

Wet Weather Stormwater Sampling Summary

For

Dane County Regional Airport

BRRT # 02-13-584472

Prepared by Mead & Hunt, Inc./LimnoTech

November 2020

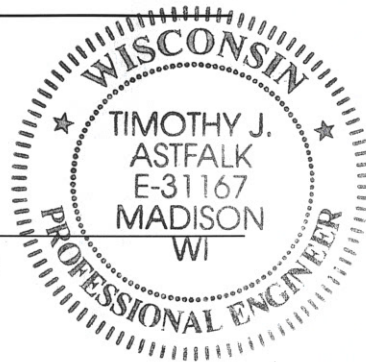
I, Timothy J. Astfalk, hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of Ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in Ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in Chs. NR 700 to 726, Wis. Adm. Code.”

Timothy J. Astfalk
Signature

31167
P.E. number

Engineer
Title

P.E. stamp



This document provides a preliminary summary of stormwater sampling conditions, locations, and results at the Dane County Regional Airport (DCRA) during the July 8-9, 2020 wet weather event. Sampling was conducted in response to BRRS # 02-13-584472, to provide additional information on per- and polyfluorinated alkyl substance (PFAS) constituents in stormwater at the airport. Sampling procedures and locations were described in the Initial Site Investigation Work Plan (February 4, 2020 (revised)) that was submitted to the WDNR on February 18, 2020.

Climatologic Conditions

The National Weather Service (NWS) reported 2.17 inches of rain at DCRA on July 7, the day immediately preceding sample collection, conducted on July 8 and 9. An additional 1.97 inches of rain were reported on July 9, though most of that precipitation occurred after sampling was completed. Table 1 contains a summary of climatologic information reported by NWS immediately prior to and during the sampling period.

Table 1. DCRA July 3-9 Climatologic Summary.

Date	Air Temperature (°F)			Precipitation (in.)
	Max	Min	Avg	Rainfall
7/3/20	91	65	78	0
7/4/20	89	66	78	0
7/5/20	90	66	78	0
7/6/20	91	68	80	0
7/7/20	91	69	80	2.17
7/8/20	90	66	78	0
7/9/20	90	68	79	1.97

The observed precipitation resulted in elevated flow conditions relative to the February 10-12, 2020 dry weather sampling event. There are no active United States Geologic Survey (USGS) stream gages on Starkweather Creek. To provide a nearby comparison, USGS gage 05427718 (Yahara River at Windsor, WI) recorded an average gage height of 2.26 feet during the July 8-9 sampling period, approximately 0.74 feet higher than the 1.52 feet recorded during the February 10-12 sampling period. Sampling staff estimate that Starkweather Creek was at least 1 to 2 feet higher during the July event as compared the February event. Figures 1 and 2 show photos of the Outfall 27 monitoring location during the February dry and July wet weather events, illustrating relative stream flow conditions.



Figure 1. Outfall 27 Monitoring Location, February 2020 DCRA Dry Weather Sampling Event.

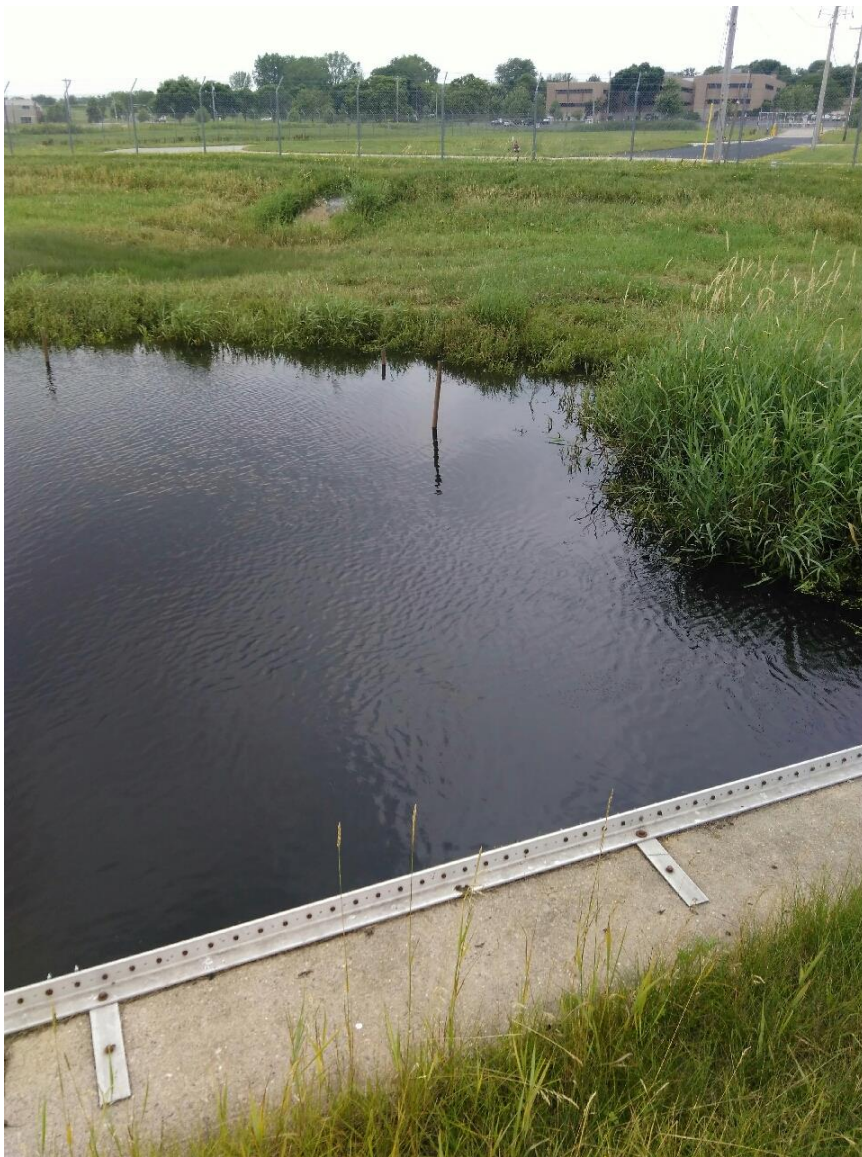


Figure 2. Outfall 27 Monitoring Location, July 2020 DCRA Wet Weather Sampling Event.

Monitoring Locations

Grab samples were collected at a total of 29 outfall locations and 17 storm sewer network locations. Storm network sampling effort was conducted in drainage areas 001, 021, and 032. Table 2 contains a summary of the locations sampled.

Table 2. DCRA Outfall and Storm Network Sample Collection Locations July 8-9, 2020.

