/kg	3.1	0.6603	U	N	35	7.28	UD	N
8:2 Fluorotelomer sulfonic acid (8:2 FTSA)	ug/kg	520	110.76	UD	N	59	12.272	UD	N
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (F-53 Major)	ug/kg	1.5	0.3195	U	N	1.7	0.3536	U	N
N-Ethyl perfluorooctane sulfonamide (N-EtFOSA)	ug/kg	4	0.852	U	N	4.5	0.936	U	N
N-Ethyl perfluorooctane sulfonamide ethanol (N-EtFOSE)	ug/kg	0.75	0.15975	U	N	0.85	0.1768	U	N
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	ug/kg	7.7	1.6401	U	N	87	18.096	UD	N
N-Methyl perfluorooctane sulfonamide (N-MeFOSA)	ug/kg	0.67	0.14271	U	N	0.75	0.156	U	N
N-Methyl perfluorooctane sulfonamidoethanol (N-MeFOSE)	ug/kg	1.5	0.3195	U	N	1.6	0.3328	U	N
N-Methylperfluoroocatane sulfonamidoacetic acid (MeFOSAA)	ug/kg	8.2	1.7466	U	N	9.2	1.9136	U	N
Perfluorobutane sulfonic acid (PFBS)	ug/kg	0.52	0.11076	U	N	0.59	0.12272	U	N
Perfluorobutanoic acid (PFBA)	ug/kg	4.2	0.8946	UB	N	4.7	0.9776	UB	N
Perfluorodecane sulfonic acid (PFDS)	ug/kg	0.82	0.17466	U	N	0.92	0.19136	U	N
Perfluorodecanoic acid (PFDA)	ug/kg	2	0.426	J	Y	1.5	0.312	J	Y
Perfluorododecane sulfonic acid (PFDOS)	ug/kg	1.3	0.2769	U	N	1.4	0.2912	U	N
Perfluorododecanoic acid (PFDoA)	ug/kg	1.4	0.2982	U	N	1.6	0.3328	U	N
Perfluoroheptane sulfonic acid (PFHpS)	ug/kg	0.73	0.15549	U	N	0.82	0.17056	U	N
Perfluoroheptanoic acid (PFHpA)	ug/kg	0.61	0.12993	U	N	0.68	0.14144	U	N
Perfluorohexadecanoic acid (PFHxDA)	ug/kg	0.92	0.19596	U	N	1	0.208	U	N
Perfluorohexane sulfonic acid (PFHxS)	ug/kg	2.1	0.4473	UY	N	0.73	0.15184	U	N
Perfluorohexanoic acid (PFHxA)	ug/kg	0.88	0.18744	U	N	0.99	0.20592	U	N
Perfluorononane sulfonic acid (PFNS)	ug/kg	0.42	0.08946	U	N	0.47	0.09776	U	N
Perfluorononanoic acid (PFNA)	ug/kg	0.75	0.15975	U	N	0.85	0.1768	U	N
Perfluorooctadecanoic acid	ug/kg	0.59	0.12567	U	N	0.66	0.13728	U	N
Perfluorooctane sulfonamide (PFOSA)	ug/kg	1.7	0.3621	U	N	1.9	0.3952	U	N
Perfluorooctane sulfonic acid (PFOS)	ug/kg	380	80.94	UY	N	940	195.52	UY	N
Perfluorooctanoic acid (PFOA)	ug/kg	1.8	0.3834	U	N	2	0.416	U	N
Perfluoropentane sulfonic acid (PFPeS)	ug/kg	0.42	0.08946	U	N	0.47	0.09776	U	N
Perfluoropentanoic acid (PFPeA)	ug/kg	1.6	0.3408	U	N	1.8	0.3744	U	N
Perfluorotetradecanoic acid (PFTeA)	ug/kg	1.1	0.2343	U	N	1.3	0.2704	U	N
Perfluorotridecanoic acid (PFTrDA)	ug/kg	1.1	0.2343	U	N	1.2	0.2496	U	N
Perfluoroundecanoic acid (PFUdA)	ug/kg	2.9	0.6177	J	Y	2.7	0.5616	J	Y

Table - Validated Fish Tissue Results

	Location	SW37-PS4				SW37-PS5			
	Sample ID	SW37-PS4 (082620)				SW37-PS5 (082620)			
	Sample Date	8/26/2020				8/26/2020			
Chemical Name	**Units**	**Result[1]**	**Result_WW[2]**	**Qualifier**	**Detect?**	**Result[1]**	**Result_WW[2]**	**Qualifier**	**Detect?**
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	ug/kg	5.8	1.2586	UD	N	53	12.455	UD	N
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (F-53B Minor)	ug/kg	0.49	0.10633	U	N	4.5	1.0575	U	N
2,3,3,3-Tetrafluoro-2-(heptafluoropropoxy)propanoic acid (HFPO-DA)	ug/kg	2.4	0.5208	U	N	22	5.17	U	N
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	ug/kg	0.4	0.0868	U	N	3.6	0.846	U	N
4:2 Fluorotelomer sulfonate	ug/kg	82	17.794	UD	N	75	17.625	U	N
6:2 Fluorotelomer sulfonic acid (6:2 FTSA)	ug/kg	33	7.161	UD	N	30	7.05	U	N
8:2 Fluorotelomer sulfonic acid (8:2 FTSA)	ug/kg	55	11.935	UD	N	510	119.85	UD	N
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (F-53 Major)	ug/kg	1.6	0.3472	U	N	15	3.525	U	N
N-Ethyl perfluoroctane sulfonamide (N-EtFOSA)	ug/kg	4.3	0.9331	U	N	39	9.165	U	N
N-Ethyl perfluorooctane sulfonamide ethanol (N-EtFOSE)	ug/kg	0.8	0.1736	U	N	7.3	1.7155	U	N
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	ug/kg	8.2	1.7794	U	N	75	17.625	U	N
N-Methyl perfluorooctane sulfonamide (N-MeFOSA)	ug/kg	0.71	0.15407	U	N	6.5	1.5275	U	N
N-Methyl perfluorooctane sulfonamidoethanol (N-MeFOSE)	ug/kg	1.5	0.3255	U	N	14	3.29	U	N
N-Methylperfluoroocatane sulfonamidoacetic acid (MeFOSAA)	ug/kg	8.6	1.8662	U	N	79	18.565	U	N
Perfluorobutane sulfonic acid (PFBS)	ug/kg	0.55	0.11935	U	N	5.1	1.1985	U	N
Perfluorobutanoic acid (PFBA)	ug/kg	4.4	0.9548	UB	N	5.7	1.3395	U	N
Perfluorodecane sulfonic acid (PFDS)	ug/kg	0.86	0.18662	U	N	7.9	1.8565	U	N
Perfluorodecanoic acid (PFDA)	ug/kg	1.5	0.3255	J	Y	4.5	1.0575	U	N
Perfluorododecane sulfonic acid (PFDOS)	ug/kg	1.3	0.2821	U	N	12	2.82	U	N
Perfluorododecanoic acid (PFDoA)	ug/kg	1.5	0.3255	U	N	14	3.29	U	N
Perfluoroheptane sulfonic acid (PFHpS)	ug/kg	0.77	0.16709	U	N	7.1	1.6685	U	N
Perfluoroheptanoic acid (PFHpA)	ug/kg	0.64	0.13888	U	N	5.9	1.3865	U	N
Perfluorohexadecanoic acid (PFHxDA)	ug/kg	0.97	0.21049	U	N	8.9	2.0915	U	N
Perfluorohexane sulfonic acid (PFHxS)	ug/kg	18	3.906	UY	N	6.3	1.4805	U	N
Perfluorohexanoic acid (PFHxA)	ug/kg	0.93	0.20181	U	N	8.5	1.9975	U	N
Perfluorononane sulfonic acid (PFNS)	ug/kg	0.44	0.09548	U	N	4.1	0.9635	U	N
Perfluorononanoic acid (PFNA)	ug/kg	0.8	0.1736	U	N	7.3	1.7155	U	N
Perfluorooctadecanoic acid	ug/kg	0.62	0.13454	U	N	5.7	1.3395	U	N
Perfluorooctane sulfonamide (PFOSA)	ug/kg	1.8	0.3906	U	N	17	3.995	U	N
Perfluorooctane sulfonic acid (PFOS)	ug/kg	1200	260.4	UY	N	200	47	UY	N
Perfluorooctanoic acid (PFOA)	ug/kg	1.9	0.4123	U	N	17	3.995	U	N
Perfluoropentane sulfonic acid (PFPeS)	ug/kg	0.44	0.09548	U	N	4.1	0.9635	U	N
Perfluoropentanoic acid (PFPeA)	ug/kg	1.7	0.3689	U	N	16	3.76	U	N
Perfluorotetradecanoic acid (PFTeA)	ug/kg	1.2	0.2604	U	N	11	2.585	U	N
Perfluorotridecanoic acid (PFTrDA)	ug/kg	1.1	0.2387	U	N	10	2.35	U	N
Perfluoroundecanoic acid (PFUdA)	ug/kg	3.2	0.6944	J	Y	7.3	1.7155	U	N

Table - Validated Fish Tissue Results

	Location	SW37-YP1				SW37-YP2 [4]			
	Sample ID	SW37-YP1 (082620)				SW37-YP2 (082620)			
	Sample Date	8/26/2020				8/26/2020			
Chemical Name	**Units**	**Result[1]**	**Result_WW[2]**	**Qualifier**	**Detect?**	**Result[1]**	**Result_WW[2]**	**Qualifier**	**Detect?**
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	ug/kg	5.6	1.2432	UD	N	68	12.58	UD	N
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (F-53B Minor)	ug/kg	0.47	0.10434	U	N	0.58	0.1073	U	N
2,3,3,3-Tetrafluoro-2-(heptafluoropropoxy)propanoic acid (HFPO-DA)	ug/kg	2.4	0.5328	U	N	2.9	0.5365	U	N
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	ug/kg	0.39	0.08658	U	N	0.47	0.08695	U	N
4:2 Fluorotelomer sulfonate	ug/kg	7.9	1.7538	U	N	9.7	1.7945	U	N
6:2 Fluorotelomer sulfonic acid (6:2 FTSA)	ug/kg	3.2	0.7104	U	N	3.9	0.7215	U	N
8:2 Fluorotelomer sulfonic acid (8:2 FTSA)	ug/kg	54	11.988	UD	N	660	122.1	UD	N
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (F-53 Major)	ug/kg	1.5	0.333	U	N	1.9	0.3515	U	N
N-Ethyl perfluorooctane sulfonamide (N-EtFOSA)	ug/kg	4.1	0.9102	U	N	5	0.925	U	N
N-Ethyl perfluorooctane sulfonamide ethanol (N-EtFOSE)	ug/kg	0.77	0.17094	U	N	0.94	0.1739	U	N
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	ug/kg	7.9	1.7538	U	N	9.7	1.7945	U	N
N-Methyl perfluorooctane sulfonamide (N-MeFOSA)	ug/kg	0.69	0.15318	U	N	0.84	0.1554	U	N
N-Methyl perfluorooctane sulfonamidoethanol (N-MeFOSE)	ug/kg	1.5	0.333	U	N	1.8	0.333	U	N
N-Methylperfluoroocatane sulfonamidoacetic acid (MeFOSAA)	ug/kg	8.4	1.8648	U	N	10	1.85	U	N
Perfluorobutane sulfonic acid (PFBS)	ug/kg	0.54	0.11988	U	N	0.65	0.12025	U	N
Perfluorobutanoic acid (PFBA)	ug/kg	4.3	0.9546	UB	N	5.2	0.962	UB	N
Perfluorodecane sulfonic acid (PFDS)	ug/kg	0.84	0.18648	U	N	1	0.185	U	N
Perfluorodecanoic acid (PFDA)	ug/kg	13	2.886		Y	2.4	0.444	J	Y
Perfluorododecane sulfonic acid (PFDOS)	ug/kg	1.3	0.2886	U	N	1.6	0.296	U	N
Perfluorododecanoic acid (PFDoA)	ug/kg	2.8	0.6216	J	Y	1.8	0.333	U	N
Perfluoroheptane sulfonic acid (PFHpS)	ug/kg	0.75	0.1665	U	N	0.92	0.1702	U	N
Perfluoroheptanoic acid (PFHpA)	ug/kg	0.62	0.13764	U	N	0.76	0.1406	U	N
Perfluorohexadecanoic acid (PFHxDA)	ug/kg	0.95	0.2109	U	N	1.2	0.222	U	N
Perfluorohexane sulfonic acid (PFHxS)	ug/kg	21	4.662	UY	N	10	1.85	UY	N
Perfluorohexanoic acid (PFHxA)	ug/kg	0.9	0.1998	U	N	1.1	0.2035	U	N
Perfluorononane sulfonic acid (PFNS)	ug/kg	0.43	0.09546	U	N	0.52	0.0962	U	N
Perfluorononanoic acid (PFNA)	ug/kg	1.1	0.2442	J	Y	0.94	0.1739	U	N
Perfluorooctadecanoic acid	ug/kg	0.6	0.1332	U	N	0.73	0.13505	U	N
Perfluorooctane sulfonamide (PFOSA)	ug/kg	1.8	0.3996	U	N	2.1	0.3885	U	N
Perfluorooctane sulfonic acid (PFOS)	ug/kg	1200	266.4	UY	N	84	15.54	UY	N
Perfluorooctanoic acid (PFOA)	ug/kg	1.8	0.3996	U	N	2.3	0.4255	U	N
Perfluoropentane sulfonic acid (PFPeS)	ug/kg	0.43	0.09546	U	N	0.52	0.0962	U	N
Perfluoropentanoic acid (PFPeA)	ug/kg	1.7	0.3774	U	N	2	0.37	U	N
Perfluorotetradecanoic acid (PFTeA)	ug/kg	1.2	0.2664	U	N	1.4	0.259	U	N
Perfluorotridecanoic acid (PFTrDA)	ug/kg	1.9	0.4218	J	Y	1.3	0.2405	U	N
Perfluoroundecanoic acid (PFUdA)	ug/kg	14	3.108		Y	3	0.555	J	Y

Table - Validated Fish Tissue Results

	Location	SW38-GS1				SW38-YP1			
	Sample ID	SW38-GS1 (082620)				SW38-YP1 (082620)			
	Sample Date	8/26/2020				8/26/2020			
Chemical Name	Units	Result[1]	Result_WW[2]	Qualifier	Detect?	Result[1]	Result_WW[2]	Qualifier	Detect?
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	ug/kg	64	12.288	UD	N	53	11.342	UD	N
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (F-53B Minor)	ug/kg	0.55	0.1056	U	N	0.45	0.0963	U	N
2,3,3,3-Tetrafluoro-2-(heptafluoropropoxy)propanoic acid (HFPO-DA)	ug/kg	2.7	0.5184	U	N	2.2	0.4708	U	N
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	ug/kg	0.45	0.0864	U	N	0.37	0.07918	U	N
4:2 Fluorotelomer sulfonate	ug/kg	9.2	1.7664	U	N	7.5	1.605	U	N
6:2 Fluorotelomer sulfonic acid (6:2 FTSA)	ug/kg	3.7	0.7104	U	N	3	0.642	U	N
8:2 Fluorotelomer sulfonic acid (8:2 FTSA)	ug/kg	620	119.04	UD	N	510	109.14	UD	N
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (F-53 Major)	ug/kg	1.8	0.3456	U	N	1.5	0.321	U	N
N-Ethyl perfluorooctane sulfonamide (N-EtFOSA)	ug/kg	4.8	0.9216	U	N	3.9	0.8346	U	N
N-Ethyl perfluorooctane sulfonamide ethanol (N-EtFOSE)	ug/kg	0.89	0.17088	U	N	0.73	0.15622	U	N
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	ug/kg	9.2	1.7664	U	N	7.5	1.605	U	N
N-Methyl perfluorooctane sulfonamide (N-MeFOSA)	ug/kg	0.79	0.15168	U	N	0.65	0.1391	U	N
N-Methyl perfluorooctane sulfonamidoethanol (N-MeFOSE)	ug/kg	1.7	0.3264	U	N	1.4	0.2996	U	N
N-Methylperfluoroocatane sulfonamidoacetic acid (MeFOSAA)	ug/kg	9.7	1.8624	U	N	7.9	1.6906	U	N
Perfluorobutane sulfonic acid (PFBS)	ug/kg	0.62	0.11904	U	N	0.51	0.10914	U	N
Perfluorobutanoic acid (PFBA)	ug/kg	5	0.96	UB	N	4.1	0.8774	UB	N
Perfluorodecane sulfonic acid (PFDS)	ug/kg	0.97	0.18624	U	N	0.79	0.16906	U	N
Perfluorodecanoic acid (PFDA)	ug/kg	0.55	0.1056	U	N	1.7	0.3638	J	Y
Perfluorododecane sulfonic acid (PFDOS)	ug/kg	1.5	0.288	U	N	1.2	0.2568	U	N
Perfluorododecanoic acid (PFDoA)	ug/kg	1.7	0.3264	U	N	1.4	0.2996	U	N
Perfluoroheptane sulfonic acid (PFHpS)	ug/kg	0.87	0.16704	U	N	0.71	0.15194	U	N
Perfluoroheptanoic acid (PFHpA)	ug/kg	0.72	0.13824	U	N	0.59	0.12626	U	N
Perfluorohexadecanoic acid (PFHxDA)	ug/kg	1.1	0.2112	U	N	0.89	0.19046	U	N
Perfluorohexane sulfonic acid (PFHxS)	ug/kg	45	8.64	UY	N	12	2.568	UY	N
Perfluorohexanoic acid (PFHxA)	ug/kg	1	0.192	U	N	0.85	0.1819	U	N
Perfluorononane sulfonic acid (PFNS)	ug/kg	0.5	0.096	U	N	0.41	0.08774	U	N
Perfluorononanoic acid (PFNA)	ug/kg	0.89	0.17088	U	N	1.1	0.2354	J	Y
Perfluorooctadecanoic acid	ug/kg	0.69	0.13248	U	N	0.57	0.12198	U	N
Perfluorooctane sulfonamide (PFOSA)	ug/kg	2	0.384	U	N	1.7	0.3638	U	N
Perfluorooctane sulfonic acid (PFOS)	ug/kg	55	10.56	UY	N	49	10.486	UY	N
Perfluorooctanoic acid (PFOA)	ug/kg	2.1	0.4032	U	N	1.7	0.3638	U	N
Perfluoropentane sulfonic acid (PFPeS)	ug/kg	0.5	0.096	U	N	0.41	0.08774	U	N
Perfluoropentanoic acid (PFPeA)	ug/kg	1.9	0.3648	U	N	1.6	0.3424	U	N
Perfluorotetradecanoic acid (PFTeA)	ug/kg	1.3	0.2496	U	N	1.1	0.2354	U	N
Perfluorotridecanoic acid (PFTrDA)	ug/kg	1.3	0.2496	U	N	1	0.214	U	N
Perfluoroundecanoic acid (PFUdA)	ug/kg	1.4	0.2688	J	Y	2.8	0.5992	J	Y

Table - Validated Fish Tissue Results

	Location	SW38-YP2				SW38-YP3 [4]			
	Sample ID	SW38-YP2 (082620)				SW38-YP3 (082620)			
	Sample Date	8/26/2020				8/26/2020			
Chemical Name	**Units**	**Result[1]**	**Result_WW[2]**	**Qualifier**	**Detect?**	**Result[1]**	**Result_WW[2]**	**Qualifier**	**Detect?**
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	ug/kg	0.63	0.12474	U	N	55	11.66	UD	N
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (F-53B Minor)	ug/kg	0.53	0.10494	U	N	0.46	0.09752	U	N
2,3,3,3-Tetrafluoro-2-(heptafluoropropoxy)propanoic acid (HFPO-DA)	ug/kg	2.7	0.5346	U	N	2.3	0.4876	U	N
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	ug/kg	0.44	0.08712	U	N	0.38	0.08056	U	N
4:2 Fluorotelomer sulfonate	ug/kg	9	1.782	U	N	7.8	1.6536	U	N
6:2 Fluorotelomer sulfonic acid (6:2 FTSA)	ug/kg	3.6	0.7128	U	N	3.2	0.6784	U	N
8:2 Fluorotelomer sulfonic acid (8:2 FTSA)	ug/kg	6.1	1.2078	U	N	530	112.36	UD	N
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (F-53 Major)	ug/kg	1.7	0.3366	U	N	1.5	0.318	U	N
N-Ethyl perfluoroctane sulfonamide (N-EtFOSA)	ug/kg	4.7	0.9306	U	N	4	0.848	U	N
N-Ethyl perfluorooctane sulfonamide ethanol (N-EtFOSE)	ug/kg	0.87	0.17226	U	N	0.76	0.16112	U	N
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	ug/kg	9	1.782	U	N	7.8	1.6536	U	N
N-Methyl perfluorooctane sulfonamide (N-MeFOSA)	ug/kg	0.78	0.15444	U	N	0.67	0.14204	U	N
N-Methyl perfluorooctane sulfonamidoethanol (N-MeFOSE)	ug/kg	1.7	0.3366	U	N	1.5	0.318	U	N
N-Methylperfluoroocatane sulfonamidoacetic acid (MeFOSAA)	ug/kg	9.5	1.881	U	N	8.2	1.7384	U	N
Perfluorobutane sulfonic acid (PFBS)	ug/kg	0.61	0.12078	U	N	0.53	0.11236	U	N
Perfluorobutanoic acid (PFBA)	ug/kg	4.9	0.9702	UB	N	4.2	0.8904	UB	N
Perfluorodecane sulfonic acid (PFDS)	ug/kg	0.95	0.1881	U	N	0.82	0.17384	U	N
Perfluorodecanoic acid (PFDA)	ug/kg	1.4	0.2772	J	Y	1.8	0.3816	J	Y
Perfluorododecane sulfonic acid (PFDOS)	ug/kg	1.5	0.297	U	N	1.3	0.2756	U	N
Perfluorododecanoic acid (PFDoA)	ug/kg	1.6	0.3168	U	N	1.4	0.2968	U	N
Perfluoroheptane sulfonic acid (PFHpS)	ug/kg	0.85	0.1683	U	N	0.74	0.15688	U	N
Perfluoroheptanoic acid (PFHpA)	ug/kg	0.7	0.1386	U	N	0.61	0.12932	U	N
Perfluorohexadecanoic acid (PFHxDA)	ug/kg	1.1	0.2178	UJ	N	0.93	0.19716	U	N
Perfluorohexane sulfonic acid (PFHxS)	ug/kg	9.7	1.9206	UY	N	6.3	1.3356	UY	N
Perfluorohexanoic acid (PFHxA)	ug/kg	1	0.198	U	N	0.88	0.18656	U	N
Perfluorononane sulfonic acid (PFNS)	ug/kg	0.49	0.09702	U	N	0.42	0.08904	U	N
Perfluorononanoic acid (PFNA)	ug/kg	0.87	0.17226	U	N	2.9	0.6148	J	Y
Perfluorooctadecanoic acid	ug/kg	0.68	0.13464	U	N	0.59	0.12508	U	N
Perfluorooctane sulfonamide (PFOSA)	ug/kg	2	0.396	U	N	1.7	0.3604	U	N
Perfluorooctane sulfonic acid (PFOS)	ug/kg	320	63.36	UY	N	170	36.04	UY	N
Perfluorooctanoic acid (PFOA)	ug/kg	2.1	0.4158	U	N	1.8	0.3816	U	N
Perfluoropentane sulfonic acid (PFPeS)	ug/kg	0.49	0.09702	U	N	0.42	0.08904	U	N
Perfluoropentanoic acid (PFPeA)	ug/kg	1.9	0.3762	U	N	1.6	0.3392	U	N
Perfluorotetradecanoic acid (PFTeA)	ug/kg	1.3	0.2574	UJ	N	1.1	0.2332	U	N
Perfluorotridecanoic acid (PFTrDA)	ug/kg	1.2	0.2376	U	N	1.1	0.2332	U	N
Perfluoroundecanoic acid (PFUdA)	ug/kg	2.6	0.5148	J	Y	2	0.424	J	Y

Table - Validated Fish Tissue Results

	Location	SW38-YP4				SW38-YP5 [4]			
	Sample ID	SW38-YP4 (082620)				SW38-YP5 (082620)			
	Sample Date	8/26/2020				8/26/2020			
Chemical Name	**Units**	**Result[1]**	**Result_WW[2]**	**Qualifier**	**Detect?**	**Result[1]**	**Result_WW[2]**	**Qualifier**	**Detect?**
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	ug/kg	52	11.024	UD	N	58	12.412	UD	N
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (F-53B Minor)	ug/kg	0.44	0.09328	U	N	0.49	0.10486	U	N
2,3,3,3-Tetrafluoro-2-(heptafluoropropoxy)propanoic acid (HFPO-DA)	ug/kg	2.2	0.4664	U	N	2.5	0.535	U	N
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	ug/kg	0.36	0.07632	U	N	0.4	0.0856	U	N
4:2 Fluorotelomer sulfonate	ug/kg	7.4	1.5688	U	N	830	177.62	UD	N
6:2 Fluorotelomer sulfonic acid (6:2 FTSA)	ug/kg	3	0.636	U	N	3.4	0.7276	U	N
8:2 Fluorotelomer sulfonic acid (8:2 FTSA)	ug/kg	500	106	UD	N	560	119.84	UD	N
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (F-53 Major)	ug/kg	1.4	0.2968	U	N	1.6	0.3424	U	N
N-Ethyl perfluoroctane sulfonamide (N-EtFOSA)	ug/kg	3.9	0.8268	U	N	4.3	0.9202	U	N
N-Ethyl perfluorooctane sulfonamide ethanol (N-EtFOSE)	ug/kg	0.72	0.15264	U	N	0.81	0.17334	U	N
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	ug/kg	7.4	1.5688	U	N	8.3	1.7762	U	N
N-Methyl perfluorooctane sulfonamide (N-MeFOSA)	ug/kg	0.64	0.13568	U	N	0.72	0.15408	U	N
N-Methyl perfluorooctane sulfonamidoethanol (N-MeFOSE)	ug/kg	1.4	0.2968	U	N	1.6	0.3424	U	N
N-Methylperfluoroocatane sulfonamidoacetic acid (MeFOSAA)	ug/kg	7.8	1.6536	U	N	8.8	1.8832	U	N
Perfluorobutane sulfonic acid (PFBS)	ug/kg	0.5	0.106	U	N	0.56	0.11984	U	N
Perfluorobutanoic acid (PFBA)	ug/kg	4	0.848	UB	N	4.5	0.963	UB	N
Perfluorodecane sulfonic acid (PFDS)	ug/kg	0.78	0.16536	U	N	0.88	0.18832	U	N
Perfluorodecanoic acid (PFDA)	ug/kg	1.4	0.2968	J	Y	0.49	0.10486	U	N
Perfluorododecane sulfonic acid (PFDOS)	ug/kg	1.2	0.2544	U	N	1.3	0.2782	U	N
Perfluorododecanoic acid (PFDoA)	ug/kg	1.3	0.2756	U	N	1.5	0.321	U	N
Perfluoroheptane sulfonic acid (PFHpS)	ug/kg	0.7	0.1484	U	N	0.79	0.16906	U	N
Perfluoroheptanoic acid (PFHpA)	ug/kg	0.58	0.12296	U	N	0.65	0.1391	U	N
Perfluorohexadecanoic acid (PFHxDA)	ug/kg	0.88	0.18656	U	N	0.99	0.21186	U	N
Perfluorohexane sulfonic acid (PFHxS)	ug/kg	28	5.936	UY	N	13	2.782	UY	N
Perfluorohexanoic acid (PFHxA)	ug/kg	0.84	0.17808	U	N	0.94	0.20116	U	N
Perfluorononane sulfonic acid (PFNS)	ug/kg	0.4	0.0848	U	N	0.45	0.0963	U	N
Perfluorononanoic acid (PFNA)	ug/kg	0.73	0.15476	J	Y	0.81	0.17334	U	N
Perfluorooctadecanoic acid	ug/kg	0.56	0.11872	U	N	0.63	0.13482	U	N
Perfluorooctane sulfonamide (PFOSA)	ug/kg	1.6	0.3392	U	N	1.8	0.3852	U	N
Perfluorooctane sulfonic acid (PFOS)	ug/kg	320	67.84	UY	N	450	96.3	UY	N
Perfluorooctanoic acid (PFOA)	ug/kg	1.7	0.3604	U	N	1.9	0.4066	U	N
Perfluoropentane sulfonic acid (PFPeS)	ug/kg	0.4	0.0848	U	N	0.45	0.0963	U	N
Perfluoropentanoic acid (PFPeA)	ug/kg	1.5	0.318	U	N	1.7	0.3638	U	N
Perfluorotetradecanoic acid (PFTeA)	ug/kg	1.1	0.2332	U	N	1.2	0.2568	U	N
Perfluorotridecanoic acid (PFTrDA)	ug/kg	1	0.212	U	N	1.1	0.2354	J	Y
Perfluoroundecanoic acid (PFUdA)	ug/kg	2.5	0.53	J	Y	1.2	0.2568	JN	Y

Table - Validated Fish Tissue Results

Notes:
1. Results are presented on a dry weight basis.
2. Results are presented on a wet weight basis.
3. Samples with sufficient mass will be reanalyzed at SGS AXYS.
4. Samples SW14-BG5, SW14-YP5, SW37-PS3, SW37-YP2, SW38-YP3, and SW38-YP5 will not be re-analyzed because there is insufficient remaining sample mass.

U	The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
B	The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
E	The compound was quantitated above the calibration range.
D	Concentration is based on a diluted sample analysis.
UB	Compound is considered non-detect at the listed value due to associated blank contamination.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity. The associated numerical value is expected to have a positive or high bias.
J-	The result is an estimated quantity. The associated numerical value is expected to have a negative or low bias.
UJ	The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
JN	The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria.
UY	The laboratory reported the result as not detected at elevated detection limit because of matrix interference. The elevated detection limit is the estimated maximum possible concentration.

Average Historic Surface Water Concentration In Ponds

Location	**Concentration**
SW-14	270 ng/L
SW-37	7.4 ng/L
SW-38	47 ng/L

* Values are average of the summation of PFOS and PFOA from each pond sampling event. If either result was non-detect, 0 was used in the calculation

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ANALYTICAL REPORT

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-64243-1
Client Project/Site: Marinette, WI FIsh Tissue 30015294.0001

For:
ARCADIS U.S., Inc.
126 North Jefferson Street
Suite 400
Milwaukee, Wisconsin 53202

Attn: Elizabeth Hover

Authorized for release by:
9/29/2020 11:40:01 AM

Sandie Fredrick, Project Manager II
(920)261-1660
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Table of Contents

Definitions/Glossary

Client: ARCADIS U.S., Inc. Job ID: 320-64243-1
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Qualifiers

LCMS

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*5	Isotope dilution analyte is outside acceptance limits.
B	Compound was found in the blank and sample.
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL.
G	The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference
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

Job ID: 320-64243-1

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Narrative

Job Narrative
320-64243-1

Comments
No additional comments.

Receipt
The samples were received on 9/2/2020 9:50 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.9º C and 1.3º C.

Receipt Exceptions
For sample 1-28, all sample containers do not have time and date on them. Logged in and labeled according to COC.

For samples 29-34, COC does not list date for these samples. Sample ID has date listed on them. Sample ID dates were used to login samples. Also COC indicates time for these samples but all containers for these samples do not have time on them.

Sample 33 has both containers with ID as Rinse Blank 8/27/20 (plastic bag) but COC lists ID as Rinse Blank 8/27/20 (Ziploc). Logged in and labeled according to COC.

LCMS
Method 537 (modified): The "I" qualifier means the transition mass ratio for the indicated analyte was outside of 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. 320-64243-34

Method 537 (modified): The Isotope Dilution Analyte (IDA) recovery associated with the following method blank (MB) is below the method recommended limit for d7-N-MeFOSE-M and d9-N-EtFOSE-M due to matrix interference from the oil added to mimic fish tissue: preparation batch 320-411238 and analytical batch 320-412393. This was confirmed in a re-analysis. Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the method blank. The labeled d7-N-MeFOSE-M and d9-N-EtFOSE-M isotope dilution analyte (IDA) recovered in all the samples being reported are within the method recommended limit; there is no adverse impact to data quantitation/quality.

Method 537 (modified): The Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for M2-6:2 FTS and M2-8:2 FTS in the following laboratory control sample duplicate (LCSD) due to matrix interference from the oil added to mimic fish tissue: preparation batch 320-411238 and analytical batch 320-412393.This was confirmed in a re-analysis. Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): The Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for M2-8:2 FTS in the following laboratory control sample (LCS) due to matrix interference from the oil added to mimic fish tissue: preparation batch 320-411238 and analytical batch 320-412393. This was confirmed in a re-analysis. Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for M2-8:2 FTS the following samples: 320-64243-1, 320-64243-4, 320-64243-7, 320-64243-9, 320-64243-10 and 320-64243-A-7-B DU. Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): The Isotope Dilution Analyte (IDA) recovery associated with the following sample is below the method recommended limit for 13C2 PFTeDA and 13C2 PFHxDA: 320-64243-2. Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample.

Method 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for M2-6:2 FTS in the following samples: 320-64243-3, 320-64243-5, 320-64243-6, 320-64243-8, 320-64243-11 and 320-64243-12. Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): Several Isotope Dilution Analyte (IDA) recovery are above the method recommended limit for the following samples: 320-64243-5, 320-64243-11 and 320-64243-12. Quantitation by isotope dilution generally precludes any adverse effect on data

Job ID: 320-64243-1 (Continued)

Laboratory: Eurofins TestAmerica, Sacramento (Continued)

quality due to elevated IDA recoveries.

Method 537 (modified): The sample duplicate (DUP) precision for Perfluorobutanoic acid (PFBA) in preparation batch 320-411238 and analytical batch 320-413145 was outside control limits. Sample matrix interference is suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method 537 (modified): Results for samples 320-64243-7, 320-64243-11, 320-64243-12, 320-64243-13 and 320-64243-A-7-B DU were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits.

Method 537 (modified): Results for sample 320-64243-13 were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits.

Method 537 (modified): The “I” qualifier means the transition mass ratio for the indicated analyte(s) was outside of the established ratio limits. The qualitative identification of the analyte(s) has/have some degree of uncertainty. However, analyst judgement was used to positively identify the analyte(s). 320-64243-13

Method 537 (modified): The Isotope Dilution Analyte (IDA) recovery associated with the following laboratory control sample (LCS) is below the method recommended limit for several analytes due to matrix interference from the oil added to mimic fish tissue: preparation batch 320-411238 and analytical batch 320-412393. This was confirmed in a re-analysis. Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the laboratory control sample. The labeled isotope dilution analyte (IDA) for associated analytes recovered in all samples being reported are within the method recommended limits; there is no adverse impact to data quantitation/quality.

Method 537 (modified): Results for sample 320-64243-16, 320-64243-24, 320-64243-26, 320-64243-27, 320-64243-28 and 320-64243-A-26-B DU were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits.

Method 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for M2-6:2 FTS and M2-8:2 FTS in the following samples: 320-64243-17, 320-64243-18, 320-64243-19, 320-64243-20, 320-64243-21, 320-64243-22 and 320-64243-23. Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): The laboratory control sample (LCS) for preparation batch 320-411223 and analytical batch 320-412780 recovered Isotope Dilution Analyte (IDA) outside of the control limits for M2-8:2 FTS and M2-6:2 FTS due to matrix interference from the oil added to mimic fish tissue.Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for M2-8:2 FTS in the following samples: 320-64243-15 and 320-64243-24. Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): The Isotope Dilution Analyte (IDA) recovery associated with the following samples are below the method recommended limit for 13C2 PFTeDA: 320-64243-17, 320-64243-19 and 320-64243-28. Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the samples.

Method 537 (modified): The Isotope Dilution Analyte (IDA) recovery associated with the following sample is below the method recommended limit for several analytes: 320-64243-16. Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample.

Method 537 (modified): The Isotope Dilution Analyte (IDA) recovery associated with the following sample is below the method recommended limit for 13C2 PFHxDA: 320-64243-27. Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample.

Job ID: 320-64243-1 (Continued)

Laboratory: Eurofins TestAmerica, Sacramento (Continued)

Method 537 (modified): Results for samples 320-64243-16, 320-64243-24, 320-64243-25, 320-64243-26, 320-64243-27, 320-64243-28 and 320-64243-A-28-C DU were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits.

Method 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for M2-8:2 FTS in the following samples: 320-64243-15, 320-64243-16, 320-64243-17, 320-64243-18, 320-64243-19, 320-64243-20, 320-64243-21, 320-64243-22, 320-64243-23, 320-64243-24, 320-64243-25, 320-64243-26, 320-64243-27, 320-64243-28 and 320-64243-A-28-C DU. Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): The laboratory control sample (LCS) for preparation batch 320-413207 and analytical batch 320-415958 recovered Isotope Dilution Analyte (IDA) outside of the control limits for M2-8:2 FTS due to matrix interference from the oil added to mimic fish tissue. Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): The method blank (MB) for preparation batch 320-413207 and analytical batch 320-415958 recovered Isotope Dilution Analyte (IDA) outside of the control limits for M2-8:2 FTS due to matrix interference from the oil added to mimic fish tissue.Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): The laboratory control sample duplicate (LCSD) for preparation batch 320-413207 and analytical batch 320-415958 recovered Isotope Dilution Analyte (IDA) outside of the control limits for M2-8:2 FTS due to matrix interference from the oil added to mimic fish tissue. Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): The Isotope Dilution Analyte (IDA) recovery associated with the following samples is below the method recommended limit for 13C2 PFHxDA: 320-64243-16 and 320-64243-25. Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the samples.

Method 537 (modified): Results for samples 320-64243-17 and 320-64243-23 were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits.

Method 537 (modified): The "I" qualifier means the transition mass ratio for the indicated analyte was outside of 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. 320-64243-5

Method 537 (modified): The method blank (MB) for preparation batch 320-411223 and analytical batch 320-412780 recovered Isotope Dilution Analyte (IDA) outside of the control limits for M2-8:2 FTS and M2-6:2 FTS due to matrix interference from the oil added to mimic fish tissue.Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): Results for sample 320-64243-25 were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits.

Method 537 (modified): The laboratory control sample duplicate (LCSD) for preparation batch 320-411223 and analytical batch 320-416200 recovered Isotope Dilution Analyte (IDA) outside of the control limits for M2-6:2 FTS and M2-8:2 FTS due to matrix interference from the oil added to mimic fish tissue. Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): The following sample has chromatographic matrix interferences for Perfluorooctanesulfonic acid (PFOS) that could adversely impact the identification and quantitation of target analytes: 320-64243-23 These interferences could cause false positive results.

Method 537 (modified): The Isotope Dilution Analyte (IDA) recovery associated with the following samples are below the method recommended limit for 13C2 PFHxDA and 13C2 PFTeDA: 320-64243-A-26-B DU. Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample.

Job ID: 320-64243-1 (Continued)

Laboratory: Eurofins TestAmerica, Sacramento (Continued)

Method 537 (modified): The following sample exhibited matrix interferences for Perfluorohexanesulfonic acid (PFHxS) and Perfluorooctanesulfonic acid (PFOS) causing elevation of the Reporting Limit (RL): 320-64243-1, 320-64243-2, 320-64243-3, 320-64243-4, 320-64243-6, 320-64243-8 and 320-64243-10 . The RL for the affected analyte has been raised to be equal to the matrix interferences, and a "G" qualifier applied.

Method 537 (modified): The following sample exhibited matrix interferences for Perfluorohexanesulfonic acid (PFHxS) causing elevation of the Reporting Limit (RL): 320-64243-7, 320-64243-12, 320-64243-18, 320-64243-19, 320-64243-20, 320-64243-21, 320-64243-22, 320-64243-24, 320-64243-25, 320-64243-26 and 320-64243-A-7-B DU . The RL for the affected analyte has been raised to be equal to the matrix interferences, and a "G" qualifier applied.

Method 537 (modified): The following sample exhibited matrix interferences for Perfluorooctanesulfonic acid (PFOS) causing elevation of the Reporting Limit (RL): 320-64243-7, 320-64243-9, 320-64243-11, 320-64243-12, 320-64243-13, 320-64243-19, 320-64243-23 and 320-64243-A-7-B DU . The RL for the affected analyte has been raised to be equal to the matrix interferences, and a "G" qualifier applied.

Method 537 (modified): The “I” qualifier means the transition mass ratio for the indicated analytes were outside of the established ratio limits. The qualitative identification of the analytes have some degree of uncertainty. However, analyst judgement was used to positively identify the analytes. 320-64243-27

Method 537 (modified): The “I” qualifier means the transition mass ratio for the indicated analytes were outside of the established ratio limits. The qualitative identification of the analytes have some degree of uncertainty. However, analyst judgement was used to positively identify the analytes. 320-64243-16 and 320-64243-20

Method Moisture: Several Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following sample: 320-64243-10. Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): Several Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following sample: 320-64243-12. Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): The continuing calibration verification (CCV) associated with batch 320-415958 recovered above the upper control limit for M2-6:2 FTS. The associated target analyte in the following samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The associated samples are impacted: 320-64243-28, CCV 320-415958/15, LCS 320-413207/2-A, LCSD 320-413207/3-A, MB 320-413207/1-A and 320-64243-A-28-C DU.

Method 537 (modified): The laboratory control sample duplicate (LCSD) for preparation batch 320-413207 and analytical batch 320-415958 recovered outside control limits for the following analytes: Perfluorotetradecanoic acid (PFTeA) and Perfluoropentanesulfonic acid (PFPeS). These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

Method 537 (modified): Isotope Dilution Analyte (IDA) recovery for M2-8:2 FTS is above the method recommended limit for the following sample: MB 320-413207/1-A. Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): Isotope Dilution Analyte (IDA) recovery for M2-6:2 FTS and M2-8:2 FTS is above the method recommended limit for the following samples: 320-64243-28, LCS 320-413207/2-A, LCSD 320-413207/3-A and 320-64243-A-28-C DU. Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): The “I” qualifier means the transition mass ratio for the indicated analytes were outside of the established ratio limits. The qualitative identification of the analytes have some degree of uncertainty. However, analyst judgement was used to positively identify the analytes. 320-64243-28 and 320-64243-A-28-C DU

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

General Chemistry
Method Moisture: The following sample in analytical batch 320-411500 had a limited sample volume. Per standard operating procedure, a

Job ID: 320-64243-1 (Continued)

Laboratory: Eurofins TestAmerica, Sacramento (Continued)

minimum of 5.0 grams is to be used for percent moisture analysis. This criterion was not met for the reason stated above. 320-64243-13

Method Moisture: The reference method does not list a specific holding time for this procedure; therefore, the laboratory defaults to an in-house holding time of 14 days. The samples were analyzed outside this time period due to prep and homogenization requirements.

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

Organic Prep
Method 3535: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-409390. 3535_PFC Aqueous

For the following sample, the client label did not match Eurofins/TA label: 320-64243-25. Eurofins/TA label: SW14-LB2Client label: SW-LB2

Method SHAKE: The samples, 320-64243-15, 320-64243-16, 320-64243-17, 320-64243-18, 320-64243-19, 320-64243-20, 320-64243-21, 320-64243-22, 320-64243-23, 320-64243-24, 320-64243-25, 320-64243-26, 320-64243-27, 320-64243-28 and 320-64243-A-26 DU, were homogenized prior to batching. Shake_Bath_14D/PFC_IDA Tissue 320-411223

Method SHAKE: The following samples: 320-64243-1, 320-64243-2, 320-64243-3, 320-64243-4, 320-64243-5, 320-64243-6, 320-64243-7, 320-64243-8, 320-64243-9, 320-64243-10, 320-64243-11, 320-64243-12, 320-64243-13, 320-64243-14 and 320-64243-A-7 DU were homogenized prior to batching. preparation batch 320-411238 and 320-411238 Method: PFC_IDA/Shake_Bath_14D Matrix: Solids/Tissue

Method SHAKE: The samples, 320-64243-15, 320-64243-16, 320-64243-17, 320-64243-18, 320-64243-19, 320-64243-20, 320-64243-21, 320-64243-22, 320-64243-23, 320-64243-24, 320-64243-25, 320-64243-26, 320-64243-27, 320-64243-28 and 320-64243-A-26 DU, were observed to be light yellow after extraction and final volume. Shake_Bath_14D/PFC_IDA Tissue 320-411223

Method SHAKE: Samples were homogenized prior to batching: 320-64243-15, 320-64243-16, 320-64243-17, 320-64243-18, 320-64243-19, 320-64243-20, 320-64243-21, 320-64243-22, 320-64243-23, 320-64243-24, 320-64243-25, 320-64243-26, 320-64243-27, 320-64243-28 and 320-64243-A-28 DU. Method: Shake_Bath_14D/PFC_IDA Matrix: Tissue 320-413207 and 320-413207

Method SHAKE: The following samples were re-prepared outside of preparation holding time due to LCS/LCSD low/high %R for 10:2 and PFOS. Prep again at 1g. A13.:320-64243-15, 320-64243-16, 320-64243-17, 320-64243-18, 320-64243-19, 320-64243-20, 320-64243-21, 320-64243-22, 320-64243-23, 320-64243-24, 320-64243-25, 320-64243-26, 320-64243-27, 320-64243-28 and 320-64243-A-28 DU. Method: Shake_Bath_14D/PFC_IDA Matrix: Tissue 320-413207 and 320-413207

Method SHAKE: The following samples are observed to be yellow after final voluming: 320-64243-15, 320-64243-16, 320-64243-17, 320-64243-18, 320-64243-19, 320-64243-20, 320-64243-21, 320-64243-22, 320-64243-23, 320-64243-24, 320-64243-25, 320-64243-26, 320-64243-27, 320-64243-28 and 320-64243-A-28 DU. Method: Shake_Bath_14D/PFC_IDA Matrix: Tissue 320-413207 and 320-413207

Method SHAKE: The following samples was re-prepared outside of preparation holding time due to MB and LCSD/LCSD high and low IDA failures: 320-64243-1, 320-64243-2, 320-64243-3, 320-64243-4, 320-64243-5, 320-64243-6, 320-64243-7, 320-64243-8, 320-64243-9, 320-64243-10, 320-64243-11, 320-64243-12, 320-64243-13, 320-64243-14 and 320-64243-A-7 DU. Method: Shake Bath_14D/ PFC_IDA Matrix: Tissue preparation batch 320-414471

Method SHAKE: The following samples: 320-64243-1, 320-64243-2, 320-64243-3, 320-64243-4, 320-64243-5, 320-64243-6, 320-64243-7, 320-64243-8, 320-64243-9, 320-64243-10, 320-64243-11, 320-64243-12, 320-64243-13, 320-64243-14 and 320-64243-A-7 DU were homogenized prior to batching. Method: Shake_Bath_14D/PFC_IDA Matrix: Tissue preparation batch 320-414471

Method SHAKE: The following samples were slightly yellow after extraction: 320-64243-1, 320-64243-2, 320-64243-3, 320-64243-4, 320-64243-5 and 320-64243-8. Shake_Bath_14D/PFC_IDA Tissue 320-414471

Method SHAKE: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-414471. Shake_Bath_14D/PFC_IDA Tissue 320-414471

Job ID: 320-64243-1 (Continued)

Laboratory: Eurofins TestAmerica, Sacramento (Continued)

Method SHAKE: Elevated reporting limits are provided for the following sample due to insufficient sample provided for preparation: 320-64243-11. Shake_Bath_14D/PFC_IDA Tissue 320-414471

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

Detection Summary

Client: ARCADIS U.S., Inc.
Job ID: 320-64243-1
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Client Sample ID: SW38-YP1 — Lab Sample ID: 320-64243-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	1.8	J B	4.1	0.57	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	1.1	J	4.1	0.73	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	1.7	J	4.1	0.45	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	2.8	J	4.1	0.73	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: SW38-YP2 — Lab Sample ID: 320-64243-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	2.7	J B	4.9	0.68	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	1.4	J	4.9	0.53	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	2.6	J	4.9	0.87	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: SW38-YP3 — Lab Sample ID: 320-64243-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	1.5	J B	4.2	0.59	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	2.9	J	4.2	0.76	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	1.8	J	4.2	0.46	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	2.0	J	4.2	0.76	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: SW38-YP4 — Lab Sample ID: 320-64243-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	1.8	J B	4.0	0.56	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.73	J	4.0	0.72	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	1.4	J	4.0	0.44	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	2.5	J	4.0	0.72	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: SW38-YP5 — Lab Sample ID: 320-64243-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	2.0	J B	4.5	0.63	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	1.2	J I	4.5	0.81	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorotridecanoic acid (PFTriA)	1.1	J	4.5	1.1	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: SW38-GS1 — Lab Sample ID: 320-64243-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	2.7	J B	5.0	0.69	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	1.4	J	5.0	0.89	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: SW37-YP1 — Lab Sample ID: 320-64243-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	3.1	J B	4.3	0.60	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	1.1	J	4.3	0.77	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	13		4.3	0.47	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	14		4.3	0.77	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorododecanoic acid (PFDoA)	2.8	J	4.3	1.4	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorotridecanoic acid (PFTriA)	1.9	J	4.3	1.1	ug/Kg	1	☼	537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: ARCADIS U.S., Inc.
Job ID: 320-64243-1
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Client Sample ID: SW37-YP2 — Lab Sample ID: 320-64243-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	3.0	J B	5.2	0.73	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	2.4	J	5.2	0.58	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	3.0	J	5.2	0.94	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: SW37-PS1 — Lab Sample ID: 320-64243-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	2.6	J B	4.7	0.66	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	1.3	J	4.7	0.52	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	1.9	J	4.7	0.85	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: SW37-PS2 — Lab Sample ID: 320-64243-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	2.4	J B	4.2	0.59	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	2.0	J	4.2	0.46	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	2.9	J	4.2	0.75	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: SW37-PS3 — Lab Sample ID: 320-64243-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	3.3	J B	4.7	0.66	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	1.5	J	4.7	0.52	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	2.7	J	4.7	0.85	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: SW37-PS4 — Lab Sample ID: 320-64243-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	3.0	J B	4.4	0.62	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	1.5	J	4.4	0.49	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	3.2	J	4.4	0.80	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: SW37-PS5 — Lab Sample ID: 320-64243-13

No Detections.