Sample Location	Sample I.D.
Outfall 1	Outfall 01
Outfall 3	Outfall 03
Outfall 4	Outfall 04
Outfall 5	Outfall 05
Outfall 6	Outfall 06
Outfall 7	Outfall 07
Outfall 9	Outfall 09
Outfall 10	Outfall 10
Outfall 11	Outfall 11
Outfall 12	Outfall 12
Outfall 13	Outfall 13
Outfall 14	Outfall 14
Outfall 15	Outfall 15
Outfall 17	Outfall 17
Outfall 18	Outfall 18
Outfall 19	Outfall 19
Outfall 21	Outfall 21
Outfall 22	Outfall 22
Outfall 24	Outfall 24
Outfall 25	Outfall 25
Outfall 27	Outfall 27
Outfall 28	Outfall 28
Outfall 29	Outfall 29
Outfall 30	Outfall 30
Outfall 32	Outfall 32
Outfall 36	Outfall 36
Outfall 37	Outfall 37
Outfall 39	Outfall 39
Outfall A	Outfall A
Drainage Area 1, Location 1	DA001-01
Drainage Area 1, Location 3	DA001-03
Drainage Area 21, Location 4 Alternate	DA021-04 ALT
Drainage Area 21, Location 6 Alternate	DA021-06 ALT
Drainage Area 32, Location 3A	DA032-03 A
Drainage Area 32, Location 3B	DA032-03 B
Drainage Area 32, Location 5	DA032-05
Drainage Area 32, Location 8	DA032-08
Drainage Area 32, Location 9A	DA032-09A
Drainage Area 32, Location 9B	DA032-09B*
Drainage Area 32, Location 10 Alternate	DA032-10 ALT
Drainage Area 32, Location 12A	DA032-12A
Drainage Area 32, Location 12B	DA032-12B
Drainage Area 32, Location 13	DA032-13
Drainage Area 32, Location 14	DA032-14
Drainage Area 32, Location 15	DA032-15

Sample Location	Sample I.D.
Drainage Area 32, Location x	DA032-x
*same location as DA032-09 sampled in February 2020	

Samples were not collected at outfalls 20, 26, 33, 34, or 35 or locations DA021-03 Alt because there was no water present at these locations.

Sampling locations and reported perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) results are shown in Figures 1 and 2.

In addition to the storm sewer and outfall samples, one field blank and two duplicates were collected to evaluate sampling and equipment decontamination procedures.

Initial Summary of Reported Results

Samples were submitted to Vista Analytical Laboratory in El Dorado Hills, California for PFAS analysis using method 537M. Laboratory reports are included as Attachment 1. The reported PFOA and PFOS concentrations for samples collected are shown in Table 3. Table 3 also denotes the locations where samples were collected directly from stormwater flowing from the outfall (“DCRA Storm Flow”) as opposed to those locations affected by the elevated water level present in Starkweather Creek (“Impounded”). Samples from the “Impounded” locations were affected, if not dominated, by water from Starkweather Creek.

Table 3. July 2020 PFOA and PFOS Results.

Sample I.D.	PFOA (ng/L)	PFOS (ng/L)	DCRA Storm Flow	Impounded
Outfall 01	74.4	46.6	X	
Outfall 03	51.8	33.5	X	
Outfall 04	4.13 (J)	6.02		X
Outfall 05	2.8 (J)	6.19 (Q)	X	
Outfall 06	4.74	9.49	X	
Outfall 07	3.46 (J)	5.42 (Q)	X	
Outfall 09	5.06	7.56		X
Outfall 10	1.75 (J)	2.43 (J)		X
Outfall 11	2.3 (J)	3.41 (J)		X
Outfall 12	2.38 (J)	2.77 (J)		X
Outfall 13	2.48 (J)	5.13		X
Outfall 14	1.91 (J)	3.52 (J)		X
Outfall 15	4.22 (J)	535	X	
Outfall 17	3.9 (J)	3.17 (J)		X
Outfall 18	2.56 (J)	2.89 (J)		X
Outfall 19	18.5	700	X	
Outfall 21	422	8490 (D)	X	
Outfall 22	6.12	153		X
Outfall 24	12.5	356	X	
Outfall 25	21.8	150	X	
Outfall 27	15.2	108		X
Outfall 28	12.4	68.7		X
Outfall 29	6.76	7.27		X
Outfall 30	10.1	47.3	X	

Sample I.D.	PFOA (ng/L)	PFOS (ng/L)	DCRA Storm Flow	Impounded	
Outfall 32	40.6	528		X	
Outfall 36	314	3330		X	
Outfall 37	17.6	384		X	
Outfall 39	3.59 (J)	101	X		
Outfall A	363	3960		X	
DA001-01	81.2	65.3	NA		
DA001-03	291	33.6			
DA021-04 ALT	1.23 (J)	22.1			
DA021-06 ALT	2.65 (J)	9.4			
DA032-03 A	303	5950 (D)			
DA032-03 B	313	6280 (D)			
DA032-05	380	9620 (D)			
DA032-08	39.9	516			
DA032-09A	53.9	514			
DA032-09B*	74.9	947			
DA032-10 ALT	18.3	57			
DA032-12A	12.3	125			
DA032-12B	54.2	162			
DA032-13	60.3	2110			
DA032-14	37.4	350			
DA032-15	37.5	429			
DA032-x	112	1670			
Field Blank 070920	ND	0.978(J)			
Dup-070820 (DA032-05)	346	7320			
Dup-070920 (Outfall 32)	41.3	554			
(J)=Estimated value, amount detected is below the Reporting Limit/LOQ					
(D)=Dilution					
(Q)=Ion transition ratio outside acceptance criteria					

The (D) flag indicates that the sample required dilution prior to analysis so that one or more PFAS compounds at elevated concentrations were quantitated within the calibration range of the instrument.

The (Q) flag indicates that the ratio of the characteristic mass ions used to positively identify the PFAS analyte was outside the specified laboratory quality criteria in the sample. The ion transition ratio is one of several analysis outputs used to confirm the presence of a PFAS analyte in a sample. Thus, failure to meet the ion transition ratio alone does not mean the PFAS compound is not present, but rather, that the calculated concentration has more uncertainty, and the result is qualified to indicate the additional uncertainty in the reported value.

LimnoTech conducted a quality assurance/quality control (QA/QC) review of the data reports provided by Vista Analytical. Review elements included calibration and continuing calibration standards, method and instrument blanks, blank spikes, field blanks and duplicates, dilutions, and internal standard surrogate recoveries.

Summary observations of the QA/QC review include the following:

- The field blank was non-detect for all PFAS compounds.

- The average relative percent differences observed in the two field duplicates for compounds detected at greater than five times the detection limit was 7.4% and ranged from -18% to 30%, which is well within the acceptable range.

Based on the above observations and QA review, the data generated during this sampling effort indicated satisfactory laboratory performance and data of acceptable quality. The QA/QC review is included as Attachment 2.

Figure 1 shows all DCRA stormwater outfall locations.

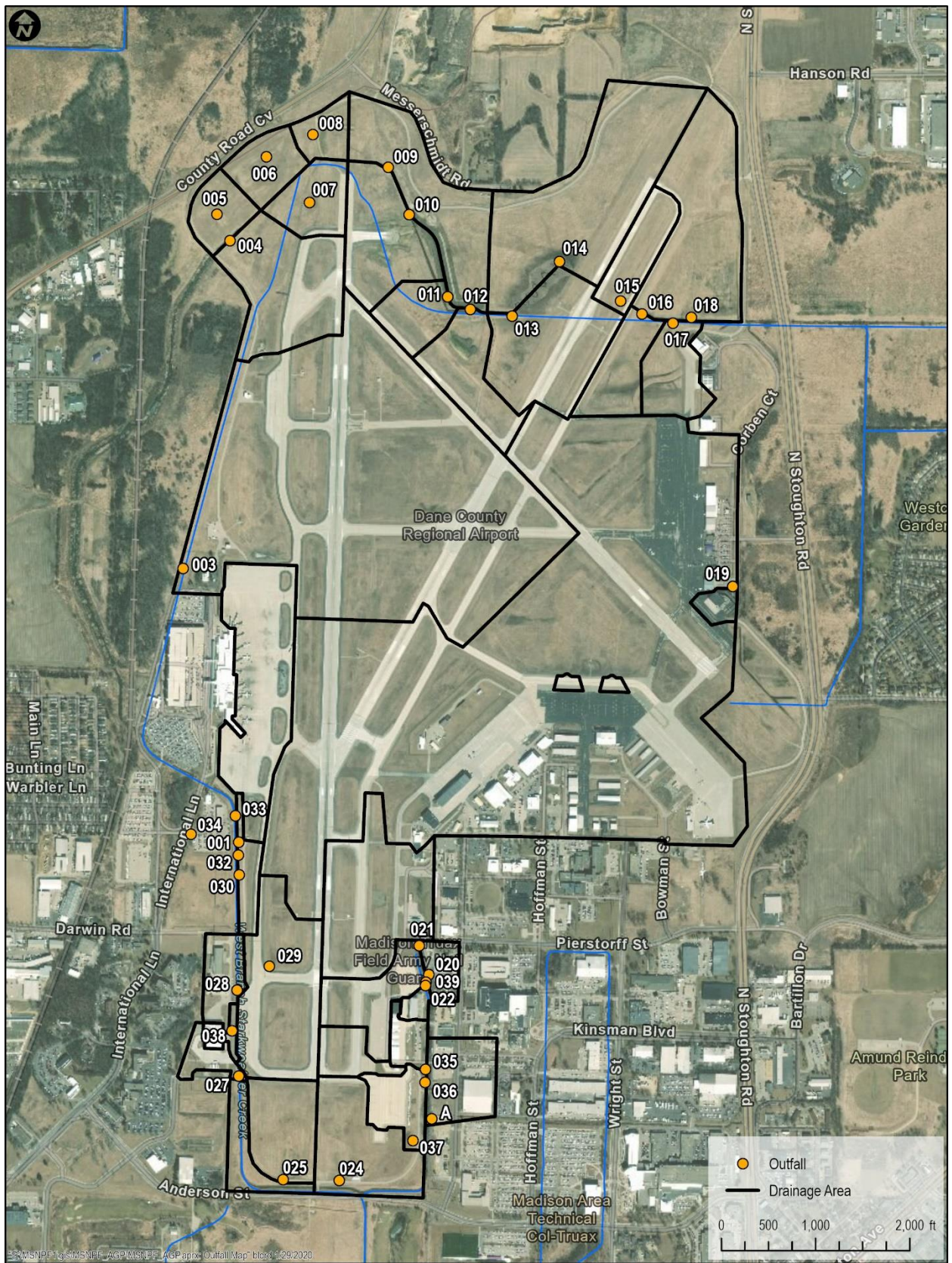


Figure 1. DCRA Stormwater Outfalls.

Figure 2 shows reported PFOA and PFOS results for the outfall locations where flow was observed and sampled (DCRA Storm Flow).

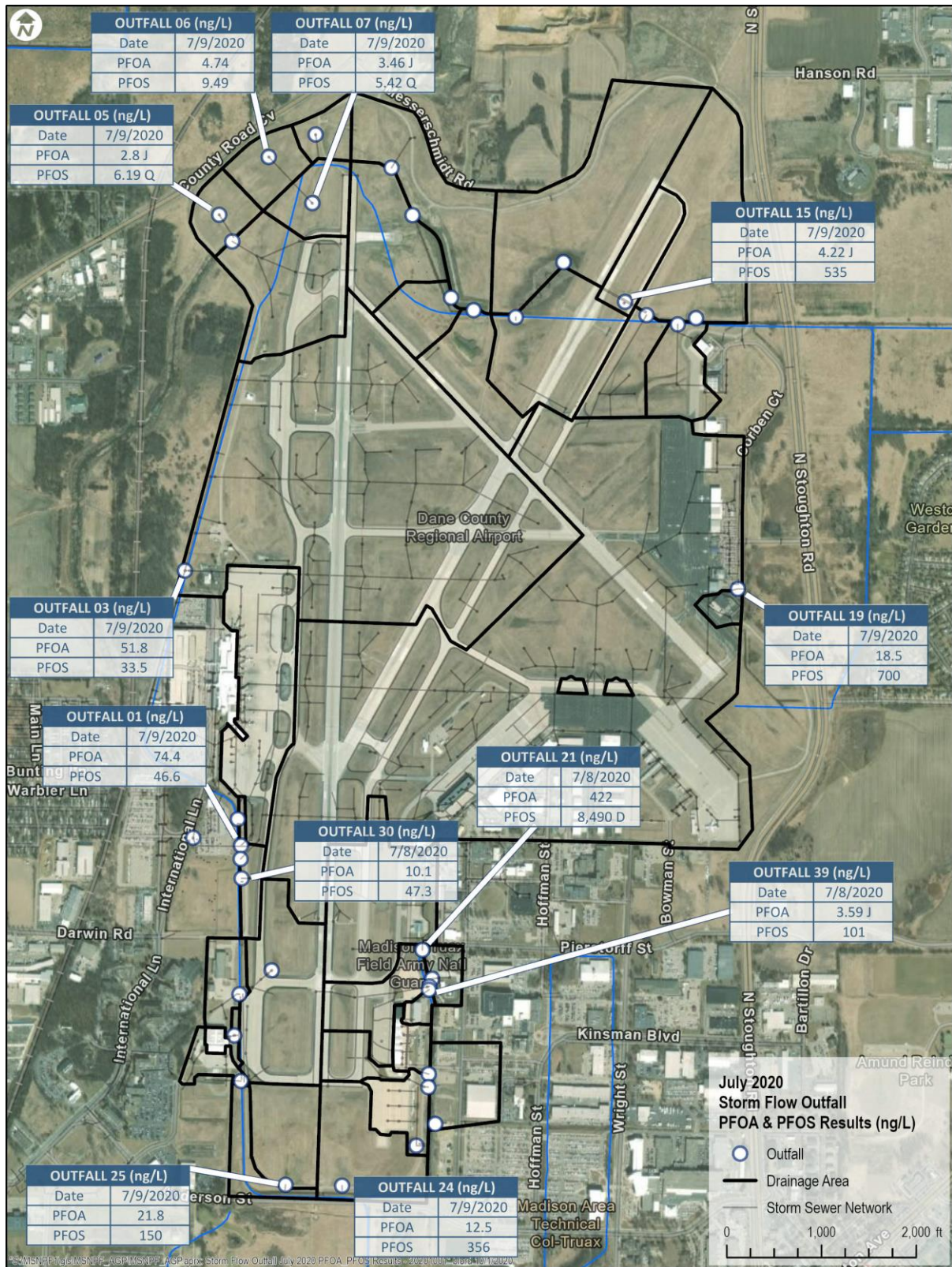


Figure 2. July 8-9 PFOA and PFOS Results at DCRA “Storm Flow” Outfalls.