Client Sample ID: SW14-YP1 — Lab Sample ID: 320-64243-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	2.4	J B	4.1	0.58	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	10		4.1	1.8	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	37		4.1	0.74	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	12		4.1	0.46	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	6.7		4.1	0.74	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorododecanoic acid (PFDoA)	1.7	J	4.1	1.4	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.94	J	4.1	0.41	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	50		4.1	0.64	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroheptanesulfonic Acid (PFHpS)	1.7	J	4.1	0.72	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	240	B	10	4.1	ug/Kg	1	☼	537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Sacramento

Client Sample ID: SW14-YP2 — Lab Sample ID: 320-64243-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	3.8	J B	4.1	0.57	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	19		4.1	1.7	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	33		4.1	0.73	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	19		4.1	0.45	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	12		4.1	0.73	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorododecanoic acid (PFDoA)	2.9	J	4.1	1.4	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorotridecanoic acid (PFTriA)	1.4	J	4.1	1.0	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	1.2	J	4.1	0.41	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	110		4.1	0.63	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroheptanesulfonic Acid (PFHpS)	1.6	J	4.1	0.71	ug/Kg	1	☼	537 (modified)	Total/NA
8:2 FTS	11	J	41	5.1	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - RE	370		9.9	4.0	ug/Kg	1	☼	537 (modified)	Total/NA
10:2 FTS - RE	2.0	J	4.0	0.52	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: SW14-YP3 — Lab Sample ID: 320-64243-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	23	J	31	14	ug/Kg	10	☼	537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	39		31	5.7	ug/Kg	10	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	15	J	31	3.5	ug/Kg	10	☼	537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	7.5	J	31	5.7	ug/Kg	10	☼	537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	150		31	4.9	ug/Kg	10	☼	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - RE	910	I	75	30	ug/Kg	10	☼	537 (modified)	Total/NA

Client Sample ID: SW14-YP4 — Lab Sample ID: 320-64243-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	2.7	J B	3.5	0.48	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	5.1		3.5	1.5	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	15		3.5	0.62	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	11		3.5	0.38	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	7.0		3.5	0.62	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorododecanoic acid (PFDoA)	1.8	J	3.5	1.2	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	35		3.5	0.54	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroheptanesulfonic Acid (PFHpS)	1.0	J	3.5	0.60	ug/Kg	1	☼	537 (modified)	Total/NA
8:2 FTS	6.2	J	35	4.3	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	350		81	32	ug/Kg	10	☼	537 (modified)	Total/NA
10:2 FTS - RE	1.8	J	3.2	0.42	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: SW14-YP5 — Lab Sample ID: 320-64243-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	2.5	J B	4.2	0.59	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	20		4.2	0.76	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	14		4.2	0.47	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	8.9		4.2	0.76	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorododecanoic acid (PFDoA)	2.2	J	4.2	1.4	ug/Kg	1	☼	537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: ARCADIS U.S., Inc.
Job ID: 320-64243-1
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Client Sample ID: SW14-YP5 (Continued) — Lab Sample ID: 320-64243-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanesulfonic Acid (PFHpS)	1.6	J	4.2	0.74	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - RE	350		11	4.3	ug/Kg	1	☼	537 (modified)	Total/NA
10:2 FTS - RE	1.3	J	4.3	0.56	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: SW14-BG1 — Lab Sample ID: 320-64243-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	2.8	J B	3.7	0.52	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	1.1	J	3.7	0.67	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	2.6	J	3.7	0.41	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	1.9	J	3.7	0.67	ug/Kg	1	☼	537 (modified)	Total/NA
10:2 FTS - RE	0.73	J	4.8	0.62	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: SW14-BG2 — Lab Sample ID: 320-64243-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	2.6	J B	4.1	0.57	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	1.6	J	4.1	0.73	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	3.4	J	4.1	0.45	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	2.8	J	4.1	0.73	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - RE	150	I	11	4.6	ug/Kg	1	☼	537 (modified)	Total/NA
10:2 FTS - RE	1.1	J	4.6	0.59	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: SW14-BG3 — Lab Sample ID: 320-64243-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	2.8	J B	4.5	0.63	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	1.5	J	4.5	0.81	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	5.1		4.5	0.50	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	3.8	J	4.5	0.81	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - RE	120		11	4.2	ug/Kg	1	☼	537 (modified)	Total/NA
10:2 FTS - RE	0.75	J	4.2	0.55	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: SW14-BG4 — Lab Sample ID: 320-64243-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	2.4	J B	3.9	0.54	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	1.4	J	3.9	0.70	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	3.7	J	3.9	0.43	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	3.2	J	3.9	0.70	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorododecanoic acid (PFDoA)	1.4	J	3.9	1.3	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - RE	150		11	4.4	ug/Kg	1	☼	537 (modified)	Total/NA
10:2 FTS - RE	2.8	J	4.4	0.57	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: SW14-BG5 — Lab Sample ID: 320-64243-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	2.6	J B	4.0	0.56	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	1.1	J	4.0	0.71	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	2.9	J	4.0	0.44	ug/Kg	1	☼	537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SW14-BG5 (Continued) — Lab Sample ID: 320-64243-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroundecanoic acid (PFUnA)	2.6	J	4.0	0.71	ug/Kg	1	☼	537 (modified)	Total/NA
10:2 FTS - RE	1.3	J	5.2	0.68	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: SW14-LB1 — Lab Sample ID: 320-64243-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorononanoic acid (PFNA)	11	J	42	7.6	ug/Kg	10	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	25	J	42	4.7	ug/Kg	10	☼	537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	14	J	42	7.6	ug/Kg	10	☼	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - RE	950		83	33	ug/Kg	10	☼	537 (modified)	Total/NA

Client Sample ID: SW14-LB2 — Lab Sample ID: 320-64243-25

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorononanoic acid (PFNA)	18	J	40	7.2	ug/Kg	10	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	30	J	40	4.4	ug/Kg	10	☼	537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	12	J	40	7.2	ug/Kg	10	☼	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - RE	700		94	38	ug/Kg	10	☼	537 (modified)	Total/NA

Client Sample ID: SW14-LB3 — Lab Sample ID: 320-64243-26

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorononanoic acid (PFNA)	8.8	J	35	6.3	ug/Kg	10	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	17	J	35	3.8	ug/Kg	10	☼	537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	14	J	35	6.3	ug/Kg	10	☼	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - RE	430		87	35	ug/Kg	10	☼	537 (modified)	Total/NA
10:2 FTS - RE	4.7	J	35	4.5	ug/Kg	10	☼	537 (modified)	Total/NA

Client Sample ID: SW14-LB4 — Lab Sample ID: 320-64243-27

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorononanoic acid (PFNA)	9.6	J	51	9.1	ug/Kg	10	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	55		51	5.6	ug/Kg	10	☼	537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	83		51	9.1	ug/Kg	10	☼	537 (modified)	Total/NA
Perfluorododecanoic acid (PFDoA)	28	J	51	17	ug/Kg	10	☼	537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	7.9	J I	51	7.9	ug/Kg	10	☼	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - RE	940		120	47	ug/Kg	10	☼	537 (modified)	Total/NA
10:2 FTS - RE	14	J	47	6.1	ug/Kg	10	☼	537 (modified)	Total/NA

Client Sample ID: SW14-LB5 — Lab Sample ID: 320-64243-28

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorononanoic acid (PFNA)	16	J	41	7.4	ug/Kg	10	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	30	J	41	4.5	ug/Kg	10	☼	537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	12	J	41	7.4	ug/Kg	10	☼	537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	16	J I	41	6.4	ug/Kg	10	☼	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1100		100	41	ug/Kg	10	☼	537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: ARCADIS U.S., Inc.
Job ID: 320-64243-1
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Client Sample ID: Field Blank 8/26/20 (SW38) — Lab Sample ID: 320-64243-29

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.49	J	1.8	0.31	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.35	J B	1.8	0.15	ng/L	1		537 (modified)	Total/NA

Client Sample ID: Field Blank 8/26/20 (SW37) — Lab Sample ID: 320-64243-30

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.42	J	1.8	0.31	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.31	J B	1.8	0.15	ng/L	1		537 (modified)	Total/NA

Client Sample ID: Field Blank 8/26/20 (SW14) — Lab Sample ID: 320-64243-31

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.36	J	1.8	0.31	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.29	J B	1.8	0.15	ng/L	1		537 (modified)	Total/NA

Client Sample ID: Field Blank 8/27/20 (Foil) — Lab Sample ID: 320-64243-32

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.42	J	1.7	0.30	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.30	J B	1.7	0.15	ng/L	1		537 (modified)	Total/NA

Client Sample ID: Field Blank 8/27/20 (Ziploc) — Lab Sample ID: 320-64243-33

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.48	J	1.8	0.32	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.33	J B	1.8	0.15	ng/L	1		537 (modified)	Total/NA

Client Sample ID: Field Blank 8/27/20 (SW38) — Lab Sample ID: 320-64243-34

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	0.25	J I B	1.8	0.15	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SW38-YP1
Lab Sample ID: 320-64243-1
Date Collected: 08/26/20 14:00
Matrix: Tissue
Date Received: 09/02/20 09:50
Percent Solids: 21.4

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**1.8**	**J B**	4.1	0.57	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1
Perfluoropentanoic acid (PFPeA)	<4.1		4.1	1.6	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1
Perfluorohexanoic acid (PFHxA)	<4.1		4.1	0.85	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1
Perfluoroheptanoic acid (PFHpA)	<4.1		4.1	0.59	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1
Perfluorooctanoic acid (PFOA)	<4.1		4.1	1.7	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1
Perfluorononanoic acid (PFNA)	**1.1**	**J**	4.1	0.73	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1
Perfluorodecanoic acid (PFDA)	**1.7**	**J**	4.1	0.45	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1
Perfluoroundecanoic acid (PFUnA)	**2.8**	**J**	4.1	0.73	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1
Perfluorododecanoic acid (PFDoA)	<4.1		4.1	1.4	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1
Perfluorotridecanoic acid (PFTriA)	<4.1		4.1	1.0	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1
Perfluorotetradecanoic acid (PFTeA)	<4.1		4.1	1.1	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<4.1		4.1	0.89	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1
Perfluoro-n-octadecanoic acid (PFODA)	<4.1		4.1	0.57	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1
Perfluorobutanesulfonic acid (PFBS)	<4.1		4.1	0.51	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1
Perfluoropentanesulfonic acid (PFPeS)	<4.1		4.1	0.41	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1
Perfluorohexanesulfonic acid (PFHxS)	<12	G	12	12	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1
Perfluoroheptanesulfonic Acid (PFHpS)	<4.1		4.1	0.71	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1
Perfluorooctanesulfonic acid (PFOS)	<49	G	49	49	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1
Perfluorononanesulfonic acid (PFNS)	<4.1		4.1	0.41	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1
Perfluorodecanesulfonic acid (PFDS)	<4.1		4.1	0.79	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1
Perfluorododecanesulfonic acid (PFDoS)	<4.1		4.1	1.2	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1
Perfluorooctanesulfonamide (FOSA)	<4.1		4.1	1.7	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1
NEtFOSA	<4.1		4.1	3.9	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1
NMeFOSA	<4.1		4.1	0.65	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<41		41	7.9	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<41		41	7.5	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1
NMeFOSE	<4.1		4.1	1.4	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1
NEtFOSE	<4.1		4.1	0.73	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1
4:2 FTS	<41		41	7.5	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1
6:2 FTS	<41		41	3.0	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1
DONA	<4.1		4.1	0.37	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1
HFPO-DA (GenX)	<5.1		5.1	2.2	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1
F-53B Major	<4.1		4.1	1.5	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1
F-53B Minor	<4.1		4.1	0.45	ug/Kg	☼	09/10/20 19:28	09/17/20 11:20	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*93*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:20*	*1*
13C5 PFPeA	*91*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:20*	*1*
13C2 PFHxA	*91*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:20*	*1*
13C4 PFHpA	*93*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:20*	*1*
13C4 PFOA	*88*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:20*	*1*
13C5 PFNA	*94*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:20*	*1*
13C2 PFDA	*91*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:20*	*1*
13C2 PFUnA	*96*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:20*	*1*

Client: ARCADIS U.S., Inc.
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Job ID: 320-64243-1

Client Sample ID: SW38-YP1
Date Collected: 08/26/20 14:00
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-1
Matrix: Tissue
Percent Solids: 21.4

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDoA	68		25 - 150	09/10/20 19:28	09/17/20 11:20	1
13C2 PFTeDA	35		25 - 150	09/10/20 19:28	09/17/20 11:20	1
13C2 PFHxDA	31		25 - 150	09/10/20 19:28	09/17/20 11:20	1
13C3 PFBS	93		25 - 150	09/10/20 19:28	09/17/20 11:20	1
18O2 PFHxS	99		25 - 150	09/10/20 19:28	09/17/20 11:20	1
13C4 PFOS	96		25 - 150	09/10/20 19:28	09/17/20 11:20	1
13C8 FOSA	79		25 - 150	09/10/20 19:28	09/17/20 11:20	1
d3-NMeFOSAA	90		25 - 150	09/10/20 19:28	09/17/20 11:20	1
d5-NEtFOSAA	103		25 - 150	09/10/20 19:28	09/17/20 11:20	1
d-N-MeFOSA-M	54		25 - 150	09/10/20 19:28	09/17/20 11:20	1
d-N-EtFOSA-M	47		25 - 150	09/10/20 19:28	09/17/20 11:20	1
d7-N-MeFOSE-M	31		10 - 120	09/10/20 19:28	09/17/20 11:20	1
d9-N-EtFOSE-M	25		10 - 120	09/10/20 19:28	09/17/20 11:20	1
M2-4:2 FTS	122		25 - 150	09/10/20 19:28	09/17/20 11:20	1
M2-6:2 FTS	146		25 - 150	09/10/20 19:28	09/17/20 11:20	1
13C3 HFPO-DA	84		25 - 150	09/10/20 19:28	09/17/20 11:20	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
8:2 FTS	<4100		4100	510	ug/Kg	☼	09/10/20 19:28	09/16/20 02:45	100
10:2 FTS	<410		410	53	ug/Kg	☼	09/10/20 19:28	09/16/20 02:45	100

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-8:2 FTS	119		25 - 150	09/10/20 19:28	09/16/20 02:45	100

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	78.6		0.1	0.1	%			09/11/20 14:13	1
Percent Solids	21.4		0.1	0.1	%			09/11/20 14:13	1

Client Sample ID: SW38-YP2
Date Collected: 08/26/20 14:00
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-2
Matrix: Tissue
Percent Solids: 19.8

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**2.7**	**J B**	4.9	0.68	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
Perfluoropentanoic acid (PFPeA)	<4.9		4.9	1.9	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
Perfluorohexanoic acid (PFHxA)	<4.9		4.9	1.0	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
Perfluoroheptanoic acid (PFHpA)	<4.9		4.9	0.70	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
Perfluorooctanoic acid (PFOA)	<4.9		4.9	2.1	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
Perfluorononanoic acid (PFNA)	<4.9		4.9	0.87	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
Perfluorodecanoic acid (PFDA)	**1.4**	**J**	4.9	0.53	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
Perfluoroundecanoic acid (PFUnA)	**2.6**	**J**	4.9	0.87	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
Perfluorododecanoic acid (PFDoA)	<4.9		4.9	1.6	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
Perfluorotridecanoic acid (PFTriA)	<4.9		4.9	1.2	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
Perfluorotetradecanoic acid (PFTeA)	<4.9		4.9	1.3	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<4.9		4.9	1.1	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
Perfluoro-n-octadecanoic acid (PFODA)	<4.9		4.9	0.68	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
Perfluorobutanesulfonic acid (PFBS)	<4.9		4.9	0.61	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
Perfluoropentanesulfonic acid (PFPeS)	<4.9		4.9	0.49	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
Perfluorohexanesulfonic acid (PFHxS)	<9.7	G	9.7	9.7	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
Perfluoroheptanesulfonic Acid (PFHpS)	<4.9		4.9	0.85	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
Perfluorooctanesulfonic acid (PFOS)	<320	G	320	320	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
Perfluorononanesulfonic acid (PFNS)	<4.9		4.9	0.49	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
Perfluorodecanesulfonic acid (PFDS)	<4.9		4.9	0.95	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
Perfluorododecanesulfonic acid (PFDoS)	<4.9		4.9	1.5	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
Perfluorooctanesulfonamide (FOSA)	<4.9		4.9	2.0	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
NEtFOSA	<4.9		4.9	4.7	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
NMeFOSA	<4.9		4.9	0.78	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<49		49	9.5	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<49		49	9.0	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
NMeFOSE	<4.9		4.9	1.7	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
NEtFOSE	<4.9		4.9	0.87	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
4:2 FTS	<49		49	9.0	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
6:2 FTS	<49		49	3.6	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
8:2 FTS	<49		49	6.1	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
10:2 FTS	<4.9		4.9	0.63	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
DONA	<4.9		4.9	0.44	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
HFPO-DA (GenX)	<6.1		6.1	2.7	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
F-53B Major	<4.9		4.9	1.7	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1
F-53B Minor	<4.9		4.9	0.53	ug/Kg	☼	09/10/20 19:28	09/17/20 11:29	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*47*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:29*	*1*
13C5 PFPeA	*57*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:29*	*1*
13C2 PFHxA	*88*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:29*	*1*
13C4 PFHpA	*107*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:29*	*1*
13C4 PFOA	*87*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:29*	*1*
13C5 PFNA	*108*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:29*	*1*

Client: ARCADIS U.S., Inc.
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Job ID: 320-64243-1

Client Sample ID: SW38-YP2
Date Collected: 08/26/20 14:00
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-2
Matrix: Tissue
Percent Solids: 19.8

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	101		25 - 150	09/10/20 19:28	09/17/20 11:29	1
13C2 PFUnA	92		25 - 150	09/10/20 19:28	09/17/20 11:29	1
13C2 PFDoA	62		25 - 150	09/10/20 19:28	09/17/20 11:29	1
13C2 PFTeDA	23	*5	25 - 150	09/10/20 19:28	09/17/20 11:29	1
13C2 PFHxDA	23	*5	25 - 150	09/10/20 19:28	09/17/20 11:29	1
13C3 PFBS	75		25 - 150	09/10/20 19:28	09/17/20 11:29	1
18O2 PFHxS	113		25 - 150	09/10/20 19:28	09/17/20 11:29	1
13C4 PFOS	106		25 - 150	09/10/20 19:28	09/17/20 11:29	1
13C8 FOSA	96		25 - 150	09/10/20 19:28	09/17/20 11:29	1
d3-NMeFOSAA	100		25 - 150	09/10/20 19:28	09/17/20 11:29	1
d5-NEtFOSAA	103		25 - 150	09/10/20 19:28	09/17/20 11:29	1
d-N-MeFOSA-M	77		25 - 150	09/10/20 19:28	09/17/20 11:29	1
d-N-EtFOSA-M	71		25 - 150	09/10/20 19:28	09/17/20 11:29	1
d7-N-MeFOSE-M	40		10 - 120	09/10/20 19:28	09/17/20 11:29	1
d9-N-EtFOSE-M	33		10 - 120	09/10/20 19:28	09/17/20 11:29	1
M2-4:2 FTS	114		25 - 150	09/10/20 19:28	09/17/20 11:29	1
M2-6:2 FTS	134		25 - 150	09/10/20 19:28	09/17/20 11:29	1
M2-8:2 FTS	150		25 - 150	09/10/20 19:28	09/17/20 11:29	1
13C3 HFPO-DA	82		25 - 150	09/10/20 19:28	09/17/20 11:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	80.2		0.1	0.1	%			09/11/20 14:13	1
Percent Solids	19.8		0.1	0.1	%			09/11/20 14:13	1

Client Sample ID: SW38-YP3
Lab Sample ID: 320-64243-3
Date Collected: 08/26/20 14:00
Matrix: Tissue
Date Received: 09/02/20 09:50
Percent Solids: 21.2

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**1.5**	**J B**	4.2	0.59	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1
Perfluoropentanoic acid (PFPeA)	<4.2		4.2	1.6	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1
Perfluorohexanoic acid (PFHxA)	<4.2		4.2	0.88	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1
Perfluoroheptanoic acid (PFHpA)	<4.2		4.2	0.61	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1
Perfluorooctanoic acid (PFOA)	<4.2		4.2	1.8	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1
Perfluorononanoic acid (PFNA)	**2.9**	**J**	4.2	0.76	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1
Perfluorodecanoic acid (PFDA)	**1.8**	**J**	4.2	0.46	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1
Perfluoroundecanoic acid (PFUnA)	**2.0**	**J**	4.2	0.76	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1
Perfluorododecanoic acid (PFDoA)	<4.2		4.2	1.4	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1
Perfluorotridecanoic acid (PFTriA)	<4.2		4.2	1.1	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1
Perfluorotetradecanoic acid (PFTeA)	<4.2		4.2	1.1	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<4.2		4.2	0.93	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1
Perfluoro-n-octadecanoic acid (PFODA)	<4.2		4.2	0.59	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1
Perfluorobutanesulfonic acid (PFBS)	<4.2		4.2	0.53	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1
Perfluoropentanesulfonic acid (PFPeS)	<4.2		4.2	0.42	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1
Perfluorohexanesulfonic acid (PFHxS)	<6.3	G	6.3	6.3	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1
Perfluoroheptanesulfonic Acid (PFHpS)	<4.2		4.2	0.74	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1
Perfluorooctanesulfonic acid (PFOS)	<170	G	170	170	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1
Perfluorononanesulfonic acid (PFNS)	<4.2		4.2	0.42	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1
Perfluorodecanesulfonic acid (PFDS)	<4.2		4.2	0.82	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1
Perfluorododecanesulfonic acid (PFDoS)	<4.2		4.2	1.3	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1
Perfluorooctanesulfonamide (FOSA)	<4.2		4.2	1.7	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1
NEtFOSA	<4.2		4.2	4.0	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1
NMeFOSA	<4.2		4.2	0.67	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<42		42	8.2	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<42		42	7.8	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1
NMeFOSE	<4.2		4.2	1.5	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1
NEtFOSE	<4.2		4.2	0.76	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1
4:2 FTS	<42		42	7.8	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1
6:2 FTS	<42		42	3.2	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1
DONA	<4.2		4.2	0.38	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1
HFPO-DA (GenX)	<5.3		5.3	2.3	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1
F-53B Major	<4.2		4.2	1.5	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1
F-53B Minor	<4.2		4.2	0.46	ug/Kg	☼	09/10/20 19:28	09/17/20 11:39	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*78*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:39*	*1*
13C5 PFPeA	*79*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:39*	*1*
13C2 PFHxA	*94*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:39*	*1*
13C4 PFHpA	*103*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:39*	*1*
13C4 PFOA	*84*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:39*	*1*
13C5 PFNA	*103*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:39*	*1*
13C2 PFDA	*104*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:39*	*1*
13C2 PFUnA	*107*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:39*	*1*

Client Sample ID: SW38-YP3
Date Collected: 08/26/20 14:00
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-3
Matrix: Tissue
Percent Solids: 21.2

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

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDoA	*74*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:39*	*1*
13C2 PFTeDA	*42*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:39*	*1*
13C2 PFHxDA	*46*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:39*	*1*
13C3 PFBS	*88*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:39*	*1*
18O2 PFHxS	*111*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:39*	*1*
13C4 PFOS	*104*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:39*	*1*
13C8 FOSA	*83*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:39*	*1*
d3-NMeFOSAA	*95*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:39*	*1*
d5-NEtFOSAA	*104*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:39*	*1*
d-N-MeFOSA-M	*70*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:39*	*1*
d-N-EtFOSA-M	*60*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:39*	*1*
d7-N-MeFOSE-M	*35*		*10 - 120*	*09/10/20 19:28*	*09/17/20 11:39*	*1*
d9-N-EtFOSE-M	*31*		*10 - 120*	*09/10/20 19:28*	*09/17/20 11:39*	*1*
M2-4:2 FTS	*131*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:39*	*1*
M2-6:2 FTS	*151*	**5*	*25 - 150*	*09/10/20 19:28*	*09/17/20 11:39*	*1*
13C3 HFPO-DA	*86*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:39*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
8:2 FTS	<4200		4200	530	ug/Kg	☼	09/10/20 19:28	09/16/20 03:04	100
10:2 FTS	<420		420	55	ug/Kg	☼	09/10/20 19:28	09/16/20 03:04	100

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-8:2 FTS	*96*		*25 - 150*	*09/10/20 19:28*	*09/16/20 03:04*	*100*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**78.8**		0.1	0.1	%			09/11/20 14:13	1
Percent Solids	**21.2**		0.1	0.1	%			09/11/20 14:13	1

Client Sample ID: SW38-YP4
Lab Sample ID: 320-64243-4
Date Collected: 08/26/20 22:30
Matrix: Tissue
Date Received: 09/02/20 09:50
Percent Solids: 21.2

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**1.8**	**J B**	4.0	0.56	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1
Perfluoropentanoic acid (PFPeA)	<4.0		4.0	1.5	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1
Perfluorohexanoic acid (PFHxA)	<4.0		4.0	0.84	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1
Perfluoroheptanoic acid (PFHpA)	<4.0		4.0	0.58	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1
Perfluorooctanoic acid (PFOA)	<4.0		4.0	1.7	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1
Perfluorononanoic acid (PFNA)	**0.73**	**J**	4.0	0.72	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1
Perfluorodecanoic acid (PFDA)	**1.4**	**J**	4.0	0.44	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1
Perfluoroundecanoic acid (PFUnA)	**2.5**	**J**	4.0	0.72	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1
Perfluorododecanoic acid (PFDoA)	<4.0		4.0	1.3	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1
Perfluorotridecanoic acid (PFTriA)	<4.0		4.0	1.0	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1
Perfluorotetradecanoic acid (PFTeA)	<4.0		4.0	1.1	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<4.0		4.0	0.88	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1
Perfluoro-n-octadecanoic acid (PFODA)	<4.0		4.0	0.56	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1
Perfluorobutanesulfonic acid (PFBS)	<4.0		4.0	0.50	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1
Perfluoropentanesulfonic acid (PFPeS)	<4.0		4.0	0.40	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1
Perfluorohexanesulfonic acid (PFHxS)	<28	G	28	28	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1
Perfluoroheptanesulfonic Acid (PFHpS)	<4.0		4.0	0.70	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1
Perfluorooctanesulfonic acid (PFOS)	<320	G	320	320	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1
Perfluorononanesulfonic acid (PFNS)	<4.0		4.0	0.40	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1
Perfluorodecanesulfonic acid (PFDS)	<4.0		4.0	0.78	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1
Perfluorododecanesulfonic acid (PFDoS)	<4.0		4.0	1.2	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1
Perfluorooctanesulfonamide (FOSA)	<4.0		4.0	1.6	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1
NEtFOSA	<4.0		4.0	3.9	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1
NMeFOSA	<4.0		4.0	0.64	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<40		40	7.8	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<40		40	7.4	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1
NMeFOSE	<4.0		4.0	1.4	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1
NEtFOSE	<4.0		4.0	0.72	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1
4:2 FTS	<40		40	7.4	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1
6:2 FTS	<40		40	3.0	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1
DONA	<4.0		4.0	0.36	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1
HFPO-DA (GenX)	<5.0		5.0	2.2	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1
F-53B Major	<4.0		4.0	1.4	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1
F-53B Minor	<4.0		4.0	0.44	ug/Kg	☼	09/10/20 19:28	09/17/20 11:48	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*87*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:48*	*1*
13C5 PFPeA	*81*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:48*	*1*
13C2 PFHxA	*101*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:48*	*1*
13C4 PFHpA	*113*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:48*	*1*
13C4 PFOA	*88*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:48*	*1*
13C5 PFNA	*104*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:48*	*1*
13C2 PFDA	*120*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:48*	*1*
13C2 PFUnA	*128*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:48*	*1*

Client Sample ID: SW38-YP4
Date Collected: 08/26/20 22:30
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-4
Matrix: Tissue
Percent Solids: 21.2

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

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDoA	*98*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:48*	*1*
13C2 PFTeDA	*53*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:48*	*1*
13C2 PFHxDA	*55*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:48*	*1*
13C3 PFBS	*97*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:48*	*1*
18O2 PFHxS	*123*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:48*	*1*
13C4 PFOS	*114*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:48*	*1*
13C8 FOSA	*100*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:48*	*1*
d3-NMeFOSAA	*123*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:48*	*1*
d5-NEtFOSAA	*134*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:48*	*1*
d-N-MeFOSA-M	*75*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:48*	*1*
d-N-EtFOSA-M	*66*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:48*	*1*
d7-N-MeFOSE-M	*43*		*10 - 120*	*09/10/20 19:28*	*09/17/20 11:48*	*1*
d9-N-EtFOSE-M	*39*		*10 - 120*	*09/10/20 19:28*	*09/17/20 11:48*	*1*
M2-4:2 FTS	*143*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:48*	*1*
M2-6:2 FTS	*139*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:48*	*1*
13C3 HFPO-DA	*92*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:48*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
8:2 FTS	<4000		4000	500	ug/Kg	☼	09/10/20 19:28	09/16/20 03:13	100
10:2 FTS	<400		400	52	ug/Kg	☼	09/10/20 19:28	09/16/20 03:13	100

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-8:2 FTS	*83*		*25 - 150*	*09/10/20 19:28*	*09/16/20 03:13*	*100*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**78.8**		0.1	0.1	%			09/11/20 14:13	1
Percent Solids	**21.2**		0.1	0.1	%			09/11/20 14:13	1

Client Sample ID: SW38-YP5
Lab Sample ID: 320-64243-5
Date Collected: 08/26/20 22:30
Matrix: Tissue
Date Received: 09/02/20 09:50
Percent Solids: 21.4

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**2.0**	**J B**	4.5	0.63	ug/Kg	☼	09/10/20 19:28	09/17/20 11:57	1
Perfluoropentanoic acid (PFPeA)	<4.5		4.5	1.7	ug/Kg	☼	09/10/20 19:28	09/17/20 11:57	1
Perfluorohexanoic acid (PFHxA)	<4.5		4.5	0.94	ug/Kg	☼	09/10/20 19:28	09/17/20 11:57	1
Perfluoroheptanoic acid (PFHpA)	<4.5		4.5	0.65	ug/Kg	☼	09/10/20 19:28	09/17/20 11:57	1
Perfluorooctanoic acid (PFOA)	<4.5		4.5	1.9	ug/Kg	☼	09/10/20 19:28	09/17/20 11:57	1
Perfluorononanoic acid (PFNA)	<4.5		4.5	0.81	ug/Kg	☼	09/10/20 19:28	09/17/20 11:57	1
Perfluorodecanoic acid (PFDA)	<4.5		4.5	0.49	ug/Kg	☼	09/10/20 19:28	09/17/20 11:57	1
Perfluoroundecanoic acid (PFUnA)	**1.2**	**J I**	4.5	0.81	ug/Kg	☼	09/10/20 19:28	09/17/20 11:57	1
Perfluorododecanoic acid (PFDoA)	<4.5		4.5	1.5	ug/Kg	☼	09/10/20 19:28	09/17/20 11:57	1
Perfluorotridecanoic acid (PFTriA)	**1.1**	**J**	4.5	1.1	ug/Kg	☼	09/10/20 19:28	09/17/20 11:57	1
Perfluorotetradecanoic acid (PFTeA)	<4.5		4.5	1.2	ug/Kg	☼	09/10/20 19:28	09/17/20 11:57	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<4.5		4.5	0.99	ug/Kg	☼	09/10/20 19:28	09/17/20 11:57	1
Perfluoro-n-octadecanoic acid (PFODA)	<4.5		4.5	0.63	ug/Kg	☼	09/10/20 19:28	09/17/20 11:57	1
Perfluorobutanesulfonic acid (PFBS)	<4.5		4.5	0.56	ug/Kg	☼	09/10/20 19:28	09/17/20 11:57	1
Perfluoropentanesulfonic acid (PFPeS)	<4.5		4.5	0.45	ug/Kg	☼	09/10/20 19:28	09/17/20 11:57	1
Perfluorohexanesulfonic acid (PFHxS)	<13	G	13	13	ug/Kg	☼	09/10/20 19:28	09/17/20 11:57	1
Perfluoroheptanesulfonic Acid (PFHpS)	<4.5		4.5	0.79	ug/Kg	☼	09/10/20 19:28	09/17/20 11:57	1
Perfluorooctanesulfonic acid (PFOS)	<450	G	450	450	ug/Kg	☼	09/10/20 19:28	09/17/20 11:57	1
Perfluorononanesulfonic acid (PFNS)	<4.5		4.5	0.45	ug/Kg	☼	09/10/20 19:28	09/17/20 11:57	1
Perfluorodecanesulfonic acid (PFDS)	<4.5		4.5	0.88	ug/Kg	☼	09/10/20 19:28	09/17/20 11:57	1
Perfluorododecanesulfonic acid (PFDoS)	<4.5		4.5	1.3	ug/Kg	☼	09/10/20 19:28	09/17/20 11:57	1
Perfluorooctanesulfonamide (FOSA)	<4.5		4.5	1.8	ug/Kg	☼	09/10/20 19:28	09/17/20 11:57	1
NEtFOSA	<4.5		4.5	4.3	ug/Kg	☼	09/10/20 19:28	09/17/20 11:57	1
NMeFOSA	<4.5		4.5	0.72	ug/Kg	☼	09/10/20 19:28	09/17/20 11:57	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<45		45	8.8	ug/Kg	☼	09/10/20 19:28	09/17/20 11:57	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<45		45	8.3	ug/Kg	☼	09/10/20 19:28	09/17/20 11:57	1
NMeFOSE	<4.5		4.5	1.6	ug/Kg	☼	09/10/20 19:28	09/17/20 11:57	1
NEtFOSE	<4.5		4.5	0.81	ug/Kg	☼	09/10/20 19:28	09/17/20 11:57	1
6:2 FTS	<45		45	3.4	ug/Kg	☼	09/10/20 19:28	09/17/20 11:57	1
DONA	<4.5		4.5	0.40	ug/Kg	☼	09/10/20 19:28	09/17/20 11:57	1
HFPO-DA (GenX)	<5.6		5.6	2.5	ug/Kg	☼	09/10/20 19:28	09/17/20 11:57	1
F-53B Major	<4.5		4.5	1.6	ug/Kg	☼	09/10/20 19:28	09/17/20 11:57	1
F-53B Minor	<4.5		4.5	0.49	ug/Kg	☼	09/10/20 19:28	09/17/20 11:57	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*95*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:57*	*1*
13C5 PFPeA	*86*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:57*	*1*
13C2 PFHxA	*99*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:57*	*1*
13C4 PFHpA	*108*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:57*	*1*
13C4 PFOA	*95*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:57*	*1*
13C5 PFNA	*102*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:57*	*1*
13C2 PFDA	*117*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:57*	*1*
13C2 PFUnA	*112*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:57*	*1*
13C2 PFDoA	*93*		*25 - 150*	*09/10/20 19:28*	*09/17/20 11:57*	*1*

Client: ARCADIS U.S., Inc.
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Job ID: 320-64243-1

Client Sample ID: SW38-YP5

Date Collected: 08/26/20 22:30
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-5

Matrix: Tissue
Percent Solids: 21.4

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFTeDA	63		25 - 150	09/10/20 19:28	09/17/20 11:57	1
13C2 PFHxDA	52		25 - 150	09/10/20 19:28	09/17/20 11:57	1
13C3 PFBS	107		25 - 150	09/10/20 19:28	09/17/20 11:57	1
18O2 PFHxS	117		25 - 150	09/10/20 19:28	09/17/20 11:57	1
13C4 PFOS	110		25 - 150	09/10/20 19:28	09/17/20 11:57	1
13C8 FOSA	85		25 - 150	09/10/20 19:28	09/17/20 11:57	1
d3-NMeFOSAA	113		25 - 150	09/10/20 19:28	09/17/20 11:57	1
d5-NEtFOSAA	119		25 - 150	09/10/20 19:28	09/17/20 11:57	1
d-N-MeFOSA-M	54		25 - 150	09/10/20 19:28	09/17/20 11:57	1
d-N-EtFOSA-M	47		25 - 150	09/10/20 19:28	09/17/20 11:57	1
d7-N-MeFOSE-M	29		10 - 120	09/10/20 19:28	09/17/20 11:57	1
d9-N-EtFOSE-M	30		10 - 120	09/10/20 19:28	09/17/20 11:57	1
M2-6:2 FTS	207	*5	25 - 150	09/10/20 19:28	09/17/20 11:57	1
13C3 HFPO-DA	90		25 - 150	09/10/20 19:28	09/17/20 11:57	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4:2 FTS	<4500		4500	830	ug/Kg	☼	09/10/20 19:28	09/16/20 03:23	100
8:2 FTS	<4500		4500	560	ug/Kg	☼	09/10/20 19:28	09/16/20 03:23	100
10:2 FTS	<450		450	58	ug/Kg	☼	09/10/20 19:28	09/16/20 03:23	100

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-4:2 FTS	111		25 - 150	09/10/20 19:28	09/16/20 03:23	100
M2-8:2 FTS	113		25 - 150	09/10/20 19:28	09/16/20 03:23	100

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**78.6**		0.1	0.1	%			09/11/20 14:13	1
Percent Solids	**21.4**		0.1	0.1	%			09/11/20 14:13	1

Client Sample ID: SW38-GS1
Lab Sample ID: 320-64243-6
Date Collected: 08/26/20 14:00
Matrix: Tissue
Date Received: 09/02/20 09:50
Percent Solids: 19.2

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**2.7**	**J B**	5.0	0.69	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1
Perfluoropentanoic acid (PFPeA)	<5.0		5.0	1.9	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1
Perfluorohexanoic acid (PFHxA)	<5.0		5.0	1.0	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1
Perfluoroheptanoic acid (PFHpA)	<5.0		5.0	0.72	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1
Perfluorooctanoic acid (PFOA)	<5.0		5.0	2.1	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1
Perfluorononanoic acid (PFNA)	<5.0		5.0	0.89	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1
Perfluorodecanoic acid (PFDA)	<5.0		5.0	0.55	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1
Perfluoroundecanoic acid (PFUnA)	**1.4**	**J**	5.0	0.89	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1
Perfluorododecanoic acid (PFDoA)	<5.0		5.0	1.7	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1
Perfluorotridecanoic acid (PFTriA)	<5.0		5.0	1.3	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1
Perfluorotetradecanoic acid (PFTeA)	<5.0		5.0	1.3	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<5.0		5.0	1.1	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1
Perfluoro-n-octadecanoic acid (PFODA)	<5.0		5.0	0.69	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1
Perfluorobutanesulfonic acid (PFBS)	<5.0		5.0	0.62	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1
Perfluoropentanesulfonic acid (PFPeS)	<5.0		5.0	0.50	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1
Perfluorohexanesulfonic acid (PFHxS)	<45	G	45	45	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1
Perfluoroheptanesulfonic Acid (PFHpS)	<5.0		5.0	0.87	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1
Perfluorooctanesulfonic acid (PFOS)	<55	G	55	55	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1
Perfluorononanesulfonic acid (PFNS)	<5.0		5.0	0.50	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1
Perfluorodecanesulfonic acid (PFDS)	<5.0		5.0	0.97	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1
Perfluorododecanesulfonic acid (PFDoS)	<5.0		5.0	1.5	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1
Perfluorooctanesulfonamide (FOSA)	<5.0		5.0	2.0	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1
NEtFOSA	<5.0		5.0	4.8	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1
NMeFOSA	<5.0		5.0	0.79	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<50		50	9.7	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<50		50	9.2	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1
NMeFOSE	<5.0		5.0	1.7	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1
NEtFOSE	<5.0		5.0	0.89	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1
4:2 FTS	<50		50	9.2	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1
6:2 FTS	<50		50	3.7	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1
DONA	<5.0		5.0	0.45	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1
HFPO-DA (GenX)	<6.2		6.2	2.7	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1
F-53B Major	<5.0		5.0	1.8	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1
F-53B Minor	<5.0		5.0	0.55	ug/Kg	☼	09/10/20 19:28	09/17/20 12:07	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*99*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:07*	*1*
13C5 PFPeA	*88*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:07*	*1*
13C2 PFHxA	*101*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:07*	*1*
13C4 PFHpA	*98*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:07*	*1*
13C4 PFOA	*92*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:07*	*1*
13C5 PFNA	*101*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:07*	*1*
13C2 PFDA	*97*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:07*	*1*
13C2 PFUnA	*96*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:07*	*1*

Client Sample ID: SW38-GS1
Date Collected: 08/26/20 14:00
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-6
Matrix: Tissue
Percent Solids: 19.2

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

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDoA	*89*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:07*	*1*
13C2 PFTeDA	*52*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:07*	*1*
13C2 PFHxDA	*49*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:07*	*1*
13C3 PFBS	*103*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:07*	*1*
18O2 PFHxS	*109*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:07*	*1*
13C4 PFOS	*103*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:07*	*1*
13C8 FOSA	*91*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:07*	*1*
d3-NMeFOSAA	*107*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:07*	*1*
d5-NEtFOSAA	*114*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:07*	*1*
d-N-MeFOSA-M	*64*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:07*	*1*
d-N-EtFOSA-M	*57*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:07*	*1*
d7-N-MeFOSE-M	*35*		*10 - 120*	*09/10/20 19:28*	*09/17/20 12:07*	*1*
d9-N-EtFOSE-M	*31*		*10 - 120*	*09/10/20 19:28*	*09/17/20 12:07*	*1*
M2-4:2 FTS	*125*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:07*	*1*
M2-6:2 FTS	*155*	**5*	*25 - 150*	*09/10/20 19:28*	*09/17/20 12:07*	*1*
13C3 HFPO-DA	*91*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:07*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
8:2 FTS	<5000		5000	620	ug/Kg	☼	09/10/20 19:28	09/16/20 03:32	100
10:2 FTS	<500		500	64	ug/Kg	☼	09/10/20 19:28	09/16/20 03:32	100

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-8:2 FTS	*106*		*25 - 150*	*09/10/20 19:28*	*09/16/20 03:32*	*100*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**80.8**		0.1	0.1	%			09/11/20 14:13	1
Percent Solids	**19.2**		0.1	0.1	%			09/11/20 14:13	1

Client Sample ID: SW37-YP1
Lab Sample ID: 320-64243-7
Date Collected: 08/26/20 16:00
Matrix: Tissue
Date Received: 09/02/20 09:50
Percent Solids: 22.2

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**3.1**	**J B**	4.3	0.60	ug/Kg	☼	09/10/20 19:28	09/17/20 12:16	1
Perfluoropentanoic acid (PFPeA)	<4.3		4.3	1.7	ug/Kg	☼	09/10/20 19:28	09/17/20 12:16	1
Perfluorohexanoic acid (PFHxA)	<4.3		4.3	0.90	ug/Kg	☼	09/10/20 19:28	09/17/20 12:16	1
Perfluoroheptanoic acid (PFHpA)	<4.3		4.3	0.62	ug/Kg	☼	09/10/20 19:28	09/17/20 12:16	1
Perfluorooctanoic acid (PFOA)	<4.3		4.3	1.8	ug/Kg	☼	09/10/20 19:28	09/17/20 12:16	1
Perfluorononanoic acid (PFNA)	**1.1**	**J**	4.3	0.77	ug/Kg	☼	09/10/20 19:28	09/17/20 12:16	1
Perfluorodecanoic acid (PFDA)	**13**		4.3	0.47	ug/Kg	☼	09/10/20 19:28	09/17/20 12:16	1
Perfluoroundecanoic acid (PFUnA)	**14**		4.3	0.77	ug/Kg	☼	09/10/20 19:28	09/17/20 12:16	1
Perfluorododecanoic acid (PFDoA)	**2.8**	**J**	4.3	1.4	ug/Kg	☼	09/10/20 19:28	09/17/20 12:16	1
Perfluorotridecanoic acid (PFTriA)	**1.9**	**J**	4.3	1.1	ug/Kg	☼	09/10/20 19:28	09/17/20 12:16	1
Perfluorotetradecanoic acid (PFTeA)	<4.3		4.3	1.2	ug/Kg	☼	09/10/20 19:28	09/17/20 12:16	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<4.3		4.3	0.95	ug/Kg	☼	09/10/20 19:28	09/17/20 12:16	1
Perfluoro-n-octadecanoic acid (PFODA)	<4.3		4.3	0.60	ug/Kg	☼	09/10/20 19:28	09/17/20 12:16	1
Perfluorobutanesulfonic acid (PFBS)	<4.3		4.3	0.54	ug/Kg	☼	09/10/20 19:28	09/17/20 12:16	1
Perfluoropentanesulfonic acid (PFPeS)	<4.3		4.3	0.43	ug/Kg	☼	09/10/20 19:28	09/17/20 12:16	1
Perfluorohexanesulfonic acid (PFHxS)	<21	G	21	21	ug/Kg	☼	09/10/20 19:28	09/17/20 12:16	1
Perfluoroheptanesulfonic Acid (PFHpS)	<4.3		4.3	0.75	ug/Kg	☼	09/10/20 19:28	09/17/20 12:16	1
Perfluorononanesulfonic acid (PFNS)	<4.3		4.3	0.43	ug/Kg	☼	09/10/20 19:28	09/17/20 12:16	1
Perfluorodecanesulfonic acid (PFDS)	<4.3		4.3	0.84	ug/Kg	☼	09/10/20 19:28	09/17/20 12:16	1
Perfluorododecanesulfonic acid (PFDoS)	<4.3		4.3	1.3	ug/Kg	☼	09/10/20 19:28	09/17/20 12:16	1
Perfluorooctanesulfonamide (FOSA)	<4.3		4.3	1.8	ug/Kg	☼	09/10/20 19:28	09/17/20 12:16	1
NEtFOSA	<4.3		4.3	4.1	ug/Kg	☼	09/10/20 19:28	09/17/20 12:16	1
NMeFOSA	<4.3		4.3	0.69	ug/Kg	☼	09/10/20 19:28	09/17/20 12:16	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<43		43	8.4	ug/Kg	☼	09/10/20 19:28	09/17/20 12:16	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<43		43	7.9	ug/Kg	☼	09/10/20 19:28	09/17/20 12:16	1
NMeFOSE	<4.3		4.3	1.5	ug/Kg	☼	09/10/20 19:28	09/17/20 12:16	1
NEtFOSE	<4.3		4.3	0.77	ug/Kg	☼	09/10/20 19:28	09/17/20 12:16	1
4:2 FTS	<43		43	7.9	ug/Kg	☼	09/10/20 19:28	09/17/20 12:16	1
6:2 FTS	<43		43	3.2	ug/Kg	☼	09/10/20 19:28	09/17/20 12:16	1
DONA	<4.3		4.3	0.39	ug/Kg	☼	09/10/20 19:28	09/17/20 12:16	1
HFPO-DA (GenX)	<5.4		5.4	2.4	ug/Kg	☼	09/10/20 19:28	09/17/20 12:16	1
F-53B Major	<4.3		4.3	1.5	ug/Kg	☼	09/10/20 19:28	09/17/20 12:16	1
F-53B Minor	<4.3		4.3	0.47	ug/Kg	☼	09/10/20 19:28	09/17/20 12:16	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*103*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:16*	*1*
13C5 PFPeA	*93*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:16*	*1*
13C2 PFHxA	*98*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:16*	*1*
13C4 PFHpA	*107*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:16*	*1*
13C4 PFOA	*86*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:16*	*1*
13C5 PFNA	*89*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:16*	*1*
13C2 PFDA	*113*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:16*	*1*
13C2 PFUnA	*117*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:16*	*1*

Client Sample ID: SW37-YP1
Date Collected: 08/26/20 16:00
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-7
Matrix: Tissue
Percent Solids: 22.2

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

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDoA	*97*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:16*	*1*
13C2 PFTeDA	*58*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:16*	*1*
13C2 PFHxDA	*45*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:16*	*1*
13C3 PFBS	*106*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:16*	*1*
18O2 PFHxS	*109*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:16*	*1*
13C4 PFOS	*99*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:16*	*1*
13C8 FOSA	*92*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:16*	*1*
d3-NMeFOSAA	*117*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:16*	*1*
d5-NEtFOSAA	*125*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:16*	*1*
d-N-MeFOSA-M	*64*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:16*	*1*
d-N-EtFOSA-M	*55*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:16*	*1*
d7-N-MeFOSE-M	*35*		*10 - 120*	*09/10/20 19:28*	*09/17/20 12:16*	*1*
d9-N-EtFOSE-M	*34*		*10 - 120*	*09/10/20 19:28*	*09/17/20 12:16*	*1*
M2-4:2 FTS	*131*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:16*	*1*
M2-6:2 FTS	*128*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:16*	*1*
13C3 HFPO-DA	*90*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:16*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	<1200	G	1200	1200	ug/Kg	☼	09/10/20 19:28	09/18/20 10:30	10
8:2 FTS	<430		430	54	ug/Kg	☼	09/10/20 19:28	09/18/20 10:30	10
10:2 FTS	<43		43	5.6	ug/Kg	☼	09/10/20 19:28	09/18/20 10:30	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFOS	*98*		*25 - 150*	*09/10/20 19:28*	*09/18/20 10:30*	*10*
M2-8:2 FTS	*108*		*25 - 150*	*09/10/20 19:28*	*09/18/20 10:30*	*10*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**77.8**		0.1	0.1	%			09/11/20 14:13	1
Percent Solids	**22.2**		0.1	0.1	%			09/11/20 14:13	1

Client Sample ID: SW37-YP2
Lab Sample ID: 320-64243-8
Date Collected: 08/26/20 16:00
Matrix: Tissue
Date Received: 09/02/20 09:50
Percent Solids: 18.5

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**3.0**	**J B**	5.2	0.73	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1
Perfluoropentanoic acid (PFPeA)	<5.2		5.2	2.0	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1
Perfluorohexanoic acid (PFHxA)	<5.2		5.2	1.1	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1
Perfluoroheptanoic acid (PFHpA)	<5.2		5.2	0.76	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1
Perfluorooctanoic acid (PFOA)	<5.2		5.2	2.3	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1
Perfluorononanoic acid (PFNA)	<5.2		5.2	0.94	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1
Perfluorodecanoic acid (PFDA)	**2.4**	**J**	5.2	0.58	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1
Perfluoroundecanoic acid (PFUnA)	**3.0**	**J**	5.2	0.94	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1
Perfluorododecanoic acid (PFDoA)	<5.2		5.2	1.8	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1
Perfluorotridecanoic acid (PFTriA)	<5.2		5.2	1.3	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1
Perfluorotetradecanoic acid (PFTeA)	<5.2		5.2	1.4	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<5.2		5.2	1.2	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1
Perfluoro-n-octadecanoic acid (PFODA)	<5.2		5.2	0.73	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1
Perfluorobutanesulfonic acid (PFBS)	<5.2		5.2	0.65	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1
Perfluoropentanesulfonic acid (PFPeS)	<5.2		5.2	0.52	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1
Perfluorohexanesulfonic acid (PFHxS)	<10	G	10	10	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1
Perfluoroheptanesulfonic Acid (PFHpS)	<5.2		5.2	0.92	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1
Perfluorooctanesulfonic acid (PFOS)	<84	G	84	84	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1
Perfluorononanesulfonic acid (PFNS)	<5.2		5.2	0.52	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1
Perfluorodecanesulfonic acid (PFDS)	<5.2		5.2	1.0	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1
Perfluorododecanesulfonic acid (PFDoS)	<5.2		5.2	1.6	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1
Perfluorooctanesulfonamide (FOSA)	<5.2		5.2	2.1	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1
NEtFOSA	<5.2		5.2	5.0	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1
NMeFOSA	<5.2		5.2	0.84	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<52		52	10	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<52		52	9.7	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1
NMeFOSE	<5.2		5.2	1.8	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1
NEtFOSE	<5.2		5.2	0.94	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1
4:2 FTS	<52		52	9.7	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1
6:2 FTS	<52		52	3.9	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1
DONA	<5.2		5.2	0.47	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1
HFPO-DA (GenX)	<6.5		6.5	2.9	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1
F-53B Major	<5.2		5.2	1.9	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1
F-53B Minor	<5.2		5.2	0.58	ug/Kg	☼	09/10/20 19:28	09/17/20 12:35	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*74*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:35*	*1*
13C5 PFPeA	*72*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:35*	*1*
13C2 PFHxA	*99*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:35*	*1*
13C4 PFHpA	*107*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:35*	*1*
13C4 PFOA	*89*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:35*	*1*
13C5 PFNA	*119*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:35*	*1*
13C2 PFDA	*120*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:35*	*1*
13C2 PFUnA	*126*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:35*	*1*

Client Sample ID: SW37-YP2
Date Collected: 08/26/20 16:00
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-8
Matrix: Tissue
Percent Solids: 18.5

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

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDoA	*112*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:35*	*1*
13C2 PFTeDA	*60*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:35*	*1*
13C2 PFHxDA	*57*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:35*	*1*
13C3 PFBS	*92*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:35*	*1*
18O2 PFHxS	*117*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:35*	*1*
13C4 PFOS	*113*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:35*	*1*
13C8 FOSA	*96*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:35*	*1*
d3-NMeFOSAA	*111*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:35*	*1*
d5-NEtFOSAA	*118*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:35*	*1*
d-N-MeFOSA-M	*87*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:35*	*1*
d-N-EtFOSA-M	*81*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:35*	*1*
d7-N-MeFOSE-M	*40*		*10 - 120*	*09/10/20 19:28*	*09/17/20 12:35*	*1*
d9-N-EtFOSE-M	*34*		*10 - 120*	*09/10/20 19:28*	*09/17/20 12:35*	*1*
M2-4:2 FTS	*133*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:35*	*1*
M2-6:2 FTS	*155*	**5*	*25 - 150*	*09/10/20 19:28*	*09/17/20 12:35*	*1*
13C3 HFPO-DA	*88*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:35*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
8:2 FTS	<5200		5200	660	ug/Kg	☼	09/10/20 19:28	09/16/20 04:38	100
10:2 FTS	<520		520	68	ug/Kg	☼	09/10/20 19:28	09/16/20 04:38	100

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-8:2 FTS	*98*		*25 - 150*	*09/10/20 19:28*	*09/16/20 04:38*	*100*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**81.5**		0.1	0.1	%			09/11/20 14:13	1
Percent Solids	**18.5**		0.1	0.1	%			09/11/20 14:13	1

Client Sample ID: SW37-PS1
Date Collected: 08/26/20 16:00
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-9
Matrix: Tissue
Percent Solids: 20.2

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**2.6**	**J B**	4.7	0.66	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1
Perfluoropentanoic acid (PFPeA)	<4.7		4.7	1.8	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1
Perfluorohexanoic acid (PFHxA)	<4.7		4.7	0.99	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1
Perfluoroheptanoic acid (PFHpA)	<4.7		4.7	0.68	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1
Perfluorooctanoic acid (PFOA)	<4.7		4.7	2.0	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1
Perfluorononanoic acid (PFNA)	<4.7		4.7	0.85	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1
Perfluorodecanoic acid (PFDA)	**1.3**	**J**	4.7	0.52	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1
Perfluoroundecanoic acid (PFUnA)	**1.9**	**J**	4.7	0.85	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1
Perfluorododecanoic acid (PFDoA)	<4.7		4.7	1.6	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1
Perfluorotridecanoic acid (PFTriA)	<4.7		4.7	1.2	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1
Perfluorotetradecanoic acid (PFTeA)	<4.7		4.7	1.3	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<4.7		4.7	1.0	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1
Perfluoro-n-octadecanoic acid (PFODA)	<4.7		4.7	0.66	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1
Perfluorobutanesulfonic acid (PFBS)	<4.7		4.7	0.59	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1
Perfluoropentanesulfonic acid (PFPeS)	<4.7		4.7	0.47	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1
Perfluorohexanesulfonic acid (PFHxS)	<4.7		4.7	0.73	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1
Perfluoroheptanesulfonic Acid (PFHpS)	<4.7		4.7	0.82	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1
Perfluorooctanesulfonic acid (PFOS)	<380	G	380	380	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1
Perfluorononanesulfonic acid (PFNS)	<4.7		4.7	0.47	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1
Perfluorodecanesulfonic acid (PFDS)	<4.7		4.7	0.92	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1
Perfluorododecanesulfonic acid (PFDoS)	<4.7		4.7	1.4	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1
Perfluorooctanesulfonamide (FOSA)	<4.7		4.7	1.9	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1
NEtFOSA	<4.7		4.7	4.5	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1
NMeFOSA	<4.7		4.7	0.75	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<47		47	9.2	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<47		47	8.7	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1
NMeFOSE	<4.7		4.7	1.6	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1
NEtFOSE	<4.7		4.7	0.85	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1
4:2 FTS	<47		47	8.7	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1
6:2 FTS	<47		47	3.5	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1
DONA	<4.7		4.7	0.42	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1
HFPO-DA (GenX)	<5.9		5.9	2.6	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1
F-53B Major	<4.7		4.7	1.7	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1
F-53B Minor	<4.7		4.7	0.52	ug/Kg	☼	09/10/20 19:28	09/17/20 12:44	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*105*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:44*	*1*
13C5 PFPeA	*92*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:44*	*1*
13C2 PFHxA	*114*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:44*	*1*
13C4 PFHpA	*115*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:44*	*1*
13C4 PFOA	*92*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:44*	*1*
13C5 PFNA	*97*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:44*	*1*
13C2 PFDA	*121*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:44*	*1*
13C2 PFUnA	*133*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:44*	*1*