Figure 3 shows reported PFOA and PFOS results for the outfall locations where flow was not observed due to elevated stream water levels (Impounded).

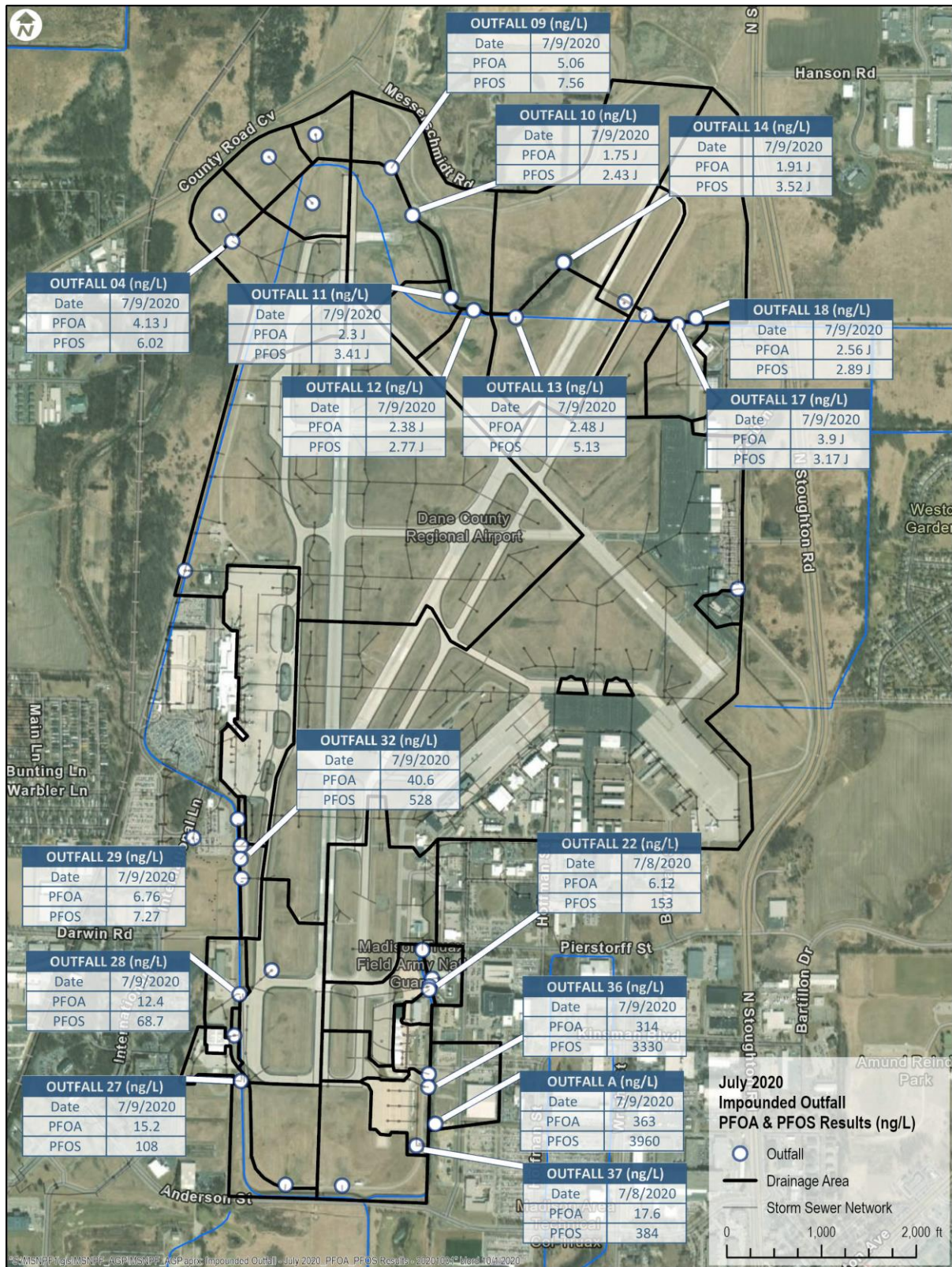


Figure 3. July 8-9 PFOA and PFOS Results at DCRA "Impounded" Outfalls.

Figure 4 shows reported PFOA and PFOS results for the 001, 021, and 032 storm sewer network locations sampled.