Client Sample ID: SW37-PS1
Date Collected: 08/26/20 16:00
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-9
Matrix: Tissue
Percent Solids: 20.2

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

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDoA	*100*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:44*	*1*
13C2 PFTeDA	*34*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:44*	*1*
13C2 PFHxDA	*30*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:44*	*1*
13C3 PFBS	*101*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:44*	*1*
18O2 PFHxS	*119*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:44*	*1*
13C4 PFOS	*113*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:44*	*1*
13C8 FOSA	*99*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:44*	*1*
d3-NMeFOSAA	*123*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:44*	*1*
d5-NEtFOSAA	*136*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:44*	*1*
d-N-MeFOSA-M	*71*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:44*	*1*
d-N-EtFOSA-M	*60*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:44*	*1*
d7-N-MeFOSE-M	*33*		*10 - 120*	*09/10/20 19:28*	*09/17/20 12:44*	*1*
d9-N-EtFOSE-M	*26*		*10 - 120*	*09/10/20 19:28*	*09/17/20 12:44*	*1*
M2-4:2 FTS	*120*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:44*	*1*
M2-6:2 FTS	*140*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:44*	*1*
13C3 HFPO-DA	*97*		*25 - 150*	*09/10/20 19:28*	*09/17/20 12:44*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
8:2 FTS	<4700		4700	590	ug/Kg	☼	09/10/20 19:28	09/16/20 04:47	100
10:2 FTS	<470		470	61	ug/Kg	☼	09/10/20 19:28	09/16/20 04:47	100

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-8:2 FTS	*107*		*25 - 150*	*09/10/20 19:28*	*09/16/20 04:47*	*100*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**79.8**		0.1	0.1	%			09/11/20 14:13	1
Percent Solids	**20.2**		0.1	0.1	%			09/11/20 14:13	1

Client Sample ID: SW37-PS2
Lab Sample ID: 320-64243-10
Date Collected: 08/26/20 16:00
Matrix: Tissue
Date Received: 09/02/20 09:50
Percent Solids: 21.3

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**2.4**	**J B**	4.2	0.59	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1
Perfluoropentanoic acid (PFPeA)	<4.2		4.2	1.6	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1
Perfluorohexanoic acid (PFHxA)	<4.2		4.2	0.88	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1
Perfluoroheptanoic acid (PFHpA)	<4.2		4.2	0.61	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1
Perfluorooctanoic acid (PFOA)	<4.2		4.2	1.8	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1
Perfluorononanoic acid (PFNA)	<4.2		4.2	0.75	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1
Perfluorodecanoic acid (PFDA)	**2.0**	**J**	4.2	0.46	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1
Perfluoroundecanoic acid (PFUnA)	**2.9**	**J**	4.2	0.75	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1
Perfluorododecanoic acid (PFDoA)	<4.2		4.2	1.4	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1
Perfluorotridecanoic acid (PFTriA)	<4.2		4.2	1.1	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1
Perfluorotetradecanoic acid (PFTeA)	<4.2		4.2	1.1	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<4.2		4.2	0.92	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1
Perfluoro-n-octadecanoic acid (PFODA)	<4.2		4.2	0.59	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1
Perfluorobutanesulfonic acid (PFBS)	<4.2		4.2	0.52	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1
Perfluoropentanesulfonic acid (PFPeS)	<4.2		4.2	0.42	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1
Perfluorohexanesulfonic acid (PFHxS)	<2.1	G	2.1	2.1	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1
Perfluoroheptanesulfonic Acid (PFHpS)	<4.2		4.2	0.73	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1
Perfluorooctanesulfonic acid (PFOS)	<380	G	380	380	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1
Perfluorononanesulfonic acid (PFNS)	<4.2		4.2	0.42	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1
Perfluorodecanesulfonic acid (PFDS)	<4.2		4.2	0.82	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1
Perfluorododecanesulfonic acid (PFDoS)	<4.2		4.2	1.3	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1
Perfluorooctanesulfonamide (FOSA)	<4.2		4.2	1.7	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1
NEtFOSA	<4.2		4.2	4.0	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1
NMeFOSA	<4.2		4.2	0.67	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<42		42	8.2	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<42		42	7.7	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1
NMeFOSE	<4.2		4.2	1.5	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1
NEtFOSE	<4.2		4.2	0.75	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1
4:2 FTS	<42		42	7.7	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1
6:2 FTS	<42		42	3.1	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1
DONA	<4.2		4.2	0.38	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1
HFPO-DA (GenX)	<5.2		5.2	2.3	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1
F-53B Major	<4.2		4.2	1.5	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1
F-53B Minor	<4.2		4.2	0.46	ug/Kg	☼	09/10/20 19:28	09/17/20 13:31	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*104*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:31*	*1*
13C5 PFPeA	*96*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:31*	*1*
13C2 PFHxA	*109*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:31*	*1*
13C4 PFHpA	*114*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:31*	*1*
13C4 PFOA	*93*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:31*	*1*
13C5 PFNA	*96*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:31*	*1*
13C2 PFDA	*118*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:31*	*1*
13C2 PFUnA	*122*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:31*	*1*

Client Sample ID: SW37-PS2
Date Collected: 08/26/20 16:00
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-10
Matrix: Tissue
Percent Solids: 21.3

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

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDoA	*87*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:31*	*1*
13C2 PFTeDA	*59*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:31*	*1*
13C2 PFHxDA	*51*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:31*	*1*
13C3 PFBS	*108*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:31*	*1*
18O2 PFHxS	*121*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:31*	*1*
13C4 PFOS	*110*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:31*	*1*
13C8 FOSA	*92*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:31*	*1*
d3-NMeFOSAA	*119*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:31*	*1*
d5-NEtFOSAA	*133*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:31*	*1*
d-N-MeFOSA-M	*71*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:31*	*1*
d-N-EtFOSA-M	*65*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:31*	*1*
d7-N-MeFOSE-M	*38*		*10 - 120*	*09/10/20 19:28*	*09/17/20 13:31*	*1*
d9-N-EtFOSE-M	*36*		*10 - 120*	*09/10/20 19:28*	*09/17/20 13:31*	*1*
M2-4:2 FTS	*141*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:31*	*1*
M2-6:2 FTS	*144*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:31*	*1*
13C3 HFPO-DA	*99*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:31*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
8:2 FTS	<4200		4200	520	ug/Kg	☼	09/10/20 19:28	09/16/20 04:57	100
10:2 FTS	<420		420	54	ug/Kg	☼	09/10/20 19:28	09/16/20 04:57	100

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-8:2 FTS	*113*		*25 - 150*	*09/10/20 19:28*	*09/16/20 04:57*	*100*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**78.7**		0.1	0.1	%			09/11/20 14:13	1
Percent Solids	**21.3**		0.1	0.1	%			09/11/20 14:13	1

Client Sample ID: SW37-PS3
Lab Sample ID: 320-64243-11
Date Collected: 08/26/20 16:00
Matrix: Tissue
Date Received: 09/02/20 09:50
Percent Solids: 20.8

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**3.3**	**J B**	4.7	0.66	ug/Kg	☼	09/10/20 19:28	09/17/20 13:41	1
Perfluoropentanoic acid (PFPeA)	<4.7		4.7	1.8	ug/Kg	☼	09/10/20 19:28	09/17/20 13:41	1
Perfluorohexanoic acid (PFHxA)	<4.7		4.7	0.99	ug/Kg	☼	09/10/20 19:28	09/17/20 13:41	1
Perfluoroheptanoic acid (PFHpA)	<4.7		4.7	0.68	ug/Kg	☼	09/10/20 19:28	09/17/20 13:41	1
Perfluorooctanoic acid (PFOA)	<4.7		4.7	2.0	ug/Kg	☼	09/10/20 19:28	09/17/20 13:41	1
Perfluorononanoic acid (PFNA)	<4.7		4.7	0.85	ug/Kg	☼	09/10/20 19:28	09/17/20 13:41	1
Perfluorodecanoic acid (PFDA)	**1.5**	**J**	4.7	0.52	ug/Kg	☼	09/10/20 19:28	09/17/20 13:41	1
Perfluoroundecanoic acid (PFUnA)	**2.7**	**J**	4.7	0.85	ug/Kg	☼	09/10/20 19:28	09/17/20 13:41	1
Perfluorododecanoic acid (PFDoA)	<4.7		4.7	1.6	ug/Kg	☼	09/10/20 19:28	09/17/20 13:41	1
Perfluorotridecanoic acid (PFTriA)	<4.7		4.7	1.2	ug/Kg	☼	09/10/20 19:28	09/17/20 13:41	1
Perfluorotetradecanoic acid (PFTeA)	<4.7		4.7	1.3	ug/Kg	☼	09/10/20 19:28	09/17/20 13:41	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<4.7		4.7	1.0	ug/Kg	☼	09/10/20 19:28	09/17/20 13:41	1
Perfluoro-n-octadecanoic acid (PFODA)	<4.7		4.7	0.66	ug/Kg	☼	09/10/20 19:28	09/17/20 13:41	1
Perfluorobutanesulfonic acid (PFBS)	<4.7		4.7	0.59	ug/Kg	☼	09/10/20 19:28	09/17/20 13:41	1
Perfluoropentanesulfonic acid (PFPeS)	<4.7		4.7	0.47	ug/Kg	☼	09/10/20 19:28	09/17/20 13:41	1
Perfluorohexanesulfonic acid (PFHxS)	<4.7		4.7	0.73	ug/Kg	☼	09/10/20 19:28	09/17/20 13:41	1
Perfluoroheptanesulfonic Acid (PFHpS)	<4.7		4.7	0.82	ug/Kg	☼	09/10/20 19:28	09/17/20 13:41	1
Perfluorononanesulfonic acid (PFNS)	<4.7		4.7	0.47	ug/Kg	☼	09/10/20 19:28	09/17/20 13:41	1
Perfluorodecanesulfonic acid (PFDS)	<4.7		4.7	0.92	ug/Kg	☼	09/10/20 19:28	09/17/20 13:41	1
Perfluorododecanesulfonic acid (PFDoS)	<4.7		4.7	1.4	ug/Kg	☼	09/10/20 19:28	09/17/20 13:41	1
Perfluorooctanesulfonamide (FOSA)	<4.7		4.7	1.9	ug/Kg	☼	09/10/20 19:28	09/17/20 13:41	1
NEtFOSA	<4.7		4.7	4.5	ug/Kg	☼	09/10/20 19:28	09/17/20 13:41	1
NMeFOSA	<4.7		4.7	0.75	ug/Kg	☼	09/10/20 19:28	09/17/20 13:41	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<47		47	9.2	ug/Kg	☼	09/10/20 19:28	09/17/20 13:41	1
NMeFOSE	<4.7		4.7	1.6	ug/Kg	☼	09/10/20 19:28	09/17/20 13:41	1
NEtFOSE	<4.7		4.7	0.85	ug/Kg	☼	09/10/20 19:28	09/17/20 13:41	1
DONA	<4.7		4.7	0.42	ug/Kg	☼	09/10/20 19:28	09/17/20 13:41	1
HFPO-DA (GenX)	<5.9		5.9	2.6	ug/Kg	☼	09/10/20 19:28	09/17/20 13:41	1
F-53B Major	<4.7		4.7	1.7	ug/Kg	☼	09/10/20 19:28	09/17/20 13:41	1
F-53B Minor	<4.7		4.7	0.52	ug/Kg	☼	09/10/20 19:28	09/17/20 13:41	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*106*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:41*	*1*
13C5 PFPeA	*95*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:41*	*1*
13C2 PFHxA	*112*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:41*	*1*
13C4 PFHpA	*114*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:41*	*1*
13C4 PFOA	*94*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:41*	*1*
13C5 PFNA	*101*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:41*	*1*
13C2 PFDA	*138*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:41*	*1*
13C2 PFUnA	*137*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:41*	*1*
13C2 PFDoA	*117*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:41*	*1*
13C2 PFTeDA	*88*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:41*	*1*
13C2 PFHxDA	*104*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:41*	*1*
13C3 PFBS	*108*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:41*	*1*
18O2 PFHxS	*129*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:41*	*1*

Client Sample ID: SW37-PS3
Lab Sample ID: 320-64243-11

Date Collected: 08/26/20 16:00
Matrix: Tissue

Date Received: 09/02/20 09:50
Percent Solids: 20.8

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

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFOS	*118*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:41*	*1*
13C8 FOSA	*112*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:41*	*1*
d3-NMeFOSAA	*147*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:41*	*1*
d-N-MeFOSA-M	*76*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:41*	*1*
d-N-EtFOSA-M	*55*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:41*	*1*
d7-N-MeFOSE-M	*46*		*10 - 120*	*09/10/20 19:28*	*09/17/20 13:41*	*1*
d9-N-EtFOSE-M	*39*		*10 - 120*	*09/10/20 19:28*	*09/17/20 13:41*	*1*
13C3 HFPO-DA	*101*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:41*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	<940	G	940	940	ug/Kg	☼	09/10/20 19:28	09/18/20 10:49	10
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<470		470	87	ug/Kg	☼	09/10/20 19:28	09/18/20 10:49	10
4:2 FTS	<470		470	87	ug/Kg	☼	09/10/20 19:28	09/18/20 10:49	10
6:2 FTS	<470		470	35	ug/Kg	☼	09/10/20 19:28	09/18/20 10:49	10
8:2 FTS	<470		470	59	ug/Kg	☼	09/10/20 19:28	09/18/20 10:49	10
10:2 FTS	<47		47	6.1	ug/Kg	☼	09/10/20 19:28	09/18/20 10:49	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFOS	*93*		*25 - 150*	*09/10/20 19:28*	*09/18/20 10:49*	*10*
d5-NEtFOSAA	*119*		*25 - 150*	*09/10/20 19:28*	*09/18/20 10:49*	*10*
M2-4:2 FTS	*119*		*25 - 150*	*09/10/20 19:28*	*09/18/20 10:49*	*10*
M2-6:2 FTS	*131*		*25 - 150*	*09/10/20 19:28*	*09/18/20 10:49*	*10*
M2-8:2 FTS	*145*		*25 - 150*	*09/10/20 19:28*	*09/18/20 10:49*	*10*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**79.2**		0.1	0.1	%			09/11/20 14:13	1
Percent Solids	**20.8**		0.1	0.1	%			09/11/20 14:13	1

Client Sample ID: SW37-PS4
Date Collected: 08/26/20 16:00
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-12
Matrix: Tissue
Percent Solids: 21.7

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**3.0**	**J B**	4.4	0.62	ug/Kg	☼	09/10/20 19:28	09/17/20 13:50	1
Perfluoropentanoic acid (PFPeA)	<4.4		4.4	1.7	ug/Kg	☼	09/10/20 19:28	09/17/20 13:50	1
Perfluorohexanoic acid (PFHxA)	<4.4		4.4	0.93	ug/Kg	☼	09/10/20 19:28	09/17/20 13:50	1
Perfluoroheptanoic acid (PFHpA)	<4.4		4.4	0.64	ug/Kg	☼	09/10/20 19:28	09/17/20 13:50	1
Perfluorooctanoic acid (PFOA)	<4.4		4.4	1.9	ug/Kg	☼	09/10/20 19:28	09/17/20 13:50	1
Perfluorononanoic acid (PFNA)	<4.4		4.4	0.80	ug/Kg	☼	09/10/20 19:28	09/17/20 13:50	1
Perfluorodecanoic acid (PFDA)	**1.5**	**J**	4.4	0.49	ug/Kg	☼	09/10/20 19:28	09/17/20 13:50	1
Perfluoroundecanoic acid (PFUnA)	**3.2**	**J**	4.4	0.80	ug/Kg	☼	09/10/20 19:28	09/17/20 13:50	1
Perfluorododecanoic acid (PFDoA)	<4.4		4.4	1.5	ug/Kg	☼	09/10/20 19:28	09/17/20 13:50	1
Perfluorotridecanoic acid (PFTriA)	<4.4		4.4	1.1	ug/Kg	☼	09/10/20 19:28	09/17/20 13:50	1
Perfluorotetradecanoic acid (PFTeA)	<4.4		4.4	1.2	ug/Kg	☼	09/10/20 19:28	09/17/20 13:50	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<4.4		4.4	0.97	ug/Kg	☼	09/10/20 19:28	09/17/20 13:50	1
Perfluoro-n-octadecanoic acid (PFODA)	<4.4		4.4	0.62	ug/Kg	☼	09/10/20 19:28	09/17/20 13:50	1
Perfluorobutanesulfonic acid (PFBS)	<4.4		4.4	0.55	ug/Kg	☼	09/10/20 19:28	09/17/20 13:50	1
Perfluoropentanesulfonic acid (PFPeS)	<4.4		4.4	0.44	ug/Kg	☼	09/10/20 19:28	09/17/20 13:50	1
Perfluorohexanesulfonic acid (PFHxS)	<18	G	18	18	ug/Kg	☼	09/10/20 19:28	09/17/20 13:50	1
Perfluoroheptanesulfonic Acid (PFHpS)	<4.4		4.4	0.77	ug/Kg	☼	09/10/20 19:28	09/17/20 13:50	1
Perfluorononanesulfonic acid (PFNS)	<4.4		4.4	0.44	ug/Kg	☼	09/10/20 19:28	09/17/20 13:50	1
Perfluorodecanesulfonic acid (PFDS)	<4.4		4.4	0.86	ug/Kg	☼	09/10/20 19:28	09/17/20 13:50	1
Perfluorododecanesulfonic acid (PFDoS)	<4.4		4.4	1.3	ug/Kg	☼	09/10/20 19:28	09/17/20 13:50	1
Perfluorooctanesulfonamide (FOSA)	<4.4		4.4	1.8	ug/Kg	☼	09/10/20 19:28	09/17/20 13:50	1
NEtFOSA	<4.4		4.4	4.3	ug/Kg	☼	09/10/20 19:28	09/17/20 13:50	1
NMeFOSA	<4.4		4.4	0.71	ug/Kg	☼	09/10/20 19:28	09/17/20 13:50	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<44		44	8.6	ug/Kg	☼	09/10/20 19:28	09/17/20 13:50	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<44		44	8.2	ug/Kg	☼	09/10/20 19:28	09/17/20 13:50	1
NMeFOSE	<4.4		4.4	1.5	ug/Kg	☼	09/10/20 19:28	09/17/20 13:50	1
NEtFOSE	<4.4		4.4	0.80	ug/Kg	☼	09/10/20 19:28	09/17/20 13:50	1
DONA	<4.4		4.4	0.40	ug/Kg	☼	09/10/20 19:28	09/17/20 13:50	1
HFPO-DA (GenX)	<5.5		5.5	2.4	ug/Kg	☼	09/10/20 19:28	09/17/20 13:50	1
F-53B Major	<4.4		4.4	1.6	ug/Kg	☼	09/10/20 19:28	09/17/20 13:50	1
F-53B Minor	<4.4		4.4	0.49	ug/Kg	☼	09/10/20 19:28	09/17/20 13:50	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*71*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:50*	*1*
13C5 PFPeA	*67*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:50*	*1*
13C2 PFHxA	*88*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:50*	*1*
13C4 PFHpA	*94*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:50*	*1*
13C4 PFOA	*88*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:50*	*1*
13C5 PFNA	*91*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:50*	*1*
13C2 PFDA	*100*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:50*	*1*
13C2 PFUnA	*104*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:50*	*1*
13C2 PFDoA	*95*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:50*	*1*
13C2 PFTeDA	*67*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:50*	*1*
13C2 PFHxDA	*83*		*25 - 150*	*09/10/20 19:28*	*09/17/20 13:50*	*1*

Client Sample ID: SW37-PS4
Lab Sample ID: 320-64243-12
Date Collected: 08/26/20 16:00
Matrix: Tissue
Date Received: 09/02/20 09:50
Percent Solids: 21.7

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFBS	85		25 - 150	09/10/20 19:28	09/17/20 13:50	1
18O2 PFHxS	109		25 - 150	09/10/20 19:28	09/17/20 13:50	1
13C4 PFOS	106		25 - 150	09/10/20 19:28	09/17/20 13:50	1
13C8 FOSA	62		25 - 150	09/10/20 19:28	09/17/20 13:50	1
d3-NMeFOSAA	112		25 - 150	09/10/20 19:28	09/17/20 13:50	1
d5-NEtFOSAA	111		25 - 150	09/10/20 19:28	09/17/20 13:50	1
d-N-MeFOSA-M	56		25 - 150	09/10/20 19:28	09/17/20 13:50	1
d-N-EtFOSA-M	28		25 - 150	09/10/20 19:28	09/17/20 13:50	1
d7-N-MeFOSE-M	30		10 - 120	09/10/20 19:28	09/17/20 13:50	1
d9-N-EtFOSE-M	19		10 - 120	09/10/20 19:28	09/17/20 13:50	1
13C3 HFPO-DA	79		25 - 150	09/10/20 19:28	09/17/20 13:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	<1200	G	1200	1200	ug/Kg	☼	09/10/20 19:28	09/18/20 10:58	10
4:2 FTS	<440		440	82	ug/Kg	☼	09/10/20 19:28	09/18/20 10:58	10
6:2 FTS	<440		440	33	ug/Kg	☼	09/10/20 19:28	09/18/20 10:58	10
8:2 FTS	<440		440	55	ug/Kg	☼	09/10/20 19:28	09/18/20 10:58	10
10:2 FTS	<44		44	5.8	ug/Kg	☼	09/10/20 19:28	09/18/20 10:58	10

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	94		25 - 150	09/10/20 19:28	09/18/20 10:58	10
M2-4:2 FTS	135		25 - 150	09/10/20 19:28	09/18/20 10:58	10
M2-6:2 FTS	157	*5	25 - 150	09/10/20 19:28	09/18/20 10:58	10
M2-8:2 FTS	204	*5	25 - 150	09/10/20 19:28	09/18/20 10:58	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	78.3		0.1	0.1	%			09/11/20 13:16	1
Percent Solids	21.7		0.1	0.1	%			09/11/20 13:16	1

Client: ARCADIS U.S., Inc.
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Job ID: 320-64243-1

Client Sample ID: SW37-PS5
Date Collected: 08/26/20 16:00
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-13
Matrix: Tissue
Percent Solids: 23.5

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<41		41	5.7	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10
Perfluoropentanoic acid (PFPeA)	<41		41	16	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10
Perfluorohexanoic acid (PFHxA)	<41		41	8.5	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10
Perfluoroheptanoic acid (PFHpA)	<41		41	5.9	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10
Perfluorooctanoic acid (PFOA)	<41		41	17	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10
Perfluorononanoic acid (PFNA)	<41		41	7.3	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10
Perfluorodecanoic acid (PFDA)	<41		41	4.5	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10
Perfluoroundecanoic acid (PFUnA)	<41		41	7.3	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10
Perfluorododecanoic acid (PFDoA)	<41		41	14	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10
Perfluorotridecanoic acid (PFTriA)	<41		41	10	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10
Perfluorotetradecanoic acid (PFTeA)	<41		41	11	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10
Perfluoro-n-hexadecanoic acid (PFHxDA)	<41		41	8.9	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10
Perfluoro-n-octadecanoic acid (PFODA)	<41		41	5.7	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10
Perfluorobutanesulfonic acid (PFBS)	<41		41	5.1	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10
Perfluoropentanesulfonic acid (PFPeS)	<41		41	4.1	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10
Perfluorohexanesulfonic acid (PFHxS)	<41		41	6.3	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10
Perfluoroheptanesulfonic Acid (PFHpS)	<41		41	7.1	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10
Perfluorooctanesulfonic acid (PFOS)	<200	G	200	200	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10
Perfluorononanesulfonic acid (PFNS)	<41		41	4.1	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10
Perfluorodecanesulfonic acid (PFDS)	<41		41	7.9	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10
Perfluorododecanesulfonic acid (PFDoS)	<41		41	12	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10
Perfluorooctanesulfonamide (FOSA)	<41		41	17	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10
NEtFOSA	<41		41	39	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10
NMeFOSA	<41		41	6.5	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<410		410	79	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<410		410	75	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10
NMeFOSE	<41		41	14	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10
NEtFOSE	<41		41	7.3	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10
4:2 FTS	<410		410	75	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10
6:2 FTS	<410		410	30	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10
DONA	<41		41	3.6	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10
HFPO-DA (GenX)	<51		51	22	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10
F-53B Major	<41		41	15	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10
F-53B Minor	<41		41	4.5	ug/Kg	☼	09/10/20 19:28	09/18/20 11:07	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*91*		*25 - 150*	*09/10/20 19:28*	*09/18/20 11:07*	*10*
13C5 PFPeA	*89*		*25 - 150*	*09/10/20 19:28*	*09/18/20 11:07*	*10*
13C2 PFHxA	*96*		*25 - 150*	*09/10/20 19:28*	*09/18/20 11:07*	*10*
13C4 PFHpA	*96*		*25 - 150*	*09/10/20 19:28*	*09/18/20 11:07*	*10*
13C4 PFOA	*91*		*25 - 150*	*09/10/20 19:28*	*09/18/20 11:07*	*10*
13C5 PFNA	*92*		*25 - 150*	*09/10/20 19:28*	*09/18/20 11:07*	*10*
13C2 PFDA	*90*		*25 - 150*	*09/10/20 19:28*	*09/18/20 11:07*	*10*
13C2 PFUnA	*83*		*25 - 150*	*09/10/20 19:28*	*09/18/20 11:07*	*10*
13C2 PFDoA	*69*		*25 - 150*	*09/10/20 19:28*	*09/18/20 11:07*	*10*

Client: ARCADIS U.S., Inc.
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Job ID: 320-64243-1

Client Sample ID: SW37-PS5

Date Collected: 08/26/20 16:00
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-13

Matrix: Tissue
Percent Solids: 23.5

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFTeDA	47		25 - 150	09/10/20 19:28	09/18/20 11:07	10
13C2 PFHxDA	45		25 - 150	09/10/20 19:28	09/18/20 11:07	10
13C3 PFBS	99		25 - 150	09/10/20 19:28	09/18/20 11:07	10
18O2 PFHxS	100		25 - 150	09/10/20 19:28	09/18/20 11:07	10
13C4 PFOS	96		25 - 150	09/10/20 19:28	09/18/20 11:07	10
13C8 FOSA	73		25 - 150	09/10/20 19:28	09/18/20 11:07	10
d3-NMeFOSAA	89		25 - 150	09/10/20 19:28	09/18/20 11:07	10
d5-NEtFOSAA	94		25 - 150	09/10/20 19:28	09/18/20 11:07	10
d-N-MeFOSA-M	53		25 - 150	09/10/20 19:28	09/18/20 11:07	10
d-N-EtFOSA-M	52		25 - 150	09/10/20 19:28	09/18/20 11:07	10
d7-N-MeFOSE-M	31		10 - 120	09/10/20 19:28	09/18/20 11:07	10
d9-N-EtFOSE-M	34		10 - 120	09/10/20 19:28	09/18/20 11:07	10
M2-4:2 FTS	122		25 - 150	09/10/20 19:28	09/18/20 11:07	10
M2-6:2 FTS	130		25 - 150	09/10/20 19:28	09/18/20 11:07	10
13C3 HFPO-DA	85		25 - 150	09/10/20 19:28	09/18/20 11:07	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
8:2 FTS	<4100		4100	510	ug/Kg	☼	09/10/20 19:28	09/16/20 05:25	100
10:2 FTS	<410		410	53	ug/Kg	☼	09/10/20 19:28	09/16/20 05:25	100

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-8:2 FTS	106		25 - 150	09/10/20 19:28	09/16/20 05:25	100

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	76.5		0.1	0.1	%			09/11/20 13:16	1
Percent Solids	23.5		0.1	0.1	%			09/11/20 13:16	1

Client: ARCADIS U.S., Inc.
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Job ID: 320-64243-1

Client Sample ID: SW14-YP1
Date Collected: 08/26/20 18:30
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-14
Matrix: Tissue
Percent Solids: 23.7

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**2.4**	**J B**	4.1	0.58	ug/Kg	☼	09/10/20 19:31	09/17/20 14:09	1
Perfluoropentanoic acid (PFPeA)	<4.1		4.1	1.6	ug/Kg	☼	09/10/20 19:31	09/17/20 14:09	1
Perfluorohexanoic acid (PFHxA)	<4.1		4.1	0.87	ug/Kg	☼	09/10/20 19:31	09/17/20 14:09	1
Perfluoroheptanoic acid (PFHpA)	<4.1		4.1	0.60	ug/Kg	☼	09/10/20 19:31	09/17/20 14:09	1
Perfluorooctanoic acid (PFOA)	**10**		4.1	1.8	ug/Kg	☼	09/10/20 19:31	09/17/20 14:09	1
Perfluorononanoic acid (PFNA)	**37**		4.1	0.74	ug/Kg	☼	09/10/20 19:31	09/17/20 14:09	1
Perfluorodecanoic acid (PFDA)	**12**		4.1	0.46	ug/Kg	☼	09/10/20 19:31	09/17/20 14:09	1
Perfluoroundecanoic acid (PFUnA)	**6.7**		4.1	0.74	ug/Kg	☼	09/10/20 19:31	09/17/20 14:09	1
Perfluorododecanoic acid (PFDoA)	**1.7**	**J**	4.1	1.4	ug/Kg	☼	09/10/20 19:31	09/17/20 14:09	1
Perfluorotridecanoic acid (PFTriA)	<4.1		4.1	1.1	ug/Kg	☼	09/10/20 19:31	09/17/20 14:09	1
Perfluorotetradecanoic acid (PFTeA)	<4.1		4.1	1.1	ug/Kg	☼	09/10/20 19:31	09/17/20 14:09	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<4.1		4.1	0.91	ug/Kg	☼	09/10/20 19:31	09/17/20 14:09	1
Perfluoro-n-octadecanoic acid (PFODA)	<4.1		4.1	0.58	ug/Kg	☼	09/10/20 19:31	09/17/20 14:09	1
Perfluorobutanesulfonic acid (PFBS)	<4.1		4.1	0.52	ug/Kg	☼	09/10/20 19:31	09/17/20 14:09	1
Perfluoropentanesulfonic acid (PFPeS)	**0.94**	**J**	4.1	0.41	ug/Kg	☼	09/10/20 19:31	09/17/20 14:09	1
Perfluorohexanesulfonic acid (PFHxS)	**50**		4.1	0.64	ug/Kg	☼	09/10/20 19:31	09/17/20 14:09	1
Perfluoroheptanesulfonic Acid (PFHpS)	**1.7**	**J**	4.1	0.72	ug/Kg	☼	09/10/20 19:31	09/17/20 14:09	1
Perfluorooctanesulfonic acid (PFOS)	**240**	**B**	10	4.1	ug/Kg	☼	09/10/20 19:31	09/17/20 14:09	1
Perfluorononanesulfonic acid (PFNS)	<4.1		4.1	0.41	ug/Kg	☼	09/10/20 19:31	09/17/20 14:09	1
Perfluorodecanesulfonic acid (PFDS)	<4.1		4.1	0.81	ug/Kg	☼	09/10/20 19:31	09/17/20 14:09	1
Perfluorododecanesulfonic acid (PFDoS)	<4.1		4.1	1.2	ug/Kg	☼	09/10/20 19:31	09/17/20 14:09	1
Perfluorooctanesulfonamide (FOSA)	<4.1		4.1	1.7	ug/Kg	☼	09/10/20 19:31	09/17/20 14:09	1
NEtFOSA	<4.1		4.1	4.0	ug/Kg	☼	09/10/20 19:31	09/17/20 14:09	1
NMeFOSA	<4.1		4.1	0.66	ug/Kg	☼	09/10/20 19:31	09/17/20 14:09	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<41		41	8.1	ug/Kg	☼	09/10/20 19:31	09/17/20 14:09	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<41		41	7.7	ug/Kg	☼	09/10/20 19:31	09/17/20 14:09	1
NMeFOSE	<4.1		4.1	1.4	ug/Kg	☼	09/10/20 19:31	09/17/20 14:09	1
NEtFOSE	<4.1		4.1	0.74	ug/Kg	☼	09/10/20 19:31	09/17/20 14:09	1
6:2 FTS	<41		41	3.1	ug/Kg	☼	09/10/20 19:31	09/17/20 14:09	1
DONA	<4.1		4.1	0.37	ug/Kg	☼	09/10/20 19:31	09/17/20 14:09	1
HFPO-DA (GenX)	<5.2		5.2	2.3	ug/Kg	☼	09/10/20 19:31	09/17/20 14:09	1
F-53B Major	<4.1		4.1	1.5	ug/Kg	☼	09/10/20 19:31	09/17/20 14:09	1
F-53B Minor	<4.1		4.1	0.46	ug/Kg	☼	09/10/20 19:31	09/17/20 14:09	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*110*		*25 - 150*	*09/10/20 19:31*	*09/17/20 14:09*	*1*
13C5 PFPeA	*97*		*25 - 150*	*09/10/20 19:31*	*09/17/20 14:09*	*1*
13C2 PFHxA	*110*		*25 - 150*	*09/10/20 19:31*	*09/17/20 14:09*	*1*
13C4 PFHpA	*115*		*25 - 150*	*09/10/20 19:31*	*09/17/20 14:09*	*1*
13C4 PFOA	*90*		*25 - 150*	*09/10/20 19:31*	*09/17/20 14:09*	*1*
13C5 PFNA	*102*		*25 - 150*	*09/10/20 19:31*	*09/17/20 14:09*	*1*
13C2 PFDA	*121*		*25 - 150*	*09/10/20 19:31*	*09/17/20 14:09*	*1*

Client Sample ID: SW14-YP1
Lab Sample ID: 320-64243-14

Date Collected: 08/26/20 18:30
Matrix: Tissue

Date Received: 09/02/20 09:50
Percent Solids: 23.7

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

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFUnA	*117*		*25 - 150*	*09/10/20 19:31*	*09/17/20 14:09*	*1*
13C2 PFDoA	*106*		*25 - 150*	*09/10/20 19:31*	*09/17/20 14:09*	*1*
13C2 PFTeDA	*54*		*25 - 150*	*09/10/20 19:31*	*09/17/20 14:09*	*1*
13C2 PFHxDA	*47*		*25 - 150*	*09/10/20 19:31*	*09/17/20 14:09*	*1*
13C3 PFBS	*110*		*25 - 150*	*09/10/20 19:31*	*09/17/20 14:09*	*1*
18O2 PFHxS	*119*		*25 - 150*	*09/10/20 19:31*	*09/17/20 14:09*	*1*
13C4 PFOS	*106*		*25 - 150*	*09/10/20 19:31*	*09/17/20 14:09*	*1*
13C8 FOSA	*94*		*25 - 150*	*09/10/20 19:31*	*09/17/20 14:09*	*1*
d3-NMeFOSAA	*117*		*25 - 150*	*09/10/20 19:31*	*09/17/20 14:09*	*1*
d5-NEtFOSAA	*132*		*25 - 150*	*09/10/20 19:31*	*09/17/20 14:09*	*1*
d-N-MeFOSA-M	*78*		*25 - 150*	*09/10/20 19:31*	*09/17/20 14:09*	*1*
d-N-EtFOSA-M	*71*		*25 - 150*	*09/10/20 19:31*	*09/17/20 14:09*	*1*
d7-N-MeFOSE-M	*38*		*10 - 120*	*09/10/20 19:31*	*09/17/20 14:09*	*1*
d9-N-EtFOSE-M	*33*		*10 - 120*	*09/10/20 19:31*	*09/17/20 14:09*	*1*
M2-6:2 FTS	*145*		*25 - 150*	*09/10/20 19:31*	*09/17/20 14:09*	*1*
13C3 HFPO-DA	*100*		*25 - 150*	*09/10/20 19:31*	*09/17/20 14:09*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4:2 FTS	<4100		4100	770	ug/Kg	☼	09/10/20 19:31	09/16/20 05:34	100
8:2 FTS	<4100		4100	520	ug/Kg	☼	09/10/20 19:31	09/16/20 05:34	100
10:2 FTS	<410		410	54	ug/Kg	☼	09/10/20 19:31	09/16/20 05:34	100

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-4:2 FTS	*90*		*25 - 150*	*09/10/20 19:31*	*09/16/20 05:34*	*100*
M2-8:2 FTS	*107*		*25 - 150*	*09/10/20 19:31*	*09/16/20 05:34*	*100*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**76.3**		0.1	0.1	%			09/11/20 13:16	1
Percent Solids	**23.7**		0.1	0.1	%			09/11/20 13:16	1

Client: ARCADIS U.S., Inc.
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Job ID: 320-64243-1

Client Sample ID: SW14-YP2

Date Collected: 08/26/20 18:30
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-15

Matrix: Tissue
Percent Solids: 19.1

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**3.8**	**J B**	4.1	0.57	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1
Perfluoropentanoic acid (PFPeA)	<4.1		4.1	1.6	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1
Perfluorohexanoic acid (PFHxA)	<4.1		4.1	0.85	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1
Perfluoroheptanoic acid (PFHpA)	<4.1		4.1	0.59	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1
Perfluorooctanoic acid (PFOA)	**19**		4.1	1.7	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1
Perfluorononanoic acid (PFNA)	**33**		4.1	0.73	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1
Perfluorodecanoic acid (PFDA)	**19**		4.1	0.45	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1
Perfluoroundecanoic acid (PFUnA)	**12**		4.1	0.73	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1
Perfluorododecanoic acid (PFDoA)	**2.9**	**J**	4.1	1.4	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1
Perfluorotridecanoic acid (PFTriA)	**1.4**	**J**	4.1	1.0	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1
Perfluorotetradecanoic acid (PFTeA)	<4.1		4.1	1.1	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<4.1		4.1	0.89	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1
Perfluoro-n-octadecanoic acid (PFODA)	<4.1		4.1	0.57	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1
Perfluorobutanesulfonic acid (PFBS)	<4.1		4.1	0.51	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1
Perfluoropentanesulfonic acid (PFPeS)	**1.2**	**J**	4.1	0.41	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1
Perfluorohexanesulfonic acid (PFHxS)	**110**		4.1	0.63	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1
Perfluoroheptanesulfonic Acid (PFHpS)	**1.6**	**J**	4.1	0.71	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1
Perfluorononanesulfonic acid (PFNS)	<4.1		4.1	0.41	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1
Perfluorodecanesulfonic acid (PFDS)	<4.1		4.1	0.79	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1
Perfluorododecanesulfonic acid (PFDoS)	<4.1		4.1	1.2	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1
Perfluorooctanesulfonamide (FOSA)	<4.1		4.1	1.7	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1
NEtFOSA	<4.1		4.1	3.9	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1
NMeFOSA	<4.1		4.1	0.65	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<41		41	7.9	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<41		41	7.5	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1
NMeFOSE	<4.1		4.1	1.4	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1
NEtFOSE	<4.1		4.1	0.73	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1
4:2 FTS	<41		41	7.5	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1
6:2 FTS	<41		41	3.0	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1
8:2 FTS	**11**	**J**	41	5.1	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1
DONA	<4.1		4.1	0.36	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1
HFPO-DA (GenX)	<5.1		5.1	2.2	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1
F-53B Major	<4.1		4.1	1.5	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1
F-53B Minor	<4.1		4.1	0.45	ug/Kg	☼	09/10/20 17:39	09/16/20 13:52	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*89*		*25 - 150*	*09/10/20 17:39*	*09/16/20 13:52*	*1*
13C5 PFPeA	*82*		*25 - 150*	*09/10/20 17:39*	*09/16/20 13:52*	*1*
13C2 PFHxA	*89*		*25 - 150*	*09/10/20 17:39*	*09/16/20 13:52*	*1*
13C4 PFHpA	*93*		*25 - 150*	*09/10/20 17:39*	*09/16/20 13:52*	*1*
13C4 PFOA	*90*		*25 - 150*	*09/10/20 17:39*	*09/16/20 13:52*	*1*
13C5 PFNA	*104*		*25 - 150*	*09/10/20 17:39*	*09/16/20 13:52*	*1*
13C2 PFDA	*99*		*25 - 150*	*09/10/20 17:39*	*09/16/20 13:52*	*1*

Client Sample ID: SW14-YP2
Date Collected: 08/26/20 18:30
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-15
Matrix: Tissue
Percent Solids: 19.1

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFUnA	88		25 - 150	09/10/20 17:39	09/16/20 13:52	1
13C2 PFDoA	63		25 - 150	09/10/20 17:39	09/16/20 13:52	1
13C2 PFTeDA	30		25 - 150	09/10/20 17:39	09/16/20 13:52	1
13C2 PFHxDA	28		25 - 150	09/10/20 17:39	09/16/20 13:52	1
13C3 PFBS	92		25 - 150	09/10/20 17:39	09/16/20 13:52	1
18O2 PFHxS	106		25 - 150	09/10/20 17:39	09/16/20 13:52	1
13C4 PFOS	96		25 - 150	09/10/20 17:39	09/16/20 13:52	1
13C8 FOSA	83		25 - 150	09/10/20 17:39	09/16/20 13:52	1
d3-NMeFOSAA	100		25 - 150	09/10/20 17:39	09/16/20 13:52	1
d5-NEtFOSAA	104		25 - 150	09/10/20 17:39	09/16/20 13:52	1
d-N-MeFOSA-M	55		25 - 150	09/10/20 17:39	09/16/20 13:52	1
d-N-EtFOSA-M	48		25 - 150	09/10/20 17:39	09/16/20 13:52	1
d7-N-MeFOSE-M	33		10 - 120	09/10/20 17:39	09/16/20 13:52	1
d9-N-EtFOSE-M	26		10 - 120	09/10/20 17:39	09/16/20 13:52	1
M2-4:2 FTS	111		25 - 150	09/10/20 17:39	09/16/20 13:52	1
M2-6:2 FTS	147		25 - 150	09/10/20 17:39	09/16/20 13:52	1
M2-8:2 FTS	169	*5	25 - 150	09/10/20 17:39	09/16/20 13:52	1
13C3 HFPO-DA	85		25 - 150	09/10/20 17:39	09/16/20 13:52	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	370		9.9	4.0	ug/Kg	☼	09/17/20 12:46	09/25/20 14:37	1
10:2 FTS	2.0	J	4.0	0.52	ug/Kg	☼	09/17/20 12:46	09/25/20 14:37	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	97		25 - 150	09/17/20 12:46	09/25/20 14:37	1
M2-8:2 FTS	270	*5	25 - 150	09/17/20 12:46	09/25/20 14:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	80.9		0.1	0.1	%			09/11/20 13:16	1
Percent Solids	19.1		0.1	0.1	%			09/11/20 13:16	1

Client: ARCADIS U.S., Inc.
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Job ID: 320-64243-1

Client Sample ID: SW14-YP3
Date Collected: 08/26/20 18:30
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-16
Matrix: Tissue
Percent Solids: 22.7

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<31		31	4.4	ug/Kg	☼	09/10/20 17:39	09/16/20 15:45	10
Perfluoropentanoic acid (PFPeA)	<31		31	12	ug/Kg	☼	09/10/20 17:39	09/16/20 15:45	10
Perfluorohexanoic acid (PFHxA)	<31		31	6.6	ug/Kg	☼	09/10/20 17:39	09/16/20 15:45	10
Perfluoroheptanoic acid (PFHpA)	<31		31	4.6	ug/Kg	☼	09/10/20 17:39	09/16/20 15:45	10
Perfluorooctanoic acid (PFOA)	**23**	**J**	31	14	ug/Kg	☼	09/10/20 17:39	09/16/20 15:45	10
Perfluorononanoic acid (PFNA)	**39**		31	5.7	ug/Kg	☼	09/10/20 17:39	09/16/20 15:45	10
Perfluorodecanoic acid (PFDA)	**15**	**J**	31	3.5	ug/Kg	☼	09/10/20 17:39	09/16/20 15:45	10
Perfluoroundecanoic acid (PFUnA)	**7.5**	**J**	31	5.7	ug/Kg	☼	09/10/20 17:39	09/16/20 15:45	10
Perfluorododecanoic acid (PFDoA)	<31		31	11	ug/Kg	☼	09/10/20 17:39	09/16/20 15:45	10
Perfluorotridecanoic acid (PFTriA)	<31		31	8.0	ug/Kg	☼	09/10/20 17:39	09/16/20 15:45	10
Perfluorotetradecanoic acid (PFTeA)	<31		31	8.5	ug/Kg	☼	09/10/20 17:39	09/16/20 15:45	10
Perfluorobutanesulfonic acid (PFBS)	<31		31	3.9	ug/Kg	☼	09/10/20 17:39	09/16/20 15:45	10
Perfluoropentanesulfonic acid (PFPeS)	<31		31	3.1	ug/Kg	☼	09/10/20 17:39	09/16/20 15:45	10
Perfluorohexanesulfonic acid (PFHxS)	**150**		31	4.9	ug/Kg	☼	09/10/20 17:39	09/16/20 15:45	10
Perfluoroheptanesulfonic Acid (PFHpS)	<31		31	5.5	ug/Kg	☼	09/10/20 17:39	09/16/20 15:45	10
Perfluorononanesulfonic acid (PFNS)	<31		31	3.1	ug/Kg	☼	09/10/20 17:39	09/16/20 15:45	10
Perfluorodecanesulfonic acid (PFDS)	<31		31	6.1	ug/Kg	☼	09/10/20 17:39	09/16/20 15:45	10
Perfluorododecanesulfonic acid (PFDoS)	<31		31	9.4	ug/Kg	☼	09/10/20 17:39	09/16/20 15:45	10
Perfluorooctanesulfonamide (FOSA)	<31		31	13	ug/Kg	☼	09/10/20 17:39	09/16/20 15:45	10
NEtFOSA	<31		31	30	ug/Kg	☼	09/10/20 17:39	09/16/20 15:45	10
NMeFOSA	<31		31	5.0	ug/Kg	☼	09/10/20 17:39	09/16/20 15:45	10
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<310		310	61	ug/Kg	☼	09/10/20 17:39	09/16/20 15:45	10
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<310		310	58	ug/Kg	☼	09/10/20 17:39	09/16/20 15:45	10
NMeFOSE	<31		31	11	ug/Kg	☼	09/10/20 17:39	09/16/20 15:45	10
NEtFOSE	<31		31	5.7	ug/Kg	☼	09/10/20 17:39	09/16/20 15:45	10
4:2 FTS	<310		310	58	ug/Kg	☼	09/10/20 17:39	09/16/20 15:45	10
6:2 FTS	<310		310	24	ug/Kg	☼	09/10/20 17:39	09/16/20 15:45	10
8:2 FTS	<310		310	39	ug/Kg	☼	09/10/20 17:39	09/16/20 15:45	10
DONA	<31		31	2.8	ug/Kg	☼	09/10/20 17:39	09/16/20 15:45	10
HFPO-DA (GenX)	<39		39	17	ug/Kg	☼	09/10/20 17:39	09/16/20 15:45	10
F-53B Major	<31		31	11	ug/Kg	☼	09/10/20 17:39	09/16/20 15:45	10
F-53B Minor	<31		31	3.5	ug/Kg	☼	09/10/20 17:39	09/16/20 15:45	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*68*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:45*	*10*
13C5 PFPeA	*63*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:45*	*10*
13C2 PFHxA	*71*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:45*	*10*
13C4 PFHpA	*70*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:45*	*10*
13C4 PFOA	*68*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:45*	*10*
13C5 PFNA	*77*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:45*	*10*
13C2 PFDA	*70*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:45*	*10*
13C2 PFUnA	*72*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:45*	*10*
13C2 PFDoA	*46*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:45*	*10*
13C2 PFTeDA	*13*	**5*	*25 - 150*	*09/10/20 17:39*	*09/16/20 15:45*	*10*
13C3 PFBS	*77*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:45*	*10*

Client: ARCADIS U.S., Inc.
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Job ID: 320-64243-1

Client Sample ID: SW14-YP3

Date Collected: 08/26/20 18:30
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-16

Matrix: Tissue
Percent Solids: 22.7

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	*76*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:45*	*10*
13C4 PFOS	*74*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:45*	*10*
13C8 FOSA	*75*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:45*	*10*
d3-NMeFOSAA	*74*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:45*	*10*
d5-NEtFOSAA	*88*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:45*	*10*
d-N-MeFOSA-M	*29*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:45*	*10*
d-N-EtFOSA-M	*23*	**5*	*25 - 150*	*09/10/20 17:39*	*09/16/20 15:45*	*10*
d7-N-MeFOSE-M	*6*	**5*	*10 - 120*	*09/10/20 17:39*	*09/16/20 15:45*	*10*
d9-N-EtFOSE-M	*6*	**5*	*10 - 120*	*09/10/20 17:39*	*09/16/20 15:45*	*10*
M2-4:2 FTS	*106*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:45*	*10*
M2-6:2 FTS	*128*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:45*	*10*
M2-8:2 FTS	*145*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:45*	*10*
13C3 HFPO-DA	*65*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:45*	*10*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-n-hexadecanoic acid (PFHxDA)	<30		30	6.6	ug/Kg	☼	09/17/20 12:46	09/25/20 16:11	10
Perfluoro-n-octadecanoic acid (PFODA)	<30		30	4.2	ug/Kg	☼	09/17/20 12:46	09/25/20 16:11	10
Perfluorooctanesulfonic acid (PFOS)	**910**	**I**	75	30	ug/Kg	☼	09/17/20 12:46	09/25/20 16:11	10
10:2 FTS	<30		30	3.9	ug/Kg	☼	09/17/20 12:46	09/25/20 16:11	10

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxDA	*23*	**5*	*25 - 150*	*09/17/20 12:46*	*09/25/20 16:11*	*10*
13C4 PFOS	*88*		*25 - 150*	*09/17/20 12:46*	*09/25/20 16:11*	*10*
M2-8:2 FTS	*347*	**5*	*25 - 150*	*09/17/20 12:46*	*09/25/20 16:11*	*10*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**77.3**		0.1	0.1	%			09/11/20 13:16	1
Percent Solids	**22.7**		0.1	0.1	%			09/11/20 13:16	1

Client: ARCADIS U.S., Inc.
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Job ID: 320-64243-1

Client Sample ID: SW14-YP4
Date Collected: 08/26/20 18:30
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-17
Matrix: Tissue
Percent Solids: 20.8

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**2.7**	**J B**	3.5	0.48	ug/Kg	☼	09/10/20 17:39	09/16/20 14:02	1
Perfluoropentanoic acid (PFPeA)	<3.5		3.5	1.3	ug/Kg	☼	09/10/20 17:39	09/16/20 14:02	1
Perfluorohexanoic acid (PFHxA)	<3.5		3.5	0.73	ug/Kg	☼	09/10/20 17:39	09/16/20 14:02	1
Perfluoroheptanoic acid (PFHpA)	<3.5		3.5	0.50	ug/Kg	☼	09/10/20 17:39	09/16/20 14:02	1
Perfluorooctanoic acid (PFOA)	**5.1**		3.5	1.5	ug/Kg	☼	09/10/20 17:39	09/16/20 14:02	1
Perfluorononanoic acid (PFNA)	**15**		3.5	0.62	ug/Kg	☼	09/10/20 17:39	09/16/20 14:02	1
Perfluorodecanoic acid (PFDA)	**11**		3.5	0.38	ug/Kg	☼	09/10/20 17:39	09/16/20 14:02	1
Perfluoroundecanoic acid (PFUnA)	**7.0**		3.5	0.62	ug/Kg	☼	09/10/20 17:39	09/16/20 14:02	1
Perfluorododecanoic acid (PFDoA)	**1.8**	**J**	3.5	1.2	ug/Kg	☼	09/10/20 17:39	09/16/20 14:02	1
Perfluorotridecanoic acid (PFTriA)	<3.5		3.5	0.88	ug/Kg	☼	09/10/20 17:39	09/16/20 14:02	1
Perfluorotetradecanoic acid (PFTeA)	<3.5		3.5	0.93	ug/Kg	☼	09/10/20 17:39	09/16/20 14:02	1
Perfluorobutanesulfonic acid (PFBS)	<3.5		3.5	0.43	ug/Kg	☼	09/10/20 17:39	09/16/20 14:02	1
Perfluoropentanesulfonic acid (PFPeS)	<3.5		3.5	0.35	ug/Kg	☼	09/10/20 17:39	09/16/20 14:02	1
Perfluorohexanesulfonic acid (PFHxS)	**35**		3.5	0.54	ug/Kg	☼	09/10/20 17:39	09/16/20 14:02	1
Perfluoroheptanesulfonic Acid (PFHpS)	**1.0**	**J**	3.5	0.60	ug/Kg	☼	09/10/20 17:39	09/16/20 14:02	1
Perfluorononanesulfonic acid (PFNS)	<3.5		3.5	0.35	ug/Kg	☼	09/10/20 17:39	09/16/20 14:02	1
Perfluorodecanesulfonic acid (PFDS)	<3.5		3.5	0.67	ug/Kg	☼	09/10/20 17:39	09/16/20 14:02	1
Perfluorododecanesulfonic acid (PFDoS)	<3.5		3.5	1.0	ug/Kg	☼	09/10/20 17:39	09/16/20 14:02	1
Perfluorooctanesulfonamide (FOSA)	<3.5		3.5	1.4	ug/Kg	☼	09/10/20 17:39	09/16/20 14:02	1
NEtFOSA	<3.5		3.5	3.3	ug/Kg	☼	09/10/20 17:39	09/16/20 14:02	1
NMeFOSA	<3.5		3.5	0.55	ug/Kg	☼	09/10/20 17:39	09/16/20 14:02	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<35		35	6.7	ug/Kg	☼	09/10/20 17:39	09/16/20 14:02	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<35		35	6.4	ug/Kg	☼	09/10/20 17:39	09/16/20 14:02	1
NMeFOSE	<3.5		3.5	1.2	ug/Kg	☼	09/10/20 17:39	09/16/20 14:02	1
NEtFOSE	<3.5		3.5	0.62	ug/Kg	☼	09/10/20 17:39	09/16/20 14:02	1
4:2 FTS	<35		35	6.4	ug/Kg	☼	09/10/20 17:39	09/16/20 14:02	1
6:2 FTS	<35		35	2.6	ug/Kg	☼	09/10/20 17:39	09/16/20 14:02	1
8:2 FTS	**6.2**	**J**	35	4.3	ug/Kg	☼	09/10/20 17:39	09/16/20 14:02	1
DONA	<3.5		3.5	0.31	ug/Kg	☼	09/10/20 17:39	09/16/20 14:02	1
HFPO-DA (GenX)	<4.3		4.3	1.9	ug/Kg	☼	09/10/20 17:39	09/16/20 14:02	1
F-53B Major	<3.5		3.5	1.2	ug/Kg	☼	09/10/20 17:39	09/16/20 14:02	1
F-53B Minor	<3.5		3.5	0.38	ug/Kg	☼	09/10/20 17:39	09/16/20 14:02	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*78*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:02*	*1*
13C5 PFPeA	*71*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:02*	*1*
13C2 PFHxA	*79*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:02*	*1*
13C4 PFHpA	*91*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:02*	*1*
13C4 PFOA	*91*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:02*	*1*
13C5 PFNA	*102*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:02*	*1*
13C2 PFDA	*105*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:02*	*1*
13C2 PFUnA	*108*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:02*	*1*
13C2 PFDoA	*79*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:02*	*1*
13C2 PFTeDA	*15*	**5*	*25 - 150*	*09/10/20 17:39*	*09/16/20 14:02*	*1*