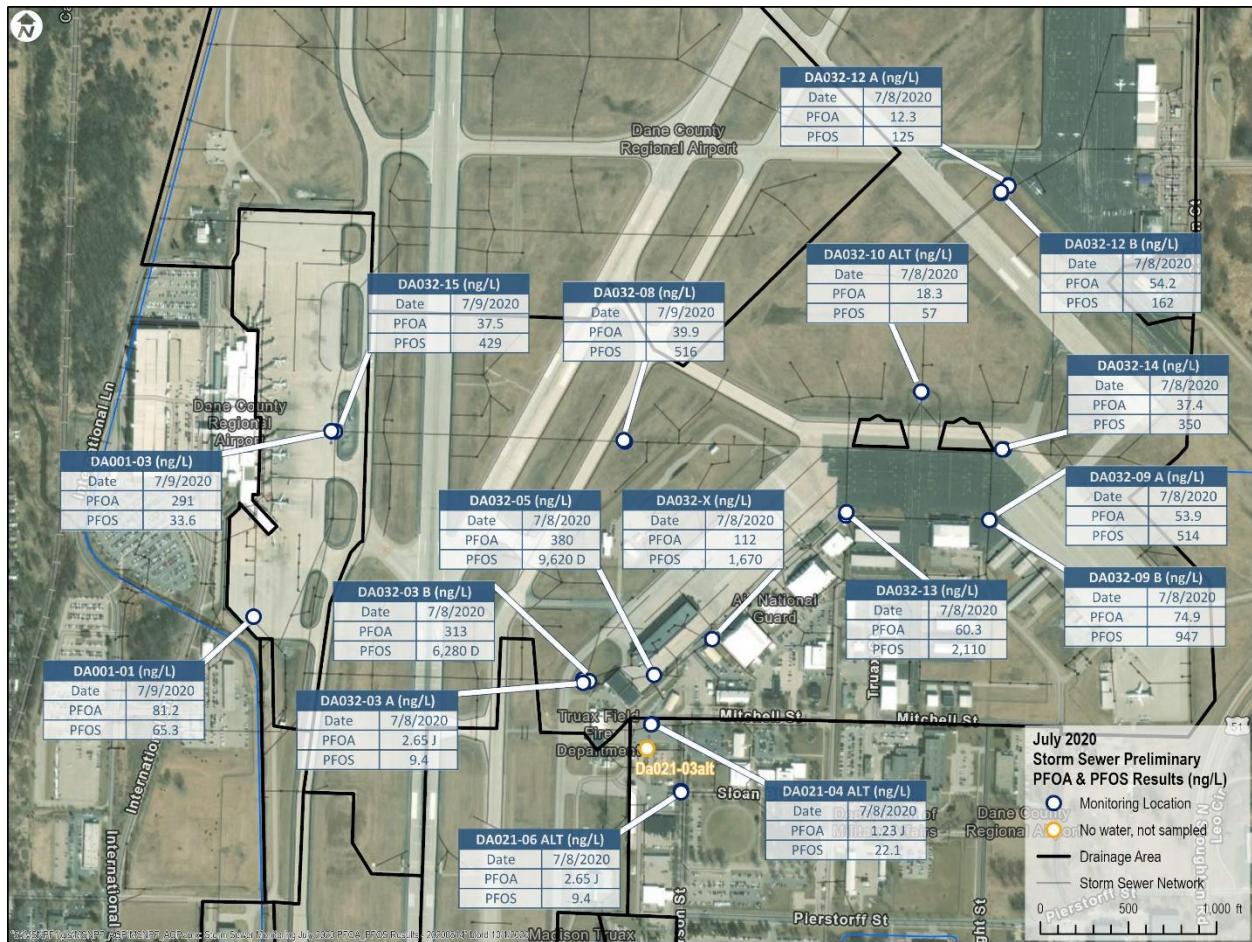


Figure 4. July 8-9 PFOA and PFOS Results for Storm Sewer Network Samples.

Table 4 contains a summary of reported sampling results for all analyzed PFAS compounds.

Table 4. July 8-9, 2020 Storm Sampling PFAS Results (ng/L).