Client Sample ID: SW14-YP4
Date Collected: 08/26/20 18:30
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-17
Matrix: Tissue
Percent Solids: 20.8

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

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 PFBS	*80*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:02*	*1*
18O2 PFHxS	*98*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:02*	*1*
13C4 PFOS	*100*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:02*	*1*
13C8 FOSA	*101*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:02*	*1*
d3-NMeFOSAA	*109*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:02*	*1*
d5-NEtFOSAA	*120*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:02*	*1*
d-N-MeFOSA-M	*61*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:02*	*1*
d-N-EtFOSA-M	*49*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:02*	*1*
d7-N-MeFOSE-M	*24*		*10 - 120*	*09/10/20 17:39*	*09/16/20 14:02*	*1*
d9-N-EtFOSE-M	*17*		*10 - 120*	*09/10/20 17:39*	*09/16/20 14:02*	*1*
M2-4:2 FTS	*118*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:02*	*1*
M2-6:2 FTS	*151*	**5*	*25 - 150*	*09/10/20 17:39*	*09/16/20 14:02*	*1*
M2-8:2 FTS	*155*	**5*	*25 - 150*	*09/10/20 17:39*	*09/16/20 14:02*	*1*
13C3 HFPO-DA	*74*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:02*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	**350**		81	32	ug/Kg	☼	09/17/20 12:46	09/27/20 11:43	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFOS	*87*		*25 - 150*	*09/17/20 12:46*	*09/27/20 11:43*	*10*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-n-hexadecanoic acid (PFHxDA)	<3.2		3.2	0.71	ug/Kg	☼	09/17/20 12:46	09/25/20 14:46	1
Perfluoro-n-octadecanoic acid (PFODA)	<3.2		3.2	0.45	ug/Kg	☼	09/17/20 12:46	09/25/20 14:46	1
10:2 FTS	**1.8**	**J**	3.2	0.42	ug/Kg	☼	09/17/20 12:46	09/25/20 14:46	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxDA	*29*		*25 - 150*	*09/17/20 12:46*	*09/25/20 14:46*	*1*
M2-8:2 FTS	*244*	**5*	*25 - 150*	*09/17/20 12:46*	*09/25/20 14:46*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**79.2**		0.1	0.1	%			09/11/20 13:16	1
Percent Solids	**20.8**		0.1	0.1	%			09/11/20 13:16	1

Client Sample ID: SW14-YP5
Date Collected: 08/26/20 18:30
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-18
Matrix: Tissue
Percent Solids: 19.2

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**2.5**	**J B**	4.2	0.59	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1
Perfluoropentanoic acid (PFPeA)	<4.2		4.2	1.6	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1
Perfluorohexanoic acid (PFHxA)	<4.2		4.2	0.89	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1
Perfluoroheptanoic acid (PFHpA)	<4.2		4.2	0.61	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1
Perfluorooctanoic acid (PFOA)	<4.2		4.2	1.8	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1
Perfluorononanoic acid (PFNA)	**20**		4.2	0.76	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1
Perfluorodecanoic acid (PFDA)	**14**		4.2	0.47	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1
Perfluoroundecanoic acid (PFUnA)	**8.9**		4.2	0.76	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1
Perfluorododecanoic acid (PFDoA)	**2.2**	**J**	4.2	1.4	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1
Perfluorotridecanoic acid (PFTriA)	<4.2		4.2	1.1	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1
Perfluorotetradecanoic acid (PFTeA)	<4.2		4.2	1.1	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<4.2		4.2	0.93	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1
Perfluoro-n-octadecanoic acid (PFODA)	<4.2		4.2	0.59	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1
Perfluorobutanesulfonic acid (PFBS)	<4.2		4.2	0.53	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1
Perfluoropentanesulfonic acid (PFPeS)	<4.2		4.2	0.42	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1
Perfluorohexanesulfonic acid (PFHxS)	<21	G	21	21	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1
Perfluoroheptanesulfonic Acid (PFHpS)	**1.6**	**J**	4.2	0.74	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1
Perfluorononanesulfonic acid (PFNS)	<4.2		4.2	0.42	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1
Perfluorodecanesulfonic acid (PFDS)	<4.2		4.2	0.83	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1
Perfluorododecanesulfonic acid (PFDoS)	<4.2		4.2	1.3	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1
Perfluorooctanesulfonamide (FOSA)	<4.2		4.2	1.7	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1
NEtFOSA	<4.2		4.2	4.1	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1
NMeFOSA	<4.2		4.2	0.68	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<42		42	8.3	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<42		42	7.8	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1
NMeFOSE	<4.2		4.2	1.5	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1
NEtFOSE	<4.2		4.2	0.76	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1
4:2 FTS	<42		42	7.8	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1
6:2 FTS	<42		42	3.2	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1
8:2 FTS	<42		42	5.3	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1
DONA	<4.2		4.2	0.38	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1
HFPO-DA (GenX)	<5.3		5.3	2.3	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1
F-53B Major	<4.2		4.2	1.5	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1
F-53B Minor	<4.2		4.2	0.47	ug/Kg	☼	09/10/20 17:39	09/16/20 14:11	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*91*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:11*	*1*
13C5 PFPeA	*79*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:11*	*1*
13C2 PFHxA	*86*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:11*	*1*
13C4 PFHpA	*95*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:11*	*1*
13C4 PFOA	*90*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:11*	*1*
13C5 PFNA	*103*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:11*	*1*
13C2 PFDA	*107*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:11*	*1*

Client: ARCADIS U.S., Inc.
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Job ID: 320-64243-1

Client Sample ID: SW14-YP5

Date Collected: 08/26/20 18:30
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-18

Matrix: Tissue
Percent Solids: 19.2

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFUnA	93		25 - 150	09/10/20 17:39	09/16/20 14:11	1
13C2 PFDoA	67		25 - 150	09/10/20 17:39	09/16/20 14:11	1
13C2 PFTeDA	20	*5	25 - 150	09/10/20 17:39	09/16/20 14:11	1
13C2 PFHxDA	23	*5	25 - 150	09/10/20 17:39	09/16/20 14:11	1
13C3 PFBS	90		25 - 150	09/10/20 17:39	09/16/20 14:11	1
18O2 PFHxS	111		25 - 150	09/10/20 17:39	09/16/20 14:11	1
13C4 PFOS	101		25 - 150	09/10/20 17:39	09/16/20 14:11	1
13C8 FOSA	106		25 - 150	09/10/20 17:39	09/16/20 14:11	1
d3-NMeFOSAA	102		25 - 150	09/10/20 17:39	09/16/20 14:11	1
d5-NEtFOSAA	107		25 - 150	09/10/20 17:39	09/16/20 14:11	1
d-N-MeFOSA-M	50		25 - 150	09/10/20 17:39	09/16/20 14:11	1
d-N-EtFOSA-M	41		25 - 150	09/10/20 17:39	09/16/20 14:11	1
d7-N-MeFOSE-M	19		10 - 120	09/10/20 17:39	09/16/20 14:11	1
d9-N-EtFOSE-M	15		10 - 120	09/10/20 17:39	09/16/20 14:11	1
M2-4:2 FTS	125		25 - 150	09/10/20 17:39	09/16/20 14:11	1
M2-6:2 FTS	165	*5	25 - 150	09/10/20 17:39	09/16/20 14:11	1
M2-8:2 FTS	174	*5	25 - 150	09/10/20 17:39	09/16/20 14:11	1
13C3 HFPO-DA	83		25 - 150	09/10/20 17:39	09/16/20 14:11	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	350		11	4.3	ug/Kg	☼	09/17/20 12:46	09/25/20 14:56	1
10:2 FTS	1.3	J	4.3	0.56	ug/Kg	☼	09/17/20 12:46	09/25/20 14:56	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	112		25 - 150	09/17/20 12:46	09/25/20 14:56	1
M2-8:2 FTS	295	*5	25 - 150	09/17/20 12:46	09/25/20 14:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	80.8		0.1	0.1	%			09/11/20 13:16	1
Percent Solids	19.2		0.1	0.1	%			09/11/20 13:16	1

Client Sample ID: SW14-BG1
Date Collected: 08/26/20 18:30
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-19
Matrix: Tissue
Percent Solids: 19.5

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**2.8**	**J B**	3.7	0.52	ug/Kg	☼	09/10/20 17:39	09/16/20 14:20	1
Perfluoropentanoic acid (PFPeA)	<3.7		3.7	1.4	ug/Kg	☼	09/10/20 17:39	09/16/20 14:20	1
Perfluorohexanoic acid (PFHxA)	<3.7		3.7	0.78	ug/Kg	☼	09/10/20 17:39	09/16/20 14:20	1
Perfluoroheptanoic acid (PFHpA)	<3.7		3.7	0.54	ug/Kg	☼	09/10/20 17:39	09/16/20 14:20	1
Perfluorooctanoic acid (PFOA)	<3.7		3.7	1.6	ug/Kg	☼	09/10/20 17:39	09/16/20 14:20	1
Perfluorononanoic acid (PFNA)	**1.1**	**J**	3.7	0.67	ug/Kg	☼	09/10/20 17:39	09/16/20 14:20	1
Perfluorodecanoic acid (PFDA)	**2.6**	**J**	3.7	0.41	ug/Kg	☼	09/10/20 17:39	09/16/20 14:20	1
Perfluoroundecanoic acid (PFUnA)	**1.9**	**J**	3.7	0.67	ug/Kg	☼	09/10/20 17:39	09/16/20 14:20	1
Perfluorododecanoic acid (PFDoA)	<3.7		3.7	1.2	ug/Kg	☼	09/10/20 17:39	09/16/20 14:20	1
Perfluorotridecanoic acid (PFTriA)	<3.7		3.7	0.95	ug/Kg	☼	09/10/20 17:39	09/16/20 14:20	1
Perfluorotetradecanoic acid (PFTeA)	<3.7		3.7	1.0	ug/Kg	☼	09/10/20 17:39	09/16/20 14:20	1
Perfluorobutanesulfonic acid (PFBS)	<3.7		3.7	0.46	ug/Kg	☼	09/10/20 17:39	09/16/20 14:20	1
Perfluoropentanesulfonic acid (PFPeS)	<3.7		3.7	0.37	ug/Kg	☼	09/10/20 17:39	09/16/20 14:20	1
Perfluorohexanesulfonic acid (PFHxS)	<7.4	G	7.4	7.4	ug/Kg	☼	09/10/20 17:39	09/16/20 14:20	1
Perfluoroheptanesulfonic Acid (PFHpS)	<3.7		3.7	0.65	ug/Kg	☼	09/10/20 17:39	09/16/20 14:20	1
Perfluorononanesulfonic acid (PFNS)	<3.7		3.7	0.37	ug/Kg	☼	09/10/20 17:39	09/16/20 14:20	1
Perfluorodecanesulfonic acid (PFDS)	<3.7		3.7	0.72	ug/Kg	☼	09/10/20 17:39	09/16/20 14:20	1
Perfluorododecanesulfonic acid (PFDoS)	<3.7		3.7	1.1	ug/Kg	☼	09/10/20 17:39	09/16/20 14:20	1
Perfluorooctanesulfonamide (FOSA)	<3.7		3.7	1.5	ug/Kg	☼	09/10/20 17:39	09/16/20 14:20	1
NEtFOSA	<3.7		3.7	3.6	ug/Kg	☼	09/10/20 17:39	09/16/20 14:20	1
NMeFOSA	<3.7		3.7	0.59	ug/Kg	☼	09/10/20 17:39	09/16/20 14:20	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<37		37	7.2	ug/Kg	☼	09/10/20 17:39	09/16/20 14:20	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<37		37	6.9	ug/Kg	☼	09/10/20 17:39	09/16/20 14:20	1
NMeFOSE	<3.7		3.7	1.3	ug/Kg	☼	09/10/20 17:39	09/16/20 14:20	1
NEtFOSE	<3.7		3.7	0.67	ug/Kg	☼	09/10/20 17:39	09/16/20 14:20	1
4:2 FTS	<37		37	6.9	ug/Kg	☼	09/10/20 17:39	09/16/20 14:20	1
6:2 FTS	<37		37	2.8	ug/Kg	☼	09/10/20 17:39	09/16/20 14:20	1
8:2 FTS	<37		37	4.7	ug/Kg	☼	09/10/20 17:39	09/16/20 14:20	1
DONA	<3.7		3.7	0.33	ug/Kg	☼	09/10/20 17:39	09/16/20 14:20	1
HFPO-DA (GenX)	<4.6		4.6	2.0	ug/Kg	☼	09/10/20 17:39	09/16/20 14:20	1
F-53B Major	<3.7		3.7	1.3	ug/Kg	☼	09/10/20 17:39	09/16/20 14:20	1
F-53B Minor	<3.7		3.7	0.41	ug/Kg	☼	09/10/20 17:39	09/16/20 14:20	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*107*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:20*	*1*
13C5 PFPeA	*89*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:20*	*1*
13C2 PFHxA	*101*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:20*	*1*
13C4 PFHpA	*100*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:20*	*1*
13C4 PFOA	*92*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:20*	*1*
13C5 PFNA	*112*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:20*	*1*
13C2 PFDA	*120*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:20*	*1*
13C2 PFUnA	*113*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:20*	*1*
13C2 PFDoA	*81*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:20*	*1*
13C2 PFTeDA	*16*	**5*	*25 - 150*	*09/10/20 17:39*	*09/16/20 14:20*	*1*
13C3 PFBS	*100*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:20*	*1*
18O2 PFHxS	*114*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:20*	*1*

Client Sample ID: SW14-BG1
Lab Sample ID: 320-64243-19

Date Collected: 08/26/20 18:30
Matrix: Tissue

Date Received: 09/02/20 09:50
Percent Solids: 19.5

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	116		25 - 150	09/10/20 17:39	09/16/20 14:20	1
13C8 FOSA	112		25 - 150	09/10/20 17:39	09/16/20 14:20	1
d3-NMeFOSAA	117		25 - 150	09/10/20 17:39	09/16/20 14:20	1
d5-NEtFOSAA	135		25 - 150	09/10/20 17:39	09/16/20 14:20	1
d-N-MeFOSA-M	49		25 - 150	09/10/20 17:39	09/16/20 14:20	1
d-N-EtFOSA-M	31		25 - 150	09/10/20 17:39	09/16/20 14:20	1
d7-N-MeFOSE-M	17		10 - 120	09/10/20 17:39	09/16/20 14:20	1
d9-N-EtFOSE-M	10		10 - 120	09/10/20 17:39	09/16/20 14:20	1
M2-4:2 FTS	131		25 - 150	09/10/20 17:39	09/16/20 14:20	1
M2-6:2 FTS	165	*5	25 - 150	09/10/20 17:39	09/16/20 14:20	1
M2-8:2 FTS	255	*5	25 - 150	09/10/20 17:39	09/16/20 14:20	1
13C3 HFPO-DA	92		25 - 150	09/10/20 17:39	09/16/20 14:20	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-n-hexadecanoic acid (PFHxDA)	<4.8		4.8	1.1	ug/Kg	☼	09/17/20 12:46	09/25/20 15:05	1
Perfluoro-n-octadecanoic acid (PFODA)	<4.8		4.8	0.67	ug/Kg	☼	09/17/20 12:46	09/25/20 15:05	1
Perfluorooctanesulfonic acid (PFOS)	<380	G	380	380	ug/Kg	☼	09/17/20 12:46	09/25/20 15:05	1
10:2 FTS	**0.73**	**J**	4.8	0.62	ug/Kg	☼	09/17/20 12:46	09/25/20 15:05	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxDA	55		25 - 150	09/17/20 12:46	09/25/20 15:05	1
13C4 PFOS	98		25 - 150	09/17/20 12:46	09/25/20 15:05	1
M2-8:2 FTS	367	*5	25 - 150	09/17/20 12:46	09/25/20 15:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**80.5**		0.1	0.1	%			09/11/20 13:16	1
Percent Solids	**19.5**		0.1	0.1	%			09/11/20 13:16	1

Client Sample ID: SW14-BG2
Lab Sample ID: 320-64243-20
Date Collected: 08/26/20 18:30
Matrix: Tissue
Date Received: 09/02/20 09:50
Percent Solids: 20.0

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**2.6**	**J B**	4.1	0.57	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1
Perfluoropentanoic acid (PFPeA)	<4.1		4.1	1.6	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1
Perfluorohexanoic acid (PFHxA)	<4.1		4.1	0.86	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1
Perfluoroheptanoic acid (PFHpA)	<4.1		4.1	0.59	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1
Perfluorooctanoic acid (PFOA)	<4.1		4.1	1.8	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1
Perfluorononanoic acid (PFNA)	**1.6**	**J**	4.1	0.73	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1
Perfluorodecanoic acid (PFDA)	**3.4**	**J**	4.1	0.45	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1
Perfluoroundecanoic acid (PFUnA)	**2.8**	**J**	4.1	0.73	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1
Perfluorododecanoic acid (PFDoA)	<4.1		4.1	1.4	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1
Perfluorotridecanoic acid (PFTriA)	<4.1		4.1	1.0	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1
Perfluorotetradecanoic acid (PFTeA)	<4.1		4.1	1.1	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<4.1		4.1	0.90	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1
Perfluoro-n-octadecanoic acid (PFODA)	<4.1		4.1	0.57	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1
Perfluorobutanesulfonic acid (PFBS)	<4.1		4.1	0.51	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1
Perfluoropentanesulfonic acid (PFPeS)	<4.1		4.1	0.41	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1
Perfluorohexanesulfonic acid (PFHxS)	<29	G	29	29	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1
Perfluoroheptanesulfonic Acid (PFHpS)	<4.1		4.1	0.71	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1
Perfluorononanesulfonic acid (PFNS)	<4.1		4.1	0.41	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1
Perfluorodecanesulfonic acid (PFDS)	<4.1		4.1	0.79	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1
Perfluorododecanesulfonic acid (PFDoS)	<4.1		4.1	1.2	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1
Perfluorooctanesulfonamide (FOSA)	<4.1		4.1	1.7	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1
NEtFOSA	<4.1		4.1	3.9	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1
NMeFOSA	<4.1		4.1	0.65	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<41		41	7.9	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<41		41	7.5	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1
NMeFOSE	<4.1		4.1	1.4	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1
NEtFOSE	<4.1		4.1	0.73	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1
4:2 FTS	<41		41	7.5	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1
6:2 FTS	<41		41	3.1	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1
8:2 FTS	<41		41	5.1	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1
DONA	<4.1		4.1	0.37	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1
HFPO-DA (GenX)	<5.1		5.1	2.2	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1
F-53B Major	<4.1		4.1	1.5	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1
F-53B Minor	<4.1		4.1	0.45	ug/Kg	☼	09/10/20 17:39	09/16/20 14:30	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*91*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:30*	*1*
13C5 PFPeA	*77*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:30*	*1*
13C2 PFHxA	*94*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:30*	*1*
13C4 PFHpA	*93*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:30*	*1*
13C4 PFOA	*89*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:30*	*1*
13C5 PFNA	*113*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:30*	*1*
13C2 PFDA	*119*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:30*	*1*
13C2 PFUnA	*114*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:30*	*1*

Client Sample ID: SW14-BG2
Lab Sample ID: 320-64243-20

Date Collected: 08/26/20 18:30
Matrix: Tissue

Date Received: 09/02/20 09:50
Percent Solids: 20.0

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDoA	80		25 - 150	09/10/20 17:39	09/16/20 14:30	1
13C2 PFTeDA	41		25 - 150	09/10/20 17:39	09/16/20 14:30	1
13C2 PFHxDA	35		25 - 150	09/10/20 17:39	09/16/20 14:30	1
13C3 PFBS	94		25 - 150	09/10/20 17:39	09/16/20 14:30	1
18O2 PFHxS	108		25 - 150	09/10/20 17:39	09/16/20 14:30	1
13C4 PFOS	119		25 - 150	09/10/20 17:39	09/16/20 14:30	1
13C8 FOSA	82		25 - 150	09/10/20 17:39	09/16/20 14:30	1
d3-NMeFOSAA	121		25 - 150	09/10/20 17:39	09/16/20 14:30	1
d5-NEtFOSAA	123		25 - 150	09/10/20 17:39	09/16/20 14:30	1
d-N-MeFOSA-M	47		25 - 150	09/10/20 17:39	09/16/20 14:30	1
d-N-EtFOSA-M	38		25 - 150	09/10/20 17:39	09/16/20 14:30	1
d7-N-MeFOSE-M	23		10 - 120	09/10/20 17:39	09/16/20 14:30	1
d9-N-EtFOSE-M	20		10 - 120	09/10/20 17:39	09/16/20 14:30	1
M2-4:2 FTS	138		25 - 150	09/10/20 17:39	09/16/20 14:30	1
M2-6:2 FTS	191	*5	25 - 150	09/10/20 17:39	09/16/20 14:30	1
M2-8:2 FTS	271	*5	25 - 150	09/10/20 17:39	09/16/20 14:30	1
13C3 HFPO-DA	89		25 - 150	09/10/20 17:39	09/16/20 14:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	150	I	11	4.6	ug/Kg	☼	09/17/20 12:46	09/25/20 15:33	1
10:2 FTS	1.1	J	4.6	0.59	ug/Kg	☼	09/17/20 12:46	09/25/20 15:33	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	97		25 - 150	09/17/20 12:46	09/25/20 15:33	1
M2-8:2 FTS	418	*5	25 - 150	09/17/20 12:46	09/25/20 15:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	80.0		0.1	0.1	%			09/11/20 13:16	1
Percent Solids	20.0		0.1	0.1	%			09/11/20 13:16	1

Client Sample ID: SW14-BG3
Lab Sample ID: 320-64243-21
Date Collected: 08/26/20 18:30
Matrix: Tissue
Date Received: 09/02/20 09:50
Percent Solids: 21.8

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**2.8**	**J B**	4.5	0.63	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1
Perfluoropentanoic acid (PFPeA)	<4.5		4.5	1.7	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1
Perfluorohexanoic acid (PFHxA)	<4.5		4.5	0.95	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1
Perfluoroheptanoic acid (PFHpA)	<4.5		4.5	0.65	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1
Perfluorooctanoic acid (PFOA)	<4.5		4.5	1.9	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1
Perfluorononanoic acid (PFNA)	**1.5**	**J**	4.5	0.81	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1
Perfluorodecanoic acid (PFDA)	**5.1**		4.5	0.50	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1
Perfluoroundecanoic acid (PFUnA)	**3.8**	**J**	4.5	0.81	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1
Perfluorododecanoic acid (PFDoA)	<4.5		4.5	1.5	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1
Perfluorotridecanoic acid (PFTriA)	<4.5		4.5	1.1	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1
Perfluorotetradecanoic acid (PFTeA)	<4.5		4.5	1.2	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<4.5		4.5	0.99	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1
Perfluoro-n-octadecanoic acid (PFODA)	<4.5		4.5	0.63	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1
Perfluorobutanesulfonic acid (PFBS)	<4.5		4.5	0.56	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1
Perfluoropentanesulfonic acid (PFPeS)	<4.5		4.5	0.45	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1
Perfluorohexanesulfonic acid (PFHxS)	<32	G	32	32	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1
Perfluoroheptanesulfonic Acid (PFHpS)	<4.5		4.5	0.79	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1
Perfluorononanesulfonic acid (PFNS)	<4.5		4.5	0.45	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1
Perfluorodecanesulfonic acid (PFDS)	<4.5		4.5	0.88	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1
Perfluorododecanesulfonic acid (PFDoS)	<4.5		4.5	1.4	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1
Perfluorooctanesulfonamide (FOSA)	<4.5		4.5	1.8	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1
NEtFOSA	<4.5		4.5	4.3	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1
NMeFOSA	<4.5		4.5	0.72	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<45		45	8.8	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<45		45	8.3	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1
NMeFOSE	<4.5		4.5	1.6	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1
NEtFOSE	<4.5		4.5	0.81	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1
4:2 FTS	<45		45	8.3	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1
6:2 FTS	<45		45	3.4	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1
8:2 FTS	<45		45	5.6	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1
DONA	<4.5		4.5	0.41	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1
HFPO-DA (GenX)	<5.6		5.6	2.5	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1
F-53B Major	<4.5		4.5	1.6	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1
F-53B Minor	<4.5		4.5	0.50	ug/Kg	☼	09/10/20 17:39	09/16/20 14:39	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*96*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:39*	*1*
13C5 PFPeA	*79*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:39*	*1*
13C2 PFHxA	*93*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:39*	*1*
13C4 PFHpA	*97*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:39*	*1*
13C4 PFOA	*92*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:39*	*1*
13C5 PFNA	*107*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:39*	*1*
13C2 PFDA	*119*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:39*	*1*
13C2 PFUnA	*114*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:39*	*1*

Client Sample ID: SW14-BG3
Date Collected: 08/26/20 18:30
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-21
Matrix: Tissue
Percent Solids: 21.8

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDoA	99		25 - 150	09/10/20 17:39	09/16/20 14:39	1
13C2 PFTeDA	68		25 - 150	09/10/20 17:39	09/16/20 14:39	1
13C2 PFHxDA	69		25 - 150	09/10/20 17:39	09/16/20 14:39	1
13C3 PFBS	89		25 - 150	09/10/20 17:39	09/16/20 14:39	1
18O2 PFHxS	112		25 - 150	09/10/20 17:39	09/16/20 14:39	1
13C4 PFOS	112		25 - 150	09/10/20 17:39	09/16/20 14:39	1
13C8 FOSA	98		25 - 150	09/10/20 17:39	09/16/20 14:39	1
d3-NMeFOSAA	114		25 - 150	09/10/20 17:39	09/16/20 14:39	1
d5-NEtFOSAA	138		25 - 150	09/10/20 17:39	09/16/20 14:39	1
d-N-MeFOSA-M	67		25 - 150	09/10/20 17:39	09/16/20 14:39	1
d-N-EtFOSA-M	49		25 - 150	09/10/20 17:39	09/16/20 14:39	1
d7-N-MeFOSE-M	43		10 - 120	09/10/20 17:39	09/16/20 14:39	1
d9-N-EtFOSE-M	31		10 - 120	09/10/20 17:39	09/16/20 14:39	1
M2-4:2 FTS	129		25 - 150	09/10/20 17:39	09/16/20 14:39	1
M2-6:2 FTS	174	*5	25 - 150	09/10/20 17:39	09/16/20 14:39	1
M2-8:2 FTS	262	*5	25 - 150	09/10/20 17:39	09/16/20 14:39	1
13C3 HFPO-DA	86		25 - 150	09/10/20 17:39	09/16/20 14:39	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	120		11	4.2	ug/Kg	☼	09/17/20 12:46	09/25/20 15:43	1
10:2 FTS	0.75	J	4.2	0.55	ug/Kg	☼	09/17/20 12:46	09/25/20 15:43	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	94		25 - 150	09/17/20 12:46	09/25/20 15:43	1
M2-8:2 FTS	316	*5	25 - 150	09/17/20 12:46	09/25/20 15:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	78.2		0.1	0.1	%			09/11/20 13:16	1
Percent Solids	21.8		0.1	0.1	%			09/11/20 13:16	1

Client Sample ID: SW14-BG4
Lab Sample ID: 320-64243-22
Date Collected: 08/27/20 12:30
Matrix: Tissue
Date Received: 09/02/20 09:50
Percent Solids: 22.7

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**2.4**	**J B**	3.9	0.54	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1
Perfluoropentanoic acid (PFPeA)	<3.9		3.9	1.5	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1
Perfluorohexanoic acid (PFHxA)	<3.9		3.9	0.81	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1
Perfluoroheptanoic acid (PFHpA)	<3.9		3.9	0.56	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1
Perfluorooctanoic acid (PFOA)	<3.9		3.9	1.7	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1
Perfluorononanoic acid (PFNA)	**1.4**	**J**	3.9	0.70	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1
Perfluorodecanoic acid (PFDA)	**3.7**	**J**	3.9	0.43	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1
Perfluoroundecanoic acid (PFUnA)	**3.2**	**J**	3.9	0.70	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1
Perfluorododecanoic acid (PFDoA)	**1.4**	**J**	3.9	1.3	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1
Perfluorotridecanoic acid (PFTriA)	<3.9		3.9	0.99	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1
Perfluorotetradecanoic acid (PFTeA)	<3.9		3.9	1.0	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<3.9		3.9	0.85	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1
Perfluoro-n-octadecanoic acid (PFODA)	<3.9		3.9	0.54	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1
Perfluorobutanesulfonic acid (PFBS)	<3.9		3.9	0.48	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1
Perfluoropentanesulfonic acid (PFPeS)	<3.9		3.9	0.39	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1
Perfluorohexanesulfonic acid (PFHxS)	<15	G	15	15	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1
Perfluoroheptanesulfonic Acid (PFHpS)	<3.9		3.9	0.68	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1
Perfluorononanesulfonic acid (PFNS)	<3.9		3.9	0.39	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1
Perfluorodecanesulfonic acid (PFDS)	<3.9		3.9	0.75	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1
Perfluorododecanesulfonic acid (PFDoS)	<3.9		3.9	1.2	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1
Perfluorooctanesulfonamide (FOSA)	<3.9		3.9	1.6	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1
NEtFOSA	<3.9		3.9	3.7	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1
NMeFOSA	<3.9		3.9	0.62	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<39		39	7.5	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<39		39	7.2	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1
NMeFOSE	<3.9		3.9	1.4	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1
NEtFOSE	<3.9		3.9	0.70	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1
4:2 FTS	<39		39	7.2	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1
6:2 FTS	<39		39	2.9	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1
8:2 FTS	<39		39	4.8	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1
DONA	<3.9		3.9	0.35	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1
HFPO-DA (GenX)	<4.8		4.8	2.1	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1
F-53B Major	<3.9		3.9	1.4	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1
F-53B Minor	<3.9		3.9	0.43	ug/Kg	☼	09/10/20 17:39	09/16/20 14:49	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*95*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:49*	*1*
13C5 PFPeA	*80*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:49*	*1*
13C2 PFHxA	*102*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:49*	*1*
13C4 PFHpA	*98*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:49*	*1*
13C4 PFOA	*93*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:49*	*1*
13C5 PFNA	*114*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:49*	*1*
13C2 PFDA	*124*		*25 - 150*	*09/10/20 17:39*	*09/16/20 14:49*	*1*

Client Sample ID: SW14-BG4
Date Collected: 08/27/20 12:30
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-22
Matrix: Tissue
Percent Solids: 22.7

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFUnA	119		25 - 150	09/10/20 17:39	09/16/20 14:49	1
13C2 PFDoA	96		25 - 150	09/10/20 17:39	09/16/20 14:49	1
13C2 PFTeDA	63		25 - 150	09/10/20 17:39	09/16/20 14:49	1
13C2 PFHxDA	49		25 - 150	09/10/20 17:39	09/16/20 14:49	1
13C3 PFBS	91		25 - 150	09/10/20 17:39	09/16/20 14:49	1
18O2 PFHxS	109		25 - 150	09/10/20 17:39	09/16/20 14:49	1
13C4 PFOS	113		25 - 150	09/10/20 17:39	09/16/20 14:49	1
13C8 FOSA	91		25 - 150	09/10/20 17:39	09/16/20 14:49	1
d3-NMeFOSAA	118		25 - 150	09/10/20 17:39	09/16/20 14:49	1
d5-NEtFOSAA	126		25 - 150	09/10/20 17:39	09/16/20 14:49	1
d-N-MeFOSA-M	58		25 - 150	09/10/20 17:39	09/16/20 14:49	1
d-N-EtFOSA-M	35		25 - 150	09/10/20 17:39	09/16/20 14:49	1
d7-N-MeFOSE-M	34		10 - 120	09/10/20 17:39	09/16/20 14:49	1
d9-N-EtFOSE-M	23		10 - 120	09/10/20 17:39	09/16/20 14:49	1
M2-4:2 FTS	143		25 - 150	09/10/20 17:39	09/16/20 14:49	1
M2-6:2 FTS	191	*5	25 - 150	09/10/20 17:39	09/16/20 14:49	1
M2-8:2 FTS	258	*5	25 - 150	09/10/20 17:39	09/16/20 14:49	1
13C3 HFPO-DA	89		25 - 150	09/10/20 17:39	09/16/20 14:49	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	150		11	4.4	ug/Kg	☼	09/17/20 12:46	09/25/20 15:52	1
10:2 FTS	2.8	J	4.4	0.57	ug/Kg	☼	09/17/20 12:46	09/25/20 15:52	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	94		25 - 150	09/17/20 12:46	09/25/20 15:52	1
M2-8:2 FTS	286	*5	25 - 150	09/17/20 12:46	09/25/20 15:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	77.3		0.1	0.1	%			09/11/20 13:16	1
Percent Solids	22.7		0.1	0.1	%			09/11/20 13:16	1

Client Sample ID: SW14-BG5
Lab Sample ID: 320-64243-23
Date Collected: 08/27/20 12:30
Matrix: Tissue
Date Received: 09/02/20 09:50
Percent Solids: 18.4

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**2.6**	**J B**	4.0	0.56	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1
Perfluoropentanoic acid (PFPeA)	<4.0		4.0	1.5	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1
Perfluorohexanoic acid (PFHxA)	<4.0		4.0	0.83	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1
Perfluoroheptanoic acid (PFHpA)	<4.0		4.0	0.58	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1
Perfluorooctanoic acid (PFOA)	<4.0		4.0	1.7	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1
Perfluorononanoic acid (PFNA)	**1.1**	**J**	4.0	0.71	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1
Perfluorodecanoic acid (PFDA)	**2.9**	**J**	4.0	0.44	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1
Perfluoroundecanoic acid (PFUnA)	**2.6**	**J**	4.0	0.71	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1
Perfluorododecanoic acid (PFDoA)	<4.0		4.0	1.3	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1
Perfluorotridecanoic acid (PFTriA)	<4.0		4.0	1.0	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1
Perfluorotetradecanoic acid (PFTeA)	<4.0		4.0	1.1	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<4.0		4.0	0.87	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1
Perfluoro-n-octadecanoic acid (PFODA)	<4.0		4.0	0.56	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1
Perfluorobutanesulfonic acid (PFBS)	<4.0		4.0	0.50	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1
Perfluoropentanesulfonic acid (PFPeS)	<4.0		4.0	0.40	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1
Perfluorohexanesulfonic acid (PFHxS)	<16	G	16	16	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1
Perfluoroheptanesulfonic Acid (PFHpS)	<4.0		4.0	0.69	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1
Perfluorononanesulfonic acid (PFNS)	<4.0		4.0	0.40	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1
Perfluorodecanesulfonic acid (PFDS)	<4.0		4.0	0.77	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1
Perfluorododecanesulfonic acid (PFDoS)	<4.0		4.0	1.2	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1
Perfluorooctanesulfonamide (FOSA)	<4.0		4.0	1.6	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1
NEtFOSA	<4.0		4.0	3.8	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1
NMeFOSA	<4.0		4.0	0.64	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<40		40	7.7	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<40		40	7.3	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1
NMeFOSE	<4.0		4.0	1.4	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1
NEtFOSE	<4.0		4.0	0.71	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1
4:2 FTS	<40		40	7.3	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1
6:2 FTS	<40		40	3.0	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1
8:2 FTS	<40		40	5.0	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1
DONA	<4.0		4.0	0.36	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1
HFPO-DA (GenX)	<5.0		5.0	2.2	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1
F-53B Major	<4.0		4.0	1.4	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1
F-53B Minor	<4.0		4.0	0.44	ug/Kg	☼	09/10/20 17:39	09/16/20 15:36	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*91*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:36*	*1*
13C5 PFPeA	*80*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:36*	*1*
13C2 PFHxA	*92*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:36*	*1*
13C4 PFHpA	*100*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:36*	*1*
13C4 PFOA	*93*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:36*	*1*
13C5 PFNA	*105*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:36*	*1*
13C2 PFDA	*123*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:36*	*1*
13C2 PFUnA	*122*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:36*	*1*

Client Sample ID: SW14-BG5
Date Collected: 08/27/20 12:30
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-23
Matrix: Tissue
Percent Solids: 18.4

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDoA	89		25 - 150	09/10/20 17:39	09/16/20 15:36	1
13C2 PFTeDA	38		25 - 150	09/10/20 17:39	09/16/20 15:36	1
13C2 PFHxDA	38		25 - 150	09/10/20 17:39	09/16/20 15:36	1
13C3 PFBS	88		25 - 150	09/10/20 17:39	09/16/20 15:36	1
18O2 PFHxS	109		25 - 150	09/10/20 17:39	09/16/20 15:36	1
13C4 PFOS	117		25 - 150	09/10/20 17:39	09/16/20 15:36	1
13C8 FOSA	104		25 - 150	09/10/20 17:39	09/16/20 15:36	1
d3-NMeFOSAA	110		25 - 150	09/10/20 17:39	09/16/20 15:36	1
d5-NEtFOSAA	126		25 - 150	09/10/20 17:39	09/16/20 15:36	1
d-N-MeFOSA-M	73		25 - 150	09/10/20 17:39	09/16/20 15:36	1
d-N-EtFOSA-M	60		25 - 150	09/10/20 17:39	09/16/20 15:36	1
d7-N-MeFOSE-M	37		10 - 120	09/10/20 17:39	09/16/20 15:36	1
d9-N-EtFOSE-M	27		10 - 120	09/10/20 17:39	09/16/20 15:36	1
M2-4:2 FTS	120		25 - 150	09/10/20 17:39	09/16/20 15:36	1
M2-6:2 FTS	156	*5	25 - 150	09/10/20 17:39	09/16/20 15:36	1
M2-8:2 FTS	221	*5	25 - 150	09/10/20 17:39	09/16/20 15:36	1
13C3 HFPO-DA	88		25 - 150	09/10/20 17:39	09/16/20 15:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 FTS	1.3	J	5.2	0.68	ug/Kg	☼	09/17/20 12:46	09/25/20 16:01	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-8:2 FTS	325	*5	25 - 150	09/17/20 12:46	09/25/20 16:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	<420	G	420	420	ug/Kg	☼	09/17/20 12:46	09/27/20 12:02	10

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	83		25 - 150	09/17/20 12:46	09/27/20 12:02	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	81.6		0.1	0.1	%			09/11/20 13:16	1
Percent Solids	18.4		0.1	0.1	%			09/11/20 13:16	1

Client: ARCADIS U.S., Inc.
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Job ID: 320-64243-1

Client Sample ID: SW14-LB1
Date Collected: 08/26/20 18:30
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-24
Matrix: Tissue
Percent Solids: 20.8

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<42		42	5.9	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10
Perfluoropentanoic acid (PFPeA)	<42		42	16	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10
Perfluorohexanoic acid (PFHxA)	<42		42	8.9	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10
Perfluoroheptanoic acid (PFHpA)	<42		42	6.2	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10
Perfluorooctanoic acid (PFOA)	<42		42	18	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10
Perfluorononanoic acid (PFNA)	**11**	**J**	42	7.6	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10
Perfluorodecanoic acid (PFDA)	**25**	**J**	42	4.7	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10
Perfluoroundecanoic acid (PFUnA)	**14**	**J**	42	7.6	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10
Perfluorododecanoic acid (PFDoA)	<42		42	14	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10
Perfluorotridecanoic acid (PFTriA)	<42		42	11	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10
Perfluorotetradecanoic acid (PFTeA)	<42		42	11	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10
Perfluoro-n-hexadecanoic acid (PFHxDA)	<42		42	9.3	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10
Perfluoro-n-octadecanoic acid (PFODA)	<42		42	5.9	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10
Perfluorobutanesulfonic acid (PFBS)	<42		42	5.3	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10
Perfluoropentanesulfonic acid (PFPeS)	<42		42	4.2	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10
Perfluorohexanesulfonic acid (PFHxS)	<64	G	64	64	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10
Perfluoroheptanesulfonic Acid (PFHpS)	<42		42	7.4	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10
Perfluorononanesulfonic acid (PFNS)	<42		42	4.2	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10
Perfluorodecanesulfonic acid (PFDS)	<42		42	8.3	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10
Perfluorododecanesulfonic acid (PFDoS)	<42		42	13	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10
Perfluorooctanesulfonamide (FOSA)	<42		42	17	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10
NEtFOSA	<42		42	41	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10
NMeFOSA	<42		42	6.8	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<420		420	83	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<420		420	79	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10
NMeFOSE	<42		42	15	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10
NEtFOSE	<42		42	7.6	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10
4:2 FTS	<420		420	79	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10
6:2 FTS	<420		420	32	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10
8:2 FTS	<420		420	53	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10
DONA	<42		42	3.8	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10
HFPO-DA (GenX)	<53		53	23	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10
F-53B Major	<42		42	15	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10
F-53B Minor	<42		42	4.7	ug/Kg	☼	09/10/20 17:39	09/16/20 15:54	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*96*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:54*	*10*
13C5 PFPeA	*87*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:54*	*10*
13C2 PFHxA	*94*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:54*	*10*
13C4 PFHpA	*89*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:54*	*10*
13C4 PFOA	*84*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:54*	*10*
13C5 PFNA	*89*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:54*	*10*
13C2 PFDA	*101*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:54*	*10*
13C2 PFUnA	*98*		*25 - 150*	*09/10/20 17:39*	*09/16/20 15:54*	*10*

Client Sample ID: SW14-LB1
Date Collected: 08/26/20 18:30
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-24
Matrix: Tissue
Percent Solids: 20.8

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDoA	73		25 - 150	09/10/20 17:39	09/16/20 15:54	10
13C2 PFTeDA	37		25 - 150	09/10/20 17:39	09/16/20 15:54	10
13C2 PFHxDA	32		25 - 150	09/10/20 17:39	09/16/20 15:54	10
13C3 PFBS	87		25 - 150	09/10/20 17:39	09/16/20 15:54	10
18O2 PFHxS	98		25 - 150	09/10/20 17:39	09/16/20 15:54	10
13C4 PFOS	95		25 - 150	09/10/20 17:39	09/16/20 15:54	10
13C8 FOSA	84		25 - 150	09/10/20 17:39	09/16/20 15:54	10
d3-NMeFOSAA	96		25 - 150	09/10/20 17:39	09/16/20 15:54	10
d5-NEtFOSAA	109		25 - 150	09/10/20 17:39	09/16/20 15:54	10
d-N-MeFOSA-M	55		25 - 150	09/10/20 17:39	09/16/20 15:54	10
d-N-EtFOSA-M	47		25 - 150	09/10/20 17:39	09/16/20 15:54	10
d7-N-MeFOSE-M	21		10 - 120	09/10/20 17:39	09/16/20 15:54	10
d9-N-EtFOSE-M	23		10 - 120	09/10/20 17:39	09/16/20 15:54	10
M2-4:2 FTS	114		25 - 150	09/10/20 17:39	09/16/20 15:54	10
M2-6:2 FTS	136		25 - 150	09/10/20 17:39	09/16/20 15:54	10
M2-8:2 FTS	158	*5	25 - 150	09/10/20 17:39	09/16/20 15:54	10
13C3 HFPO-DA	85		25 - 150	09/10/20 17:39	09/16/20 15:54	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	950		83	33	ug/Kg	☼	09/17/20 12:46	09/25/20 16:20	10
10:2 FTS	<33		33	4.3	ug/Kg	☼	09/17/20 12:46	09/25/20 16:20	10

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	75		25 - 150	09/17/20 12:46	09/25/20 16:20	10
M2-8:2 FTS	187	*5	25 - 150	09/17/20 12:46	09/25/20 16:20	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	79.2		0.1	0.1	%			09/11/20 14:13	1
Percent Solids	20.8		0.1	0.1	%			09/11/20 14:13	1

Client: ARCADIS U.S., Inc.
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Job ID: 320-64243-1

Client Sample ID: SW14-LB2
Date Collected: 08/26/20 18:30
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-25
Matrix: Tissue
Percent Solids: 21.0

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<40		40	5.6	ug/Kg	☼	09/10/20 17:39	09/27/20 13:54	10
Perfluoropentanoic acid (PFPeA)	<40		40	15	ug/Kg	☼	09/10/20 17:39	09/27/20 13:54	10
Perfluorohexanoic acid (PFHxA)	<40		40	8.4	ug/Kg	☼	09/10/20 17:39	09/27/20 13:54	10
Perfluoroheptanoic acid (PFHpA)	<40		40	5.8	ug/Kg	☼	09/10/20 17:39	09/27/20 13:54	10
Perfluorooctanoic acid (PFOA)	<40		40	17	ug/Kg	☼	09/10/20 17:39	09/27/20 13:54	10
Perfluorononanoic acid (PFNA)	**18**	**J**	40	7.2	ug/Kg	☼	09/10/20 17:39	09/27/20 13:54	10
Perfluorodecanoic acid (PFDA)	**30**	**J**	40	4.4	ug/Kg	☼	09/10/20 17:39	09/27/20 13:54	10
Perfluoroundecanoic acid (PFUnA)	**12**	**J**	40	7.2	ug/Kg	☼	09/10/20 17:39	09/27/20 13:54	10
Perfluorododecanoic acid (PFDoA)	<40		40	13	ug/Kg	☼	09/10/20 17:39	09/27/20 13:54	10
Perfluorotridecanoic acid (PFTriA)	<40		40	10	ug/Kg	☼	09/10/20 17:39	09/27/20 13:54	10
Perfluorotetradecanoic acid (PFTeA)	<40		40	11	ug/Kg	☼	09/10/20 17:39	09/27/20 13:54	10
Perfluorobutanesulfonic acid (PFBS)	<40		40	5.0	ug/Kg	☼	09/10/20 17:39	09/27/20 13:54	10
Perfluoropentanesulfonic acid (PFPeS)	<40		40	4.0	ug/Kg	☼	09/10/20 17:39	09/27/20 13:54	10
Perfluorohexanesulfonic acid (PFHxS)	<20	G	20	20	ug/Kg	☼	09/10/20 17:39	09/27/20 13:54	10
Perfluoroheptanesulfonic Acid (PFHpS)	<40		40	7.0	ug/Kg	☼	09/10/20 17:39	09/27/20 13:54	10
Perfluorononanesulfonic acid (PFNS)	<40		40	4.0	ug/Kg	☼	09/10/20 17:39	09/27/20 13:54	10
Perfluorodecanesulfonic acid (PFDS)	<40		40	7.8	ug/Kg	☼	09/10/20 17:39	09/27/20 13:54	10
Perfluorododecanesulfonic acid (PFDoS)	<40		40	12	ug/Kg	☼	09/10/20 17:39	09/27/20 13:54	10
Perfluorooctanesulfonamide (FOSA)	<40		40	16	ug/Kg	☼	09/10/20 17:39	09/27/20 13:54	10
NEtFOSA	<40		40	38	ug/Kg	☼	09/10/20 17:39	09/27/20 13:54	10
NMeFOSA	<40		40	6.4	ug/Kg	☼	09/10/20 17:39	09/27/20 13:54	10
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<400		400	78	ug/Kg	☼	09/10/20 17:39	09/27/20 13:54	10
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<400		400	74	ug/Kg	☼	09/10/20 17:39	09/27/20 13:54	10
NMeFOSE	<40		40	14	ug/Kg	☼	09/10/20 17:39	09/27/20 13:54	10
NEtFOSE	<40		40	7.2	ug/Kg	☼	09/10/20 17:39	09/27/20 13:54	10
4:2 FTS	<400		400	74	ug/Kg	☼	09/10/20 17:39	09/27/20 13:54	10
6:2 FTS	<400		400	30	ug/Kg	☼	09/10/20 17:39	09/27/20 13:54	10
8:2 FTS	<400		400	50	ug/Kg	☼	09/10/20 17:39	09/27/20 13:54	10
DONA	<40		40	3.6	ug/Kg	☼	09/10/20 17:39	09/27/20 13:54	10
HFPO-DA (GenX)	<50		50	22	ug/Kg	☼	09/10/20 17:39	09/27/20 13:54	10
F-53B Major	<40		40	14	ug/Kg	☼	09/10/20 17:39	09/27/20 13:54	10
F-53B Minor	<40		40	4.4	ug/Kg	☼	09/10/20 17:39	09/27/20 13:54	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*90*		*25 - 150*	*09/10/20 17:39*	*09/27/20 13:54*	*10*
13C5 PFPeA	*93*		*25 - 150*	*09/10/20 17:39*	*09/27/20 13:54*	*10*
13C2 PFHxA	*93*		*25 - 150*	*09/10/20 17:39*	*09/27/20 13:54*	*10*
13C4 PFHpA	*96*		*25 - 150*	*09/10/20 17:39*	*09/27/20 13:54*	*10*
13C4 PFOA	*94*		*25 - 150*	*09/10/20 17:39*	*09/27/20 13:54*	*10*
13C5 PFNA	*100*		*25 - 150*	*09/10/20 17:39*	*09/27/20 13:54*	*10*
13C2 PFDA	*100*		*25 - 150*	*09/10/20 17:39*	*09/27/20 13:54*	*10*
13C2 PFUnA	*83*		*25 - 150*	*09/10/20 17:39*	*09/27/20 13:54*	*10*
13C2 PFDoA	*67*		*25 - 150*	*09/10/20 17:39*	*09/27/20 13:54*	*10*
13C2 PFTeDA	*28*		*25 - 150*	*09/10/20 17:39*	*09/27/20 13:54*	*10*
13C3 PFBS	*100*		*25 - 150*	*09/10/20 17:39*	*09/27/20 13:54*	*10*
18O2 PFHxS	*100*		*25 - 150*	*09/10/20 17:39*	*09/27/20 13:54*	*10*

Client: ARCADIS U.S., Inc.
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Job ID: 320-64243-1

Client Sample ID: SW14-LB2

Date Collected: 08/26/20 18:30
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-25

Matrix: Tissue
Percent Solids: 21.0

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	94		25 - 150	09/10/20 17:39	09/27/20 13:54	10
13C8 FOSA	90		25 - 150	09/10/20 17:39	09/27/20 13:54	10
d3-NMeFOSAA	81		25 - 150	09/10/20 17:39	09/27/20 13:54	10
d5-NEtFOSAA	100		25 - 150	09/10/20 17:39	09/27/20 13:54	10
d-N-MeFOSA-M	47		25 - 150	09/10/20 17:39	09/27/20 13:54	10
d-N-EtFOSA-M	36		25 - 150	09/10/20 17:39	09/27/20 13:54	10
d7-N-MeFOSE-M	21		10 - 120	09/10/20 17:39	09/27/20 13:54	10
d9-N-EtFOSE-M	18		10 - 120	09/10/20 17:39	09/27/20 13:54	10
M2-4:2 FTS	115		25 - 150	09/10/20 17:39	09/27/20 13:54	10
M2-6:2 FTS	137		25 - 150	09/10/20 17:39	09/27/20 13:54	10
M2-8:2 FTS	147		25 - 150	09/10/20 17:39	09/27/20 13:54	10
13C3 HFPO-DA	89		25 - 150	09/10/20 17:39	09/27/20 13:54	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-n-hexadecanoic acid (PFHxDA)	<38		38	8.3	ug/Kg	☼	09/17/20 12:46	09/25/20 16:29	10
Perfluoro-n-octadecanoic acid (PFODA)	<38		38	5.3	ug/Kg	☼	09/17/20 12:46	09/25/20 16:29	10
Perfluorooctanesulfonic acid (PFOS)	**700**		94	38	ug/Kg	☼	09/17/20 12:46	09/25/20 16:29	10
10:2 FTS	<38		38	4.9	ug/Kg	☼	09/17/20 12:46	09/25/20 16:29	10

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxDA	90		25 - 150	09/17/20 12:46	09/25/20 16:29	10
13C4 PFOS	85		25 - 150	09/17/20 12:46	09/25/20 16:29	10
M2-8:2 FTS	186	*5	25 - 150	09/17/20 12:46	09/25/20 16:29	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**79.0**		0.1	0.1	%			09/11/20 13:16	1
Percent Solids	**21.0**		0.1	0.1	%			09/11/20 13:16	1