Location	PFBA	PFPeA	PFHxA	PFHpA	PFOA	PFNA	PFDA	PFUnA	PFDoA	PFTriA/PFTTrDA	PFTeA/PFTeDA	PFBS	PFPeS	PFHxS	PFHpS	PFOS	PFNS	PFDS	PFOSA	MeFOSAA	EtFOSAA	4:2 FTS	6:2 FTS	8:2 FTS	10:2 FTS	HFPO-DA	PFODA	EtFOSE	MeFOSE	MeFOSA	EtFOSA	PFHxDA	9CI-PF3ONS	11CI-PF3OUds	PFDoS	ADONA	
OUTFALL 01	16.4	40.2	54.4	23.1	74.4	13.4	40.1	3.63 (J)	13.2	0.999 (J,Q)	2.76 (J)	<1.98	<2.68	15	<1.04	46.6	<4.29	<1.36	6.46	<1.83	<1.52	<1.54	6.42	<2.28	<3.47	<5.34	<6.80	<10.5	<6.73	<4.24	<5.66	<0.326	<1.61	<2.67	<4.62	<0.800	
OUTFALL 03	17.8	39.5	41.1	15.3	51.8	9.09	20.9	<1.14	2.56 (J)	<0.537	<0.821	2.48 (J,Q)	2.67 (J)	31	<1.02	33.5	<4.21	<1.34	12.1	<1.79	<1.49	<1.51	<2.17	2.59 (J)	<3.40	<5.24	<6.68	<10.3	<6.60	<4.16	<5.56	<0.320	<1.58	<2.62	<4.53	<0.785	
OUTFALL 04	8.92	7.46	3.84 (J,Q)	1.78 (J,Q)	4.13 (J)	<0.930	<1.71	<1.21	<0.909	<0.567	<0.867	2.05 (J)	<2.78	8.39	<1.08	6.02	<4.44	<1.41	21.1	<1.89	<1.57	<1.60	<2.30	<2.36	<3.59	<5.53	<7.05	<10.8	<6.97	<4.40	<5.87	<0.337	<1.66	<2.77	<4.79	<0.829	
OUTFALL 05	14	<1.46	2.52 (J)	<0.673	2.8 (J)	<0.923	<1.70	<1.20	<0.902	<0.563	<0.860	2.06 (J)	<2.76	3.76 (J)	<1.07	6.19 (Q)	<4.41	<1.40	10.1	<1.88	<1.56	<1.58	<2.28	<2.35	<3.57	<5.49	<7.00	<10.8	<6.92	<4.36	<5.82	<0.335	<1.65	<2.75	<4.75	<0.823	
OUTFALL 06	9.46	<1.44	3.04 (J)	<0.667	4.74	<0.914	<1.68	<1.18	<0.894	<0.557	<0.852	2.78 (J)	<2.73	7.32	<1.06	9.49	<4.37	<1.39	24.9	<1.86	<1.55	<1.57	<2.26	<2.32	<3.53	<5.44	<6.93	<10.6	<6.85	<4.32	<5.76	<0.332	<1.64	<2.72	<4.70	<0.815	
OUTFALL 07	9.4	<1.49	3.11 (J)	1.68 (J,Q)	3.46 (J)	<0.943	<1.73	<1.22	<0.922	<0.575	<0.879	<2.08	<2.82	7.58	<1.09	5.42 (Q)	<4.5	<1.43	14.5	<1.92	<1.59	<1.62	<2.33	<2.4	<3.64	<5.61	<7.15	<11	<7.07	<4.46	<5.95	<0.342	<1.69	<2.81	<4.85	<0.84	
OUTFALL 09	9.85	<1.49	3.98 (J)	1.53 (J)	5.06	<0.942	<1.73	<1.22	<0.921	<0.574	<0.878	2.11 (J)	<2.81	11.5	<1.09	7.56	<4.50	<1.43	18.3	<1.92	<1.59	<1.62	<2.32	<2.39	<3.64	<5.60	<7.14	<11.0	<7.06	<4.45	<5.94	<0.342	<1.69	<2.80	<4.85	<0.839	
OUTFALL 10	9.85	<1.43	2.52 (J)	<0.659	1.75 (J)	<0.903	<1.66	<1.17	<0.883	<0.551	<0.842	<2.00	<2.70	3.25 (J)	<1.04	2.43 (J)	<4.32	<1.37	7.65	<1.84	<1.53	<1.55	<2.23	<2.30	<3.49	<5.38	<6.85	<10.5	<6.77	<4.27	<5.70	<0.328	<1.62	<2.69	<4.65	<0.805	
OUTFALL 11	9.39	<1.46	<2.49	<0.674	2.3 (J)	<0.924	<1.70	<1.20	<0.903	<0.563	<0.861	<2.04	<2.76	1.9 (J)	<1.07	3.41 (J)	<4.41	<1.40	9.83	<1.88	<1.56	<1.59	<2.28	<2.35	<3.57	<5.50	<7.00	<10.8	<6.92	<4.37	<5.83	<0.335	<1.65	<2.75	<4.76	<0.823	
OUTFALL 12	8.3	<1.40	3.03 (J)	<0.648	2.38 (J)	<0.888	<1.63	<1.15	<0.869	<0.542	<0.828	<1.96	<2.65	<1.04	<1.03	2.77 (J)	<4.24	<1.35	10.9	<1.81	<1.50	<1.52	<2.19	<2.26	<3.43	<5.29	<6.73	<10.4	<6.66	<4.20	<5.61	<0.322	<1.59	<2.64	<4.57	<0.792	
OUTFALL 13	10.3	<1.47	<2.51	<0.681	2.48 (J)	<0.933	<1.72	<1.21	<0.913	<0.569	<0.870	<2.06	<2.79	1.88 (J)	<1.08	5.13	<4.46	<1.42	8.24	<1.90	<1.58	<1.60	<2.30	<2.37	<3.61	<5.55	<7.08	<10.9	<6.99	<4.41	<5.89	<0.339	<1.67	<2.78	<4.81	<0.832	
OUTFALL 14	8.83	<1.43	<2.44	<0.660	1.91 (J)	<0.905	<1.67	<1.17	<0.885	<0.552	<0.844	<2.00	<2.70	2.78 (J)	<1.05	3.52 (J)	<4.32	<1.37	10.3	<1.84	<1.53	<1.55	<2.24	<2.30	<3.50	<5.39	<6.86	<10.5	<6.78	<4.28	<5.71	<0.329	<1.62	<2.69	<4.66	<0.807	
OUTFALL 15	14.9	21.5	19.7	7.63	4.22 (J)	<0.940	<1.73	<1.22	<0.919	<0.573	<0.876	10.2	9.15	64.6	2.03 (J)	535	<4.49	<1.43	7.97	<1.92	<1.59	<1.61	<2.32	<2.39	<3.63	<5.60	<7.13	<11.0	<7.05	<4.45	<5.93	<0.341	<1.68	<2.80	<4.84	<0.838	
OUTFALL 17	19.6	18.9	6.51	<0.653	3.9 (J)	0.944 (J)	<1.65	<1.16	<0.875	<0.546	<0.834	2.75 (J)	<2.67	11.3	<1.04	3.17 (J)	<4.28	<1.36	4.48	<1.82	<1.51	<1.54	<2.21	<2.28	<3.46	<5.33	<6.78	<10.4	<6.71	<4.23	<5.65	<0.325	<1.60	<2.66	<4.61	<0.798	
OUTFALL 18	9.09	<1.47	<2.51	<0.681	2.56 (J)	<0.933	<1.72	<1.21	<0.913	<0.569	<0.870	<2.06	<2.79	<1.09	<1.08	2.89 (J)	<4.46	<1.42	5.45	<1.90	<1.58	<1.60	<2.30	<2.37	<3.61	<5.55	<7.07	<10.9	<6.99	<4.41	<5.89	<0.339	<1.67	<2.78	<4.80	<0.832	
OUTFALL 19	27.3	62.2	52	23.4	18.5	2.41 (J)	1.82 (J)	<1.19	<0.901	<0.562	<0.859	27	26.3	130	12.5	700	<4.40	<1.40	6.14	<1.88	<1.56	<1.58	9.13	6.36	<3.56	<5.48	<6.98	<10.7	<6.90	<4.36	<5.81	<0.334	<1.65	<2.74	<4.74	<0.821	
OUTFALL 21	218	668	811	202	422	36.2	4.86	<1.21	<0.912	<0.569	<0.869	638	771	5070 (D)	253	8490 (D)	7.14 (Q)	<1.42	23.9	<1.9	<1.58	13.4	1740	207	<3.6	<5.55	<7.07	<10.9	<6.99	<4.41	<5.88	<0.338	<1.67	<2.77	<4.8	<0.831	
OUTFALL 22	9.94	9.9	8.73	4.89 (Q)	6.12	2.91 (J)	<1.68	<1.19	<0.895	<0.558	<0.853	2.47 (J)	<2.73	34.7	<1.06	153	<4.37	<1.39	13	<1.86	<1.55	<1.57	3.51 (J)	<2.33	<3.54	<5.45	<6.94	<10.7	<6.86	<4.33	<5.77	<0.332	<1.64	<2.72	<4.71	<0.816	
OUTFALL 24	30.6	39.3	30.9	14.3	12.5	2.84 (J,Q)	1.71 (J,Q)	<1.18	<0.889	<0.555	<0.848	9.66	9.32	96.9	4.13 (J,Q)	356	<4.35	<1.38	11.5	<1.85	<1.54	<1.56	5.69	<2.31	<3.51	<5.41	<6.89	<10.6	<6.82	<4.30	<5.74	<0.330	<1.63	<2.71	<4.68	<0.811	
OUTFALL 25	44	68.6	53.2	20	21.8	2.94 (J)	<1.71	<1.21	<0.910	<0.568	<0.867	54.4	40.9	216	3.71 (J)	150	<4.45	<1.41	7.59 (Q)	<1.90	<1.57	<1.60	2.73 (J)	<2.37	<3.60	<5.54	<7.05	<10.8	<6.97	<4.40	<5.87	<0.338	<1.67	<2.77	<4.79	<0.830	
OUTFALL 27	12	9.77	9.44	6.99 (Q)	15.2	1.19 (J)	<1.77	<1.25	<0.940	<0.586	<0.896	4.6 (J)	5.44	50.6	1.61 (J)	108	<4.59	<1.46	25 (Q)	<1.96	<1.63	<1.65	7.56	<2.44	<3.71	<5.72	<7.28	<11.2	<7.20	<4.54	<6.06	<0.349	<1.72	<2.86	<4.95	<0.857	
OUTFALL 28	11.9	9.84	12.2	5.18 (Q)	12.4	1.57 (J,Q)	<1.63	<1.15	<0.866	<0.540	<0.825	4.49	5.21	46	<1.02	68.7	<4.23	<1.34	20.6	<1.80	<1.50	<1.52	6	<2.25	<3.42	<5.27	<6.71	<10.3	<6.64	<4.19	<5.59	<0.321	<1.59	<2.63	<4.56	<0.789	
OUTFALL 29	8	6.02	6.1	2.68 (J)	6.76	<0.928	<1.71	<1.20	<0.907	<0.566	<0.865	<2.05	<2.77	10.6	<1.07	7.27	<4.43	<1.41	21	<1.89	<1.57	<1.59	<2.29	<2.36	<3.59	<5.52	<7.03	<10.8	<6.95	<4.39	<5.85	<0.337	<1.66	<2.76	<4.78	<0.827	
OUTFALL 30	11.2	8.72	9.11	4.22 (J)	10.1	1.85 (J)	2.54 (J)	<1.16	<0.876	<0.546	<0.835	2.83 (J)	<2.68	23.4	<1.04	47.3	<4.28	<1.36	14.2	<1.82	<1.51	<1.54	3.06 (J)	<2.28	<3.46	<5.33	<6.79	<10.4	<6.71	<4.24	<5.65	<0.325	<1.6	<2.66	<4.61	<0.798	
OUTFALL 32	20.2	41.7	50.3	25.8	40.6	4.23 (J,Q)	<1.67	<1.18	<0.890	<0.555	<0.848	20.9	27.7	205	10.1	528	<4.35	<1.38	18.3	<1.85	<1.54	<1.56	57	14.1	<3.52	<5.42	<6.90	<10.6	<6.82	<4.30	<5.74	<0.330	<1.63	<2.71	<4.68	<0.811	
OUTFALL 36	106	311	423	118	314	16.3	<1.75	<1.23	<0.931	<0.581	<0.888	275	323	2250	106	3330	<4.55	<1.45	11.1	<1.94	<1.61	<1.62	10.9	964	54.6	<3.68	<5.67	<7.22	<11.1	<7.14	<4.50	<6.01	<0.346	<1.71	<2.83	<4.90	<0.849
OUTFALL 37	9.07	18.4	18.9	6.38	17.6	3.03 (J)	<1.77	<1.24	<0.939	<0.586	<0.895	8.22	9.51	96.3	4.65 (J)	384	<4.59	<1.46	9.15	<1.96	<1.62	<1.65	38.3	12.3	<3.71	<5.71	<7.28	<11.2	<7.2	<4.54	<6.06	<0.349	<1.72	<2.86	<4.94	<0.856	
OUTFALL 39	9.96	3.58 (J)	5.49 (Q)	1.65 (J)	3.59 (J)	0.978 (J,Q)	<1.75	<1.24	<0.933	<0.582	<0.889	2.16 (J)	<2.85	27.4	<1.1	101	<4.56	<1.45	4.26 (J,Q)	<1.94	<1.61	<1.64	<2.36	<2.43	<3.69	<5.68	<7.23	<11.1	<7.15	<4.51	<6.02	<0.346	<1.71	<2.84	<4.91	<0.85	
OUTFALL A	138	385	505	154	363	22.4	2.3 (J,Q)	<1.19	<0.898	<0.560	<0.856	318	378	2850	105	3960	<4.39	<1.39	11.4	<1.87	<1.55	17	1100	57.1	<3.55	<5.46	<6.96	<10.7	<6.88	<4.34	<5.79	<0.333	<1.64	<2.73	<4.73	<0.818	
DA001-01	20.3	52.1	67.3	23.8	81.2	10.4	34.2	3.92 (J,Q)	16.7	<0.561	4.83	3.49 (J)	4.65 (Q)	25.1	1.42 (J)	65.3	<4.39	<1.4	5.89	<1.87	<1.55	<1.58	5.19	<2.34	<3.55	<5.47	<6.97	<10.7	<6.89								