Client: ARCADIS U.S., Inc.
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Job ID: 320-64243-1

Client Sample ID: SW14-LB3
Date Collected: 08/26/20 18:30
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-26
Matrix: Tissue
Percent Solids: 20.0

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<35		35	4.9	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10
Perfluoropentanoic acid (PFPeA)	<35		35	13	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10
Perfluorohexanoic acid (PFHxA)	<35		35	7.3	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10
Perfluoroheptanoic acid (PFHpA)	<35		35	5.1	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10
Perfluorooctanoic acid (PFOA)	<35		35	15	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10
Perfluorononanoic acid (PFNA)	**8.8**	**J**	35	6.3	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10
Perfluorodecanoic acid (PFDA)	**17**	**J**	35	3.8	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10
Perfluoroundecanoic acid (PFUnA)	**14**	**J**	35	6.3	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10
Perfluorododecanoic acid (PFDoA)	<35		35	12	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10
Perfluorotridecanoic acid (PFTriA)	<35		35	8.9	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10
Perfluorotetradecanoic acid (PFTeA)	<35		35	9.4	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10
Perfluoro-n-hexadecanoic acid (PFHxDA)	<35		35	7.7	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10
Perfluoro-n-octadecanoic acid (PFODA)	<35		35	4.9	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10
Perfluorobutanesulfonic acid (PFBS)	<35		35	4.4	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10
Perfluoropentanesulfonic acid (PFPeS)	<35		35	3.5	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10
Perfluorohexanesulfonic acid (PFHxS)	<52	G	52	52	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10
Perfluoroheptanesulfonic Acid (PFHpS)	<35		35	6.1	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10
Perfluorononanesulfonic acid (PFNS)	<35		35	3.5	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10
Perfluorodecanesulfonic acid (PFDS)	<35		35	6.8	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10
Perfluorododecanesulfonic acid (PFDoS)	<35		35	10	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10
Perfluorooctanesulfonamide (FOSA)	<35		35	14	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10
NEtFOSA	<35		35	34	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10
NMeFOSA	<35		35	5.6	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<350		350	68	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<350		350	65	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10
NMeFOSE	<35		35	12	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10
NEtFOSE	<35		35	6.3	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10
4:2 FTS	<350		350	65	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10
6:2 FTS	<350		350	26	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10
8:2 FTS	<350		350	44	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10
DONA	<35		35	3.1	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10
HFPO-DA (GenX)	<44		44	19	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10
F-53B Major	<35		35	13	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10
F-53B Minor	<35		35	3.8	ug/Kg	☼	09/10/20 17:39	09/16/20 16:13	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*87*		*25 - 150*	*09/10/20 17:39*	*09/16/20 16:13*	*10*
13C5 PFPeA	*83*		*25 - 150*	*09/10/20 17:39*	*09/16/20 16:13*	*10*
13C2 PFHxA	*83*		*25 - 150*	*09/10/20 17:39*	*09/16/20 16:13*	*10*
13C4 PFHpA	*83*		*25 - 150*	*09/10/20 17:39*	*09/16/20 16:13*	*10*
13C4 PFOA	*77*		*25 - 150*	*09/10/20 17:39*	*09/16/20 16:13*	*10*
13C5 PFNA	*90*		*25 - 150*	*09/10/20 17:39*	*09/16/20 16:13*	*10*
13C2 PFDA	*86*		*25 - 150*	*09/10/20 17:39*	*09/16/20 16:13*	*10*
13C2 PFUnA	*85*		*25 - 150*	*09/10/20 17:39*	*09/16/20 16:13*	*10*

Client Sample ID: SW14-LB3
Date Collected: 08/26/20 18:30
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-26
Matrix: Tissue
Percent Solids: 20.0

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDoA	77		25 - 150	09/10/20 17:39	09/16/20 16:13	10
13C2 PFTeDA	47		25 - 150	09/10/20 17:39	09/16/20 16:13	10
13C2 PFHxDA	39		25 - 150	09/10/20 17:39	09/16/20 16:13	10
13C3 PFBS	89		25 - 150	09/10/20 17:39	09/16/20 16:13	10
18O2 PFHxS	92		25 - 150	09/10/20 17:39	09/16/20 16:13	10
13C8 FOSA	76		25 - 150	09/10/20 17:39	09/16/20 16:13	10
d3-NMeFOSAA	85		25 - 150	09/10/20 17:39	09/16/20 16:13	10
d5-NEtFOSAA	94		25 - 150	09/10/20 17:39	09/16/20 16:13	10
d-N-MeFOSA-M	52		25 - 150	09/10/20 17:39	09/16/20 16:13	10
d-N-EtFOSA-M	51		25 - 150	09/10/20 17:39	09/16/20 16:13	10
d7-N-MeFOSE-M	29		10 - 120	09/10/20 17:39	09/16/20 16:13	10
d9-N-EtFOSE-M	26		10 - 120	09/10/20 17:39	09/16/20 16:13	10
M2-4:2 FTS	108		25 - 150	09/10/20 17:39	09/16/20 16:13	10
M2-6:2 FTS	136		25 - 150	09/10/20 17:39	09/16/20 16:13	10
M2-8:2 FTS	135		25 - 150	09/10/20 17:39	09/16/20 16:13	10
13C3 HFPO-DA	78		25 - 150	09/10/20 17:39	09/16/20 16:13	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	430		87	35	ug/Kg	☼	09/17/20 12:46	09/25/20 16:39	10
10:2 FTS	4.7	J	35	4.5	ug/Kg	☼	09/17/20 12:46	09/25/20 16:39	10

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	81		25 - 150	09/17/20 12:46	09/25/20 16:39	10
M2-8:2 FTS	170	*5	25 - 150	09/17/20 12:46	09/25/20 16:39	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	80.0		0.1	0.1	%			09/11/20 13:16	1
Percent Solids	20.0		0.1	0.1	%			09/11/20 13:16	1

Client Sample ID: SW14-LB4

Date Collected: 08/26/20 18:30
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-27

Matrix: Tissue
Percent Solids: 19.5

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<51		51	7.1	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10
Perfluoropentanoic acid (PFPeA)	<51		51	20	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10
Perfluorohexanoic acid (PFHxA)	<51		51	11	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10
Perfluoroheptanoic acid (PFHpA)	<51		51	7.4	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10
Perfluorooctanoic acid (PFOA)	<51		51	22	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10
Perfluorononanoic acid (PFNA)	**9.6**	**J**	51	9.1	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10
Perfluorodecanoic acid (PFDA)	**55**		51	5.6	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10
Perfluoroundecanoic acid (PFUnA)	**83**		51	9.1	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10
Perfluorododecanoic acid (PFDoA)	**28**	**J**	51	17	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10
Perfluorotridecanoic acid (PFTriA)	<51		51	13	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10
Perfluorotetradecanoic acid (PFTeA)	<51		51	14	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10
Perfluoro-n-hexadecanoic acid (PFHxDA)	<51		51	11	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10
Perfluoro-n-octadecanoic acid (PFODA)	<51		51	7.1	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10
Perfluorobutanesulfonic acid (PFBS)	<51		51	6.4	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10
Perfluoropentanesulfonic acid (PFPeS)	<51		51	5.1	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10
Perfluorohexanesulfonic acid (PFHxS)	**7.9**	**J I**	51	7.9	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10
Perfluoroheptanesulfonic Acid (PFHpS)	<51		51	8.9	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10
Perfluorononanesulfonic acid (PFNS)	<51		51	5.1	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10
Perfluorodecanesulfonic acid (PFDS)	<51		51	9.9	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10
Perfluorododecanesulfonic acid (PFDoS)	<51		51	15	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10
Perfluorooctanesulfonamide (FOSA)	<51		51	21	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10
NEtFOSA	<51		51	49	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10
NMeFOSA	<51		51	8.1	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<510		510	99	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<510		510	94	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10
NMeFOSE	<51		51	18	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10
NEtFOSE	<51		51	9.1	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10
4:2 FTS	<510		510	94	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10
6:2 FTS	<510		510	38	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10
8:2 FTS	<510		510	64	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10
DONA	<51		51	4.6	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10
HFPO-DA (GenX)	<64		64	28	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10
F-53B Major	<51		51	18	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10
F-53B Minor	<51		51	5.6	ug/Kg	☼	09/10/20 17:39	09/16/20 16:32	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*90*		*25 - 150*	*09/10/20 17:39*	*09/16/20 16:32*	*10*
13C5 PFPeA	*88*		*25 - 150*	*09/10/20 17:39*	*09/16/20 16:32*	*10*
13C2 PFHxA	*88*		*25 - 150*	*09/10/20 17:39*	*09/16/20 16:32*	*10*
13C4 PFHpA	*84*		*25 - 150*	*09/10/20 17:39*	*09/16/20 16:32*	*10*
13C4 PFOA	*83*		*25 - 150*	*09/10/20 17:39*	*09/16/20 16:32*	*10*
13C5 PFNA	*89*		*25 - 150*	*09/10/20 17:39*	*09/16/20 16:32*	*10*
13C2 PFDA	*86*		*25 - 150*	*09/10/20 17:39*	*09/16/20 16:32*	*10*

Client Sample ID: SW14-LB4
Date Collected: 08/26/20 18:30
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-27
Matrix: Tissue
Percent Solids: 19.5

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFUnA	73		25 - 150	09/10/20 17:39	09/16/20 16:32	10
13C2 PFDoA	59		25 - 150	09/10/20 17:39	09/16/20 16:32	10
13C2 PFTeDA	30		25 - 150	09/10/20 17:39	09/16/20 16:32	10
13C2 PFHxDA	24	*5	25 - 150	09/10/20 17:39	09/16/20 16:32	10
13C3 PFBS	87		25 - 150	09/10/20 17:39	09/16/20 16:32	10
18O2 PFHxS	89		25 - 150	09/10/20 17:39	09/16/20 16:32	10
13C4 PFOS	83		25 - 150	09/10/20 17:39	09/16/20 16:32	10
13C8 FOSA	79		25 - 150	09/10/20 17:39	09/16/20 16:32	10
d3-NMeFOSAA	78		25 - 150	09/10/20 17:39	09/16/20 16:32	10
d5-NEtFOSAA	82		25 - 150	09/10/20 17:39	09/16/20 16:32	10
d-N-MeFOSA-M	53		25 - 150	09/10/20 17:39	09/16/20 16:32	10
d-N-EtFOSA-M	51		25 - 150	09/10/20 17:39	09/16/20 16:32	10
d7-N-MeFOSE-M	28		10 - 120	09/10/20 17:39	09/16/20 16:32	10
d9-N-EtFOSE-M	26		10 - 120	09/10/20 17:39	09/16/20 16:32	10
M2-4:2 FTS	103		25 - 150	09/10/20 17:39	09/16/20 16:32	10
M2-6:2 FTS	128		25 - 150	09/10/20 17:39	09/16/20 16:32	10
M2-8:2 FTS	116		25 - 150	09/10/20 17:39	09/16/20 16:32	10
13C3 HFPO-DA	81		25 - 150	09/10/20 17:39	09/16/20 16:32	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	940		120	47	ug/Kg	☼	09/17/20 12:46	09/25/20 16:48	10
10:2 FTS	14	J	47	6.1	ug/Kg	☼	09/17/20 12:46	09/25/20 16:48	10

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	75		25 - 150	09/17/20 12:46	09/25/20 16:48	10
M2-8:2 FTS	137		25 - 150	09/17/20 12:46	09/25/20 16:48	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	80.5		0.1	0.1	%			09/11/20 13:16	1
Percent Solids	19.5		0.1	0.1	%			09/11/20 13:16	1

Client Sample ID: SW14-LB5
Lab Sample ID: 320-64243-28
Date Collected: 08/26/20 18:30
Matrix: Tissue
Date Received: 09/02/20 09:50
Percent Solids: 19.9

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<41		41	5.8	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
Perfluoropentanoic acid (PFPeA)	<41		41	16	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
Perfluorohexanoic acid (PFHxA)	<41		41	8.7	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
Perfluoroheptanoic acid (PFHpA)	<41		41	6.0	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
Perfluorooctanoic acid (PFOA)	<41		41	18	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
Perfluorononanoic acid (PFNA)	**16**	**J**	41	7.4	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
Perfluorodecanoic acid (PFDA)	**30**	**J**	41	4.5	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
Perfluoroundecanoic acid (PFUnA)	**12**	**J**	41	7.4	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
Perfluorododecanoic acid (PFDoA)	<41		41	14	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
Perfluorotridecanoic acid (PFTriA)	<41		41	11	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
Perfluorotetradecanoic acid (PFTeA)	<41	*	41	11	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
Perfluoro-n-hexadecanoic acid (PFHxDA)	<41		41	9.1	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
Perfluoro-n-octadecanoic acid (PFODA)	<41		41	5.8	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
Perfluorobutanesulfonic acid (PFBS)	<41		41	5.2	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
Perfluoropentanesulfonic acid (PFPeS)	<41	*	41	4.1	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
Perfluorohexanesulfonic acid (PFHxS)	**16**	**J I**	41	6.4	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
Perfluoroheptanesulfonic Acid (PFHpS)	<41		41	7.2	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
Perfluorooctanesulfonic acid (PFOS)	**1100**		100	41	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
Perfluorononanesulfonic acid (PFNS)	<41		41	4.1	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
Perfluorodecanesulfonic acid (PFDS)	<41		41	8.0	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
Perfluorododecanesulfonic acid (PFDoS)	<41		41	12	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
Perfluorooctanesulfonamide (FOSA)	<41		41	17	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
NEtFOSA	<41		41	40	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
NMeFOSA	<41		41	6.6	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<410		410	80	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<410		410	76	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
NMeFOSE	<41		41	14	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
NEtFOSE	<41		41	7.4	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
4:2 FTS	<410		410	76	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
6:2 FTS	<410		410	31	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
8:2 FTS	<410		410	52	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
10:2 FTS	<41		41	5.4	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
DONA	<41		41	3.7	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
HFPO-DA (GenX)	<52		52	23	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
F-53B Major	<41		41	15	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10
F-53B Minor	<41		41	4.5	ug/Kg	☼	09/17/20 12:46	09/25/20 17:16	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*81*		*25 - 150*	*09/17/20 12:46*	*09/25/20 17:16*	*10*
13C5 PFPeA	*80*		*25 - 150*	*09/17/20 12:46*	*09/25/20 17:16*	*10*
13C2 PFHxA	*87*		*25 - 150*	*09/17/20 12:46*	*09/25/20 17:16*	*10*
13C4 PFHpA	*88*		*25 - 150*	*09/17/20 12:46*	*09/25/20 17:16*	*10*
13C4 PFOA	*86*		*25 - 150*	*09/17/20 12:46*	*09/25/20 17:16*	*10*

Client: ARCADIS U.S., Inc.
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Job ID: 320-64243-1

Client Sample ID: SW14-LB5
Date Collected: 08/26/20 18:30
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-28
Matrix: Tissue
Percent Solids: 19.9

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFNA	94		25 - 150	09/17/20 12:46	09/25/20 17:16	10
13C2 PFDA	100		25 - 150	09/17/20 12:46	09/25/20 17:16	10
13C2 PFUnA	87		25 - 150	09/17/20 12:46	09/25/20 17:16	10
13C2 PFDoA	77		25 - 150	09/17/20 12:46	09/25/20 17:16	10
13C2 PFTeDA	57		25 - 150	09/17/20 12:46	09/25/20 17:16	10
13C2 PFHxDA	38		25 - 150	09/17/20 12:46	09/25/20 17:16	10
13C3 PFBS	82		25 - 150	09/17/20 12:46	09/25/20 17:16	10
18O2 PFHxS	92		25 - 150	09/17/20 12:46	09/25/20 17:16	10
13C4 PFOS	89		25 - 150	09/17/20 12:46	09/25/20 17:16	10
13C8 FOSA	75		25 - 150	09/17/20 12:46	09/25/20 17:16	10
d3-NMeFOSAA	86		25 - 150	09/17/20 12:46	09/25/20 17:16	10
d5-NEtFOSAA	89		25 - 150	09/17/20 12:46	09/25/20 17:16	10
d-N-MeFOSA-M	58		25 - 150	09/17/20 12:46	09/25/20 17:16	10
d-N-EtFOSA-M	53		25 - 150	09/17/20 12:46	09/25/20 17:16	10
d7-N-MeFOSE-M	33		10 - 120	09/17/20 12:46	09/25/20 17:16	10
d9-N-EtFOSE-M	29		10 - 120	09/17/20 12:46	09/25/20 17:16	10
M2-4:2 FTS	98		25 - 150	09/17/20 12:46	09/25/20 17:16	10
M2-6:2 FTS	154	*5	25 - 150	09/17/20 12:46	09/25/20 17:16	10
M2-8:2 FTS	160	*5	25 - 150	09/17/20 12:46	09/25/20 17:16	10
13C3 HFPO-DA	75		25 - 150	09/17/20 12:46	09/25/20 17:16	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	80.1		0.1	0.1	%			09/11/20 13:16	1
Percent Solids	19.9		0.1	0.1	%			09/11/20 13:16	1

Client: ARCADIS U.S., Inc.
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Job ID: 320-64243-1

Client Sample ID: Field Blank 8/26/20 (SW38)

Date Collected: 08/26/20 13:00
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-29

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**0.49**	**J**	1.8	0.31	ng/L		09/03/20 11:41	09/04/20 22:06	1
Perfluoropentanoic acid (PFPeA)	<1.8		1.8	0.44	ng/L		09/03/20 11:41	09/04/20 22:06	1
Perfluorohexanoic acid (PFHxA)	<1.8		1.8	0.52	ng/L		09/03/20 11:41	09/04/20 22:06	1
Perfluoroheptanoic acid (PFHpA)	<1.8		1.8	0.22	ng/L		09/03/20 11:41	09/04/20 22:06	1
Perfluorooctanoic acid (PFOA)	<1.8		1.8	0.76	ng/L		09/03/20 11:41	09/04/20 22:06	1
Perfluorononanoic acid (PFNA)	<1.8		1.8	0.24	ng/L		09/03/20 11:41	09/04/20 22:06	1
Perfluorodecanoic acid (PFDA)	<1.8		1.8	0.28	ng/L		09/03/20 11:41	09/04/20 22:06	1
Perfluoroundecanoic acid (PFUnA)	<1.8		1.8	0.98	ng/L		09/03/20 11:41	09/04/20 22:06	1
Perfluorododecanoic acid (PFDoA)	<1.8		1.8	0.49	ng/L		09/03/20 11:41	09/04/20 22:06	1
Perfluorotridecanoic acid (PFTriA)	<1.8		1.8	1.2	ng/L		09/03/20 11:41	09/04/20 22:06	1
Perfluorotetradecanoic acid (PFTeA)	<1.8		1.8	0.26	ng/L		09/03/20 11:41	09/04/20 22:06	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.8		1.8	0.79	ng/L		09/03/20 11:41	09/04/20 22:06	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.8		1.8	0.41	ng/L		09/03/20 11:41	09/04/20 22:06	1
Perfluorobutanesulfonic acid (PFBS)	<1.8		1.8	0.18	ng/L		09/03/20 11:41	09/04/20 22:06	1
Perfluoropentanesulfonic acid (PFPeS)	<1.8		1.8	0.27	ng/L		09/03/20 11:41	09/04/20 22:06	1
Perfluorohexanesulfonic acid (PFHxS)	**0.35**	**J B**	1.8	0.15	ng/L		09/03/20 11:41	09/04/20 22:06	1
Perfluoroheptanesulfonic Acid (PFHpS)	<1.8		1.8	0.17	ng/L		09/03/20 11:41	09/04/20 22:06	1
Perfluorooctanesulfonic acid (PFOS)	<1.8		1.8	0.48	ng/L		09/03/20 11:41	09/04/20 22:06	1
Perfluorononanesulfonic acid (PFNS)	<1.8		1.8	0.14	ng/L		09/03/20 11:41	09/04/20 22:06	1
Perfluorodecanesulfonic acid (PFDS)	<1.8		1.8	0.28	ng/L		09/03/20 11:41	09/04/20 22:06	1
Perfluorododecanesulfonic acid (PFDoS)	<1.8		1.8	0.40	ng/L		09/03/20 11:41	09/04/20 22:06	1
Perfluorooctanesulfonamide (FOSA)	<1.8		1.8	0.31	ng/L		09/03/20 11:41	09/04/20 22:06	1
NEtFOSA	<1.8		1.8	0.77	ng/L		09/03/20 11:41	09/04/20 22:06	1
NMeFOSA	<1.8		1.8	0.38	ng/L		09/03/20 11:41	09/04/20 22:06	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<18		18	2.8	ng/L		09/03/20 11:41	09/04/20 22:06	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<18		18	1.7	ng/L		09/03/20 11:41	09/04/20 22:06	1
NMeFOSE	<3.6		3.6	1.2	ng/L		09/03/20 11:41	09/04/20 22:06	1
NEtFOSE	<1.8		1.8	0.76	ng/L		09/03/20 11:41	09/04/20 22:06	1
4:2 FTS	<18		18	4.6	ng/L		09/03/20 11:41	09/04/20 22:06	1
6:2 FTS	<18		18	1.8	ng/L		09/03/20 11:41	09/04/20 22:06	1
8:2 FTS	<18		18	1.8	ng/L		09/03/20 11:41	09/04/20 22:06	1
10:2 FTS	<1.8		1.8	0.17	ng/L		09/03/20 11:41	09/04/20 22:06	1
DONA	<1.8		1.8	0.16	ng/L		09/03/20 11:41	09/04/20 22:06	1
HFPO-DA (GenX)	<3.6		3.6	1.3	ng/L		09/03/20 11:41	09/04/20 22:06	1
F-53B Major	<1.8		1.8	0.21	ng/L		09/03/20 11:41	09/04/20 22:06	1
F-53B Minor	<1.8		1.8	0.28	ng/L		09/03/20 11:41	09/04/20 22:06	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*66*		*25 - 150*	*09/03/20 11:41*	*09/04/20 22:06*	*1*
13C5 PFPeA	*66*		*25 - 150*	*09/03/20 11:41*	*09/04/20 22:06*	*1*
13C2 PFHxA	*72*		*25 - 150*	*09/03/20 11:41*	*09/04/20 22:06*	*1*
13C4 PFHpA	*72*		*25 - 150*	*09/03/20 11:41*	*09/04/20 22:06*	*1*
13C4 PFOA	*70*		*25 - 150*	*09/03/20 11:41*	*09/04/20 22:06*	*1*
13C5 PFNA	*76*		*25 - 150*	*09/03/20 11:41*	*09/04/20 22:06*	*1*

Client: ARCADIS U.S., Inc.
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Job ID: 320-64243-1

Client Sample ID: Field Blank 8/26/20 (SW38)
Date Collected: 08/26/20 13:00
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-29
Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	73		25 - 150	09/03/20 11:41	09/04/20 22:06	1
13C2 PFUnA	74		25 - 150	09/03/20 11:41	09/04/20 22:06	1
13C2 PFDoA	70		25 - 150	09/03/20 11:41	09/04/20 22:06	1
13C2 PFTeDA	70		25 - 150	09/03/20 11:41	09/04/20 22:06	1
13C2 PFHxDA	61		25 - 150	09/03/20 11:41	09/04/20 22:06	1
13C3 PFBS	81		25 - 150	09/03/20 11:41	09/04/20 22:06	1
18O2 PFHxS	78		25 - 150	09/03/20 11:41	09/04/20 22:06	1
13C4 PFOS	76		25 - 150	09/03/20 11:41	09/04/20 22:06	1
13C8 FOSA	68		25 - 150	09/03/20 11:41	09/04/20 22:06	1
d3-NMeFOSAA	71		25 - 150	09/03/20 11:41	09/04/20 22:06	1
d5-NEtFOSAA	69		25 - 150	09/03/20 11:41	09/04/20 22:06	1
d-N-MeFOSA-M	45		20 - 150	09/03/20 11:41	09/04/20 22:06	1
d-N-EtFOSA-M	32		20 - 150	09/03/20 11:41	09/04/20 22:06	1
d7-N-MeFOSE-M	19		10 - 120	09/03/20 11:41	09/04/20 22:06	1
d9-N-EtFOSE-M	16		10 - 120	09/03/20 11:41	09/04/20 22:06	1
M2-4:2 FTS	91		25 - 150	09/03/20 11:41	09/04/20 22:06	1
M2-6:2 FTS	80		25 - 150	09/03/20 11:41	09/04/20 22:06	1
M2-8:2 FTS	79		25 - 150	09/03/20 11:41	09/04/20 22:06	1
13C3 HFPO-DA	65		25 - 150	09/03/20 11:41	09/04/20 22:06	1

Client: ARCADIS U.S., Inc.
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Job ID: 320-64243-1

Client Sample ID: Field Blank 8/26/20 (SW37)

Lab Sample ID: 320-64243-30

Date Collected: 08/26/20 15:15
Matrix: Water
Date Received: 09/02/20 09:50

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**0.42**	**J**	1.8	0.31	ng/L		09/03/20 11:41	09/04/20 22:15	1
Perfluoropentanoic acid (PFPeA)	<1.8		1.8	0.43	ng/L		09/03/20 11:41	09/04/20 22:15	1
Perfluorohexanoic acid (PFHxA)	<1.8		1.8	0.51	ng/L		09/03/20 11:41	09/04/20 22:15	1
Perfluoroheptanoic acid (PFHpA)	<1.8		1.8	0.22	ng/L		09/03/20 11:41	09/04/20 22:15	1
Perfluorooctanoic acid (PFOA)	<1.8		1.8	0.75	ng/L		09/03/20 11:41	09/04/20 22:15	1
Perfluorononanoic acid (PFNA)	<1.8		1.8	0.24	ng/L		09/03/20 11:41	09/04/20 22:15	1
Perfluorodecanoic acid (PFDA)	<1.8		1.8	0.28	ng/L		09/03/20 11:41	09/04/20 22:15	1
Perfluoroundecanoic acid (PFUnA)	<1.8		1.8	0.98	ng/L		09/03/20 11:41	09/04/20 22:15	1
Perfluorododecanoic acid (PFDoA)	<1.8		1.8	0.49	ng/L		09/03/20 11:41	09/04/20 22:15	1
Perfluorotridecanoic acid (PFTriA)	<1.8		1.8	1.2	ng/L		09/03/20 11:41	09/04/20 22:15	1
Perfluorotetradecanoic acid (PFTeA)	<1.8		1.8	0.26	ng/L		09/03/20 11:41	09/04/20 22:15	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.8		1.8	0.79	ng/L		09/03/20 11:41	09/04/20 22:15	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.8		1.8	0.41	ng/L		09/03/20 11:41	09/04/20 22:15	1
Perfluorobutanesulfonic acid (PFBS)	<1.8		1.8	0.18	ng/L		09/03/20 11:41	09/04/20 22:15	1
Perfluoropentanesulfonic acid (PFPeS)	<1.8		1.8	0.27	ng/L		09/03/20 11:41	09/04/20 22:15	1
Perfluorohexanesulfonic acid (PFHxS)	**0.31**	**J B**	1.8	0.15	ng/L		09/03/20 11:41	09/04/20 22:15	1
Perfluoroheptanesulfonic Acid (PFHpS)	<1.8		1.8	0.17	ng/L		09/03/20 11:41	09/04/20 22:15	1
Perfluorooctanesulfonic acid (PFOS)	<1.8		1.8	0.48	ng/L		09/03/20 11:41	09/04/20 22:15	1
Perfluorononanesulfonic acid (PFNS)	<1.8		1.8	0.14	ng/L		09/03/20 11:41	09/04/20 22:15	1
Perfluorodecanesulfonic acid (PFDS)	<1.8		1.8	0.28	ng/L		09/03/20 11:41	09/04/20 22:15	1
Perfluorododecanesulfonic acid (PFDoS)	<1.8		1.8	0.40	ng/L		09/03/20 11:41	09/04/20 22:15	1
Perfluorooctanesulfonamide (FOSA)	<1.8		1.8	0.31	ng/L		09/03/20 11:41	09/04/20 22:15	1
NEtFOSA	<1.8		1.8	0.77	ng/L		09/03/20 11:41	09/04/20 22:15	1
NMeFOSA	<1.8		1.8	0.38	ng/L		09/03/20 11:41	09/04/20 22:15	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<18		18	2.8	ng/L		09/03/20 11:41	09/04/20 22:15	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<18		18	1.7	ng/L		09/03/20 11:41	09/04/20 22:15	1
NMeFOSE	<3.5		3.5	1.2	ng/L		09/03/20 11:41	09/04/20 22:15	1
NEtFOSE	<1.8		1.8	0.75	ng/L		09/03/20 11:41	09/04/20 22:15	1
4:2 FTS	<18		18	4.6	ng/L		09/03/20 11:41	09/04/20 22:15	1
6:2 FTS	<18		18	1.8	ng/L		09/03/20 11:41	09/04/20 22:15	1
8:2 FTS	<18		18	1.8	ng/L		09/03/20 11:41	09/04/20 22:15	1
10:2 FTS	<1.8		1.8	0.17	ng/L		09/03/20 11:41	09/04/20 22:15	1
DONA	<1.8		1.8	0.16	ng/L		09/03/20 11:41	09/04/20 22:15	1
HFPO-DA (GenX)	<3.5		3.5	1.3	ng/L		09/03/20 11:41	09/04/20 22:15	1
F-53B Major	<1.8		1.8	0.21	ng/L		09/03/20 11:41	09/04/20 22:15	1
F-53B Minor	<1.8		1.8	0.28	ng/L		09/03/20 11:41	09/04/20 22:15	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*62*		*25 - 150*	*09/03/20 11:41*	*09/04/20 22:15*	*1*
13C5 PFPeA	*67*		*25 - 150*	*09/03/20 11:41*	*09/04/20 22:15*	*1*
13C2 PFHxA	*68*		*25 - 150*	*09/03/20 11:41*	*09/04/20 22:15*	*1*
13C4 PFHpA	*70*		*25 - 150*	*09/03/20 11:41*	*09/04/20 22:15*	*1*
13C4 PFOA	*67*		*25 - 150*	*09/03/20 11:41*	*09/04/20 22:15*	*1*
13C5 PFNA	*73*		*25 - 150*	*09/03/20 11:41*	*09/04/20 22:15*	*1*

Client: ARCADIS U.S., Inc.
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Job ID: 320-64243-1

Client Sample ID: Field Blank 8/26/20 (SW37)
Date Collected: 08/26/20 15:15
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-30
Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	63		25 - 150	09/03/20 11:41	09/04/20 22:15	1
13C2 PFUnA	68		25 - 150	09/03/20 11:41	09/04/20 22:15	1
13C2 PFDoA	66		25 - 150	09/03/20 11:41	09/04/20 22:15	1
13C2 PFTeDA	64		25 - 150	09/03/20 11:41	09/04/20 22:15	1
13C2 PFHxDA	71		25 - 150	09/03/20 11:41	09/04/20 22:15	1
13C3 PFBS	76		25 - 150	09/03/20 11:41	09/04/20 22:15	1
18O2 PFHxS	74		25 - 150	09/03/20 11:41	09/04/20 22:15	1
13C4 PFOS	68		25 - 150	09/03/20 11:41	09/04/20 22:15	1
13C8 FOSA	64		25 - 150	09/03/20 11:41	09/04/20 22:15	1
d3-NMeFOSAA	67		25 - 150	09/03/20 11:41	09/04/20 22:15	1
d5-NEtFOSAA	66		25 - 150	09/03/20 11:41	09/04/20 22:15	1
d-N-MeFOSA-M	43		20 - 150	09/03/20 11:41	09/04/20 22:15	1
d-N-EtFOSA-M	34		20 - 150	09/03/20 11:41	09/04/20 22:15	1
d7-N-MeFOSE-M	20		10 - 120	09/03/20 11:41	09/04/20 22:15	1
d9-N-EtFOSE-M	17		10 - 120	09/03/20 11:41	09/04/20 22:15	1
M2-4:2 FTS	85		25 - 150	09/03/20 11:41	09/04/20 22:15	1
M2-6:2 FTS	76		25 - 150	09/03/20 11:41	09/04/20 22:15	1
M2-8:2 FTS	72		25 - 150	09/03/20 11:41	09/04/20 22:15	1
13C3 HFPO-DA	63		25 - 150	09/03/20 11:41	09/04/20 22:15	1

Client: ARCADIS U.S., Inc.
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Job ID: 320-64243-1

Client Sample ID: Field Blank 8/26/20 (SW14)

Lab Sample ID: 320-64243-31

Date Collected: 08/26/20 17:45
Matrix: Water
Date Received: 09/02/20 09:50

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**0.36**	**J**	1.8	0.31	ng/L		09/03/20 11:41	09/04/20 22:25	1
Perfluoropentanoic acid (PFPeA)	<1.8		1.8	0.44	ng/L		09/03/20 11:41	09/04/20 22:25	1
Perfluorohexanoic acid (PFHxA)	<1.8		1.8	0.52	ng/L		09/03/20 11:41	09/04/20 22:25	1
Perfluoroheptanoic acid (PFHpA)	<1.8		1.8	0.22	ng/L		09/03/20 11:41	09/04/20 22:25	1
Perfluorooctanoic acid (PFOA)	<1.8		1.8	0.75	ng/L		09/03/20 11:41	09/04/20 22:25	1
Perfluorononanoic acid (PFNA)	<1.8		1.8	0.24	ng/L		09/03/20 11:41	09/04/20 22:25	1
Perfluorodecanoic acid (PFDA)	<1.8		1.8	0.28	ng/L		09/03/20 11:41	09/04/20 22:25	1
Perfluoroundecanoic acid (PFUnA)	<1.8		1.8	0.98	ng/L		09/03/20 11:41	09/04/20 22:25	1
Perfluorododecanoic acid (PFDoA)	<1.8		1.8	0.49	ng/L		09/03/20 11:41	09/04/20 22:25	1
Perfluorotridecanoic acid (PFTriA)	<1.8		1.8	1.2	ng/L		09/03/20 11:41	09/04/20 22:25	1
Perfluorotetradecanoic acid (PFTeA)	<1.8		1.8	0.26	ng/L		09/03/20 11:41	09/04/20 22:25	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.8		1.8	0.79	ng/L		09/03/20 11:41	09/04/20 22:25	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.8		1.8	0.41	ng/L		09/03/20 11:41	09/04/20 22:25	1
Perfluorobutanesulfonic acid (PFBS)	<1.8		1.8	0.18	ng/L		09/03/20 11:41	09/04/20 22:25	1
Perfluoropentanesulfonic acid (PFPeS)	<1.8		1.8	0.27	ng/L		09/03/20 11:41	09/04/20 22:25	1
Perfluorohexanesulfonic acid (PFHxS)	**0.29**	**J B**	1.8	0.15	ng/L		09/03/20 11:41	09/04/20 22:25	1
Perfluoroheptanesulfonic Acid (PFHpS)	<1.8		1.8	0.17	ng/L		09/03/20 11:41	09/04/20 22:25	1
Perfluorooctanesulfonic acid (PFOS)	<1.8		1.8	0.48	ng/L		09/03/20 11:41	09/04/20 22:25	1
Perfluorononanesulfonic acid (PFNS)	<1.8		1.8	0.14	ng/L		09/03/20 11:41	09/04/20 22:25	1
Perfluorodecanesulfonic acid (PFDS)	<1.8		1.8	0.28	ng/L		09/03/20 11:41	09/04/20 22:25	1
Perfluorododecanesulfonic acid (PFDoS)	<1.8		1.8	0.40	ng/L		09/03/20 11:41	09/04/20 22:25	1
Perfluorooctanesulfonamide (FOSA)	<1.8		1.8	0.31	ng/L		09/03/20 11:41	09/04/20 22:25	1
NEtFOSA	<1.8		1.8	0.77	ng/L		09/03/20 11:41	09/04/20 22:25	1
NMeFOSA	<1.8		1.8	0.38	ng/L		09/03/20 11:41	09/04/20 22:25	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<18		18	2.8	ng/L		09/03/20 11:41	09/04/20 22:25	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<18		18	1.7	ng/L		09/03/20 11:41	09/04/20 22:25	1
NMeFOSE	<3.6		3.6	1.2	ng/L		09/03/20 11:41	09/04/20 22:25	1
NEtFOSE	<1.8		1.8	0.75	ng/L		09/03/20 11:41	09/04/20 22:25	1
4:2 FTS	<18		18	4.6	ng/L		09/03/20 11:41	09/04/20 22:25	1
6:2 FTS	<18		18	1.8	ng/L		09/03/20 11:41	09/04/20 22:25	1
8:2 FTS	<18		18	1.8	ng/L		09/03/20 11:41	09/04/20 22:25	1
10:2 FTS	<1.8		1.8	0.17	ng/L		09/03/20 11:41	09/04/20 22:25	1
DONA	<1.8		1.8	0.16	ng/L		09/03/20 11:41	09/04/20 22:25	1
HFPO-DA (GenX)	<3.6		3.6	1.3	ng/L		09/03/20 11:41	09/04/20 22:25	1
F-53B Major	<1.8		1.8	0.21	ng/L		09/03/20 11:41	09/04/20 22:25	1
F-53B Minor	<1.8		1.8	0.28	ng/L		09/03/20 11:41	09/04/20 22:25	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*70*		*25 - 150*	*09/03/20 11:41*	*09/04/20 22:25*	*1*
13C5 PFPeA	*72*		*25 - 150*	*09/03/20 11:41*	*09/04/20 22:25*	*1*
13C2 PFHxA	*75*		*25 - 150*	*09/03/20 11:41*	*09/04/20 22:25*	*1*
13C4 PFHpA	*75*		*25 - 150*	*09/03/20 11:41*	*09/04/20 22:25*	*1*
13C4 PFOA	*75*		*25 - 150*	*09/03/20 11:41*	*09/04/20 22:25*	*1*
13C5 PFNA	*79*		*25 - 150*	*09/03/20 11:41*	*09/04/20 22:25*	*1*

Client: ARCADIS U.S., Inc.
Job ID: 320-64243-1
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Client Sample ID: Field Blank 8/26/20 (SW14)
Lab Sample ID: 320-64243-31
Date Collected: 08/26/20 17:45
Matrix: Water
Date Received: 09/02/20 09:50

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	70		25 - 150	09/03/20 11:41	09/04/20 22:25	1
13C2 PFUnA	76		25 - 150	09/03/20 11:41	09/04/20 22:25	1
13C2 PFDoA	74		25 - 150	09/03/20 11:41	09/04/20 22:25	1
13C2 PFTeDA	65		25 - 150	09/03/20 11:41	09/04/20 22:25	1
13C2 PFHxDA	66		25 - 150	09/03/20 11:41	09/04/20 22:25	1
13C3 PFBS	83		25 - 150	09/03/20 11:41	09/04/20 22:25	1
18O2 PFHxS	78		25 - 150	09/03/20 11:41	09/04/20 22:25	1
13C4 PFOS	74		25 - 150	09/03/20 11:41	09/04/20 22:25	1
13C8 FOSA	68		25 - 150	09/03/20 11:41	09/04/20 22:25	1
d3-NMeFOSAA	73		25 - 150	09/03/20 11:41	09/04/20 22:25	1
d5-NEtFOSAA	72		25 - 150	09/03/20 11:41	09/04/20 22:25	1
d-N-MeFOSA-M	46		20 - 150	09/03/20 11:41	09/04/20 22:25	1
d-N-EtFOSA-M	35		20 - 150	09/03/20 11:41	09/04/20 22:25	1
d7-N-MeFOSE-M	20		10 - 120	09/03/20 11:41	09/04/20 22:25	1
d9-N-EtFOSE-M	17		10 - 120	09/03/20 11:41	09/04/20 22:25	1
M2-4:2 FTS	93		25 - 150	09/03/20 11:41	09/04/20 22:25	1
M2-6:2 FTS	83		25 - 150	09/03/20 11:41	09/04/20 22:25	1
M2-8:2 FTS	84		25 - 150	09/03/20 11:41	09/04/20 22:25	1
13C3 HFPO-DA	68		25 - 150	09/03/20 11:41	09/04/20 22:25	1

Client: ARCADIS U.S., Inc.
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Job ID: 320-64243-1

Client Sample ID: Field Blank 8/27/20 (Foil)

Date Collected: 08/27/20 17:30
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-32

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**0.42**	**J**	1.7	0.30	ng/L		09/03/20 11:41	09/04/20 22:34	1
Perfluoropentanoic acid (PFPeA)	<1.7		1.7	0.42	ng/L		09/03/20 11:41	09/04/20 22:34	1
Perfluorohexanoic acid (PFHxA)	<1.7		1.7	0.50	ng/L		09/03/20 11:41	09/04/20 22:34	1
Perfluoroheptanoic acid (PFHpA)	<1.7		1.7	0.22	ng/L		09/03/20 11:41	09/04/20 22:34	1
Perfluorooctanoic acid (PFOA)	<1.7		1.7	0.73	ng/L		09/03/20 11:41	09/04/20 22:34	1
Perfluorononanoic acid (PFNA)	<1.7		1.7	0.23	ng/L		09/03/20 11:41	09/04/20 22:34	1
Perfluorodecanoic acid (PFDA)	<1.7		1.7	0.27	ng/L		09/03/20 11:41	09/04/20 22:34	1
Perfluoroundecanoic acid (PFUnA)	<1.7		1.7	0.95	ng/L		09/03/20 11:41	09/04/20 22:34	1
Perfluorododecanoic acid (PFDoA)	<1.7		1.7	0.47	ng/L		09/03/20 11:41	09/04/20 22:34	1
Perfluorotridecanoic acid (PFTriA)	<1.7		1.7	1.1	ng/L		09/03/20 11:41	09/04/20 22:34	1
Perfluorotetradecanoic acid (PFTeA)	<1.7		1.7	0.25	ng/L		09/03/20 11:41	09/04/20 22:34	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.7		1.7	0.77	ng/L		09/03/20 11:41	09/04/20 22:34	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.7		1.7	0.40	ng/L		09/03/20 11:41	09/04/20 22:34	1
Perfluorobutanesulfonic acid (PFBS)	<1.7		1.7	0.17	ng/L		09/03/20 11:41	09/04/20 22:34	1
Perfluoropentanesulfonic acid (PFPeS)	<1.7		1.7	0.26	ng/L		09/03/20 11:41	09/04/20 22:34	1
Perfluorohexanesulfonic acid (PFHxS)	**0.30**	**J B**	1.7	0.15	ng/L		09/03/20 11:41	09/04/20 22:34	1
Perfluoroheptanesulfonic Acid (PFHpS)	<1.7		1.7	0.16	ng/L		09/03/20 11:41	09/04/20 22:34	1
Perfluorooctanesulfonic acid (PFOS)	<1.7		1.7	0.46	ng/L		09/03/20 11:41	09/04/20 22:34	1
Perfluorononanesulfonic acid (PFNS)	<1.7		1.7	0.14	ng/L		09/03/20 11:41	09/04/20 22:34	1
Perfluorodecanesulfonic acid (PFDS)	<1.7		1.7	0.28	ng/L		09/03/20 11:41	09/04/20 22:34	1
Perfluorododecanesulfonic acid (PFDoS)	<1.7		1.7	0.39	ng/L		09/03/20 11:41	09/04/20 22:34	1
Perfluorooctanesulfonamide (FOSA)	<1.7		1.7	0.30	ng/L		09/03/20 11:41	09/04/20 22:34	1
NEtFOSA	<1.7		1.7	0.75	ng/L		09/03/20 11:41	09/04/20 22:34	1
NMeFOSA	<1.7		1.7	0.37	ng/L		09/03/20 11:41	09/04/20 22:34	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<17		17	2.7	ng/L		09/03/20 11:41	09/04/20 22:34	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<17		17	1.6	ng/L		09/03/20 11:41	09/04/20 22:34	1
NMeFOSE	<3.4		3.4	1.2	ng/L		09/03/20 11:41	09/04/20 22:34	1
NEtFOSE	<1.7		1.7	0.73	ng/L		09/03/20 11:41	09/04/20 22:34	1
4:2 FTS	<17		17	4.5	ng/L		09/03/20 11:41	09/04/20 22:34	1
6:2 FTS	<17		17	1.7	ng/L		09/03/20 11:41	09/04/20 22:34	1
8:2 FTS	<17		17	1.7	ng/L		09/03/20 11:41	09/04/20 22:34	1
10:2 FTS	<1.7		1.7	0.16	ng/L		09/03/20 11:41	09/04/20 22:34	1
DONA	<1.7		1.7	0.15	ng/L		09/03/20 11:41	09/04/20 22:34	1
HFPO-DA (GenX)	<3.4		3.4	1.3	ng/L		09/03/20 11:41	09/04/20 22:34	1
F-53B Major	<1.7		1.7	0.21	ng/L		09/03/20 11:41	09/04/20 22:34	1
F-53B Minor	<1.7		1.7	0.28	ng/L		09/03/20 11:41	09/04/20 22:34	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*73*		*25 - 150*	*09/03/20 11:41*	*09/04/20 22:34*	*1*
13C5 PFPeA	*74*		*25 - 150*	*09/03/20 11:41*	*09/04/20 22:34*	*1*
13C2 PFHxA	*78*		*25 - 150*	*09/03/20 11:41*	*09/04/20 22:34*	*1*
13C4 PFHpA	*78*		*25 - 150*	*09/03/20 11:41*	*09/04/20 22:34*	*1*
13C4 PFOA	*79*		*25 - 150*	*09/03/20 11:41*	*09/04/20 22:34*	*1*
13C5 PFNA	*85*		*25 - 150*	*09/03/20 11:41*	*09/04/20 22:34*	*1*

Client: ARCADIS U.S., Inc.
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Job ID: 320-64243-1

Client Sample ID: Field Blank 8/27/20 (Foil)
Date Collected: 08/27/20 17:30
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-32
Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	74		25 - 150	09/03/20 11:41	09/04/20 22:34	1
13C2 PFUnA	74		25 - 150	09/03/20 11:41	09/04/20 22:34	1
13C2 PFDoA	76		25 - 150	09/03/20 11:41	09/04/20 22:34	1
13C2 PFTeDA	69		25 - 150	09/03/20 11:41	09/04/20 22:34	1
13C2 PFHxDA	76		25 - 150	09/03/20 11:41	09/04/20 22:34	1
13C3 PFBS	85		25 - 150	09/03/20 11:41	09/04/20 22:34	1
18O2 PFHxS	84		25 - 150	09/03/20 11:41	09/04/20 22:34	1
13C4 PFOS	78		25 - 150	09/03/20 11:41	09/04/20 22:34	1
13C8 FOSA	73		25 - 150	09/03/20 11:41	09/04/20 22:34	1
d3-NMeFOSAA	76		25 - 150	09/03/20 11:41	09/04/20 22:34	1
d5-NEtFOSAA	73		25 - 150	09/03/20 11:41	09/04/20 22:34	1
d-N-MeFOSA-M	47		20 - 150	09/03/20 11:41	09/04/20 22:34	1
d-N-EtFOSA-M	33		20 - 150	09/03/20 11:41	09/04/20 22:34	1
d7-N-MeFOSE-M	19		10 - 120	09/03/20 11:41	09/04/20 22:34	1
d9-N-EtFOSE-M	17		10 - 120	09/03/20 11:41	09/04/20 22:34	1
M2-4:2 FTS	94		25 - 150	09/03/20 11:41	09/04/20 22:34	1
M2-6:2 FTS	88		25 - 150	09/03/20 11:41	09/04/20 22:34	1
M2-8:2 FTS	85		25 - 150	09/03/20 11:41	09/04/20 22:34	1
13C3 HFPO-DA	73		25 - 150	09/03/20 11:41	09/04/20 22:34	1

Client: ARCADIS U.S., Inc.
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Job ID: 320-64243-1

Client Sample ID: Field Blank 8/27/20 (Ziploc)

Lab Sample ID: 320-64243-33

Date Collected: 08/27/20 17:30
Matrix: Water
Date Received: 09/02/20 09:50

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**0.48**	**J**	1.8	0.32	ng/L		09/03/20 11:41	09/04/20 23:02	1
Perfluoropentanoic acid (PFPeA)	<1.8		1.8	0.44	ng/L		09/03/20 11:41	09/04/20 23:02	1
Perfluorohexanoic acid (PFHxA)	<1.8		1.8	0.53	ng/L		09/03/20 11:41	09/04/20 23:02	1
Perfluoroheptanoic acid (PFHpA)	<1.8		1.8	0.23	ng/L		09/03/20 11:41	09/04/20 23:02	1
Perfluorooctanoic acid (PFOA)	<1.8		1.8	0.77	ng/L		09/03/20 11:41	09/04/20 23:02	1
Perfluorononanoic acid (PFNA)	<1.8		1.8	0.24	ng/L		09/03/20 11:41	09/04/20 23:02	1
Perfluorodecanoic acid (PFDA)	<1.8		1.8	0.28	ng/L		09/03/20 11:41	09/04/20 23:02	1
Perfluoroundecanoic acid (PFUnA)	<1.8		1.8	1.0	ng/L		09/03/20 11:41	09/04/20 23:02	1
Perfluorododecanoic acid (PFDoA)	<1.8		1.8	0.50	ng/L		09/03/20 11:41	09/04/20 23:02	1
Perfluorotridecanoic acid (PFTriA)	<1.8		1.8	1.2	ng/L		09/03/20 11:41	09/04/20 23:02	1
Perfluorotetradecanoic acid (PFTeA)	<1.8		1.8	0.26	ng/L		09/03/20 11:41	09/04/20 23:02	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.8		1.8	0.81	ng/L		09/03/20 11:41	09/04/20 23:02	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.8		1.8	0.42	ng/L		09/03/20 11:41	09/04/20 23:02	1
Perfluorobutanesulfonic acid (PFBS)	<1.8		1.8	0.18	ng/L		09/03/20 11:41	09/04/20 23:02	1
Perfluoropentanesulfonic acid (PFPeS)	<1.8		1.8	0.27	ng/L		09/03/20 11:41	09/04/20 23:02	1
Perfluorohexanesulfonic acid (PFHxS)	**0.33**	**J B**	1.8	0.15	ng/L		09/03/20 11:41	09/04/20 23:02	1
Perfluoroheptanesulfonic Acid (PFHpS)	<1.8		1.8	0.17	ng/L		09/03/20 11:41	09/04/20 23:02	1
Perfluorooctanesulfonic acid (PFOS)	<1.8		1.8	0.49	ng/L		09/03/20 11:41	09/04/20 23:02	1
Perfluorononanesulfonic acid (PFNS)	<1.8		1.8	0.15	ng/L		09/03/20 11:41	09/04/20 23:02	1
Perfluorodecanesulfonic acid (PFDS)	<1.8		1.8	0.29	ng/L		09/03/20 11:41	09/04/20 23:02	1
Perfluorododecanesulfonic acid (PFDoS)	<1.8		1.8	0.41	ng/L		09/03/20 11:41	09/04/20 23:02	1
Perfluorooctanesulfonamide (FOSA)	<1.8		1.8	0.32	ng/L		09/03/20 11:41	09/04/20 23:02	1
NEtFOSA	<1.8		1.8	0.79	ng/L		09/03/20 11:41	09/04/20 23:02	1
NMeFOSA	<1.8		1.8	0.39	ng/L		09/03/20 11:41	09/04/20 23:02	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<18		18	2.8	ng/L		09/03/20 11:41	09/04/20 23:02	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<18		18	1.7	ng/L		09/03/20 11:41	09/04/20 23:02	1
NMeFOSE	<3.6		3.6	1.3	ng/L		09/03/20 11:41	09/04/20 23:02	1
NEtFOSE	<1.8		1.8	0.77	ng/L		09/03/20 11:41	09/04/20 23:02	1
4:2 FTS	<18		18	4.7	ng/L		09/03/20 11:41	09/04/20 23:02	1
6:2 FTS	<18		18	1.8	ng/L		09/03/20 11:41	09/04/20 23:02	1
8:2 FTS	<18		18	1.8	ng/L		09/03/20 11:41	09/04/20 23:02	1
10:2 FTS	<1.8		1.8	0.17	ng/L		09/03/20 11:41	09/04/20 23:02	1
DONA	<1.8		1.8	0.16	ng/L		09/03/20 11:41	09/04/20 23:02	1
HFPO-DA (GenX)	<3.6		3.6	1.4	ng/L		09/03/20 11:41	09/04/20 23:02	1
F-53B Major	<1.8		1.8	0.22	ng/L		09/03/20 11:41	09/04/20 23:02	1
F-53B Minor	<1.8		1.8	0.29	ng/L		09/03/20 11:41	09/04/20 23:02	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*71*		*25 - 150*	*09/03/20 11:41*	*09/04/20 23:02*	*1*
13C5 PFPeA	*71*		*25 - 150*	*09/03/20 11:41*	*09/04/20 23:02*	*1*
13C2 PFHxA	*73*		*25 - 150*	*09/03/20 11:41*	*09/04/20 23:02*	*1*
13C4 PFHpA	*74*		*25 - 150*	*09/03/20 11:41*	*09/04/20 23:02*	*1*
13C4 PFOA	*75*		*25 - 150*	*09/03/20 11:41*	*09/04/20 23:02*	*1*
13C5 PFNA	*77*		*25 - 150*	*09/03/20 11:41*	*09/04/20 23:02*	*1*

Client: ARCADIS U.S., Inc.
Job ID: 320-64243-1
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Client Sample ID: Field Blank 8/27/20 (Ziploc)
Lab Sample ID: 320-64243-33
Date Collected: 08/27/20 17:30
Matrix: Water
Date Received: 09/02/20 09:50

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	73		25 - 150	09/03/20 11:41	09/04/20 23:02	1
13C2 PFUnA	72		25 - 150	09/03/20 11:41	09/04/20 23:02	1
13C2 PFDoA	77		25 - 150	09/03/20 11:41	09/04/20 23:02	1
13C2 PFTeDA	67		25 - 150	09/03/20 11:41	09/04/20 23:02	1
13C2 PFHxDA	67		25 - 150	09/03/20 11:41	09/04/20 23:02	1
13C3 PFBS	84		25 - 150	09/03/20 11:41	09/04/20 23:02	1
18O2 PFHxS	78		25 - 150	09/03/20 11:41	09/04/20 23:02	1
13C4 PFOS	79		25 - 150	09/03/20 11:41	09/04/20 23:02	1
13C8 FOSA	69		25 - 150	09/03/20 11:41	09/04/20 23:02	1
d3-NMeFOSAA	75		25 - 150	09/03/20 11:41	09/04/20 23:02	1
d5-NEtFOSAA	75		25 - 150	09/03/20 11:41	09/04/20 23:02	1
d-N-MeFOSA-M	50		20 - 150	09/03/20 11:41	09/04/20 23:02	1
d-N-EtFOSA-M	43		20 - 150	09/03/20 11:41	09/04/20 23:02	1
d7-N-MeFOSE-M	30		10 - 120	09/03/20 11:41	09/04/20 23:02	1
d9-N-EtFOSE-M	24		10 - 120	09/03/20 11:41	09/04/20 23:02	1
M2-4:2 FTS	92		25 - 150	09/03/20 11:41	09/04/20 23:02	1
M2-6:2 FTS	85		25 - 150	09/03/20 11:41	09/04/20 23:02	1
M2-8:2 FTS	134		25 - 150	09/03/20 11:41	09/04/20 23:02	1
13C3 HFPO-DA	69		25 - 150	09/03/20 11:41	09/04/20 23:02	1

Client: ARCADIS U.S., Inc.
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Job ID: 320-64243-1

Client Sample ID: Field Blank 8/27/20 (SW38)

Lab Sample ID: 320-64243-34

Date Collected: 08/27/20 15:30
Matrix: Water
Date Received: 09/02/20 09:50

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<1.8		1.8	0.31	ng/L		09/03/20 11:41	09/04/20 23:12	1
Perfluoropentanoic acid (PFPeA)	<1.8		1.8	0.44	ng/L		09/03/20 11:41	09/04/20 23:12	1
Perfluorohexanoic acid (PFHxA)	<1.8		1.8	0.52	ng/L		09/03/20 11:41	09/04/20 23:12	1
Perfluoroheptanoic acid (PFHpA)	<1.8		1.8	0.22	ng/L		09/03/20 11:41	09/04/20 23:12	1
Perfluorooctanoic acid (PFOA)	<1.8		1.8	0.76	ng/L		09/03/20 11:41	09/04/20 23:12	1
Perfluorononanoic acid (PFNA)	<1.8		1.8	0.24	ng/L		09/03/20 11:41	09/04/20 23:12	1
Perfluorodecanoic acid (PFDA)	<1.8		1.8	0.28	ng/L		09/03/20 11:41	09/04/20 23:12	1
Perfluoroundecanoic acid (PFUnA)	<1.8		1.8	0.98	ng/L		09/03/20 11:41	09/04/20 23:12	1
Perfluorododecanoic acid (PFDoA)	<1.8		1.8	0.49	ng/L		09/03/20 11:41	09/04/20 23:12	1
Perfluorotridecanoic acid (PFTriA)	<1.8		1.8	1.2	ng/L		09/03/20 11:41	09/04/20 23:12	1
Perfluorotetradecanoic acid (PFTeA)	<1.8		1.8	0.26	ng/L		09/03/20 11:41	09/04/20 23:12	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.8		1.8	0.79	ng/L		09/03/20 11:41	09/04/20 23:12	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.8		1.8	0.41	ng/L		09/03/20 11:41	09/04/20 23:12	1
Perfluorobutanesulfonic acid (PFBS)	<1.8		1.8	0.18	ng/L		09/03/20 11:41	09/04/20 23:12	1
Perfluoropentanesulfonic acid (PFPeS)	<1.8		1.8	0.27	ng/L		09/03/20 11:41	09/04/20 23:12	1
Perfluorohexanesulfonic acid (PFHxS)	**0.25**	**J I B**	1.8	0.15	ng/L		09/03/20 11:41	09/04/20 23:12	1
Perfluoroheptanesulfonic Acid (PFHpS)	<1.8		1.8	0.17	ng/L		09/03/20 11:41	09/04/20 23:12	1
Perfluorooctanesulfonic acid (PFOS)	<1.8		1.8	0.48	ng/L		09/03/20 11:41	09/04/20 23:12	1
Perfluorononanesulfonic acid (PFNS)	<1.8		1.8	0.14	ng/L		09/03/20 11:41	09/04/20 23:12	1
Perfluorodecanesulfonic acid (PFDS)	<1.8		1.8	0.29	ng/L		09/03/20 11:41	09/04/20 23:12	1
Perfluorododecanesulfonic acid (PFDoS)	<1.8		1.8	0.40	ng/L		09/03/20 11:41	09/04/20 23:12	1
Perfluorooctanesulfonamide (FOSA)	<1.8		1.8	0.31	ng/L		09/03/20 11:41	09/04/20 23:12	1
NEtFOSA	<1.8		1.8	0.78	ng/L		09/03/20 11:41	09/04/20 23:12	1
NMeFOSA	<1.8		1.8	0.38	ng/L		09/03/20 11:41	09/04/20 23:12	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<18		18	2.8	ng/L		09/03/20 11:41	09/04/20 23:12	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<18		18	1.7	ng/L		09/03/20 11:41	09/04/20 23:12	1
NMeFOSE	<3.6		3.6	1.2	ng/L		09/03/20 11:41	09/04/20 23:12	1
NEtFOSE	<1.8		1.8	0.76	ng/L		09/03/20 11:41	09/04/20 23:12	1
4:2 FTS	<18		18	4.6	ng/L		09/03/20 11:41	09/04/20 23:12	1
6:2 FTS	<18		18	1.8	ng/L		09/03/20 11:41	09/04/20 23:12	1
8:2 FTS	<18		18	1.8	ng/L		09/03/20 11:41	09/04/20 23:12	1
10:2 FTS	<1.8		1.8	0.17	ng/L		09/03/20 11:41	09/04/20 23:12	1
DONA	<1.8		1.8	0.16	ng/L		09/03/20 11:41	09/04/20 23:12	1
HFPO-DA (GenX)	<3.6		3.6	1.3	ng/L		09/03/20 11:41	09/04/20 23:12	1
F-53B Major	<1.8		1.8	0.21	ng/L		09/03/20 11:41	09/04/20 23:12	1
F-53B Minor	<1.8		1.8	0.29	ng/L		09/03/20 11:41	09/04/20 23:12	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*87*		*25 - 150*	*09/03/20 11:41*	*09/04/20 23:12*	*1*
13C5 PFPeA	*90*		*25 - 150*	*09/03/20 11:41*	*09/04/20 23:12*	*1*
13C2 PFHxA	*94*		*25 - 150*	*09/03/20 11:41*	*09/04/20 23:12*	*1*
13C4 PFHpA	*95*		*25 - 150*	*09/03/20 11:41*	*09/04/20 23:12*	*1*
13C4 PFOA	*95*		*25 - 150*	*09/03/20 11:41*	*09/04/20 23:12*	*1*
13C5 PFNA	*99*		*25 - 150*	*09/03/20 11:41*	*09/04/20 23:12*	*1*

Client: ARCADIS U.S., Inc.
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Job ID: 320-64243-1

Client Sample ID: Field Blank 8/27/20 (SW38)
Date Collected: 08/27/20 15:30
Date Received: 09/02/20 09:50

Lab Sample ID: 320-64243-34
Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	87		25 - 150	09/03/20 11:41	09/04/20 23:12	1
13C2 PFUnA	90		25 - 150	09/03/20 11:41	09/04/20 23:12	1
13C2 PFDoA	88		25 - 150	09/03/20 11:41	09/04/20 23:12	1
13C2 PFTeDA	83		25 - 150	09/03/20 11:41	09/04/20 23:12	1
13C2 PFHxDA	89		25 - 150	09/03/20 11:41	09/04/20 23:12	1
13C3 PFBS	103		25 - 150	09/03/20 11:41	09/04/20 23:12	1
18O2 PFHxS	99		25 - 150	09/03/20 11:41	09/04/20 23:12	1
13C4 PFOS	94		25 - 150	09/03/20 11:41	09/04/20 23:12	1
13C8 FOSA	88		25 - 150	09/03/20 11:41	09/04/20 23:12	1
d3-NMeFOSAA	94		25 - 150	09/03/20 11:41	09/04/20 23:12	1
d5-NEtFOSAA	95		25 - 150	09/03/20 11:41	09/04/20 23:12	1
d-N-MeFOSA-M	57		20 - 150	09/03/20 11:41	09/04/20 23:12	1
d-N-EtFOSA-M	43		20 - 150	09/03/20 11:41	09/04/20 23:12	1
d7-N-MeFOSE-M	28		10 - 120	09/03/20 11:41	09/04/20 23:12	1
d9-N-EtFOSE-M	22		10 - 120	09/03/20 11:41	09/04/20 23:12	1
M2-4:2 FTS	123		25 - 150	09/03/20 11:41	09/04/20 23:12	1
M2-6:2 FTS	103		25 - 150	09/03/20 11:41	09/04/20 23:12	1
M2-8:2 FTS	100		25 - 150	09/03/20 11:41	09/04/20 23:12	1
13C3 HFPO-DA	86		25 - 150	09/03/20 11:41	09/04/20 23:12	1

Isotope Dilution Summary

Client: ARCADIS U.S., Inc.
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Job ID: 320-64243-1

Method: 537 (modified) - Fluorinated Alkyl Substances

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

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	M282FTS (25-150)							
320-64243-1 - DL	SW38-YP1	119							
320-64243-3 - DL	SW38-YP3	96							
320-64243-4 - DL	SW38-YP4	83							
320-64243-6 - DL	SW38-GS1	106							
320-64243-8 - DL	SW37-YP2	98							
320-64243-9 - DL	SW37-PS1	107							
320-64243-10 - DL	SW37-PS2	113							
320-64243-13 - DL	SW37-PS5	106							
320-64243-23 - RE	SW14-BG5	325 *5							

Surrogate Legend

M282FTS = M2-8:2 FTS

Method: 537 (modified) - Fluorinated Alkyl Substances

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

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFUnA (25-150)
320-64243-1	SW38-YP1	93	91	91	93	88	94	91	96
320-64243-2	SW38-YP2	47	57	88	107	87	108	101	92
320-64243-3	SW38-YP3	78	79	94	103	84	103	104	107
320-64243-4	SW38-YP4	87	81	101	113	88	104	120	128
320-64243-5 - DL	SW38-YP5								
320-64243-5	SW38-YP5	95	86	99	108	95	102	117	112
320-64243-6	SW38-GS1	99	88	101	98	92	101	97	96
320-64243-7	SW37-YP1	103	93	98	107	86	89	113	117
320-64243-7 - DL	SW37-YP1								
320-64243-7 DU	SW37-YP1	105	91	96	105	93	97	126	124
320-64243-7 DU - DL	SW37-YP1								
320-64243-8	SW37-YP2	74	72	99	107	89	119	120	126
320-64243-9	SW37-PS1	105	92	114	115	92	97	121	133
320-64243-10	SW37-PS2	104	96	109	114	93	96	118	122
320-64243-11	SW37-PS3	106	95	112	114	94	101	138	137
320-64243-11 - DL	SW37-PS3								
320-64243-12	SW37-PS4	71	67	88	94	88	91	100	104
320-64243-12 - DL	SW37-PS4								
320-64243-13	SW37-PS5	91	89	96	96	91	92	90	83
320-64243-14 - DL	SW14-YP1								
320-64243-14	SW14-YP1	110	97	110	115	90	102	121	117
320-64243-15	SW14-YP2	89	82	89	93	90	104	99	88
320-64243-15 - RE	SW14-YP2								
320-64243-16	SW14-YP3	68	63	71	70	68	77	70	72
320-64243-16 - RE	SW14-YP3								
320-64243-17	SW14-YP4	78	71	79	91	91	102	105	108
320-64243-17 - RE	SW14-YP4								
320-64243-18	SW14-YP5	91	79	86	95	90	103	107	93
320-64243-18 - RE	SW14-YP5								
320-64243-19	SW14-BG1	107	89	101	100	92	112	120	113
320-64243-19 - RE	SW14-BG1								

Isotope Dilution Summary

Client: ARCADIS U.S., Inc. Job ID: 320-64243-1
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

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

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

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFUnA (25-150)
320-64243-20	SW14-BG2	91	77	94	93	89	113	119	114
320-64243-20 - RE	SW14-BG2								
320-64243-21	SW14-BG3	96	79	93	97	92	107	119	114
320-64243-21 - RE	SW14-BG3								
320-64243-22	SW14-BG4	95	80	102	98	93	114	124	119
320-64243-22 - RE	SW14-BG4								
320-64243-23	SW14-BG5	91	80	92	100	93	105	123	122
320-64243-24	SW14-LB1	96	87	94	89	84	89	101	98
320-64243-24 - RE	SW14-LB1								
320-64243-25 - RE	SW14-LB2								
320-64243-25	SW14-LB2	90	93	93	96	94	100	100	83
320-64243-26	SW14-LB3	87	83	83	83	77	90	86	85
320-64243-26 - RE	SW14-LB3								
320-64243-27	SW14-LB4	90	88	88	84	83	89	86	73
320-64243-27 - RE	SW14-LB4								
320-64243-28	SW14-LB5	81	80	87	88	86	94	100	87
320-64243-28 DU	SW14-LB5	68	75	81	84	86	91	95	87
LCS 320-411223/2-A	Lab Control Sample	95	93	96	99	96	94	95	97
LCS 320-411238/2-A	Lab Control Sample	91	95	91	96	89	91	90	93
LCS 320-413207/2-A	Lab Control Sample	76	76	83	84	87	93	91	101
LCSD 320-411223/3-A	Lab Control Sample Dup	86	88	94	93	96	103	102	101
LCSD 320-411238/3-A	Lab Control Sample Dup	97	92	97	98	96	101	100	100
LCSD 320-413207/3-A	Lab Control Sample Dup	75	77	84	86	89	95	94	101
MB 320-411223/1-A	Method Blank	96	96	93	94	92	93	94	80
MB 320-411238/1-A	Method Blank	95	97	94	95	92	88	88	95
MB 320-413207/1-A	Method Blank	53	54	58	59	59	61	65	64

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFDoA (25-150)	PFTDA (25-150)	PFHxDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (25-150)	d3NMFOS (25-150)
320-64243-1	SW38-YP1	68	35	31	93	99	96	79	90
320-64243-2	SW38-YP2	62	23 *5	23 *5	75	113	106	96	100
320-64243-3	SW38-YP3	74	42	46	88	111	104	83	95
320-64243-4	SW38-YP4	98	53	55	97	123	114	100	123
320-64243-5 - DL	SW38-YP5								
320-64243-5	SW38-YP5	93	63	52	107	117	110	85	113
320-64243-6	SW38-GS1	89	52	49	103	109	103	91	107
320-64243-7	SW37-YP1	97	58	45	106	109	99	92	117
320-64243-7 - DL	SW37-YP1						98		
320-64243-7 DU	SW37-YP1	105	59	57	102	119	109	103	120
320-64243-7 DU - DL	SW37-YP1						100		
320-64243-8	SW37-YP2	112	60	57	92	117	113	96	111
320-64243-9	SW37-PS1	100	34	30	101	119	113	99	123
320-64243-10	SW37-PS2	87	59	51	108	121	110	92	119
320-64243-11	SW37-PS3	117	88	104	108	129	118	112	147
320-64243-11 - DL	SW37-PS3						93		
320-64243-12	SW37-PS4	95	67	83	85	109	106	62	112
320-64243-12 - DL	SW37-PS4						94		
320-64243-13	SW37-PS5	69	47	45	99	100	96	73	89
320-64243-14 - DL	SW14-YP1								
320-64243-14	SW14-YP1	106	54	47	110	119	106	94	117

Isotope Dilution Summary

Client: ARCADIS U.S., Inc. Job ID: 320-64243-1
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

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

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

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFDoA (25-150)	PFTDA (25-150)	PFHxDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (25-150)	d3NMFOS (25-150)
320-64243-15	SW14-YP2	63	30	28	92	106	96	83	100
320-64243-15 - RE	SW14-YP2						97		
320-64243-16	SW14-YP3	46	13 *5		77	76	74	75	74
320-64243-16 - RE	SW14-YP3			23 *5			88		
320-64243-17	SW14-YP4	79	15 *5		80	98	100	101	109
320-64243-17 - RE	SW14-YP4			29					
320-64243-18	SW14-YP5	67	20 *5	23 *5	90	111	101	106	102
320-64243-18 - RE	SW14-YP5						112		
320-64243-19	SW14-BG1	81	16 *5		100	114	116	112	117
320-64243-19 - RE	SW14-BG1			55			98		
320-64243-20	SW14-BG2	80	41	35	94	108	119	82	121
320-64243-20 - RE	SW14-BG2						97		
320-64243-21	SW14-BG3	99	68	69	89	112	112	98	114
320-64243-21 - RE	SW14-BG3						94		
320-64243-22	SW14-BG4	96	63	49	91	109	113	91	118
320-64243-22 - RE	SW14-BG4						94		
320-64243-23	SW14-BG5	89	38	38	88	109	117	104	110
320-64243-24	SW14-LB1	73	37	32	87	98	95	84	96
320-64243-24 - RE	SW14-LB1						75		
320-64243-25 - RE	SW14-LB2			90			85		
320-64243-25	SW14-LB2	67	28		100	100	94	90	81
320-64243-26	SW14-LB3	77	47	39	89	92		76	85
320-64243-26 - RE	SW14-LB3						81		
320-64243-27	SW14-LB4	59	30	24 *5	87	89	83	79	78
320-64243-27 - RE	SW14-LB4						75		
320-64243-28	SW14-LB5	77	57	38	82	92	89	75	86
320-64243-28 DU	SW14-LB5	84	72	57	75	83	81	76	76
LCS 320-411223/2-A	Lab Control Sample	91	69	84	101	100	99	90	98
LCS 320-411238/2-A	Lab Control Sample	86	82	88	96	96	91	90	109
LCS 320-413207/2-A	Lab Control Sample	101	92	80	79	86	86	81	114
LCSD 320-411223/3-A	Lab Control Sample Dup	96	90	89	91	98	96	102	128
LCSD 320-411238/3-A	Lab Control Sample Dup	91	74	89	100	99	96	89	110
LCSD 320-413207/3-A	Lab Control Sample Dup	97	85	88	80	87	88	78	109
MB 320-411223/1-A	Method Blank	74	59	75	97	96	96	79	104
MB 320-411238/1-A	Method Blank	86	80	98	99	99	93	86	80
MB 320-413207/1-A	Method Blank	66	61	53	58	60	59	58	74

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	d5NEFOS (25-150)	dMeFOSA (25-150)	dEtFOSA (25-150)	NMFM (10-120)	NEFM (10-120)	M242FTS (25-150)	M262FTS (25-150)	M282FTS (25-150)
320-64243-1	SW38-YP1	103	54	47	31	25	122	146	
320-64243-2	SW38-YP2	103	77	71	40	33	114	134	150
320-64243-3	SW38-YP3	104	70	60	35	31	131	151 *5	
320-64243-4	SW38-YP4	134	75	66	43	39	143	139	
320-64243-5 - DL	SW38-YP5						111		113
320-64243-5	SW38-YP5	119	54	47	29	30		207 *5	
320-64243-6	SW38-GS1	114	64	57	35	31	125	155 *5	
320-64243-7	SW37-YP1	125	64	55	35	34	131	128	
320-64243-7 - DL	SW37-YP1								108
320-64243-7 DU	SW37-YP1	138	74	67	42	40	138	144	
320-64243-7 DU - DL	SW37-YP1								120

Isotope Dilution Summary

Client: ARCADIS U.S., Inc. Job ID: 320-64243-1
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

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

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

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	d5NEFOS (25-150)	dMeFOSA (25-150)	dEtFOSA (25-150)	NMFM (10-120)	NEFM (10-120)	M242FTS (25-150)	M262FTS (25-150)	M282FTS (25-150)
320-64243-8	SW37-YP2	118	87	81	40	34	133	155 *5	
320-64243-9	SW37-PS1	136	71	60	33	26	120	140	
320-64243-10	SW37-PS2	133	71	65	38	36	141	144	
320-64243-11	SW37-PS3		76	55	46	39			
320-64243-11 - DL	SW37-PS3	119					119	131	145
320-64243-12	SW37-PS4	111	56	28	30	19			
320-64243-12 - DL	SW37-PS4						135	157 *5	204 *5
320-64243-13	SW37-PS5	94	53	52	31	34	122	130	
320-64243-14 - DL	SW14-YP1						90		107
320-64243-14	SW14-YP1	132	78	71	38	33		145	
320-64243-15	SW14-YP2	104	55	48	33	26	111	147	169 *5
320-64243-15 - RE	SW14-YP2								270 *5
320-64243-16	SW14-YP3	88	29	23 *5	6 *5	6 *5	106	128	145
320-64243-16 - RE	SW14-YP3								347 *5
320-64243-17	SW14-YP4	120	61	49	24	17	118	151 *5	155 *5
320-64243-17 - RE	SW14-YP4								244 *5
320-64243-18	SW14-YP5	107	50	41	19	15	125	165 *5	174 *5
320-64243-18 - RE	SW14-YP5								295 *5
320-64243-19	SW14-BG1	135	49	31	17	10	131	165 *5	255 *5
320-64243-19 - RE	SW14-BG1								367 *5
320-64243-20	SW14-BG2	123	47	38	23	20	138	191 *5	271 *5
320-64243-20 - RE	SW14-BG2								418 *5
320-64243-21	SW14-BG3	138	67	49	43	31	129	174 *5	262 *5
320-64243-21 - RE	SW14-BG3								316 *5
320-64243-22	SW14-BG4	126	58	35	34	23	143	191 *5	258 *5
320-64243-22 - RE	SW14-BG4								286 *5
320-64243-23	SW14-BG5	126	73	60	37	27	120	156 *5	221 *5
320-64243-24	SW14-LB1	109	55	47	21	23	114	136	158 *5
320-64243-24 - RE	SW14-LB1								187 *5
320-64243-25 - RE	SW14-LB2								186 *5
320-64243-25	SW14-LB2	100	47	36	21	18	115	137	147
320-64243-26	SW14-LB3	94	52	51	29	26	108	136	135
320-64243-26 - RE	SW14-LB3								170 *5
320-64243-27	SW14-LB4	82	53	51	28	26	103	128	116
320-64243-27 - RE	SW14-LB4								137
320-64243-28	SW14-LB5	89	58	53	33	29	98	154 *5	160 *5
320-64243-28 DU	SW14-LB5	79	51	45	26	23	99	142	152 *5
LCS 320-411223/2-A	Lab Control Sample	89	80	72	50	46	105	169 *5	206 *5
LCS 320-411238/2-A	Lab Control Sample	97	15 *5	7 *5	8 *5	7 *5	106	143	177 *5
LCS 320-413207/2-A	Lab Control Sample	114	54	54	40	40	93	159 *5	363 *5
LCSD 320-411223/3-A	Lab Control Sample Dup	110	76	71	38	32	123	158 *5	334 *5
LCSD 320-411238/3-A	Lab Control Sample Dup	101	79	68	58	47	117	173 *5	201 *5
LCSD 320-413207/3-A	Lab Control Sample Dup	123	79	79	56	54	106	205 *5	363 *5
MB 320-411223/1-A	Method Blank	89	69	64	49	44	108	158 *5	211 *5
MB 320-411238/1-A	Method Blank	86	36	35	9 *5	8 *5	93	115	90
MB 320-413207/1-A	Method Blank	74	31	30	22	21	60	103	247 *5

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HFPODA (25-150)							
320-64243-1	SW38-YP1	84							

Isotope Dilution Summary

Client: ARCADIS U.S., Inc. Job ID: 320-64243-1
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

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

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

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HFPODA (25-150)						
320-64243-2	SW38-YP2	82						
320-64243-3	SW38-YP3	86						
320-64243-4	SW38-YP4	92						
320-64243-5 - DL	SW38-YP5							
320-64243-5	SW38-YP5	90						
320-64243-6	SW38-GS1	91						
320-64243-7	SW37-YP1	90						
320-64243-7 - DL	SW37-YP1							
320-64243-7 DU	SW37-YP1	91						
320-64243-7 DU - DL	SW37-YP1							
320-64243-8	SW37-YP2	88						
320-64243-9	SW37-PS1	97						
320-64243-10	SW37-PS2	99						
320-64243-11	SW37-PS3	101						
320-64243-11 - DL	SW37-PS3							
320-64243-12	SW37-PS4	79						
320-64243-12 - DL	SW37-PS4							
320-64243-13	SW37-PS5	85						
320-64243-14 - DL	SW14-YP1							
320-64243-14	SW14-YP1	100						
320-64243-15	SW14-YP2	85						
320-64243-15 - RE	SW14-YP2							
320-64243-16	SW14-YP3	65						
320-64243-16 - RE	SW14-YP3							
320-64243-17	SW14-YP4	74						
320-64243-17 - RE	SW14-YP4							
320-64243-18	SW14-YP5	83						
320-64243-18 - RE	SW14-YP5							
320-64243-19	SW14-BG1	92						
320-64243-19 - RE	SW14-BG1							
320-64243-20	SW14-BG2	89						
320-64243-20 - RE	SW14-BG2							
320-64243-21	SW14-BG3	86						
320-64243-21 - RE	SW14-BG3							
320-64243-22	SW14-BG4	89						
320-64243-22 - RE	SW14-BG4							
320-64243-23	SW14-BG5	88						
320-64243-24	SW14-LB1	85						
320-64243-24 - RE	SW14-LB1							
320-64243-25 - RE	SW14-LB2							
320-64243-25	SW14-LB2	89						
320-64243-26	SW14-LB3	78						
320-64243-26 - RE	SW14-LB3							
320-64243-27	SW14-LB4	81						
320-64243-27 - RE	SW14-LB4							
320-64243-28	SW14-LB5	75						
320-64243-28 DU	SW14-LB5	74						
LCS 320-411223/2-A	Lab Control Sample	89						
LCS 320-411238/2-A	Lab Control Sample	85						
LCS 320-413207/2-A	Lab Control Sample	78						

Isotope Dilution Summary

Client: ARCADIS U.S., Inc. Job ID: 320-64243-1
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

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

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

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HFPODA (25-150)						
LCSD 320-411223/3-A	Lab Control Sample Dup	87						
LCSD 320-411238/3-A	Lab Control Sample Dup	90						
LCSD 320-413207/3-A	Lab Control Sample Dup	79						
MB 320-411223/1-A	Method Blank	86						
MB 320-411238/1-A	Method Blank	88						
MB 320-413207/1-A	Method Blank	54						

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA
PFHxDA = 13C2 PFHxDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
dMeFOSA = d-N-MeFOSA-M
dEtFOSA = d-N-EtFOSA-M
NMFM = d7-N-MeFOSE-M
NEFM = d9-N-EtFOSE-M
M242FTS = M2-4:2 FTS
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
HFPODA = 13C3 HFPO-DA

Method: 537 (modified) - Fluorinated Alkyl Substances

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

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	PFOS (25-150)						
320-64243-17 - DL	SW14-YP4	87						
320-64243-23 - REDL	SW14-BG5	83						

Surrogate Legend

PFOS = 13C4 PFOS

Isotope Dilution Summary

Client: ARCADIS U.S., Inc. Job ID: 320-64243-1
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Method: 537 (modified) - Fluorinated Alkyl Substances

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

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFUnA (25-150)
320-64243-29	Field Blank 8/26/20 (SW38)	66	66	72	72	70	76	73	74
320-64243-30	Field Blank 8/26/20 (SW37)	62	67	68	70	67	73	63	68
320-64243-31	Field Blank 8/26/20 (SW14)	70	72	75	75	75	79	70	76
320-64243-32	Field Blank 8/27/20 (Foil)	73	74	78	78	79	85	74	74
320-64243-33	Field Blank 8/27/20 (Ziploc)	71	71	73	74	75	77	73	72
320-64243-34	Field Blank 8/27/20 (SW38)	87	90	94	95	95	99	87	90
LCS 320-409390/2-A	Lab Control Sample	78	79	80	83	79	81	79	86
LCSD 320-409390/3-A	Lab Control Sample Dup	71	75	77	80	76	80	72	75
MB 320-409390/1-A	Method Blank	91	93	98	98	98	98	96	98

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFDoA (25-150)	PFTDA (25-150)	PFHxDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (25-150)	d3NMFOS (25-150)
320-64243-29	Field Blank 8/26/20 (SW38)	70	70	61	81	78	76	68	71
320-64243-30	Field Blank 8/26/20 (SW37)	66	64	71	76	74	68	64	67
320-64243-31	Field Blank 8/26/20 (SW14)	74	65	66	83	78	74	68	73
320-64243-32	Field Blank 8/27/20 (Foil)	76	69	76	85	84	78	73	76
320-64243-33	Field Blank 8/27/20 (Ziploc)	77	67	67	84	78	79	69	75
320-64243-34	Field Blank 8/27/20 (SW38)	88	83	89	103	99	94	88	94
LCS 320-409390/2-A	Lab Control Sample	81	73	86	92	88	83	76	79
LCSD 320-409390/3-A	Lab Control Sample Dup	77	73	74	85	81	82	71	73
MB 320-409390/1-A	Method Blank	94	87	99	110	106	97	93	94

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	d5NEFOS (25-150)	dMeFOSA (20-150)	dEtFOSA (20-150)	NMFM (10-120)	NEFM (10-120)	M242FTS (25-150)	M262FTS (25-150)	M282FTS (25-150)
320-64243-29	Field Blank 8/26/20 (SW38)	69	45	32	19	16	91	80	79
320-64243-30	Field Blank 8/26/20 (SW37)	66	43	34	20	17	85	76	72
320-64243-31	Field Blank 8/26/20 (SW14)	72	46	35	20	17	93	83	84
320-64243-32	Field Blank 8/27/20 (Foil)	73	47	33	19	17	94	88	85
320-64243-33	Field Blank 8/27/20 (Ziploc)	75	50	43	30	24	92	85	134
320-64243-34	Field Blank 8/27/20 (SW38)	95	57	43	28	22	123	103	100
LCS 320-409390/2-A	Lab Control Sample	78	51	34	17	14	83	83	82
LCSD 320-409390/3-A	Lab Control Sample Dup	74	46	32	15	12	80	82	83
MB 320-409390/1-A	Method Blank	94	62	44	20	16	108	105	109

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	HFPODA (25-150)
320-64243-29	Field Blank 8/26/20 (SW38)	65
320-64243-30	Field Blank 8/26/20 (SW37)	63
320-64243-31	Field Blank 8/26/20 (SW14)	68
320-64243-32	Field Blank 8/27/20 (Foil)	73
320-64243-33	Field Blank 8/27/20 (Ziploc)	69
320-64243-34	Field Blank 8/27/20 (SW38)	86
LCS 320-409390/2-A	Lab Control Sample	76
LCSD 320-409390/3-A	Lab Control Sample Dup	73
MB 320-409390/1-A	Method Blank	91

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA

Isotope Dilution Summary

Client: ARCADIS U.S., Inc.
Job ID: 320-64243-1
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA
PFHxDA = 13C2 PFHxDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
dMeFOSA = d-N-MeFOSA-M
dEtFOSA = d-N-EtFOSA-M
NMFM = d7-N-MeFOSE-M
NEFM = d9-N-EtFOSE-M
M242FTS = M2-4:2 FTS
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
HFPODA = 13C3 HFPO-DA

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-409390/1-A
Matrix: Water
Analysis Batch: 409793

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 409390

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.0		2.0	0.35	ng/L		09/03/20 11:41	09/04/20 19:26	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	0.49	ng/L		09/03/20 11:41	09/04/20 19:26	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	0.58	ng/L		09/03/20 11:41	09/04/20 19:26	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	0.25	ng/L		09/03/20 11:41	09/04/20 19:26	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	0.85	ng/L		09/03/20 11:41	09/04/20 19:26	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	0.27	ng/L		09/03/20 11:41	09/04/20 19:26	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	0.31	ng/L		09/03/20 11:41	09/04/20 19:26	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	1.1	ng/L		09/03/20 11:41	09/04/20 19:26	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	0.55	ng/L		09/03/20 11:41	09/04/20 19:26	1
Perfluorotridecanoic acid (PFTriA)	<2.0		2.0	1.3	ng/L		09/03/20 11:41	09/04/20 19:26	1
Perfluorotetradecanoic acid (PFTeA)	0.435	J	2.0	0.29	ng/L		09/03/20 11:41	09/04/20 19:26	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<2.0		2.0	0.89	ng/L		09/03/20 11:41	09/04/20 19:26	1
Perfluoro-n-octadecanoic acid (PFODA)	<2.0		2.0	0.46	ng/L		09/03/20 11:41	09/04/20 19:26	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	0.20	ng/L		09/03/20 11:41	09/04/20 19:26	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	0.30	ng/L		09/03/20 11:41	09/04/20 19:26	1
Perfluorohexanesulfonic acid (PFHxS)	0.283	J	2.0	0.17	ng/L		09/03/20 11:41	09/04/20 19:26	1
Perfluoroheptanesulfonic Acid (PFHpS)	<2.0		2.0	0.19	ng/L		09/03/20 11:41	09/04/20 19:26	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	0.54	ng/L		09/03/20 11:41	09/04/20 19:26	1
Perfluorononanesulfonic acid (PFNS)	<2.0		2.0	0.16	ng/L		09/03/20 11:41	09/04/20 19:26	1
Perfluorodecanesulfonic acid (PFDS)	<2.0		2.0	0.32	ng/L		09/03/20 11:41	09/04/20 19:26	1
Perfluorododecanesulfonic acid (PFDoS)	<2.0		2.0	0.45	ng/L		09/03/20 11:41	09/04/20 19:26	1
Perfluorooctanesulfonamide (FOSA)	0.827	J	2.0	0.35	ng/L		09/03/20 11:41	09/04/20 19:26	1
NEtFOSA	<2.0		2.0	0.87	ng/L		09/03/20 11:41	09/04/20 19:26	1
NMeFOSA	<2.0		2.0	0.43	ng/L		09/03/20 11:41	09/04/20 19:26	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<20		20	3.1	ng/L		09/03/20 11:41	09/04/20 19:26	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<20		20	1.9	ng/L		09/03/20 11:41	09/04/20 19:26	1
NMeFOSE	<4.0		4.0	1.4	ng/L		09/03/20 11:41	09/04/20 19:26	1
NEtFOSE	<2.0		2.0	0.85	ng/L		09/03/20 11:41	09/04/20 19:26	1
4:2 FTS	<20		20	5.2	ng/L		09/03/20 11:41	09/04/20 19:26	1
6:2 FTS	<20		20	2.0	ng/L		09/03/20 11:41	09/04/20 19:26	1
8:2 FTS	<20		20	2.0	ng/L		09/03/20 11:41	09/04/20 19:26	1
10:2 FTS	<2.0		2.0	0.19	ng/L		09/03/20 11:41	09/04/20 19:26	1
DONA	<2.0		2.0	0.18	ng/L		09/03/20 11:41	09/04/20 19:26	1
HFPO-DA (GenX)	<4.0		4.0	1.5	ng/L		09/03/20 11:41	09/04/20 19:26	1
F-53B Major	<2.0		2.0	0.24	ng/L		09/03/20 11:41	09/04/20 19:26	1
F-53B Minor	<2.0		2.0	0.32	ng/L		09/03/20 11:41	09/04/20 19:26	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*91*		*25 - 150*	*09/03/20 11:41*	*09/04/20 19:26*	*1*
13C5 PFPeA	*93*		*25 - 150*	*09/03/20 11:41*	*09/04/20 19:26*	*1*
13C2 PFHxA	*98*		*25 - 150*	*09/03/20 11:41*	*09/04/20 19:26*	*1*
13C4 PFHpA	*98*		*25 - 150*	*09/03/20 11:41*	*09/04/20 19:26*	*1*
13C4 PFOA	*98*		*25 - 150*	*09/03/20 11:41*	*09/04/20 19:26*	*1*

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

Lab Sample ID: MB 320-409390/1-A
Matrix: Water
Analysis Batch: 409793

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 409390

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFNA	98		25 - 150	09/03/20 11:41	09/04/20 19:26	1
13C2 PFDA	96		25 - 150	09/03/20 11:41	09/04/20 19:26	1
13C2 PFUnA	98		25 - 150	09/03/20 11:41	09/04/20 19:26	1
13C2 PFDoA	94		25 - 150	09/03/20 11:41	09/04/20 19:26	1
13C2 PFTeDA	87		25 - 150	09/03/20 11:41	09/04/20 19:26	1
13C2 PFHxDA	99		25 - 150	09/03/20 11:41	09/04/20 19:26	1
13C3 PFBS	110		25 - 150	09/03/20 11:41	09/04/20 19:26	1
18O2 PFHxS	106		25 - 150	09/03/20 11:41	09/04/20 19:26	1
13C4 PFOS	97		25 - 150	09/03/20 11:41	09/04/20 19:26	1
13C8 FOSA	93		25 - 150	09/03/20 11:41	09/04/20 19:26	1
d3-NMeFOSAA	94		25 - 150	09/03/20 11:41	09/04/20 19:26	1
d5-NEtFOSAA	94		25 - 150	09/03/20 11:41	09/04/20 19:26	1
d-N-MeFOSA-M	62		20 - 150	09/03/20 11:41	09/04/20 19:26	1
d-N-EtFOSA-M	44		20 - 150	09/03/20 11:41	09/04/20 19:26	1
d7-N-MeFOSE-M	20		10 - 120	09/03/20 11:41	09/04/20 19:26	1
d9-N-EtFOSE-M	16		10 - 120	09/03/20 11:41	09/04/20 19:26	1
M2-4:2 FTS	108		25 - 150	09/03/20 11:41	09/04/20 19:26	1
M2-6:2 FTS	105		25 - 150	09/03/20 11:41	09/04/20 19:26	1
M2-8:2 FTS	109		25 - 150	09/03/20 11:41	09/04/20 19:26	1
13C3 HFPO-DA	91		25 - 150	09/03/20 11:41	09/04/20 19:26	1

Lab Sample ID: LCS 320-409390/2-A
Matrix: Water
Analysis Batch: 409793

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 409390

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	40.0	42.3		ng/L		106	76 - 136
Perfluoropentanoic acid (PFPeA)	40.0	37.9		ng/L		95	71 - 131
Perfluorohexanoic acid (PFHxA)	40.0	40.5		ng/L		101	73 - 133
Perfluoroheptanoic acid (PFHpA)	40.0	41.0		ng/L		103	72 - 132
Perfluorooctanoic acid (PFOA)	40.0	40.1		ng/L		100	70 - 130
Perfluorononanoic acid (PFNA)	40.0	41.4		ng/L		103	75 - 135
Perfluorodecanoic acid (PFDA)	40.0	45.1		ng/L		113	76 - 136
Perfluoroundecanoic acid (PFUnA)	40.0	37.5		ng/L		94	68 - 128
Perfluorododecanoic acid (PFDoA)	40.0	33.1		ng/L		83	71 - 131
Perfluorotridecanoic acid (PFTriA)	40.0	35.7		ng/L		89	71 - 131
Perfluorotetradecanoic acid (PFTeA)	40.0	44.8		ng/L		112	70 - 130
Perfluoro-n-hexadecanoic acid (PFHxDA)	40.0	34.6		ng/L		86	76 - 136
Perfluoro-n-octadecanoic acid (PFODA)	40.0	38.9		ng/L		97	58 - 145
Perfluorobutanesulfonic acid (PFBS)	35.4	36.4		ng/L		103	67 - 127
Perfluoropentanesulfonic acid (PFPeS)	37.5	40.2		ng/L		107	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	36.4	35.4		ng/L		97	59 - 119

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

Lab Sample ID: LCS 320-409390/2-A
Matrix: Water
Analysis Batch: 409793

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 409390

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	43.1		ng/L		113	76 - 136
Perfluorooctanesulfonic acid (PFOS)	37.1	39.8		ng/L		107	70 - 130
Perfluorononanesulfonic acid (PFNS)	38.4	39.0		ng/L		101	75 - 135
Perfluorodecanesulfonic acid (PFDS)	38.6	37.5		ng/L		97	71 - 131
Perfluorododecanesulfonic acid (PFDoS)	38.7	39.9		ng/L		103	67 - 127
Perfluorooctanesulfonamide (FOSA)	40.0	42.9		ng/L		107	73 - 133
NMeFOSA	40.0	43.5		ng/L		109	67 - 154
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	38.9		ng/L		97	76 - 136
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	39.4		ng/L		99	76 - 136
NMeFOSE	40.0	41.8		ng/L		105	70 - 130
NEtFOSE	40.0	36.6		ng/L		91	71 - 131
4:2 FTS	37.4	39.2		ng/L		105	79 - 139
6:2 FTS	37.9	36.4		ng/L		96	59 - 175
8:2 FTS	38.3	36.8		ng/L		96	75 - 135
10:2 FTS	38.6	32.1		ng/L		83	64 - 142
DONA	37.7	38.5		ng/L		102	79 - 139
HFPO-DA (GenX)	40.0	38.6		ng/L		97	51 - 173
F-53B Major	37.3	37.0		ng/L		99	75 - 135
F-53B Minor	37.7	36.9		ng/L		98	54 - 114

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*78*		*25 - 150*
13C5 PFPeA	*79*		*25 - 150*
13C2 PFHxA	*80*		*25 - 150*
13C4 PFHpA	*83*		*25 - 150*
13C4 PFOA	*79*		*25 - 150*
13C5 PFNA	*81*		*25 - 150*
13C2 PFDA	*79*		*25 - 150*
13C2 PFUnA	*86*		*25 - 150*
13C2 PFDoA	*81*		*25 - 150*
13C2 PFTeDA	*73*		*25 - 150*
13C2 PFHxDA	*86*		*25 - 150*
13C3 PFBS	*92*		*25 - 150*
18O2 PFHxS	*88*		*25 - 150*
13C4 PFOS	*83*		*25 - 150*
13C8 FOSA	*76*		*25 - 150*
d3-NMeFOSAA	*79*		*25 - 150*
d5-NEtFOSAA	*78*		*25 - 150*
d-N-MeFOSA-M	*51*		*20 - 150*
d-N-EtFOSA-M	*34*		*20 - 150*
d7-N-MeFOSE-M	*17*		*10 - 120*
d9-N-EtFOSE-M	*14*		*10 - 120*
M2-4:2 FTS	*83*		*25 - 150*

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

Lab Sample ID: LCS 320-409390/2-A
Matrix: Water
Analysis Batch: 409793

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 409390

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
M2-6:2 FTS	83		25 - 150
M2-8:2 FTS	82		25 - 150
13C3 HFPO-DA	76		25 - 150

Lab Sample ID: LCSD 320-409390/3-A
Matrix: Water
Analysis Batch: 409793

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 409390

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)			40.0	43.4		ng/L		108	76 - 136	3	30
Perfluoropentanoic acid (PFPeA)			40.0	39.5		ng/L		99	71 - 131	4	30
Perfluorohexanoic acid (PFHxA)			40.0	43.1		ng/L		108	73 - 133	6	30
Perfluoroheptanoic acid (PFHpA)			40.0	42.3		ng/L		106	72 - 132	3	30
Perfluorooctanoic acid (PFOA)			40.0	42.1		ng/L		105	70 - 130	5	30
Perfluorononanoic acid (PFNA)			40.0	41.9		ng/L		105	75 - 135	1	30
Perfluorodecanoic acid (PFDA)			40.0	47.7		ng/L		119	76 - 136	6	30
Perfluoroundecanoic acid (PFUnA)			40.0	46.3		ng/L		116	68 - 128	21	30
Perfluorododecanoic acid (PFDoA)			40.0	38.9		ng/L		97	71 - 131	16	30
Perfluorotridecanoic acid (PFTriA)			40.0	36.4		ng/L		91	71 - 131	2	30
Perfluorotetradecanoic acid (PFTeA)			40.0	42.1		ng/L		105	70 - 130	6	30
Perfluoro-n-hexadecanoic acid (PFHxDA)			40.0	38.3		ng/L		96	76 - 136	10	30
Perfluoro-n-octadecanoic acid (PFODA)			40.0	40.9		ng/L		102	58 - 145	5	30
Perfluorobutanesulfonic acid (PFBS)			35.4	38.5		ng/L		109	67 - 127	6	30
Perfluoropentanesulfonic acid (PFPeS)			37.5	41.2		ng/L		110	66 - 126	3	30
Perfluorohexanesulfonic acid (PFHxS)			36.4	37.1		ng/L		102	59 - 119	5	30
Perfluoroheptanesulfonic Acid (PFHpS)			38.1	41.9		ng/L		110	76 - 136	3	30
Perfluorooctanesulfonic acid (PFOS)			37.1	40.4		ng/L		109	70 - 130	2	30
Perfluorononanesulfonic acid (PFNS)			38.4	39.5		ng/L		103	75 - 135	1	30
Perfluorodecanesulfonic acid (PFDS)			38.6	39.0		ng/L		101	71 - 131	4	30
Perfluorododecanesulfonic acid (PFDoS)			38.7	39.4		ng/L		102	67 - 127	1	30
Perfluorooctanesulfonamide (FOSA)			40.0	43.4		ng/L		109	73 - 133	1	30
NMeFOSA			40.0	44.9		ng/L		112	67 - 154	3	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			40.0	40.8		ng/L		102	76 - 136	5	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			40.0	38.3		ng/L		96	76 - 136	3	30
NMeFOSE			40.0	41.8		ng/L		105	70 - 130	0	30
NEtFOSE			40.0	38.0		ng/L		95	71 - 131	4	30

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

Lab Sample ID: LCSD 320-409390/3-A
Matrix: Water
Analysis Batch: 409793

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 409390

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4:2 FTS			37.4	40.3		ng/L		108	79 - 139	3	30
6:2 FTS			37.9	36.5		ng/L		96	59 - 175	0	30
8:2 FTS			38.3	39.3		ng/L		103	75 - 135	7	30
10:2 FTS			38.6	33.6		ng/L		87	64 - 142	5	30
DONA			37.7	39.6		ng/L		105	79 - 139	3	30
HFPO-DA (GenX)			40.0	40.2		ng/L		100	51 - 173	4	30
F-53B Major			37.3	37.5		ng/L		101	75 - 135	1	30
F-53B Minor			37.7	37.7		ng/L		100	54 - 114	2	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C4 PFBA	*71*		*25 - 150*
13C5 PFPeA	*75*		*25 - 150*
13C2 PFHxA	*77*		*25 - 150*
13C4 PFHpA	*80*		*25 - 150*
13C4 PFOA	*76*		*25 - 150*
13C5 PFNA	*80*		*25 - 150*
13C2 PFDA	*72*		*25 - 150*
13C2 PFUnA	*75*		*25 - 150*
13C2 PFDoA	*77*		*25 - 150*
13C2 PFTeDA	*73*		*25 - 150*
13C2 PFHxDA	*74*		*25 - 150*
13C3 PFBS	*85*		*25 - 150*
18O2 PFHxS	*81*		*25 - 150*
13C4 PFOS	*82*		*25 - 150*
13C8 FOSA	*71*		*25 - 150*
d3-NMeFOSAA	*73*		*25 - 150*
d5-NEtFOSAA	*74*		*25 - 150*
d-N-MeFOSA-M	*46*		*20 - 150*
d-N-EtFOSA-M	*32*		*20 - 150*
d7-N-MeFOSE-M	*15*		*10 - 120*
d9-N-EtFOSE-M	*12*		*10 - 120*
M2-4:2 FTS	*80*		*25 - 150*
M2-6:2 FTS	*82*		*25 - 150*
M2-8:2 FTS	*83*		*25 - 150*
13C3 HFPO-DA	*73*		*25 - 150*

Lab Sample ID: MB 320-411223/1-A
Matrix: Tissue
Analysis Batch: 412780

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 411223

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	0.698	J	1.0	0.14	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
Perfluoropentanoic acid (PFPeA)	<1.0		1.0	0.39	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
Perfluorohexanoic acid (PFHxA)	<1.0		1.0	0.21	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
Perfluoroheptanoic acid (PFHpA)	<1.0		1.0	0.15	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
Perfluorooctanoic acid (PFOA)	<1.0		1.0	0.43	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
Perfluorononanoic acid (PFNA)	<1.0		1.0	0.18	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
Perfluorodecanoic acid (PFDA)	<1.0		1.0	0.11	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
Perfluoroundecanoic acid (PFUnA)	<1.0		1.0	0.18	ug/Kg		09/10/20 17:39	09/16/20 13:24	1

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

Lab Sample ID: MB 320-411223/1-A
Matrix: Tissue
Analysis Batch: 412780

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 411223

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanoic acid (PFDoA)	<1.0		1.0	0.34	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
Perfluorotridecanoic acid (PFTriA)	<1.0		1.0	0.26	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
Perfluorotetradecanoic acid (PFTeA)	<1.0		1.0	0.27	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.0		1.0	0.22	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.0		1.0	0.14	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
Perfluorobutanesulfonic acid (PFBS)	<1.0		1.0	0.13	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
Perfluoropentanesulfonic acid (PFPeS)	<1.0		1.0	0.10	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
Perfluorohexanesulfonic acid (PFHxS)	<1.0		1.0	0.16	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
Perfluoroheptanesulfonic Acid (PFHpS)	<1.0		1.0	0.18	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
Perfluorooctanesulfonic acid (PFOS)	<2.5		2.5	1.0	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
Perfluorononanesulfonic acid (PFNS)	<1.0		1.0	0.10	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
Perfluorodecanesulfonic acid (PFDS)	<1.0		1.0	0.20	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
Perfluorododecanesulfonic acid (PFDoS)	<1.0		1.0	0.30	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
Perfluorooctanesulfonamide (FOSA)	<1.0		1.0	0.41	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
NEtFOSA	<1.0		1.0	0.96	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
NMeFOSA	<1.0		1.0	0.16	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<10		10	2.0	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<10		10	1.9	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
NMeFOSE	<1.0		1.0	0.35	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
NEtFOSE	<1.0		1.0	0.18	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
4:2 FTS	<10		10	1.9	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
6:2 FTS	<10		10	0.75	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
8:2 FTS	<10		10	1.3	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
10:2 FTS	<1.0		1.0	0.13	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
DONA	<1.0		1.0	0.090	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
HFPO-DA (GenX)	<1.3		1.3	0.55	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
F-53B Major	<1.0		1.0	0.36	ug/Kg		09/10/20 17:39	09/16/20 13:24	1
F-53B Minor	<1.0		1.0	0.11	ug/Kg		09/10/20 17:39	09/16/20 13:24	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*96*		*25 - 150*	*09/10/20 17:39*	*09/16/20 13:24*	*1*
13C5 PFPeA	*96*		*25 - 150*	*09/10/20 17:39*	*09/16/20 13:24*	*1*
13C2 PFHxA	*93*		*25 - 150*	*09/10/20 17:39*	*09/16/20 13:24*	*1*
13C4 PFHpA	*94*		*25 - 150*	*09/10/20 17:39*	*09/16/20 13:24*	*1*
13C4 PFOA	*92*		*25 - 150*	*09/10/20 17:39*	*09/16/20 13:24*	*1*
13C5 PFNA	*93*		*25 - 150*	*09/10/20 17:39*	*09/16/20 13:24*	*1*
13C2 PFDA	*94*		*25 - 150*	*09/10/20 17:39*	*09/16/20 13:24*	*1*
13C2 PFUnA	*80*		*25 - 150*	*09/10/20 17:39*	*09/16/20 13:24*	*1*
13C2 PFDoA	*74*		*25 - 150*	*09/10/20 17:39*	*09/16/20 13:24*	*1*
13C2 PFTeDA	*59*		*25 - 150*	*09/10/20 17:39*	*09/16/20 13:24*	*1*
13C2 PFHxDA	*75*		*25 - 150*	*09/10/20 17:39*	*09/16/20 13:24*	*1*
13C3 PFBS	*97*		*25 - 150*	*09/10/20 17:39*	*09/16/20 13:24*	*1*
18O2 PFHxS	*96*		*25 - 150*	*09/10/20 17:39*	*09/16/20 13:24*	*1*

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

Lab Sample ID: MB 320-411223/1-A
Matrix: Tissue
Analysis Batch: 412780

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 411223

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	96		25 - 150	09/10/20 17:39	09/16/20 13:24	1
13C8 FOSA	79		25 - 150	09/10/20 17:39	09/16/20 13:24	1
d3-NMeFOSAA	104		25 - 150	09/10/20 17:39	09/16/20 13:24	1
d5-NEtFOSAA	89		25 - 150	09/10/20 17:39	09/16/20 13:24	1
d-N-MeFOSA-M	69		25 - 150	09/10/20 17:39	09/16/20 13:24	1
d-N-EtFOSA-M	64		25 - 150	09/10/20 17:39	09/16/20 13:24	1
d7-N-MeFOSE-M	49		10 - 120	09/10/20 17:39	09/16/20 13:24	1
d9-N-EtFOSE-M	44		10 - 120	09/10/20 17:39	09/16/20 13:24	1
M2-4:2 FTS	108		25 - 150	09/10/20 17:39	09/16/20 13:24	1
M2-6:2 FTS	158	*5	25 - 150	09/10/20 17:39	09/16/20 13:24	1
M2-8:2 FTS	211	*5	25 - 150	09/10/20 17:39	09/16/20 13:24	1
13C3 HFPO-DA	86		25 - 150	09/10/20 17:39	09/16/20 13:24	1