Attachment 1
Laboratory Reports

July 30, 2020

Vista Work Order No. 2001479

Mr. Chris Cieciek
LimnoTech, Inc.
501 Avis Drive
Ann Arbor, MI 48108

Dear Mr. Cieciek,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on July 14, 2020 under your Project Name 'MSN Wet Weather Storm Samples'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,



Martha Maier
Laboratory Director



Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Work Order No. 2001479

Case Narrative

Sample Condition on Receipt:

Ten aqueous samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology.

Analytical Notes:

PFAS Isotope Dilution Method

Samples "OUTFALL 17" and "OUTFALL 03" contained particulate and were centrifuged prior to extraction.

The samples were extracted and analyzed for a selected list of PFAS using Vista's PFAS Isotope Dilution Method. The results for PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Results for all other analytes include the linear isomers only.

Holding Times

The samples were extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank above the Reporting Limit. The OPR recoveries were within the method acceptance criteria.

The internal standard recoveries outside the acceptance criteria are listed in the table below.

QC Anomalies

LabNumber	SampleName	Analysis	Analyte	Flag	%Rec
2001479-10	OUTFALL 03	PFAS Isotope Dilution Method	d5-EtFOSA	H	9.50

H = Recovery was outside laboratory acceptance criteria.

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Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
2001479-01	OUTFALL 15	09-Jul-20 09:30	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001479-02	OUTFALL 19	09-Jul-20 09:50	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001479-03	OUTFALL 18	09-Jul-20 10:10	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001479-04	OUTFALL 17	09-Jul-20 10:15	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001479-05	OUTFALL 10	09-Jul-20 10:35	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001479-06	OUTFALL 11	09-Jul-20 10:45	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001479-07	OUTFALL 12	09-Jul-20 10:55	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001479-08	OUTFALL 13	09-Jul-20 11:10	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001479-09	OUTFALL 14	09-Jul-20 11:30	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001479-10	OUTFALL 03	09-Jul-20 12:15	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL

ANALYTICAL RESULTS

Sample ID: Method Blank

PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	B0G0137-BLK1	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples						

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	<0.729	0.729	4.00		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
PFPeA	2706-90-3	<1.28	1.28	4.00		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
PFBS	375-73-5	<1.79	1.79	4.00		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
4:2 FTS	757124-72-4	<1.39	1.39	4.00		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
PFHxA	307-24-4	<2.18	2.18	4.00		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
PFPeS	2706-91-4	<2.42	2.42	4.00		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
HFPO-DA	13252-13-6	<4.82	4.82	5.00		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
PFHpA	375-85-9	<0.591	0.591	4.00		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
ADONA	919005-14-4	<0.722	0.722	4.00		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
PFHxS	355-46-4	<0.947	0.947	4.00		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
6:2 FTS	27619-97-2	<2.00	2.00	4.00		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
PFOA	335-67-1	<0.651	0.651	4.00		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
PFHpS	375-92-8	<0.937	0.937	4.00		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
PFNA	375-95-1	<0.810	0.810	4.00		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
PFOSA	754-91-6	<1.77	1.77	4.00		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
PFOS	1763-23-1	<0.807	0.807	4.00		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
9Cl-PF3ONS	756426-58-1	<1.45	1.45	4.00		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
PFDA	335-76-2	<1.49	1.49	4.00		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
8:2 FTS	39108-34-4	<2.06	2.06	4.00		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
PFNS	68259-12-1	<3.87	3.87	4.00		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
MeFOSAA	2355-31-9	<1.65	1.65	4.00		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
EtFOSAA	2991-50-6	<1.37	1.37	4.00		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
PFUnA	2058-94-8	<1.05	1.05	4.00		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
PFDS	335-77-3	<1.23	1.23	4.00		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
11Cl-PF3OUdS	763051-92-9	<2.41	2.41	4.00		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
10:2 FTS	120226-60-0	<3.13	3.13	4.00		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
PFDoA	307-55-1	<0.792	0.792	4.00		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
MeFOSA	31506-32-8	<3.83	3.83	20.0		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
PFTrDA	72629-94-8	<0.494	0.494	4.00		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
PFDoS	79780-39-5	<4.17	4.17	5.00		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
PFTeDA	376-06-7	<0.755	0.755	4.00		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
EtFOSA	4151-50-2	<5.11	5.11	20.0		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
PFHxDA	67905-19-5	<0.294	0.294	4.00		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
PFODA	16517-11-6	<6.14	6.14	7.00		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
MeFOSE	24448-09-7	<6.07	6.07	20.0		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
EtFOSE	1691-99-2	<9.44	9.44	20.0		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	109	25 - 150			B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1

Sample ID: Method Blank **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	B0G0137-BLK1	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples						