Lab Sample ID: LCS 320-411223/2-A
Matrix: Tissue
Analysis Batch: 412780

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 411223

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	10.0	11.2		ug/Kg		112	76 - 136
Perfluoropentanoic acid (PFPeA)	10.0	10.2		ug/Kg		102	69 - 129
Perfluorohexanoic acid (PFHxA)	10.0	10.3		ug/Kg		103	71 - 131
Perfluoroheptanoic acid (PFHpA)	10.0	10.6		ug/Kg		106	71 - 131
Perfluorooctanoic acid (PFOA)	10.0	10.0		ug/Kg		100	72 - 132
Perfluorononanoic acid (PFNA)	10.0	10.4		ug/Kg		104	73 - 133
Perfluorodecanoic acid (PFDA)	10.0	10.5		ug/Kg		105	72 - 132
Perfluoroundecanoic acid (PFUnA)	10.0	10.4		ug/Kg		104	66 - 126
Perfluorododecanoic acid (PFDoA)	10.0	9.80		ug/Kg		98	71 - 131
Perfluorotridecanoic acid (PFTriA)	10.0	9.78		ug/Kg		98	71 - 131
Perfluorotetradecanoic acid (PFTeA)	10.0	10.2		ug/Kg		102	67 - 127
Perfluoro-n-hexadecanoic acid (PFHxDA)	10.0	9.91		ug/Kg		99	75 - 135
Perfluoro-n-octadecanoic acid (PFODA)	10.0	12.1		ug/Kg		121	53 - 130
Perfluorobutanesulfonic acid (PFBS)	8.84	9.08		ug/Kg		103	69 - 129
Perfluoropentanesulfonic acid (PFPeS)	9.38	9.94		ug/Kg		106	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	9.10	9.13		ug/Kg		100	62 - 122
Perfluoroheptanesulfonic Acid (PFHpS)	9.52	10.4		ug/Kg		109	76 - 136
Perfluorononanesulfonic acid (PFNS)	9.60	9.70		ug/Kg		101	72 - 132
Perfluorodecanesulfonic acid (PFDS)	9.64	9.73		ug/Kg		101	71 - 131
Perfluorododecanesulfonic acid (PFDoS)	9.68	9.49		ug/Kg		98	70 - 130

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

Lab Sample ID: LCS 320-411223/2-A
Matrix: Tissue
Analysis Batch: 412780

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 411223

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorooctanesulfonamide (FOSA)	10.0	10.2		ug/Kg		102	77 - 137
NMeFOSA	10.0	10.3		ug/Kg		103	63 - 148
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	10.0	10.9		ug/Kg		109	72 - 132
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	10.0	10.2		ug/Kg		102	72 - 132
NMeFOSE	10.0	10.5		ug/Kg		105	43 - 153
NEtFOSE	10.0	9.79		ug/Kg		98	44 - 155
4:2 FTS	9.34	9.08	J	ug/Kg		97	68 - 143
6:2 FTS	9.48	8.78	J	ug/Kg		93	73 - 139
8:2 FTS	9.58	9.64	J	ug/Kg		101	75 - 135
DONA	9.42	9.36		ug/Kg		99	79 - 139
HFPO-DA (GenX)	10.0	10.1		ug/Kg		101	53 - 158
F-53B Major	9.32	10.1		ug/Kg		108	74 - 134
F-53B Minor	9.42	9.15		ug/Kg		97	66 - 136

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*95*		*25 - 150*
13C5 PFPeA	*93*		*25 - 150*
13C2 PFHxA	*96*		*25 - 150*
13C4 PFHpA	*99*		*25 - 150*
13C4 PFOA	*96*		*25 - 150*
13C5 PFNA	*94*		*25 - 150*
13C2 PFDA	*95*		*25 - 150*
13C2 PFUnA	*97*		*25 - 150*
13C2 PFDoA	*91*		*25 - 150*
13C2 PFTeDA	*69*		*25 - 150*
13C2 PFHxDA	*84*		*25 - 150*
13C3 PFBS	*101*		*25 - 150*
18O2 PFHxS	*100*		*25 - 150*
13C4 PFOS	*99*		*25 - 150*
13C8 FOSA	*90*		*25 - 150*
d3-NMeFOSAA	*98*		*25 - 150*
d5-NEtFOSAA	*89*		*25 - 150*
d-N-MeFOSA-M	*80*		*25 - 150*
d-N-EtFOSA-M	*72*		*25 - 150*
d7-N-MeFOSE-M	*50*		*10 - 120*
d9-N-EtFOSE-M	*46*		*10 - 120*
M2-4:2 FTS	*105*		*25 - 150*
M2-6:2 FTS	*169*	**5*	*25 - 150*
M2-8:2 FTS	*206*	**5*	*25 - 150*
13C3 HFPO-DA	*89*		*25 - 150*

Lab Sample ID: LCSD 320-411223/3-A
Matrix: Tissue
Analysis Batch: 416200

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 411223

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	10.0	12.7		ug/Kg		127	76 - 136	13	30

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

Lab Sample ID: LCSD 320-411223/3-A
Client Sample ID: Lab Control Sample Dup
Matrix: Tissue
Prep Type: Total/NA
Analysis Batch: 416200
Prep Batch: 411223

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluoropentanoic acid (PFPeA)	10.0	10.0		ug/Kg		100	69 - 129	1	30
Perfluorohexanoic acid (PFHxA)	10.0	10.1		ug/Kg		101	71 - 131	3	30
Perfluoroheptanoic acid (PFHpA)	10.0	10.8		ug/Kg		108	71 - 131	1	30
Perfluorooctanoic acid (PFOA)	10.0	10.0		ug/Kg		100	72 - 132	0	30
Perfluorononanoic acid (PFNA)	10.0	10.0		ug/Kg		100	73 - 133	3	30
Perfluorodecanoic acid (PFDA)	10.0	10.8		ug/Kg		108	72 - 132	2	30
Perfluoroundecanoic acid (PFUnA)	10.0	10.6		ug/Kg		106	66 - 126	2	30
Perfluorododecanoic acid (PFDoA)	10.0	10.2		ug/Kg		102	71 - 131	5	30
Perfluorotridecanoic acid (PFTriA)	10.0	10.5		ug/Kg		105	71 - 131	7	30
Perfluorotetradecanoic acid (PFTeA)	10.0	9.70		ug/Kg		97	67 - 127	5	30
Perfluoro-n-hexadecanoic acid (PFHxDA)	10.0	9.32		ug/Kg		93	75 - 135	6	30
Perfluoro-n-octadecanoic acid (PFODA)	10.0	9.12		ug/Kg		91	53 - 130	28	30
Perfluorobutanesulfonic acid (PFBS)	8.84	9.73		ug/Kg		110	69 - 129	7	30
Perfluoropentanesulfonic acid (PFPeS)	9.38	10.7		ug/Kg		114	66 - 126	8	30
Perfluorohexanesulfonic acid (PFHxS)	9.10	8.70		ug/Kg		96	62 - 122	5	30
Perfluoroheptanesulfonic Acid (PFHpS)	9.52	10.6		ug/Kg		112	76 - 136	3	30
Perfluorononanesulfonic acid (PFNS)	9.60	10.6		ug/Kg		110	72 - 132	9	30
Perfluorodecanesulfonic acid (PFDS)	9.64	9.74		ug/Kg		101	71 - 131	0	30
Perfluorododecanesulfonic acid (PFDoS)	9.68	8.94		ug/Kg		92	70 - 130	6	30
Perfluorooctanesulfonamide (FOSA)	10.0	10.4		ug/Kg		104	77 - 137	2	30
NMeFOSA	10.0	10.9		ug/Kg		109	63 - 148	6	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	10.0	9.93	J	ug/Kg		99	72 - 132	9	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	10.0	9.63	J	ug/Kg		96	72 - 132	5	30
NMeFOSE	10.0	10.3		ug/Kg		103	43 - 153	1	30
NEtFOSE	10.0	11.6		ug/Kg		116	44 - 155	17	30
4:2 FTS	9.34	9.65	J	ug/Kg		103	68 - 143	6	30
6:2 FTS	9.48	9.05	J	ug/Kg		95	73 - 139	3	30
8:2 FTS	9.58	9.60	J	ug/Kg		100	75 - 135	0	30
DONA	9.42	9.71		ug/Kg		103	79 - 139	4	30
HFPO-DA (GenX)	10.0	10.4		ug/Kg		104	53 - 158	3	30
F-53B Major	9.32	9.61		ug/Kg		103	74 - 134	5	30
F-53B Minor	9.42	9.45		ug/Kg		100	66 - 136	3	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C4 PFBA	*86*		*25 - 150*
13C5 PFPeA	*88*		*25 - 150*
13C2 PFHxA	*94*		*25 - 150*

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

Lab Sample ID: LCSD 320-411223/3-A
Matrix: Tissue
Analysis Batch: 416200

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 411223

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C4 PFHpA	*93*		*25 - 150*
13C4 PFOA	*96*		*25 - 150*
13C5 PFNA	*103*		*25 - 150*
13C2 PFDA	*102*		*25 - 150*
13C2 PFUnA	*101*		*25 - 150*
13C2 PFDoA	*96*		*25 - 150*
13C2 PFTeDA	*90*		*25 - 150*
13C2 PFHxDA	*89*		*25 - 150*
13C3 PFBS	*91*		*25 - 150*
18O2 PFHxS	*98*		*25 - 150*
13C4 PFOS	*96*		*25 - 150*
13C8 FOSA	*102*		*25 - 150*
d3-NMeFOSAA	*128*		*25 - 150*
d5-NEtFOSAA	*110*		*25 - 150*
d-N-MeFOSA-M	*76*		*25 - 150*
d-N-EtFOSA-M	*71*		*25 - 150*
d7-N-MeFOSE-M	*38*		*10 - 120*
d9-N-EtFOSE-M	*32*		*10 - 120*
M2-4:2 FTS	*123*		*25 - 150*
M2-6:2 FTS	*158*	**5*	*25 - 150*
M2-8:2 FTS	*334*	**5*	*25 - 150*
13C3 HFPO-DA	*87*		*25 - 150*

Lab Sample ID: MB 320-411238/1-A
Matrix: Tissue
Analysis Batch: 412393

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 411238

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	0.631	J	1.0	0.14	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
Perfluoropentanoic acid (PFPeA)	<1.0		1.0	0.39	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
Perfluorohexanoic acid (PFHxA)	<1.0		1.0	0.21	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
Perfluoroheptanoic acid (PFHpA)	<1.0		1.0	0.15	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
Perfluorooctanoic acid (PFOA)	<1.0		1.0	0.43	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
Perfluorononanoic acid (PFNA)	<1.0		1.0	0.18	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
Perfluorodecanoic acid (PFDA)	<1.0		1.0	0.11	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
Perfluoroundecanoic acid (PFUnA)	<1.0		1.0	0.18	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
Perfluorododecanoic acid (PFDoA)	<1.0		1.0	0.34	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
Perfluorotridecanoic acid (PFTriA)	<1.0		1.0	0.26	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
Perfluorotetradecanoic acid (PFTeA)	<1.0		1.0	0.27	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.0		1.0	0.22	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.0		1.0	0.14	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
Perfluorobutanesulfonic acid (PFBS)	<1.0		1.0	0.13	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
Perfluoropentanesulfonic acid (PFPeS)	<1.0		1.0	0.10	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
Perfluorohexanesulfonic acid (PFHxS)	<1.0		1.0	0.16	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
Perfluoroheptanesulfonic Acid (PFHpS)	<1.0		1.0	0.18	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
Perfluorooctanesulfonic acid (PFOS)	2.20	J	2.5	1.0	ug/Kg		09/10/20 19:28	09/16/20 02:17	1

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

Lab Sample ID: MB 320-411238/1-A
Matrix: Tissue
Analysis Batch: 412393

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 411238

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanesulfonic acid (PFNS)	<1.0		1.0	0.10	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
Perfluorodecanesulfonic acid (PFDS)	<1.0		1.0	0.20	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
Perfluorododecanesulfonic acid (PFDoS)	<1.0		1.0	0.30	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
Perfluorooctanesulfonamide (FOSA)	<1.0		1.0	0.41	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
NEtFOSA	<1.0		1.0	0.96	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
NMeFOSA	<1.0		1.0	0.16	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<10		10	2.0	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<10		10	1.9	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
NMeFOSE	<1.0		1.0	0.35	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
NEtFOSE	<1.0		1.0	0.18	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
4:2 FTS	<10		10	1.9	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
6:2 FTS	<10		10	0.75	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
8:2 FTS	<10		10	1.3	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
10:2 FTS	<1.0		1.0	0.13	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
DONA	<1.0		1.0	0.090	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
HFPO-DA (GenX)	<1.3		1.3	0.55	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
F-53B Major	<1.0		1.0	0.36	ug/Kg		09/10/20 19:28	09/16/20 02:17	1
F-53B Minor	<1.0		1.0	0.11	ug/Kg		09/10/20 19:28	09/16/20 02:17	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*95*		*25 - 150*	*09/10/20 19:28*	*09/16/20 02:17*	*1*
13C5 PFPeA	*97*		*25 - 150*	*09/10/20 19:28*	*09/16/20 02:17*	*1*
13C2 PFHxA	*94*		*25 - 150*	*09/10/20 19:28*	*09/16/20 02:17*	*1*
13C4 PFHpA	*95*		*25 - 150*	*09/10/20 19:28*	*09/16/20 02:17*	*1*
13C4 PFOA	*92*		*25 - 150*	*09/10/20 19:28*	*09/16/20 02:17*	*1*
13C5 PFNA	*88*		*25 - 150*	*09/10/20 19:28*	*09/16/20 02:17*	*1*
13C2 PFDA	*88*		*25 - 150*	*09/10/20 19:28*	*09/16/20 02:17*	*1*
13C2 PFUnA	*95*		*25 - 150*	*09/10/20 19:28*	*09/16/20 02:17*	*1*
13C2 PFDoA	*86*		*25 - 150*	*09/10/20 19:28*	*09/16/20 02:17*	*1*
13C2 PFTeDA	*80*		*25 - 150*	*09/10/20 19:28*	*09/16/20 02:17*	*1*
13C2 PFHxDA	*98*		*25 - 150*	*09/10/20 19:28*	*09/16/20 02:17*	*1*
13C3 PFBS	*99*		*25 - 150*	*09/10/20 19:28*	*09/16/20 02:17*	*1*
18O2 PFHxS	*99*		*25 - 150*	*09/10/20 19:28*	*09/16/20 02:17*	*1*
13C4 PFOS	*93*		*25 - 150*	*09/10/20 19:28*	*09/16/20 02:17*	*1*
13C8 FOSA	*86*		*25 - 150*	*09/10/20 19:28*	*09/16/20 02:17*	*1*
d3-NMeFOSAA	*80*		*25 - 150*	*09/10/20 19:28*	*09/16/20 02:17*	*1*
d5-NEtFOSAA	*86*		*25 - 150*	*09/10/20 19:28*	*09/16/20 02:17*	*1*
d-N-MeFOSA-M	*36*		*25 - 150*	*09/10/20 19:28*	*09/16/20 02:17*	*1*
d-N-EtFOSA-M	*35*		*25 - 150*	*09/10/20 19:28*	*09/16/20 02:17*	*1*
d7-N-MeFOSE-M	*9*	**5*	*10 - 120*	*09/10/20 19:28*	*09/16/20 02:17*	*1*
d9-N-EtFOSE-M	*8*	**5*	*10 - 120*	*09/10/20 19:28*	*09/16/20 02:17*	*1*
M2-4:2 FTS	*93*		*25 - 150*	*09/10/20 19:28*	*09/16/20 02:17*	*1*
M2-6:2 FTS	*115*		*25 - 150*	*09/10/20 19:28*	*09/16/20 02:17*	*1*
M2-8:2 FTS	*90*		*25 - 150*	*09/10/20 19:28*	*09/16/20 02:17*	*1*
13C3 HFPO-DA	*88*		*25 - 150*	*09/10/20 19:28*	*09/16/20 02:17*	*1*

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

Lab Sample ID: LCS 320-411238/2-A
Matrix: Tissue
Analysis Batch: 412393

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 411238

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	10.0	11.1		ug/Kg		111	76 - 136
Perfluoropentanoic acid (PFPeA)	10.0	9.69		ug/Kg		97	69 - 129
Perfluorohexanoic acid (PFHxA)	10.0	10.6		ug/Kg		106	71 - 131
Perfluoroheptanoic acid (PFHpA)	10.0	9.87		ug/Kg		99	71 - 131
Perfluorooctanoic acid (PFOA)	10.0	10.5		ug/Kg		105	72 - 132
Perfluorononanoic acid (PFNA)	10.0	10.3		ug/Kg		103	73 - 133
Perfluorodecanoic acid (PFDA)	10.0	10.7		ug/Kg		107	72 - 132
Perfluoroundecanoic acid (PFUnA)	10.0	11.2		ug/Kg		112	66 - 126
Perfluorododecanoic acid (PFDoA)	10.0	10.2		ug/Kg		102	71 - 131
Perfluorotridecanoic acid (PFTriA)	10.0	9.90		ug/Kg		99	71 - 131
Perfluorotetradecanoic acid (PFTeA)	10.0	10.1		ug/Kg		101	67 - 127
Perfluoro-n-hexadecanoic acid (PFHxDA)	10.0	9.99		ug/Kg		100	75 - 135
Perfluoro-n-octadecanoic acid (PFODA)	10.0	12.2		ug/Kg		122	53 - 130
Perfluorobutanesulfonic acid (PFBS)	8.84	9.39		ug/Kg		106	69 - 129
Perfluoropentanesulfonic acid (PFPeS)	9.38	10.2		ug/Kg		109	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	9.10	9.02		ug/Kg		99	62 - 122
Perfluoroheptanesulfonic Acid (PFHpS)	9.52	10.5		ug/Kg		110	76 - 136
Perfluorooctanesulfonic acid (PFOS)	9.28	12.2		ug/Kg		132	68 - 141
Perfluorononanesulfonic acid (PFNS)	9.60	10.5		ug/Kg		110	72 - 132
Perfluorodecanesulfonic acid (PFDS)	9.64	10.5		ug/Kg		109	71 - 131
Perfluorododecanesulfonic acid (PFDoS)	9.68	10.5		ug/Kg		109	70 - 130
Perfluorooctanesulfonamide (FOSA)	10.0	10.5		ug/Kg		105	77 - 137
NMeFOSA	10.0	10.8		ug/Kg		108	63 - 148
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	10.0	11.0		ug/Kg		110	72 - 132
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	10.0	9.85	J	ug/Kg		99	72 - 132
NMeFOSE	10.0	11.0		ug/Kg		110	43 - 153
NEtFOSE	10.0	10.6		ug/Kg		106	44 - 155
4:2 FTS	9.34	9.29	J	ug/Kg		99	68 - 143
6:2 FTS	9.48	10.2		ug/Kg		107	73 - 139
8:2 FTS	9.58	10.2		ug/Kg		107	75 - 135
10:2 FTS	9.64	7.25		ug/Kg		75	69 - 145
DONA	9.42	10.1		ug/Kg		107	79 - 139
HFPO-DA (GenX)	10.0	10.2		ug/Kg		102	53 - 158
F-53B Major	9.32	10.8		ug/Kg		116	74 - 134
F-53B Minor	9.42	10.4		ug/Kg		110	66 - 136

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

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C4 PFBA	91		25 - 150
13C5 PFPeA	95		25 - 150
13C2 PFHxA	91		25 - 150
13C4 PFHpA	96		25 - 150
13C4 PFOA	89		25 - 150
13C5 PFNA	91		25 - 150
13C2 PFDA	90		25 - 150
13C2 PFUnA	93		25 - 150
13C2 PFDoA	86		25 - 150
13C2 PFTeDA	82		25 - 150
13C2 PFHxDA	88		25 - 150
13C3 PFBS	96		25 - 150
18O2 PFHxS	96		25 - 150
13C4 PFOS	91		25 - 150
13C8 FOSA	90		25 - 150
d3-NMeFOSAA	109		25 - 150
d5-NEtFOSAA	97		25 - 150
d-N-MeFOSA-M	15	*5	25 - 150
d-N-EtFOSA-M	7	*5	25 - 150
d7-N-MeFOSE-M	8	*5	10 - 120
d9-N-EtFOSE-M	7	*5	10 - 120
M2-4:2 FTS	106		25 - 150
M2-6:2 FTS	143		25 - 150
M2-8:2 FTS	177	*5	25 - 150
13C3 HFPO-DA	85		25 - 150

Lab Sample ID: LCSD 320-411238/3-A
Matrix: Tissue
Analysis Batch: 412393

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 411238

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)			10.0	11.2		ug/Kg		112	76 - 136	1	30
Perfluoropentanoic acid (PFPeA)			10.0	10.3		ug/Kg		103	69 - 129	6	30
Perfluorohexanoic acid (PFHxA)			10.0	10.3		ug/Kg		103	71 - 131	3	30
Perfluoroheptanoic acid (PFHpA)			10.0	10.3		ug/Kg		103	71 - 131	4	30
Perfluorooctanoic acid (PFOA)			10.0	10.2		ug/Kg		102	72 - 132	3	30
Perfluorononanoic acid (PFNA)			10.0	10.2		ug/Kg		102	73 - 133	0	30
Perfluorodecanoic acid (PFDA)			10.0	10.6		ug/Kg		106	72 - 132	2	30
Perfluoroundecanoic acid (PFUnA)			10.0	10.8		ug/Kg		108	66 - 126	4	30
Perfluorododecanoic acid (PFDoA)			10.0	10.8		ug/Kg		108	71 - 131	6	30
Perfluorotridecanoic acid (PFTriA)			10.0	9.24		ug/Kg		92	71 - 131	7	30
Perfluorotetradecanoic acid (PFTeA)			10.0	9.98		ug/Kg		100	67 - 127	1	30
Perfluoro-n-hexadecanoic acid (PFHxDA)			10.0	10.0		ug/Kg		100	75 - 135	0	30
Perfluoro-n-octadecanoic acid (PFODA)			10.0	12.1		ug/Kg		121	53 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)			8.84	9.43		ug/Kg		107	69 - 129	0	30
Perfluoropentanesulfonic acid (PFPeS)			9.38	10.0		ug/Kg		107	66 - 126	2	30

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

Lab Sample ID: LCSD 320-411238/3-A
Matrix: Tissue
Analysis Batch: 412393

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 411238

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorohexanesulfonic acid (PFHxS)			9.10	9.31		ug/Kg		102	62 - 122	3	30
Perfluoroheptanesulfonic Acid (PFHpS)			9.52	10.5		ug/Kg		111	76 - 136	1	30
Perfluorooctanesulfonic acid (PFOS)			9.28	11.4		ug/Kg		123	68 - 141	7	30
Perfluorononanesulfonic acid (PFNS)			9.60	10.3		ug/Kg		107	72 - 132	2	30
Perfluorodecanesulfonic acid (PFDS)			9.64	10.1		ug/Kg		105	71 - 131	4	30
Perfluorododecanesulfonic acid (PFDoS)			9.68	10.3		ug/Kg		107	70 - 130	2	30
Perfluorooctanesulfonamide (FOSA)			10.0	11.5		ug/Kg		115	77 - 137	9	30
NMeFOSA			10.0	10.8		ug/Kg		108	63 - 148	1	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			10.0	11.2		ug/Kg		112	72 - 132	2	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			10.0	10.6		ug/Kg		106	72 - 132	7	30
NMeFOSE			10.0	10.0		ug/Kg		100	43 - 153	9	30
NEtFOSE			10.0	9.75		ug/Kg		97	44 - 155	8	30
4:2 FTS			9.34	9.07	J	ug/Kg		97	68 - 143	2	30
6:2 FTS			9.48	9.66	J	ug/Kg		102	73 - 139	5	30
8:2 FTS			9.58	10.4		ug/Kg		109	75 - 135	2	30
10:2 FTS			9.64	7.16		ug/Kg		74	69 - 145	1	30
DONA			9.42	10.0		ug/Kg		106	79 - 139	1	30
HFPO-DA (GenX)			10.0	10.4		ug/Kg		104	53 - 158	2	30
F-53B Major			9.32	11.0		ug/Kg		118	74 - 134	2	30
F-53B Minor			9.42	10.1		ug/Kg		107	66 - 136	3	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C4 PFBA	*97*		*25 - 150*
13C5 PFPeA	*92*		*25 - 150*
13C2 PFHxA	*97*		*25 - 150*
13C4 PFHpA	*98*		*25 - 150*
13C4 PFOA	*96*		*25 - 150*
13C5 PFNA	*101*		*25 - 150*
13C2 PFDA	*100*		*25 - 150*
13C2 PFUnA	*100*		*25 - 150*
13C2 PFDoA	*91*		*25 - 150*
13C2 PFTeDA	*74*		*25 - 150*
13C2 PFHxDA	*89*		*25 - 150*
13C3 PFBS	*100*		*25 - 150*
18O2 PFHxS	*99*		*25 - 150*
13C4 PFOS	*96*		*25 - 150*
13C8 FOSA	*89*		*25 - 150*
d3-NMeFOSAA	*110*		*25 - 150*
d5-NEtFOSAA	*101*		*25 - 150*
d-N-MeFOSA-M	*79*		*25 - 150*
d-N-EtFOSA-M	*68*		*25 - 150*
d7-N-MeFOSE-M	*58*		*10 - 120*

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

Lab Sample ID: LCSD 320-411238/3-A
Matrix: Tissue
Analysis Batch: 412393

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 411238

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
d9-N-EtFOSE-M	*47*		*10 - 120*
M2-4:2 FTS	*117*		*25 - 150*
M2-6:2 FTS	*173*	**5*	*25 - 150*
M2-8:2 FTS	*201*	**5*	*25 - 150*
13C3 HFPO-DA	*90*		*25 - 150*

Lab Sample ID: 320-64243-7 DU
Matrix: Tissue
Analysis Batch: 413145

Client Sample ID: SW37-YP1
Prep Type: Total/NA
Prep Batch: 411238

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	3.1	J B	1.93	J F5	ug/Kg	☼	46	30
Perfluoropentanoic acid (PFPeA)	<4.3		<4.1		ug/Kg	☼	NC	30
Perfluorohexanoic acid (PFHxA)	<4.3		<4.1		ug/Kg	☼	NC	30
Perfluoroheptanoic acid (PFHpA)	<4.3		<4.1		ug/Kg	☼	NC	30
Perfluorooctanoic acid (PFOA)	<4.3		<4.1		ug/Kg	☼	NC	30
Perfluorononanoic acid (PFNA)	1.1	J	0.887	J	ug/Kg	☼	17	30
Perfluorodecanoic acid (PFDA)	13		12.8		ug/Kg	☼	3	30
Perfluoroundecanoic acid (PFUnA)	14		13.9		ug/Kg	☼	3	30
Perfluorododecanoic acid (PFDoA)	2.8	J	2.69	J	ug/Kg	☼	2	30
Perfluorotridecanoic acid (PFTriA)	1.9	J	1.88	J	ug/Kg	☼	2	30
Perfluorotetradecanoic acid (PFTeA)	<4.3		<4.1		ug/Kg	☼	NC	30
Perfluoro-n-hexadecanoic acid (PFHxDA)	<4.3		<4.1		ug/Kg	☼	NC	30
Perfluoro-n-octadecanoic acid (PFODA)	<4.3		<4.1		ug/Kg	☼	NC	30
Perfluorobutanesulfonic acid (PFBS)	<4.3		<4.1		ug/Kg	☼	NC	30
Perfluoropentanesulfonic acid (PFPeS)	<4.3		<4.1		ug/Kg	☼	NC	30
Perfluorohexanesulfonic acid (PFHxS)	<21	G	<21	G	ug/Kg	☼	NC	30
Perfluoroheptanesulfonic Acid (PFHpS)	<4.3		<4.1		ug/Kg	☼	NC	30
Perfluorononanesulfonic acid (PFNS)	<4.3		<4.1		ug/Kg	☼	NC	30
Perfluorodecanesulfonic acid (PFDS)	<4.3		<4.1		ug/Kg	☼	NC	30
Perfluorododecanesulfonic acid (PFDoS)	<4.3		<4.1		ug/Kg	☼	NC	30
Perfluorooctanesulfonamide (FOSA)	<4.3		<4.1		ug/Kg	☼	NC	30
NEtFOSA	<4.3		<4.1		ug/Kg	☼	NC	30
NMeFOSA	<4.3		<4.1		ug/Kg	☼	NC	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<43		<41		ug/Kg	☼	NC	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<43		<41		ug/Kg	☼	NC	30
NMeFOSE	<4.3		<4.1		ug/Kg	☼	NC	30

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

Lab Sample ID: 320-64243-7 DU
Matrix: Tissue
Analysis Batch: 413145

Client Sample ID: SW37-YP1
Prep Type: Total/NA
Prep Batch: 411238

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
NEtFOSE	<4.3			<4.1		ug/Kg	☼			NC	30
4:2 FTS	<43			<41		ug/Kg	☼			NC	30
6:2 FTS	<43			<41		ug/Kg	☼			NC	30
DONA	<4.3			<4.1		ug/Kg	☼			NC	30
HFPO-DA (GenX)	<5.4			<5.1		ug/Kg	☼			NC	30
F-53B Major	<4.3			<4.1		ug/Kg	☼			NC	30
F-53B Minor	<4.3			<4.1		ug/Kg	☼			NC	30

Isotope Dilution	*DU %Recovery*	*DU Qualifier*	*Limits*
13C4 PFBA	*105*		*25 - 150*
13C5 PFPeA	*91*		*25 - 150*
13C2 PFHxA	*96*		*25 - 150*
13C4 PFHpA	*105*		*25 - 150*
13C4 PFOA	*93*		*25 - 150*
13C5 PFNA	*97*		*25 - 150*
13C2 PFDA	*126*		*25 - 150*
13C2 PFUnA	*124*		*25 - 150*
13C2 PFDoA	*105*		*25 - 150*
13C2 PFTeDA	*59*		*25 - 150*
13C2 PFHxDA	*57*		*25 - 150*
13C3 PFBS	*102*		*25 - 150*
18O2 PFHxS	*119*		*25 - 150*
13C4 PFOS	*109*		*25 - 150*
13C8 FOSA	*103*		*25 - 150*
d3-NMeFOSAA	*120*		*25 - 150*
d5-NEtFOSAA	*138*		*25 - 150*
d-N-MeFOSA-M	*74*		*25 - 150*
d-N-EtFOSA-M	*67*		*25 - 150*
d7-N-MeFOSE-M	*42*		*10 - 120*
d9-N-EtFOSE-M	*40*		*10 - 120*
M2-4:2 FTS	*138*		*25 - 150*
M2-6:2 FTS	*144*		*25 - 150*
13C3 HFPO-DA	*91*		*25 - 150*

Lab Sample ID: MB 320-413207/1-A
Matrix: Tissue
Analysis Batch: 415958

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 413207

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	0.444	J	1.0	0.14	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
Perfluoropentanoic acid (PFPeA)	<1.0		1.0	0.39	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
Perfluorohexanoic acid (PFHxA)	<1.0		1.0	0.21	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
Perfluoroheptanoic acid (PFHpA)	<1.0		1.0	0.15	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
Perfluorooctanoic acid (PFOA)	<1.0		1.0	0.43	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
Perfluorononanoic acid (PFNA)	<1.0		1.0	0.18	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
Perfluorodecanoic acid (PFDA)	<1.0		1.0	0.11	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
Perfluoroundecanoic acid (PFUnA)	<1.0		1.0	0.18	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
Perfluorododecanoic acid (PFDoA)	<1.0		1.0	0.34	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
Perfluorotridecanoic acid (PFTriA)	<1.0		1.0	0.26	ug/Kg		09/17/20 12:46	09/25/20 14:00	1

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

Lab Sample ID: MB 320-413207/1-A
Matrix: Tissue
Analysis Batch: 415958

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 413207

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotetradecanoic acid (PFTeA)	<1.0		1.0	0.27	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.0		1.0	0.22	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.0		1.0	0.14	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
Perfluorobutanesulfonic acid (PFBS)	<1.0		1.0	0.13	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
Perfluoropentanesulfonic acid (PFPeS)	<1.0		1.0	0.10	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
Perfluorohexanesulfonic acid (PFHxS)	<1.0		1.0	0.16	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
Perfluoroheptanesulfonic Acid (PFHpS)	<1.0		1.0	0.18	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
Perfluorooctanesulfonic acid (PFOS)	<2.5		2.5	1.0	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
Perfluorononanesulfonic acid (PFNS)	<1.0		1.0	0.10	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
Perfluorodecanesulfonic acid (PFDS)	<1.0		1.0	0.20	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
Perfluorododecanesulfonic acid (PFDoS)	<1.0		1.0	0.30	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
Perfluorooctanesulfonamide (FOSA)	<1.0		1.0	0.41	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
NEtFOSA	<1.0		1.0	0.96	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
NMeFOSA	<1.0		1.0	0.16	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<10		10	2.0	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<10		10	1.9	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
NMeFOSE	<1.0		1.0	0.35	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
NEtFOSE	<1.0		1.0	0.18	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
4:2 FTS	<10		10	1.9	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
6:2 FTS	<10		10	0.75	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
8:2 FTS	<10		10	1.3	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
10:2 FTS	<1.0		1.0	0.13	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
DONA	<1.0		1.0	0.090	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
HFPO-DA (GenX)	<1.3		1.3	0.55	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
F-53B Major	<1.0		1.0	0.36	ug/Kg		09/17/20 12:46	09/25/20 14:00	1
F-53B Minor	<1.0		1.0	0.11	ug/Kg		09/17/20 12:46	09/25/20 14:00	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*53*		*25 - 150*	*09/17/20 12:46*	*09/25/20 14:00*	*1*
13C5 PFPeA	*54*		*25 - 150*	*09/17/20 12:46*	*09/25/20 14:00*	*1*
13C2 PFHxA	*58*		*25 - 150*	*09/17/20 12:46*	*09/25/20 14:00*	*1*
13C4 PFHpA	*59*		*25 - 150*	*09/17/20 12:46*	*09/25/20 14:00*	*1*
13C4 PFOA	*59*		*25 - 150*	*09/17/20 12:46*	*09/25/20 14:00*	*1*
13C5 PFNA	*61*		*25 - 150*	*09/17/20 12:46*	*09/25/20 14:00*	*1*
13C2 PFDA	*65*		*25 - 150*	*09/17/20 12:46*	*09/25/20 14:00*	*1*
13C2 PFUnA	*64*		*25 - 150*	*09/17/20 12:46*	*09/25/20 14:00*	*1*
13C2 PFDoA	*66*		*25 - 150*	*09/17/20 12:46*	*09/25/20 14:00*	*1*
13C2 PFTeDA	*61*		*25 - 150*	*09/17/20 12:46*	*09/25/20 14:00*	*1*
13C2 PFHxDA	*53*		*25 - 150*	*09/17/20 12:46*	*09/25/20 14:00*	*1*
13C3 PFBS	*58*		*25 - 150*	*09/17/20 12:46*	*09/25/20 14:00*	*1*
18O2 PFHxS	*60*		*25 - 150*	*09/17/20 12:46*	*09/25/20 14:00*	*1*
13C4 PFOS	*59*		*25 - 150*	*09/17/20 12:46*	*09/25/20 14:00*	*1*
13C8 FOSA	*58*		*25 - 150*	*09/17/20 12:46*	*09/25/20 14:00*	*1*

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

Lab Sample ID: MB 320-413207/1-A
Matrix: Tissue
Analysis Batch: 415958

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 413207

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
d3-NMeFOSAA	74		25 - 150	09/17/20 12:46	09/25/20 14:00	1
d5-NEtFOSAA	74		25 - 150	09/17/20 12:46	09/25/20 14:00	1
d-N-MeFOSA-M	31		25 - 150	09/17/20 12:46	09/25/20 14:00	1
d-N-EtFOSA-M	30		25 - 150	09/17/20 12:46	09/25/20 14:00	1
d7-N-MeFOSE-M	22		10 - 120	09/17/20 12:46	09/25/20 14:00	1
d9-N-EtFOSE-M	21		10 - 120	09/17/20 12:46	09/25/20 14:00	1
M2-4:2 FTS	60		25 - 150	09/17/20 12:46	09/25/20 14:00	1
M2-6:2 FTS	103		25 - 150	09/17/20 12:46	09/25/20 14:00	1
M2-8:2 FTS	247	*5	25 - 150	09/17/20 12:46	09/25/20 14:00	1
13C3 HFPO-DA	54		25 - 150	09/17/20 12:46	09/25/20 14:00	1

Lab Sample ID: LCS 320-413207/2-A
Matrix: Tissue
Analysis Batch: 415958

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 413207

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	10.0	12.1		ug/Kg		121	76 - 136
Perfluoropentanoic acid (PFPeA)	10.0	10.4		ug/Kg		104	69 - 129
Perfluorohexanoic acid (PFHxA)	10.0	10.8		ug/Kg		108	71 - 131
Perfluoroheptanoic acid (PFHpA)	10.0	11.7		ug/Kg		117	71 - 131
Perfluorooctanoic acid (PFOA)	10.0	10.9		ug/Kg		109	72 - 132
Perfluorononanoic acid (PFNA)	10.0	11.7		ug/Kg		117	73 - 133
Perfluorodecanoic acid (PFDA)	10.0	11.7		ug/Kg		117	72 - 132
Perfluoroundecanoic acid (PFUnA)	10.0	10.6		ug/Kg		106	66 - 126
Perfluorododecanoic acid (PFDoA)	10.0	10.8		ug/Kg		108	71 - 131
Perfluorotridecanoic acid (PFTriA)	10.0	10.7		ug/Kg		107	71 - 131
Perfluorotetradecanoic acid (PFTeA)	10.0	11.8		ug/Kg		118	67 - 127
Perfluoro-n-hexadecanoic acid (PFHxDA)	10.0	10.7		ug/Kg		107	75 - 135
Perfluoro-n-octadecanoic acid (PFODA)	10.0	8.96		ug/Kg		90	53 - 130
Perfluorobutanesulfonic acid (PFBS)	8.84	9.97		ug/Kg		113	69 - 129
Perfluoropentanesulfonic acid (PFPeS)	9.38	11.3		ug/Kg		120	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	9.10	9.10		ug/Kg		100	62 - 122
Perfluoroheptanesulfonic Acid (PFHpS)	9.52	11.5		ug/Kg		121	76 - 136
Perfluorooctanesulfonic acid (PFOS)	9.28	11.2		ug/Kg		121	68 - 141
Perfluorononanesulfonic acid (PFNS)	9.60	10.3		ug/Kg		108	72 - 132
Perfluorodecanesulfonic acid (PFDS)	9.64	10.9		ug/Kg		113	71 - 131
Perfluorododecanesulfonic acid (PFDoS)	9.68	11.2		ug/Kg		116	70 - 130
Perfluorooctanesulfonamide (FOSA)	10.0	12.0		ug/Kg		120	77 - 137

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

Lab Sample ID: LCS 320-413207/2-A
Matrix: Tissue
Analysis Batch: 415958

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 413207

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
NMeFOSA	10.0	11.6		ug/Kg		116	63 - 148
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	10.0	11.0		ug/Kg		110	72 - 132
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	10.0	10.2		ug/Kg		102	72 - 132
NMeFOSE	10.0	11.6		ug/Kg		116	43 - 153
NEtFOSE	10.0	11.0		ug/Kg		110	44 - 155
4:2 FTS	9.34	10.0		ug/Kg		107	68 - 143
6:2 FTS	9.48	9.34	J	ug/Kg		99	73 - 139
8:2 FTS	9.58	10.3		ug/Kg		108	75 - 135
10:2 FTS	9.64	6.61		ug/Kg		69	69 - 145
DONA	9.42	10.5		ug/Kg		111	79 - 139
HFPO-DA (GenX)	10.0	10.5		ug/Kg		105	53 - 158
F-53B Major	9.32	9.81		ug/Kg		105	74 - 134
F-53B Minor	9.42	9.98		ug/Kg		106	66 - 136

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*76*		*25 - 150*
13C5 PFPeA	*76*		*25 - 150*
13C2 PFHxA	*83*		*25 - 150*
13C4 PFHpA	*84*		*25 - 150*
13C4 PFOA	*87*		*25 - 150*
13C5 PFNA	*93*		*25 - 150*
13C2 PFDA	*91*		*25 - 150*
13C2 PFUnA	*101*		*25 - 150*
13C2 PFDoA	*101*		*25 - 150*
13C2 PFTeDA	*92*		*25 - 150*
13C2 PFHxDA	*80*		*25 - 150*
13C3 PFBS	*79*		*25 - 150*
18O2 PFHxS	*86*		*25 - 150*
13C4 PFOS	*86*		*25 - 150*
13C8 FOSA	*81*		*25 - 150*
d3-NMeFOSAA	*114*		*25 - 150*
d5-NEtFOSAA	*114*		*25 - 150*
d-N-MeFOSA-M	*54*		*25 - 150*
d-N-EtFOSA-M	*54*		*25 - 150*
d7-N-MeFOSE-M	*40*		*10 - 120*
d9-N-EtFOSE-M	*40*		*10 - 120*
M2-4:2 FTS	*93*		*25 - 150*
M2-6:2 FTS	*159*	**5*	*25 - 150*
M2-8:2 FTS	*363*	**5*	*25 - 150*
13C3 HFPO-DA	*78*		*25 - 150*

Lab Sample ID: LCSD 320-413207/3-A
Matrix: Tissue
Analysis Batch: 415958

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 413207

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	10.0	12.3		ug/Kg		123	76 - 136	1	30

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

Lab Sample ID: LCSD 320-413207/3-A
Client Sample ID: Lab Control Sample Dup
Matrix: Tissue
Prep Type: Total/NA
Analysis Batch: 415958
Prep Batch: 413207

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluoropentanoic acid (PFPeA)	10.0	10.1		ug/Kg		101	69 - 129	3	30
Perfluorohexanoic acid (PFHxA)	10.0	10.9		ug/Kg		109	71 - 131	1	30
Perfluoroheptanoic acid (PFHpA)	10.0	11.2		ug/Kg		112	71 - 131	4	30
Perfluorooctanoic acid (PFOA)	10.0	10.9		ug/Kg		109	72 - 132	0	30
Perfluorononanoic acid (PFNA)	10.0	11.0		ug/Kg		110	73 - 133	6	30
Perfluorodecanoic acid (PFDA)	10.0	11.8		ug/Kg		118	72 - 132	1	30
Perfluoroundecanoic acid (PFUnA)	10.0	10.2		ug/Kg		102	66 - 126	5	30
Perfluorododecanoic acid (PFDoA)	10.0	11.1		ug/Kg		111	71 - 131	3	30
Perfluorotridecanoic acid (PFTriA)	10.0	11.0		ug/Kg		110	71 - 131	3	30
Perfluorotetradecanoic acid (PFTeA)	10.0	13.1	*	ug/Kg		131	67 - 127	10	30
Perfluoro-n-hexadecanoic acid (PFHxDA)	10.0	10.9		ug/Kg		109	75 - 135	2	30
Perfluoro-n-octadecanoic acid (PFODA)	10.0	9.12		ug/Kg		91	53 - 130	2	30
Perfluorobutanesulfonic acid (PFBS)	8.84	10.5		ug/Kg		119	69 - 129	5	30
Perfluoropentanesulfonic acid (PFPeS)	9.38	12.5	*	ug/Kg		134	66 - 126	11	30
Perfluorohexanesulfonic acid (PFHxS)	9.10	9.07		ug/Kg		100	62 - 122	0	30
Perfluoroheptanesulfonic Acid (PFHpS)	9.52	11.4		ug/Kg		120	76 - 136	1	30
Perfluorooctanesulfonic acid (PFOS)	9.28	10.8		ug/Kg		117	68 - 141	4	30
Perfluorononanesulfonic acid (PFNS)	9.60	10.4		ug/Kg		109	72 - 132	1	30
Perfluorodecanesulfonic acid (PFDS)	9.64	10.7		ug/Kg		111	71 - 131	2	30
Perfluorododecanesulfonic acid (PFDoS)	9.68	10.5		ug/Kg		108	70 - 130	7	30
Perfluorooctanesulfonamide (FOSA)	10.0	11.4		ug/Kg		114	77 - 137	5	30
NMeFOSA	10.0	11.2		ug/Kg		112	63 - 148	4	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	10.0	11.6		ug/Kg		116	72 - 132	6	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	10.0	10.4		ug/Kg		104	72 - 132	2	30
NMeFOSE	10.0	11.9		ug/Kg		119	43 - 153	2	30
NEtFOSE	10.0	11.2		ug/Kg		112	44 - 155	2	30
4:2 FTS	9.34	10.6		ug/Kg		113	68 - 143	6	30
6:2 FTS	9.48	9.50	J	ug/Kg		100	73 - 139	2	30
8:2 FTS	9.58	10.2		ug/Kg		106	75 - 135	2	30
10:2 FTS	9.64	7.13		ug/Kg		74	69 - 145	8	30
DONA	9.42	10.4		ug/Kg		110	79 - 139	1	30
HFPO-DA (GenX)	10.0	10.9		ug/Kg		109	53 - 158	4	30
F-53B Major	9.32	10.5		ug/Kg		113	74 - 134	7	30
F-53B Minor	9.42	9.90		ug/Kg		105	66 - 136	1	30

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

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C4 PFBA	75		25 - 150
13C5 PFPeA	77		25 - 150
13C2 PFHxA	84		25 - 150
13C4 PFHpA	86		25 - 150
13C4 PFOA	89		25 - 150
13C5 PFNA	95		25 - 150
13C2 PFDA	94		25 - 150
13C2 PFUnA	101		25 - 150
13C2 PFDoA	97		25 - 150
13C2 PFTeDA	85		25 - 150
13C2 PFHxDA	88		25 - 150
13C3 PFBS	80		25 - 150
18O2 PFHxS	87		25 - 150
13C4 PFOS	88		25 - 150
13C8 FOSA	78		25 - 150
d3-NMeFOSAA	109		25 - 150
d5-NEtFOSAA	123		25 - 150
d-N-MeFOSA-M	79		25 - 150
d-N-EtFOSA-M	79		25 - 150
d7-N-MeFOSE-M	56		10 - 120
d9-N-EtFOSE-M	54		10 - 120
M2-4:2 FTS	106		25 - 150
M2-6:2 FTS	205	*5	25 - 150
M2-8:2 FTS	363	*5	25 - 150
13C3 HFPO-DA	79		25 - 150

Lab Sample ID: 320-64243-28 DU
Matrix: Tissue
Analysis Batch: 415958

Client Sample ID: SW14-LB5
Prep Type: Total/NA
Prep Batch: 413207

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	<41			<42		ug/Kg	☼			NC	30
Perfluoropentanoic acid (PFPeA)	<41			<42		ug/Kg	☼			NC	30
Perfluorohexanoic acid (PFHxA)	<41			<42		ug/Kg	☼			NC	30
Perfluoroheptanoic acid (PFHpA)	<41			<42		ug/Kg	☼			NC	30
Perfluorooctanoic acid (PFOA)	<41			<42		ug/Kg	☼			NC	30
Perfluorononanoic acid (PFNA)	16	J		15.9	J	ug/Kg	☼			1	30
Perfluorodecanoic acid (PFDA)	30	J		32.0	J	ug/Kg	☼			6	30
Perfluoroundecanoic acid (PFUnA)	12	J		10.4	J	ug/Kg	☼			16	30
Perfluorododecanoic acid (PFDoA)	<41			<42		ug/Kg	☼			NC	30
Perfluorotridecanoic acid (PFTriA)	<41			<42		ug/Kg	☼			NC	30
Perfluorotetradecanoic acid (PFTeA)	<41	*		<42	*	ug/Kg	☼			NC	30
Perfluoro-n-hexadecanoic acid (PFHxDA)	<41			<42		ug/Kg	☼			NC	30
Perfluoro-n-octadecanoic acid (PFODA)	<41			<42		ug/Kg	☼			NC	30
Perfluorobutanesulfonic acid (PFBS)	<41			<42		ug/Kg	☼			NC	30
Perfluoropentanesulfonic acid (PFPeS)	<41	*		<42	*	ug/Kg	☼			NC	30

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

Lab Sample ID: 320-64243-28 DU
Matrix: Tissue
Analysis Batch: 415958

Client Sample ID: SW14-LB5
Prep Type: Total/NA
Prep Batch: 413207

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Perfluorohexanesulfonic acid (PFHxS)	16	J I		14.8	J I	ug/Kg	☼			9	30
Perfluoroheptanesulfonic Acid (PFHpS)	<41			<42		ug/Kg	☼			NC	30
Perfluorooctanesulfonic acid (PFOS)	1100			1160		ug/Kg	☼			1	30
Perfluorononanesulfonic acid (PFNS)	<41			<42		ug/Kg	☼			NC	30
Perfluorodecanesulfonic acid (PFDS)	<41			<42		ug/Kg	☼			NC	30
Perfluorododecanesulfonic acid (PFDoS)	<41			<42		ug/Kg	☼			NC	30
Perfluorooctanesulfonamide (FOSA)	<41			<42		ug/Kg	☼			NC	30
NEtFOSA	<41			<42		ug/Kg	☼			NC	30
NMeFOSA	<41			<42		ug/Kg	☼			NC	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<410			<420		ug/Kg	☼			NC	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<410			<420		ug/Kg	☼			NC	30
NMeFOSE	<41			<42		ug/Kg	☼			NC	30
NEtFOSE	<41			<42		ug/Kg	☼			NC	30
4:2 FTS	<410			<420		ug/Kg	☼			NC	30
6:2 FTS	<410			<420		ug/Kg	☼			NC	30
8:2 FTS	<410			<420		ug/Kg	☼			NC	30
10:2 FTS	<41			<42		ug/Kg	☼			NC	30
DONA	<41			<42		ug/Kg	☼			NC	30
HFPO-DA (GenX)	<52			<52		ug/Kg	☼			NC	30
F-53B Major	<41			<42		ug/Kg	☼			NC	30
F-53B Minor	<41			<42		ug/Kg	☼			NC	30

Isotope Dilution	*DU %Recovery*	*DU Qualifier*	*Limits*
13C4 PFBA	*68*		*25 - 150*
13C5 PFPeA	*75*		*25 - 150*
13C2 PFHxA	*81*		*25 - 150*
13C4 PFHpA	*84*		*25 - 150*
13C4 PFOA	*86*		*25 - 150*
13C5 PFNA	*91*		*25 - 150*
13C2 PFDA	*95*		*25 - 150*
13C2 PFUnA	*87*		*25 - 150*
13C2 PFDoA	*84*		*25 - 150*
13C2 PFTeDA	*72*		*25 - 150*
13C2 PFHxDA	*57*		*25 - 150*
13C3 PFBS	*75*		*25 - 150*
18O2 PFHxS	*83*		*25 - 150*
13C4 PFOS	*81*		*25 - 150*
13C8 FOSA	*76*		*25 - 150*
d3-NMeFOSAA	*76*		*25 - 150*
d5-NEtFOSAA	*79*		*25 - 150*
d-N-MeFOSA-M	*51*		*25 - 150*
d-N-EtFOSA-M	*45*		*25 - 150*

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

Lab Sample ID: 320-64243-28 DU
Matrix: Tissue
Analysis Batch: 415958

Client Sample ID: SW14-LB5
Prep Type: Total/NA
Prep Batch: 413207

Isotope Dilution	DU %Recovery	DU Qualifier	Limits
d7-N-MeFOSE-M	26		10 - 120
d9-N-EtFOSE-M	23		10 - 120
M2-4:2 FTS	99		25 - 150
M2-6:2 FTS	142		25 - 150
M2-8:2 FTS	152	*5	25 - 150
13C3 HFPO-DA	74		25 - 150

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

Lab Sample ID: 320-64243-7 DU
Matrix: Tissue
Analysis Batch: 413543

Client Sample ID: SW37-YP1
Prep Type: Total/NA
Prep Batch: 411238

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Perfluorooctanesulfonic acid (PFOS) - DL	<1200	G		<1000	G	ug/Kg	☼			NC	30
8:2 FTS - DL	<430			<410		ug/Kg	☼			NC	30
10:2 FTS - DL	<43			<41		ug/Kg	☼			NC	30

Isotope Dilution	DU %Recovery	DU Qualifier	Limits
13C4 PFOS - DL	100		25 - 150
M2-8:2 FTS - DL	120		25 - 150

LCMS

Prep Batch: 409390

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64243-29	Field Blank 8/26/20 (SW38)	Total/NA	Water	3535	
320-64243-30	Field Blank 8/26/20 (SW37)	Total/NA	Water	3535	
320-64243-31	Field Blank 8/26/20 (SW14)	Total/NA	Water	3535	
320-64243-32	Field Blank 8/27/20 (Foil)	Total/NA	Water	3535	
320-64243-33	Field Blank 8/27/20 (Ziploc)	Total/NA	Water	3535	
320-64243-34	Field Blank 8/27/20 (SW38)	Total/NA	Water	3535	
MB 320-409390/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-409390/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-409390/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 409793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64243-29	Field Blank 8/26/20 (SW38)	Total/NA	Water	537 (modified)	409390
320-64243-30	Field Blank 8/26/20 (SW37)	Total/NA	Water	537 (modified)	409390
320-64243-31	Field Blank 8/26/20 (SW14)	Total/NA	Water	537 (modified)	409390
320-64243-32	Field Blank 8/27/20 (Foil)	Total/NA	Water	537 (modified)	409390
320-64243-33	Field Blank 8/27/20 (Ziploc)	Total/NA	Water	537 (modified)	409390
320-64243-34	Field Blank 8/27/20 (SW38)	Total/NA	Water	537 (modified)	409390
MB 320-409390/1-A	Method Blank	Total/NA	Water	537 (modified)	409390
LCS 320-409390/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	409390
LCSD 320-409390/3-A	Lab Control Sample Dup	Total/NA	Water	537 (modified)	409390

Prep Batch: 411223

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64243-15	SW14-YP2	Total/NA	Tissue	SHAKE	
320-64243-16	SW14-YP3	Total/NA	Tissue	SHAKE	
320-64243-17	SW14-YP4	Total/NA	Tissue	SHAKE	
320-64243-18	SW14-YP5	Total/NA	Tissue	SHAKE	
320-64243-19	SW14-BG1	Total/NA	Tissue	SHAKE	
320-64243-20	SW14-BG2	Total/NA	Tissue	SHAKE	
320-64243-21	SW14-BG3	Total/NA	Tissue	SHAKE	
320-64243-22	SW14-BG4	Total/NA	Tissue	SHAKE	
320-64243-23	SW14-BG5	Total/NA	Tissue	SHAKE	
320-64243-24	SW14-LB1	Total/NA	Tissue	SHAKE	
320-64243-25	SW14-LB2	Total/NA	Tissue	SHAKE	
320-64243-26	SW14-LB3	Total/NA	Tissue	SHAKE	
320-64243-27	SW14-LB4	Total/NA	Tissue	SHAKE	
MB 320-411223/1-A	Method Blank	Total/NA	Tissue	SHAKE	
LCS 320-411223/2-A	Lab Control Sample	Total/NA	Tissue	SHAKE	
LCSD 320-411223/3-A	Lab Control Sample Dup	Total/NA	Tissue	SHAKE	

Prep Batch: 411238

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64243-1 - DL	SW38-YP1	Total/NA	Tissue	SHAKE	
320-64243-1	SW38-YP1	Total/NA	Tissue	SHAKE	
320-64243-2	SW38-YP2	Total/NA	Tissue	SHAKE	
320-64243-3	SW38-YP3	Total/NA	Tissue	SHAKE	
320-64243-3 - DL	SW38-YP3	Total/NA	Tissue	SHAKE	
320-64243-4	SW38-YP4	Total/NA	Tissue	SHAKE	
320-64243-4 - DL	SW38-YP4	Total/NA	Tissue	SHAKE	
320-64243-5 - DL	SW38-YP5	Total/NA	Tissue	SHAKE	

LCMS (Continued)

Prep Batch: 411238 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64243-5	SW38-YP5	Total/NA	Tissue	SHAKE	
320-64243-6 - DL	SW38-GS1	Total/NA	Tissue	SHAKE	
320-64243-6	SW38-GS1	Total/NA	Tissue	SHAKE	
320-64243-7 - DL	SW37-YP1	Total/NA	Tissue	SHAKE	
320-64243-7	SW37-YP1	Total/NA	Tissue	SHAKE	
320-64243-8	SW37-YP2	Total/NA	Tissue	SHAKE	
320-64243-8 - DL	SW37-YP2	Total/NA	Tissue	SHAKE	
320-64243-9 - DL	SW37-PS1	Total/NA	Tissue	SHAKE	
320-64243-9	SW37-PS1	Total/NA	Tissue	SHAKE	
320-64243-10 - DL	SW37-PS2	Total/NA	Tissue	SHAKE	
320-64243-10	SW37-PS2	Total/NA	Tissue	SHAKE	
320-64243-11	SW37-PS3	Total/NA	Tissue	SHAKE	
320-64243-11 - DL	SW37-PS3	Total/NA	Tissue	SHAKE	
320-64243-12 - DL	SW37-PS4	Total/NA	Tissue	SHAKE	
320-64243-12	SW37-PS4	Total/NA	Tissue	SHAKE	
320-64243-13	SW37-PS5	Total/NA	Tissue	SHAKE	
320-64243-13 - DL	SW37-PS5	Total/NA	Tissue	SHAKE	
320-64243-14	SW14-YP1	Total/NA	Tissue	SHAKE	
320-64243-14 - DL	SW14-YP1	Total/NA	Tissue	SHAKE	
MB 320-411238/1-A	Method Blank	Total/NA	Tissue	SHAKE	
LCS 320-411238/2-A	Lab Control Sample	Total/NA	Tissue	SHAKE	
LCSD 320-411238/3-A	Lab Control Sample Dup	Total/NA	Tissue	SHAKE	
320-64243-7 DU - DL	SW37-YP1	Total/NA	Tissue	SHAKE	
320-64243-7 DU	SW37-YP1	Total/NA	Tissue	SHAKE	

Analysis Batch: 412393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64243-1 - DL	SW38-YP1	Total/NA	Tissue	537 (modified)	411238
320-64243-3 - DL	SW38-YP3	Total/NA	Tissue	537 (modified)	411238
320-64243-4 - DL	SW38-YP4	Total/NA	Tissue	537 (modified)	411238
320-64243-5 - DL	SW38-YP5	Total/NA	Tissue	537 (modified)	411238
320-64243-6 - DL	SW38-GS1	Total/NA	Tissue	537 (modified)	411238
320-64243-8 - DL	SW37-YP2	Total/NA	Tissue	537 (modified)	411238
320-64243-9 - DL	SW37-PS1	Total/NA	Tissue	537 (modified)	411238
320-64243-10 - DL	SW37-PS2	Total/NA	Tissue	537 (modified)	411238
320-64243-13 - DL	SW37-PS5	Total/NA	Tissue	537 (modified)	411238
320-64243-14 - DL	SW14-YP1	Total/NA	Tissue	537 (modified)	411238
MB 320-411238/1-A	Method Blank	Total/NA	Tissue	537 (modified)	411238
LCS 320-411238/2-A	Lab Control Sample	Total/NA	Tissue	537 (modified)	411238
LCSD 320-411238/3-A	Lab Control Sample Dup	Total/NA	Tissue	537 (modified)	411238

Analysis Batch: 412780

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64243-15	SW14-YP2	Total/NA	Tissue	537 (modified)	411223
320-64243-16	SW14-YP3	Total/NA	Tissue	537 (modified)	411223
320-64243-17	SW14-YP4	Total/NA	Tissue	537 (modified)	411223
320-64243-18	SW14-YP5	Total/NA	Tissue	537 (modified)	411223
320-64243-19	SW14-BG1	Total/NA	Tissue	537 (modified)	411223
320-64243-20	SW14-BG2	Total/NA	Tissue	537 (modified)	411223
320-64243-21	SW14-BG3	Total/NA	Tissue	537 (modified)	411223
320-64243-22	SW14-BG4	Total/NA	Tissue	537 (modified)	411223

LCMS (Continued)

Analysis Batch: 412780 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64243-23	SW14-BG5	Total/NA	Tissue	537 (modified)	411223
320-64243-24	SW14-LB1	Total/NA	Tissue	537 (modified)	411223
320-64243-26	SW14-LB3	Total/NA	Tissue	537 (modified)	411223
320-64243-27	SW14-LB4	Total/NA	Tissue	537 (modified)	411223
MB 320-411223/1-A	Method Blank	Total/NA	Tissue	537 (modified)	411223
LCS 320-411223/2-A	Lab Control Sample	Total/NA	Tissue	537 (modified)	411223

Analysis Batch: 413145

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64243-1	SW38-YP1	Total/NA	Tissue	537 (modified)	411238
320-64243-2	SW38-YP2	Total/NA	Tissue	537 (modified)	411238
320-64243-3	SW38-YP3	Total/NA	Tissue	537 (modified)	411238
320-64243-4	SW38-YP4	Total/NA	Tissue	537 (modified)	411238
320-64243-5	SW38-YP5	Total/NA	Tissue	537 (modified)	411238
320-64243-6	SW38-GS1	Total/NA	Tissue	537 (modified)	411238
320-64243-7	SW37-YP1	Total/NA	Tissue	537 (modified)	411238
320-64243-8	SW37-YP2	Total/NA	Tissue	537 (modified)	411238
320-64243-9	SW37-PS1	Total/NA	Tissue	537 (modified)	411238
320-64243-10	SW37-PS2	Total/NA	Tissue	537 (modified)	411238
320-64243-11	SW37-PS3	Total/NA	Tissue	537 (modified)	411238
320-64243-12	SW37-PS4	Total/NA	Tissue	537 (modified)	411238
320-64243-14	SW14-YP1	Total/NA	Tissue	537 (modified)	411238
320-64243-7 DU	SW37-YP1	Total/NA	Tissue	537 (modified)	411238

Prep Batch: 413207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64243-15 - RE	SW14-YP2	Total/NA	Tissue	SHAKE	
320-64243-16 - RE	SW14-YP3	Total/NA	Tissue	SHAKE	
320-64243-17 - DL	SW14-YP4	Total/NA	Tissue	SHAKE	
320-64243-17 - RE	SW14-YP4	Total/NA	Tissue	SHAKE	
320-64243-18 - RE	SW14-YP5	Total/NA	Tissue	SHAKE	
320-64243-19 - RE	SW14-BG1	Total/NA	Tissue	SHAKE	
320-64243-20 - RE	SW14-BG2	Total/NA	Tissue	SHAKE	
320-64243-21 - RE	SW14-BG3	Total/NA	Tissue	SHAKE	
320-64243-22 - RE	SW14-BG4	Total/NA	Tissue	SHAKE	
320-64243-23 - REDL	SW14-BG5	Total/NA	Tissue	SHAKE	
320-64243-23 - RE	SW14-BG5	Total/NA	Tissue	SHAKE	
320-64243-24 - RE	SW14-LB1	Total/NA	Tissue	SHAKE	
320-64243-25 - RE	SW14-LB2	Total/NA	Tissue	SHAKE	
320-64243-26 - RE	SW14-LB3	Total/NA	Tissue	SHAKE	
320-64243-27 - RE	SW14-LB4	Total/NA	Tissue	SHAKE	
320-64243-28	SW14-LB5	Total/NA	Tissue	SHAKE	
MB 320-413207/1-A	Method Blank	Total/NA	Tissue	SHAKE	
LCS 320-413207/2-A	Lab Control Sample	Total/NA	Tissue	SHAKE	
LCSD 320-413207/3-A	Lab Control Sample Dup	Total/NA	Tissue	SHAKE	
320-64243-28 DU	SW14-LB5	Total/NA	Tissue	SHAKE	

Analysis Batch: 413543

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64243-7 - DL	SW37-YP1	Total/NA	Tissue	537 (modified)	411238
320-64243-11 - DL	SW37-PS3	Total/NA	Tissue	537 (modified)	411238

LCMS (Continued)

Analysis Batch: 413543 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64243-12 - DL	SW37-PS4	Total/NA	Tissue	537 (modified)	411238
320-64243-13	SW37-PS5	Total/NA	Tissue	537 (modified)	411238
320-64243-7 DU - DL	SW37-YP1	Total/NA	Tissue	537 (modified)	411238

Analysis Batch: 415958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64243-15 - RE	SW14-YP2	Total/NA	Tissue	537 (modified)	413207
320-64243-16 - RE	SW14-YP3	Total/NA	Tissue	537 (modified)	413207
320-64243-17 - RE	SW14-YP4	Total/NA	Tissue	537 (modified)	413207
320-64243-18 - RE	SW14-YP5	Total/NA	Tissue	537 (modified)	413207
320-64243-19 - RE	SW14-BG1	Total/NA	Tissue	537 (modified)	413207
320-64243-20 - RE	SW14-BG2	Total/NA	Tissue	537 (modified)	413207
320-64243-21 - RE	SW14-BG3	Total/NA	Tissue	537 (modified)	413207
320-64243-22 - RE	SW14-BG4	Total/NA	Tissue	537 (modified)	413207
320-64243-23 - RE	SW14-BG5	Total/NA	Tissue	537 (modified)	413207
320-64243-24 - RE	SW14-LB1	Total/NA	Tissue	537 (modified)	413207
320-64243-25 - RE	SW14-LB2	Total/NA	Tissue	537 (modified)	413207
320-64243-26 - RE	SW14-LB3	Total/NA	Tissue	537 (modified)	413207
320-64243-27 - RE	SW14-LB4	Total/NA	Tissue	537 (modified)	413207
320-64243-28	SW14-LB5	Total/NA	Tissue	537 (modified)	413207
MB 320-413207/1-A	Method Blank	Total/NA	Tissue	537 (modified)	413207
LCS 320-413207/2-A	Lab Control Sample	Total/NA	Tissue	537 (modified)	413207
LCSD 320-413207/3-A	Lab Control Sample Dup	Total/NA	Tissue	537 (modified)	413207
320-64243-28 DU	SW14-LB5	Total/NA	Tissue	537 (modified)	413207

Analysis Batch: 416185

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64243-17 - DL	SW14-YP4	Total/NA	Tissue	537 (modified)	413207
320-64243-23 - REDL	SW14-BG5	Total/NA	Tissue	537 (modified)	413207

Analysis Batch: 416200

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64243-25	SW14-LB2	Total/NA	Tissue	537 (modified)	411223
LCSD 320-411223/3-A	Lab Control Sample Dup	Total/NA	Tissue	537 (modified)	411223

General Chemistry

Analysis Batch: 411500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64243-12	SW37-PS4	Total/NA	Tissue	D 2216	
320-64243-13	SW37-PS5	Total/NA	Tissue	D 2216	
320-64243-14	SW14-YP1	Total/NA	Tissue	D 2216	
320-64243-15	SW14-YP2	Total/NA	Tissue	D 2216	
320-64243-16	SW14-YP3	Total/NA	Tissue	D 2216	
320-64243-17	SW14-YP4	Total/NA	Tissue	D 2216	
320-64243-18	SW14-YP5	Total/NA	Tissue	D 2216	
320-64243-19	SW14-BG1	Total/NA	Tissue	D 2216	
320-64243-20	SW14-BG2	Total/NA	Tissue	D 2216	
320-64243-21	SW14-BG3	Total/NA	Tissue	D 2216	
320-64243-22	SW14-BG4	Total/NA	Tissue	D 2216	
320-64243-23	SW14-BG5	Total/NA	Tissue	D 2216	

General Chemistry (Continued)

Analysis Batch: 411500 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64243-25	SW14-LB2	Total/NA	Tissue	D 2216	
320-64243-26	SW14-LB3	Total/NA	Tissue	D 2216	
320-64243-27	SW14-LB4	Total/NA	Tissue	D 2216	
320-64243-28	SW14-LB5	Total/NA	Tissue	D 2216	

Analysis Batch: 411512

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64243-1	SW38-YP1	Total/NA	Tissue	D 2216	
320-64243-2	SW38-YP2	Total/NA	Tissue	D 2216	
320-64243-3	SW38-YP3	Total/NA	Tissue	D 2216	
320-64243-4	SW38-YP4	Total/NA	Tissue	D 2216	
320-64243-5	SW38-YP5	Total/NA	Tissue	D 2216	
320-64243-6	SW38-GS1	Total/NA	Tissue	D 2216	
320-64243-7	SW37-YP1	Total/NA	Tissue	D 2216	
320-64243-8	SW37-YP2	Total/NA	Tissue	D 2216	
320-64243-9	SW37-PS1	Total/NA	Tissue	D 2216	
320-64243-10	SW37-PS2	Total/NA	Tissue	D 2216	
320-64243-11	SW37-PS3	Total/NA	Tissue	D 2216	
320-64243-24	SW14-LB1	Total/NA	Tissue	D 2216	

Client Sample ID: SW38-YP1
Lab Sample ID: 320-64243-1
Date Collected: 08/26/20 14:00
Matrix: Tissue
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			411512	09/11/20 14:13	KDB	TAL SAC

Client Sample ID: SW38-YP1
Lab Sample ID: 320-64243-1
Date Collected: 08/26/20 14:00
Matrix: Tissue
Date Received: 09/02/20 09:50
Percent Solids: 21.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE	DL		1.15 g	10.00 mL	411238	09/10/20 19:28	FX	TAL SAC
Total/NA	Analysis	537 (modified)	DL	100			412393	09/16/20 02:45	S1M	TAL SAC
Total/NA	Prep	SHAKE			1.15 g	10.00 mL	411238	09/10/20 19:28	FX	TAL SAC
Total/NA	Analysis	537 (modified)		1			413145	09/17/20 11:20	S1M	TAL SAC

Client Sample ID: SW38-YP2
Lab Sample ID: 320-64243-2
Date Collected: 08/26/20 14:00
Matrix: Tissue
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			411512	09/11/20 14:13	KDB	TAL SAC

Client Sample ID: SW38-YP2
Lab Sample ID: 320-64243-2
Date Collected: 08/26/20 14:00
Matrix: Tissue
Date Received: 09/02/20 09:50
Percent Solids: 19.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			1.04 g	10.00 mL	411238	09/10/20 19:28	FX	TAL SAC
Total/NA	Analysis	537 (modified)		1			413145	09/17/20 11:29	S1M	TAL SAC

Client Sample ID: SW38-YP3
Lab Sample ID: 320-64243-3
Date Collected: 08/26/20 14:00
Matrix: Tissue
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			411512	09/11/20 14:13	KDB	TAL SAC

Client Sample ID: SW38-YP3
Lab Sample ID: 320-64243-3
Date Collected: 08/26/20 14:00
Matrix: Tissue
Date Received: 09/02/20 09:50
Percent Solids: 21.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE	DL		1.12 g	10.00 mL	411238	09/10/20 19:28	FX	TAL SAC
Total/NA	Analysis	537 (modified)	DL	100			412393	09/16/20 03:04	S1M	TAL SAC
Total/NA	Prep	SHAKE			1.12 g	10.00 mL	411238	09/10/20 19:28	FX	TAL SAC
Total/NA	Analysis	537 (modified)		1			413145	09/17/20 11:39	S1M	TAL SAC

Client Sample ID: SW38-YP4 — Lab Sample ID: 320-64243-4
Date Collected: 08/26/20 22:30 — **Matrix: Tissue**
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			411512	09/11/20 14:13	KDB	TAL SAC

Client Sample ID: SW38-YP4 — Lab Sample ID: 320-64243-4
Date Collected: 08/26/20 22:30 — **Matrix: Tissue**
Date Received: 09/02/20 09:50 — **Percent Solids: 21.2**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE	DL		1.17 g	10.00 mL	411238	09/10/20 19:28	FX	TAL SAC
Total/NA	Analysis	537 (modified)	DL	100			412393	09/16/20 03:13	S1M	TAL SAC
Total/NA	Prep	SHAKE			1.17 g	10.00 mL	411238	09/10/20 19:28	FX	TAL SAC
Total/NA	Analysis	537 (modified)		1			413145	09/17/20 11:48	S1M	TAL SAC

Client Sample ID: SW38-YP5 — Lab Sample ID: 320-64243-5
Date Collected: 08/26/20 22:30 — **Matrix: Tissue**
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			411512	09/11/20 14:13	KDB	TAL SAC

Client Sample ID: SW38-YP5 — Lab Sample ID: 320-64243-5
Date Collected: 08/26/20 22:30 — **Matrix: Tissue**
Date Received: 09/02/20 09:50 — **Percent Solids: 21.4**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE	DL		1.04 g	10.00 mL	411238	09/10/20 19:28	FX	TAL SAC
Total/NA	Analysis	537 (modified)	DL	100			412393	09/16/20 03:23	S1M	TAL SAC
Total/NA	Prep	SHAKE			1.04 g	10.00 mL	411238	09/10/20 19:28	FX	TAL SAC
Total/NA	Analysis	537 (modified)		1			413145	09/17/20 11:57	S1M	TAL SAC

Client Sample ID: SW38-GS1 — Lab Sample ID: 320-64243-6
Date Collected: 08/26/20 14:00 — **Matrix: Tissue**
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			411512	09/11/20 14:13	KDB	TAL SAC

Client Sample ID: SW38-GS1 — Lab Sample ID: 320-64243-6
Date Collected: 08/26/20 14:00 — **Matrix: Tissue**
Date Received: 09/02/20 09:50 — **Percent Solids: 19.2**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE	DL		1.05 g	10.00 mL	411238	09/10/20 19:28	FX	TAL SAC
Total/NA	Analysis	537 (modified)	DL	100			412393	09/16/20 03:32	S1M	TAL SAC
Total/NA	Prep	SHAKE			1.05 g	10.00 mL	411238	09/10/20 19:28	FX	TAL SAC
Total/NA	Analysis	537 (modified)		1			413145	09/17/20 12:07	S1M	TAL SAC

Client Sample ID: SW37-YP1
Lab Sample ID: 320-64243-7
Date Collected: 08/26/20 16:00
Matrix: Tissue
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			411512	09/11/20 14:13	KDB	TAL SAC

Client Sample ID: SW37-YP1
Lab Sample ID: 320-64243-7
Date Collected: 08/26/20 16:00
Matrix: Tissue
Date Received: 09/02/20 09:50
Percent Solids: 22.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			1.05 g	10.00 mL	411238	09/10/20 19:28	FX	TAL SAC
Total/NA	Analysis	537 (modified)		1			413145	09/17/20 12:16	S1M	TAL SAC
Total/NA	Prep	SHAKE	DL		1.05 g	10.00 mL	411238	09/10/20 19:28	FX	TAL SAC
Total/NA	Analysis	537 (modified)	DL	10			413543	09/18/20 10:30	MNV	TAL SAC

Client Sample ID: SW37-YP2
Lab Sample ID: 320-64243-8
Date Collected: 08/26/20 16:00
Matrix: Tissue
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			411512	09/11/20 14:13	KDB	TAL SAC

Client Sample ID: SW37-YP2
Lab Sample ID: 320-64243-8
Date Collected: 08/26/20 16:00
Matrix: Tissue
Date Received: 09/02/20 09:50
Percent Solids: 18.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE	DL		1.03 g	10.00 mL	411238	09/10/20 19:28	FX	TAL SAC
Total/NA	Analysis	537 (modified)	DL	100			412393	09/16/20 04:38	S1M	TAL SAC
Total/NA	Prep	SHAKE			1.03 g	10.00 mL	411238	09/10/20 19:28	FX	TAL SAC
Total/NA	Analysis	537 (modified)		1			413145	09/17/20 12:35	S1M	TAL SAC

Client Sample ID: SW37-PS1
Lab Sample ID: 320-64243-9
Date Collected: 08/26/20 16:00
Matrix: Tissue
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			411512	09/11/20 14:13	KDB	TAL SAC

Client Sample ID: SW37-PS1
Lab Sample ID: 320-64243-9
Date Collected: 08/26/20 16:00
Matrix: Tissue
Date Received: 09/02/20 09:50
Percent Solids: 20.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE	DL		1.05 g	10.00 mL	411238	09/10/20 19:28	FX	TAL SAC
Total/NA	Analysis	537 (modified)	DL	100			412393	09/16/20 04:47	S1M	TAL SAC
Total/NA	Prep	SHAKE			1.05 g	10.00 mL	411238	09/10/20 19:28	FX	TAL SAC
Total/NA	Analysis	537 (modified)		1			413145	09/17/20 12:44	S1M	TAL SAC

Client Sample ID: SW37-PS2 — Lab Sample ID: 320-64243-10
Date Collected: 08/26/20 16:00 — **Matrix: Tissue**
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			411512	09/11/20 14:13	KDB	TAL SAC

Client Sample ID: SW37-PS2 — Lab Sample ID: 320-64243-10
Date Collected: 08/26/20 16:00 — **Matrix: Tissue**
Date Received: 09/02/20 09:50 — **Percent Solids: 21.3**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE	DL		1.12 g	10.00 mL	411238	09/10/20 19:28	FX	TAL SAC
Total/NA	Analysis	537 (modified)	DL	100			412393	09/16/20 04:57	S1M	TAL SAC
Total/NA	Prep	SHAKE			1.12 g	10.00 mL	411238	09/10/20 19:28	FX	TAL SAC
Total/NA	Analysis	537 (modified)		1			413145	09/17/20 13:31	S1M	TAL SAC

Client Sample ID: SW37-PS3 — Lab Sample ID: 320-64243-11
Date Collected: 08/26/20 16:00 — **Matrix: Tissue**
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			411512	09/11/20 14:13	KDB	TAL SAC

Client Sample ID: SW37-PS3 — Lab Sample ID: 320-64243-11
Date Collected: 08/26/20 16:00 — **Matrix: Tissue**
Date Received: 09/02/20 09:50 — **Percent Solids: 20.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			1.02 g	10.00 mL	411238	09/10/20 19:28	FX	TAL SAC
Total/NA	Analysis	537 (modified)		1			413145	09/17/20 13:41	S1M	TAL SAC
Total/NA	Prep	SHAKE	DL		1.02 g	10.00 mL	411238	09/10/20 19:28	FX	TAL SAC
Total/NA	Analysis	537 (modified)	DL	10			413543	09/18/20 10:49	MNV	TAL SAC

Client Sample ID: SW37-PS4 — Lab Sample ID: 320-64243-12
Date Collected: 08/26/20 16:00 — **Matrix: Tissue**
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			411500	09/11/20 13:16	TCS	TAL SAC

Client Sample ID: SW37-PS4 — Lab Sample ID: 320-64243-12
Date Collected: 08/26/20 16:00 — **Matrix: Tissue**
Date Received: 09/02/20 09:50 — **Percent Solids: 21.7**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			1.04 g	10.00 mL	411238	09/10/20 19:28	FX	TAL SAC
Total/NA	Analysis	537 (modified)		1			413145	09/17/20 13:50	S1M	TAL SAC
Total/NA	Prep	SHAKE	DL		1.04 g	10.00 mL	411238	09/10/20 19:28	FX	TAL SAC
Total/NA	Analysis	537 (modified)	DL	10			413543	09/18/20 10:58	MNV	TAL SAC

Client Sample ID: SW37-PS5 — Lab Sample ID: 320-64243-13

Date Collected: 08/26/20 16:00 — **Matrix: Tissue**
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			411500	09/11/20 13:16	TCS	TAL SAC

Client Sample ID: SW37-PS5 — Lab Sample ID: 320-64243-13

Date Collected: 08/26/20 16:00 — **Matrix: Tissue**
Date Received: 09/02/20 09:50 — **Percent Solids: 23.5**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE	DL		1.05 g	10.00 mL	411238	09/10/20 19:28	FX	TAL SAC
Total/NA	Analysis	537 (modified)	DL	100			412393	09/16/20 05:25	S1M	TAL SAC
Total/NA	Prep	SHAKE			1.05 g	10.00 mL	411238	09/10/20 19:28	FX	TAL SAC
Total/NA	Analysis	537 (modified)		10			413543	09/18/20 11:07	MNV	TAL SAC

Client Sample ID: SW14-YP1 — Lab Sample ID: 320-64243-14

Date Collected: 08/26/20 18:30 — **Matrix: Tissue**
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			411500	09/11/20 13:16	TCS	TAL SAC

Client Sample ID: SW14-YP1 — Lab Sample ID: 320-64243-14

Date Collected: 08/26/20 18:30 — **Matrix: Tissue**
Date Received: 09/02/20 09:50 — **Percent Solids: 23.7**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE	DL		1.02 g	10.00 mL	411238	09/10/20 19:31	FX	TAL SAC
Total/NA	Analysis	537 (modified)	DL	100			412393	09/16/20 05:34	S1M	TAL SAC
Total/NA	Prep	SHAKE			1.02 g	10.00 mL	411238	09/10/20 19:31	FX	TAL SAC
Total/NA	Analysis	537 (modified)		1			413145	09/17/20 14:09	S1M	TAL SAC

Client Sample ID: SW14-YP2 — Lab Sample ID: 320-64243-15

Date Collected: 08/26/20 18:30 — **Matrix: Tissue**
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			411500	09/11/20 13:16	TCS	TAL SAC

Client Sample ID: SW14-YP2 — Lab Sample ID: 320-64243-15

Date Collected: 08/26/20 18:30 — **Matrix: Tissue**
Date Received: 09/02/20 09:50 — **Percent Solids: 19.1**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			1.29 g	10.0 mL	411223	09/10/20 17:39	MC	TAL SAC
Total/NA	Analysis	537 (modified)		1			412780	09/16/20 13:52	RS1	TAL SAC
Total/NA	Prep	SHAKE	RE		1.32 g	10.0 mL	413207	09/17/20 12:46	CG	TAL SAC
Total/NA	Analysis	537 (modified)	RE	1			415958	09/25/20 14:37	JC	TAL SAC

Client Sample ID: SW14-YP3 — Lab Sample ID: 320-64243-16
Date Collected: 08/26/20 18:30 — **Matrix: Tissue**
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			411500	09/11/20 13:16	TCS	TAL SAC

Client Sample ID: SW14-YP3 — Lab Sample ID: 320-64243-16
Date Collected: 08/26/20 18:30 — **Matrix: Tissue**
Date Received: 09/02/20 09:50 — **Percent Solids: 22.7**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			1.40 g	10.0 mL	411223	09/10/20 17:39	MC	TAL SAC
Total/NA	Analysis	537 (modified)		10			412780	09/16/20 15:45	RS1	TAL SAC
Total/NA	Prep	SHAKE	RE		1.46 g	10.0 mL	413207	09/17/20 12:46	CG	TAL SAC
Total/NA	Analysis	537 (modified)	RE	10			415958	09/25/20 16:11	JC	TAL SAC

Client Sample ID: SW14-YP4 — Lab Sample ID: 320-64243-17
Date Collected: 08/26/20 18:30 — **Matrix: Tissue**
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			411500	09/11/20 13:16	TCS	TAL SAC

Client Sample ID: SW14-YP4 — Lab Sample ID: 320-64243-17
Date Collected: 08/26/20 18:30 — **Matrix: Tissue**
Date Received: 09/02/20 09:50 — **Percent Solids: 20.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			1.39 g	10.0 mL	411223	09/10/20 17:39	MC	TAL SAC
Total/NA	Analysis	537 (modified)		1			412780	09/16/20 14:02	RS1	TAL SAC
Total/NA	Prep	SHAKE	RE		1.48 g	10.0 mL	413207	09/17/20 12:46	CG	TAL SAC
Total/NA	Analysis	537 (modified)	RE	1			415958	09/25/20 14:46	JC	TAL SAC
Total/NA	Prep	SHAKE	DL		1.48 g	10.0 mL	413207	09/17/20 12:46	CG	TAL SAC
Total/NA	Analysis	537 (modified)	DL	10			416185	09/27/20 11:43	JC	TAL SAC

Client Sample ID: SW14-YP5 — Lab Sample ID: 320-64243-18
Date Collected: 08/26/20 18:30 — **Matrix: Tissue**
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			411500	09/11/20 13:16	TCS	TAL SAC

Client Sample ID: SW14-YP5 — Lab Sample ID: 320-64243-18
Date Collected: 08/26/20 18:30 — **Matrix: Tissue**
Date Received: 09/02/20 09:50 — **Percent Solids: 19.2**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			1.23 g	10.0 mL	411223	09/10/20 17:39	MC	TAL SAC
Total/NA	Analysis	537 (modified)		1			412780	09/16/20 14:11	RS1	TAL SAC

Client Sample ID: SW14-YP5
Lab Sample ID: 320-64243-18
Date Collected: 08/26/20 18:30
Matrix: Tissue
Date Received: 09/02/20 09:50
Percent Solids: 19.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE	RE		1.21 g	10.0 mL	413207	09/17/20 12:46	CG	TAL SAC
Total/NA	Analysis	537 (modified)	RE	1			415958	09/25/20 14:56	JC	TAL SAC

Client Sample ID: SW14-BG1
Lab Sample ID: 320-64243-19
Date Collected: 08/26/20 18:30
Matrix: Tissue
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			411500	09/11/20 13:16	TCS	TAL SAC

Client Sample ID: SW14-BG1
Lab Sample ID: 320-64243-19
Date Collected: 08/26/20 18:30
Matrix: Tissue
Date Received: 09/02/20 09:50
Percent Solids: 19.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			1.38 g	10.0 mL	411223	09/10/20 17:39	MC	TAL SAC
Total/NA	Analysis	537 (modified)		1			412780	09/16/20 14:20	RS1	TAL SAC
Total/NA	Prep	SHAKE	RE		1.07 g	10.0 mL	413207	09/17/20 12:46	CG	TAL SAC
Total/NA	Analysis	537 (modified)	RE	1			415958	09/25/20 15:05	JC	TAL SAC

Client Sample ID: SW14-BG2
Lab Sample ID: 320-64243-20
Date Collected: 08/26/20 18:30
Matrix: Tissue
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			411500	09/11/20 13:16	TCS	TAL SAC

Client Sample ID: SW14-BG2
Lab Sample ID: 320-64243-20
Date Collected: 08/26/20 18:30
Matrix: Tissue
Date Received: 09/02/20 09:50
Percent Solids: 20.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			1.23 g	10.0 mL	411223	09/10/20 17:39	MC	TAL SAC
Total/NA	Analysis	537 (modified)		1			412780	09/16/20 14:30	RS1	TAL SAC
Total/NA	Prep	SHAKE	RE		1.10 g	10.0 mL	413207	09/17/20 12:46	CG	TAL SAC
Total/NA	Analysis	537 (modified)	RE	1			415958	09/25/20 15:33	JC	TAL SAC

Client Sample ID: SW14-BG3
Lab Sample ID: 320-64243-21
Date Collected: 08/26/20 18:30
Matrix: Tissue
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			411500	09/11/20 13:16	TCS	TAL SAC

Client Sample ID: SW14-BG3
Lab Sample ID: 320-64243-21
Date Collected: 08/26/20 18:30
Matrix: Tissue
Date Received: 09/02/20 09:50
Percent Solids: 21.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			1.02 g	10.0 mL	411223	09/10/20 17:39	MC	TAL SAC
Total/NA	Analysis	537 (modified)		1			412780	09/16/20 14:39	RS1	TAL SAC
Total/NA	Prep	SHAKE	RE		1.09 g	10.0 mL	413207	09/17/20 12:46	CG	TAL SAC
Total/NA	Analysis	537 (modified)	RE	1			415958	09/25/20 15:43	JC	TAL SAC

Client Sample ID: SW14-BG4
Lab Sample ID: 320-64243-22
Date Collected: 08/27/20 12:30
Matrix: Tissue
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			411500	09/11/20 13:16	TCS	TAL SAC

Client Sample ID: SW14-BG4
Lab Sample ID: 320-64243-22
Date Collected: 08/27/20 12:30
Matrix: Tissue
Date Received: 09/02/20 09:50
Percent Solids: 22.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			1.14 g	10.0 mL	411223	09/10/20 17:39	MC	TAL SAC
Total/NA	Analysis	537 (modified)		1			412780	09/16/20 14:49	RS1	TAL SAC
Total/NA	Prep	SHAKE	RE		1.01 g	10.0 mL	413207	09/17/20 12:46	CG	TAL SAC
Total/NA	Analysis	537 (modified)	RE	1			415958	09/25/20 15:52	JC	TAL SAC

Client Sample ID: SW14-BG5
Lab Sample ID: 320-64243-23
Date Collected: 08/27/20 12:30
Matrix: Tissue
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			411500	09/11/20 13:16	TCS	TAL SAC

Client Sample ID: SW14-BG5
Lab Sample ID: 320-64243-23
Date Collected: 08/27/20 12:30
Matrix: Tissue
Date Received: 09/02/20 09:50
Percent Solids: 18.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			1.37 g	10.0 mL	411223	09/10/20 17:39	MC	TAL SAC
Total/NA	Analysis	537 (modified)		1			412780	09/16/20 15:36	RS1	TAL SAC
Total/NA	Prep	SHAKE	RE		1.04 g	10.0 mL	413207	09/17/20 12:46	CG	TAL SAC
Total/NA	Analysis	537 (modified)	RE	1			415958	09/25/20 16:01	JC	TAL SAC
Total/NA	Prep	SHAKE	REDL		1.04 g	10.0 mL	413207	09/17/20 12:46	CG	TAL SAC
Total/NA	Analysis	537 (modified)	REDL	10			416185	09/27/20 12:02	JC	TAL SAC

Client Sample ID: SW14-LB1 — Lab Sample ID: 320-64243-24
Date Collected: 08/26/20 18:30 — **Matrix: Tissue**
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			411512	09/11/20 14:13	KDB	TAL SAC

Client Sample ID: SW14-LB1 — Lab Sample ID: 320-64243-24
Date Collected: 08/26/20 18:30 — **Matrix: Tissue**
Date Received: 09/02/20 09:50 — **Percent Solids: 20.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			1.13 g	10.0 mL	411223	09/10/20 17:39	MC	TAL SAC
Total/NA	Analysis	537 (modified)		10			412780	09/16/20 15:54	RS1	TAL SAC
Total/NA	Prep	SHAKE	RE		1.44 g	10.0 mL	413207	09/17/20 12:46	CG	TAL SAC
Total/NA	Analysis	537 (modified)	RE	10			415958	09/25/20 16:20	JC	TAL SAC

Client Sample ID: SW14-LB2 — Lab Sample ID: 320-64243-25
Date Collected: 08/26/20 18:30 — **Matrix: Tissue**
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			411500	09/11/20 13:16	TCS	TAL SAC

Client Sample ID: SW14-LB2 — Lab Sample ID: 320-64243-25
Date Collected: 08/26/20 18:30 — **Matrix: Tissue**
Date Received: 09/02/20 09:50 — **Percent Solids: 21.0**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE	RE		1.26 g	10.0 mL	413207	09/17/20 12:46	CG	TAL SAC
Total/NA	Analysis	537 (modified)	RE	10			415958	09/25/20 16:29	JC	TAL SAC
Total/NA	Prep	SHAKE			1.19 g	10.0 mL	411223	09/10/20 17:39	MC	TAL SAC
Total/NA	Analysis	537 (modified)		10			416200	09/27/20 13:54	JC	TAL SAC

Client Sample ID: SW14-LB3 — Lab Sample ID: 320-64243-26
Date Collected: 08/26/20 18:30 — **Matrix: Tissue**
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			411500	09/11/20 13:16	TCS	TAL SAC

Client Sample ID: SW14-LB3 — Lab Sample ID: 320-64243-26
Date Collected: 08/26/20 18:30 — **Matrix: Tissue**
Date Received: 09/02/20 09:50 — **Percent Solids: 20.0**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			1.43 g	10.0 mL	411223	09/10/20 17:39	MC	TAL SAC
Total/NA	Analysis	537 (modified)		10			412780	09/16/20 16:13	RS1	TAL SAC
Total/NA	Prep	SHAKE	RE		1.43 g	10.0 mL	413207	09/17/20 12:46	CG	TAL SAC
Total/NA	Analysis	537 (modified)	RE	10			415958	09/25/20 16:39	JC	TAL SAC

Client Sample ID: SW14-LB4
Lab Sample ID: 320-64243-27
Date Collected: 08/26/20 18:30
Matrix: Tissue
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			411500	09/11/20 13:16	TCS	TAL SAC

Client Sample ID: SW14-LB4
Lab Sample ID: 320-64243-27
Date Collected: 08/26/20 18:30
Matrix: Tissue
Date Received: 09/02/20 09:50
Percent Solids: 19.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			1.01 g	10.0 mL	411223	09/10/20 17:39	MC	TAL SAC
Total/NA	Analysis	537 (modified)		10			412780	09/16/20 16:32	RS1	TAL SAC
Total/NA	Prep	SHAKE	RE		1.10 g	10.0 mL	413207	09/17/20 12:46	CG	TAL SAC
Total/NA	Analysis	537 (modified)	RE	10			415958	09/25/20 16:48	JC	TAL SAC

Client Sample ID: SW14-LB5
Lab Sample ID: 320-64243-28
Date Collected: 08/26/20 18:30
Matrix: Tissue
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			411500	09/11/20 13:16	TCS	TAL SAC

Client Sample ID: SW14-LB5
Lab Sample ID: 320-64243-28
Date Collected: 08/26/20 18:30
Matrix: Tissue
Date Received: 09/02/20 09:50
Percent Solids: 19.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			1.22 g	10.0 mL	413207	09/17/20 12:46	CG	TAL SAC
Total/NA	Analysis	537 (modified)		10			415958	09/25/20 17:16	JC	TAL SAC

Client Sample ID: Field Blank 8/26/20 (SW38)
Lab Sample ID: 320-64243-29
Date Collected: 08/26/20 13:00
Matrix: Water
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			281.4 mL	10.00 mL	409390	09/03/20 11:41	LA	TAL SAC
Total/NA	Analysis	537 (modified)		1			409793	09/04/20 22:06	AEC	TAL SAC

Client Sample ID: Field Blank 8/26/20 (SW37)
Lab Sample ID: 320-64243-30
Date Collected: 08/26/20 15:15
Matrix: Water
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			281.8 mL	10.00 mL	409390	09/03/20 11:41	LA	TAL SAC
Total/NA	Analysis	537 (modified)		1			409793	09/04/20 22:15	AEC	TAL SAC

Lab Chronicle

Client: ARCADIS U.S., Inc.
Job ID: 320-64243-1
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Client Sample ID: Field Blank 8/26/20 (SW14)
Lab Sample ID: 320-64243-31
Date Collected: 08/26/20 17:45
Matrix: Water
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			281.5 mL	10.00 mL	409390	09/03/20 11:41	LA	TAL SAC
Total/NA	Analysis	537 (modified)		1			409793	09/04/20 22:25	AEC	TAL SAC

Client Sample ID: Field Blank 8/27/20 (Foil)
Lab Sample ID: 320-64243-32
Date Collected: 08/27/20 17:30
Matrix: Water
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			290.6 mL	10.00 mL	409390	09/03/20 11:41	LA	TAL SAC
Total/NA	Analysis	537 (modified)		1			409793	09/04/20 22:34	AEC	TAL SAC

Client Sample ID: Field Blank 8/27/20 (Ziploc)
Lab Sample ID: 320-64243-33
Date Collected: 08/27/20 17:30
Matrix: Water
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			275.6 mL	10.00 mL	409390	09/03/20 11:41	LA	TAL SAC
Total/NA	Analysis	537 (modified)		1			409793	09/04/20 23:02	AEC	TAL SAC

Client Sample ID: Field Blank 8/27/20 (SW38)
Lab Sample ID: 320-64243-34
Date Collected: 08/27/20 15:30
Matrix: Water
Date Received: 09/02/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			280.5 mL	10.00 mL	409390	09/03/20 11:41	LA	TAL SAC
Total/NA	Analysis	537 (modified)		1			409793	09/04/20 23:12	AEC	TAL SAC

Laboratory References:

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

Accreditation/Certification Summary

Client: ARCADIS U.S., Inc. Job ID: 320-64243-1
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Laboratory: Eurofins TestAmerica, Sacramento

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998204680	08-31-21

Method Summary

Client: ARCADIS U.S., Inc.
Job ID: 320-64243-1
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC
3535	Solid-Phase Extraction (SPE)	SW846	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 TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: ARCADIS U.S., Inc.
Job ID: 320-64243-1
Project/Site: Marinette, WI FIsh Tissue 30015294.0001

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
320-64243-1	SW38-YP1	Tissue	08/26/20 14:00	09/02/20 09:50	
320-64243-2	SW38-YP2	Tissue	08/26/20 14:00	09/02/20 09:50	
320-64243-3	SW38-YP3	Tissue	08/26/20 14:00	09/02/20 09:50	
320-64243-4	SW38-YP4	Tissue	08/26/20 22:30	09/02/20 09:50	
320-64243-5	SW38-YP5	Tissue	08/26/20 22:30	09/02/20 09:50	
320-64243-6	SW38-GS1	Tissue	08/26/20 14:00	09/02/20 09:50	
320-64243-7	SW37-YP1	Tissue	08/26/20 16:00	09/02/20 09:50	
320-64243-8	SW37-YP2	Tissue	08/26/20 16:00	09/02/20 09:50	
320-64243-9	SW37-PS1	Tissue	08/26/20 16:00	09/02/20 09:50	
320-64243-10	SW37-PS2	Tissue	08/26/20 16:00	09/02/20 09:50	
320-64243-11	SW37-PS3	Tissue	08/26/20 16:00	09/02/20 09:50	
320-64243-12	SW37-PS4	Tissue	08/26/20 16:00	09/02/20 09:50	
320-64243-13	SW37-PS5	Tissue	08/26/20 16:00	09/02/20 09:50	
320-64243-14	SW14-YP1	Tissue	08/26/20 18:30	09/02/20 09:50	
320-64243-15	SW14-YP2	Tissue	08/26/20 18:30	09/02/20 09:50	
320-64243-16	SW14-YP3	Tissue	08/26/20 18:30	09/02/20 09:50	
320-64243-17	SW14-YP4	Tissue	08/26/20 18:30	09/02/20 09:50	
320-64243-18	SW14-YP5	Tissue	08/26/20 18:30	09/02/20 09:50	
320-64243-19	SW14-BG1	Tissue	08/26/20 18:30	09/02/20 09:50	
320-64243-20	SW14-BG2	Tissue	08/26/20 18:30	09/02/20 09:50	
320-64243-21	SW14-BG3	Tissue	08/26/20 18:30	09/02/20 09:50	
320-64243-22	SW14-BG4	Tissue	08/27/20 12:30	09/02/20 09:50	
320-64243-23	SW14-BG5	Tissue	08/27/20 12:30	09/02/20 09:50	
320-64243-24	SW14-LB1	Tissue	08/26/20 18:30	09/02/20 09:50	
320-64243-25	SW14-LB2	Tissue	08/26/20 18:30	09/02/20 09:50	
320-64243-26	SW14-LB3	Tissue	08/26/20 18:30	09/02/20 09:50	
320-64243-27	SW14-LB4	Tissue	08/26/20 18:30	09/02/20 09:50	
320-64243-28	SW14-LB5	Tissue	08/26/20 18:30	09/02/20 09:50	
320-64243-29	Field Blank 8/26/20 (SW38)	Water	08/26/20 13:00	09/02/20 09:50	
320-64243-30	Field Blank 8/26/20 (SW37)	Water	08/26/20 15:15	09/02/20 09:50	
320-64243-31	Field Blank 8/26/20 (SW14)	Water	08/26/20 17:45	09/02/20 09:50	
320-64243-32	Field Blank 8/27/20 (Foil)	Water	08/27/20 17:30	09/02/20 09:50	
320-64243-33	Field Blank 8/27/20 (Ziploc)	Water	08/27/20 17:30	09/02/20 09:50	
320-64243-34	Field Blank 8/27/20 (SW38)	Water	08/27/20 15:30	09/02/20 09:50	

ARCADIS

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 3

Lab Work Order #

Send Results to:

Contact & Company Name: Dave Buys Arcadis
Telephone: 315-263-6192
Address: 110 W. Fayette St Suite 300
Fax:
City: Syracuse State: NY Zip: 13202
E-mail Address: dave.buys@arcadis.com
Project Name/Location (City, State): 2020 Manitowoc WI Fish Sampling
Project #: 30015294
Sampler's Printed Name: Dave Buys
Sampler's Signature:

Preservative	Freezer for fish during hold, wet ice during shipping
Filtered (✓)	NA
# of Containers	One/sample for fish
Container Information	Food grade Ziploc bag

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil, SE - Sediment, NL - NAPL/Oil
W - Water, SL - Sludge, SW - Sample Wipe
T - Tissue, A - Air, Other: _____

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	PARAMETER ANALYSIS & METHOD: 36 PFAS compounds	% Solids
SW38-YP1	8/26/20	1400		X	Fish	X	X
YP2							
YP3		↓					
YP4		2230					
YP5		↓					
GS1		1400					
SW37-YP1		1600					
YP2							
PS1							
PS2							
PS3							
PS4							
PS5	↓	↓	↓	↓	↓	↓	↓

320-64243 Chain of Custody

REMARKS

Please fillet whole individual fish and analyze skin-on scales-off fillets for 36 PFAS compounds, including PFOS and PFOA, consistent with the work plan (Arcadis 2019), QAPP and phone/email discussions. Also analyze % solids in the fillets

Analyze QA/QC samples at 1 per 20 samples (i.e. MS/MSD, lab duplicate, rinse blanks, etc.)

Special Instructions/Comments:
Please call or email any questions before proceeding. Thanks!

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Eurofins TA Sacramento	Cooler Custody Seal (✓) ☐ Intact ☐ Not Intact	Printed Name: Dave Buys	Printed Name: Salvador Ontiveros	Printed Name:	Printed Name:
X Cooler packed with ice (✓)		Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements: 15-day TAT	Sample Receipt:	Firm: Arcadis	Firm/Courier: Fedex	Firm/Courier:	Firm:
Shipping Tracking #: FedEx 8758 1761 4456	Condition/Cooler Temp: _____	Date/Time: 9/1/20 1730	Date/Time: 9/2/20 950	Date/Time:	Date/Time:

20730826 CofC AR Form 08.27.2015

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by Arcadis

* Containers do not have time; date on them so 9/1/20

0.8/1.3
0.1/0.7

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9/29/2020

ARCADIS

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Lab Work Order #

Send Results to:

Contact & Company Name: See page 1 | Telephone:

Address: | Fax:

City | State | Zip | E-mail Address:

Project Name/Location (City, State): | Project #:

Sampler's Printed Name: | Sampler's Signature:

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	36 PFAS compounds	7.5 solids
						See page 1					
SW14-YP1	8/26/20	1830		X	Fish					X	X
YP2	↓	↓		↓	↓					↓	↓
YP3	↓	↓		↓	↓					↓	↓
YP4	↓	↓		↓	↓					↓	↓
YP5	↓	↓		↓	↓					↓	↓
BG1	↓	↓		↓	↓					↓	↓
BG2	↓	↓		↓	↓					↓	↓
BG3	↓	↓		↓	↓					↓	↓
BG4	8/27/20	1230		↓	↓					↓	↓
BG5	↓	↓		↓	↓					↓	↓
LB1	8/26/20	1830		↓	↓					↓	↓
LB2	↓	↓		↓	↓					↓	↓
LB3	↓	↓		↓	↓					↓	↓
LB4	↓	↓		↓	↓					↓	↓
LB5	↓	↓		↓	↓					↓	↓

PARAMETER ANALYSIS & METHOD

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil | SE - Sediment | NL - NAPL/Oil
W - Water | SL - Sludge | SW - Sample Wipe
T - Tissue | A - Air | Other: _____

REMARKS

See page 1

Special Instructions/Comments:

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: See page 1	Cooler Custody Seal (✓)	Printed Name: Dave Buys	Printed Name: Salvador Ontiveros	Printed Name:	Printed Name:
☐ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements:	Sample Receipt:	Firm: Arcadis	Firm/Courier: EMSoe	Firm/Courier:	Firm:
Shipping Tracking #:	Condition/Cooler Temp: _____	Date/Time: 9/1/20 1730	Date/Time: 9/4/20 930	Date/Time:	Date/Time:

20730826 CofC AR Form 08.27.2015

Distribution: WHITE – Laboratory returns with results | YELLOW – Lab copy | PINK – Retained by Arcadis

0.8/1.3
0.4/0.7

9/29/2020

ARCADIS

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Lab Work Order #

Send Results to:

Contact & Company Name: See page 1	Telephone:
Address:	Fax:
City: State: Zip:	E-mail Address:
Project Name/Location (City, State):	Project #:
Sampler's Printed Name:	Sampler's Signature: [signature]

Preservative	Refrigeration for water, wet ice during shipping
Filtered (✓)	NA
# of Containers	two 250 ml HDPE plastic bottles per water sample
Container Information	

PARAMETER ANALYSIS & METHOD

Keys

Preservation Key: A. H_2SO_4 B. HCL C. HNO_3 D. NaOH E. None F. Other: G. Other: H. Other:

Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: 10. Other:

Matrix Key: SO - Soil, W - Water, T - Tissue, SE - Sediment, SL - Sludge, A - Air, NL - NAPL/Oil, SW - Sample Wipe, Other:

Sample ID	Collection Date	Collection Time	Type Comp	Type Grab	Matrix	36 PFAS Compounds	REMARKS
Field Blank 8/26/20 (SW38)		1300		X	Water	X	Please analyze field blank and rinse blank water samples for 36 PFAS compounds, including PFOS and PFOA, consistent with the work plan (Arcadis 2019), QAPP and previous discussions.
Field Blank 8/26/20 (SW37)		1515		↓	↓	↓	
Field Blank 8/26/20 (SW14)		1745		↓	↓	↓	
Rinse Blank 8/27/20 (Foil)		1730		↓	↓	↓	
Rinse Blank 8/27/20 (Ziploc)		1730		↓	↓	↓	
Field Blank 8/27/20 (SW38)		1530		↓	↓	↓	

Special Instructions/Comments: See page 1

☐ **Special QA/QC Instructions(✓):**

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: See page 1	Cooler Custody Seal (✓)	Printed Name: Dave Buys	Printed Name: Salvador Ortega	Printed Name:	Printed Name:
☐ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature: [signature]	Signature: [signature]	Signature:	Signature:
Specify Turnaround Requirements:	Sample Receipt:	Firm: Arcadis	Firm/Courier: Gtpsue	Firm/Courier:	Firm:
Shipping Tracking #:	Condition/Cooler Temp:	Date/Time: 9/1/20 1730	Date/Time: 9/2/20 950	Date/Time:	Date/Time:

20730826 CofC AR Form 08.27.2015 — 5741210

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by Arcadis

0.8 / 1.3
0.4 / 0.9

* no date COC ST 9/2/20

Δ No time on containers 9/2/20

\# 1 Don container Rinse Blank 8-27-20 (plastic bag) SO 9/2/20

Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc. Job Number: 320-64243-1

Login Number: 64243 **List Source: Eurofins TestAmerica, Sacramento**
List Number: 1
Creator: Thompson, Sarah W

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	Seal present with no number.
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	Refer to Job Narrative for details.
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	