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	94.2	25 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
13C3-PFBS	IS	87.4	25 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
13C3-HFPO-DA	IS	79.6	25 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
13C2-4:2 FTS	IS	82.3	25 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
13C2-PFHxA	IS	84.2	25 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
13C4-PFHpA	IS	88.0	25 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
13C3-PFHxS	IS	88.8	25 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
13C2-6:2 FTS	IS	89.5	25 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
13C5-PFNA	IS	85.5	25 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
13C8-PFOA	IS	41.4	10 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
13C2-PFOA	IS	91.9	25 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
13C8-PFOS	IS	71.9	25 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
13C2-PFDA	IS	76.8	25 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
13C2-8:2 FTS	IS	85.3	25 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
d3-MeFOSAA	IS	72.9	25 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
13C2-PFUnA	IS	80.7	25 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
d5-EtFOSAA	IS	71.0	25 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
13C2-10:2 FTS	IS	71.3	25 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
13C2-PFDoA	IS	70.7	25 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
d3-MeFOSA	IS	12.7	10 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
13C2-PFTeDA	IS	74.1	25 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
d5-EtFOSA	IS	11.0	10 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
13C2-PFHxDA	IS	72.6	25 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
d7-MeFOSE	IS	25.7	10 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1
d9-EtFOSE	IS	28.8	10 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 17:56	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OPR

PFAS Isotope Dilution Method

Client Data					Laboratory Data							
Name:	LimnoTech, Inc.	Matrix:	Aqueous		Lab Sample:	B0G0137-BS1	Column:	BEH C18				
Project:	MSN Wet Weather Storm Samples											

Analyte	CAS Number	Amt Found (ng/L)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	7.18	8.00	89.7	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
PFPeA	2706-90-3	8.46	8.00	106	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
PFBS	375-73-5	7.97	8.00	99.7	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
4:2 FTS	757124-72-4	7.86	8.00	98.2	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
PFHxA	307-24-4	7.27	8.00	90.9	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
PFPeS	2706-91-4	6.17	8.00	77.1	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
HFPO-DA	13252-13-6	6.63	8.00	82.8	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
PFHpA	375-85-9	8.38	8.00	105	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
ADONA	919005-14-4	6.47	8.00	80.8	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
PFHxS	355-46-4	8.88	8.00	111	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
6:2 FTS	27619-97-2	6.50	8.00	81.2	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
PFOA	335-67-1	7.36	8.00	91.9	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
PFHpS	375-92-8	8.79	8.00	110	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
PFNA	375-95-1	7.59	8.00	94.9	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
PFOSA	754-91-6	7.01	8.00	87.6	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
PFOS	1763-23-1	7.08	8.00	88.4	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
9Cl-PF3ONS	756426-58-1	6.14	8.00	76.7	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
PFDA	335-76-2	7.92	8.00	99.1	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
8:2 FTS	39108-34-4	9.36	8.00	117	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
PFNS	68259-12-1	8.48	8.00	106	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
MeFOSAA	2355-31-9	6.84	8.00	85.6	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
EtFOSAA	2991-50-6	7.37	8.00	92.1	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
PFUnA	2058-94-8	7.69	8.00	96.2	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
PFDS	335-77-3	6.46	8.00	80.7	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
11Cl-PF3OUdS	763051-92-9	8.22	8.00	103	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
10:2 FTS	120226-60-0	6.88	8.00	86.0	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
PFDoA	307-55-1	7.33	8.00	91.6	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
MeFOSA	31506-32-8	30.8	40.0	77.1	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
PFTTrDA	72629-94-8	7.67	8.00	95.9	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
PFDoS	79780-39-5	7.27	8.00	90.9	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
PFTeDA	376-06-7	7.32	8.00	91.5	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
EtFOSA	4151-50-2	37.0	40.0	92.4	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
PFHxDA	67905-19-5	6.70	8.00	83.8	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
PFODA	16517-11-6	6.74	8.00	84.3	50 - 150	J	B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1

Sample ID: OPR

PFAS Isotope Dilution Method

Client Data					Laboratory Data							
Name:	LimnoTech, Inc.	Matrix:	Aqueous		Lab Sample:	B0G0137-BS1	Column:	BEH C18				
Project:	MSN Wet Weather Storm Samples											

Analyte	CAS Number	Amt Found (ng/L)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
MeFOSE	24448-09-7	42.9	40.0	107	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
EtFOSE	1691-99-2	40.7	40.0	102	50 - 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
Labeled Standards		Type		% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA		IS		107	25- 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
13C3-PFPeA		IS		89.3	25- 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
13C3-PFBS		IS		88.1	25- 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
13C3-HFPO-DA		IS		75.4	25- 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
13C2-4:2 FTS		IS		81.0	25- 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
13C2-PFHxA		IS		82.5	25- 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
13C4-PFHpA		IS		83.8	25- 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
13C3-PFHxS		IS		87.1	25- 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
13C2-6:2 FTS		IS		90.7	25- 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
13C5-PFNA		IS		78.1	25- 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
13C8-PFOA		IS		39.3	10- 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
13C2-PFOA		IS		91.6	25- 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
13C8-PFOS		IS		74.4	25- 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
13C2-PFDA		IS		76.9	25- 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
13C2-8:2 FTS		IS		93.9	25- 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
d3-MeFOSAA		IS		68.3	25- 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
13C2-PFUnA		IS		74.2	25- 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
d5-EtFOSAA		IS		68.0	25- 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
13C2-10:2 FTS		IS		72.8	25- 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
13C2-PFDoA		IS		67.7	25- 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
d3-MeFOSA		IS		10.6	10- 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
13C2-PFTeDA		IS		72.4	25- 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
d5-EtFOSA		IS		10.4	10- 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
13C2-PFHxDA		IS		62.2	25- 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
d7-MeFOSE		IS		26.0	10- 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1
d9-EtFOSE		IS		29.5	10- 150		B0G0137	21-Jul-20	0.125 L	23-Jul-20 18:07	1

Sample ID: OUTFALL 15
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001479-01	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 09:30	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	14.9	0.846	4.64		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
PFPeA	2706-90-3	21.5	1.49	4.64		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
PFBS	375-73-5	10.2	2.08	4.64		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
4:2 FTS	757124-72-4	<1.61	1.61	4.64		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
PFHxA	307-24-4	19.7	2.53	4.64		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
PFPeS	2706-91-4	9.15	2.81	4.64		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
HFPO-DA	13252-13-6	<5.60	5.60	5.80		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
PFHpA	375-85-9	7.63	0.686	4.64		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
ADONA	919005-14-4	<0.838	0.838	4.64		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
PFHxS	355-46-4	64.6	1.10	4.64		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
6:2 FTS	27619-97-2	<2.32	2.32	4.64		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
PFOA	335-67-1	4.22	0.756	4.64	J	B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
PFHpS	375-92-8	2.03	1.09	4.64	J	B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
PFNA	375-95-1	<0.940	0.940	4.64		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
PFOSA	754-91-6	7.97	2.05	4.64		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
PFOS	1763-23-1	535	0.937	4.64		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
9Cl-PF3ONS	756426-58-1	<1.68	1.68	4.64		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
PFDA	335-76-2	<1.73	1.73	4.64		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
8:2 FTS	39108-34-4	<2.39	2.39	4.64		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
PFNS	68259-12-1	<4.49	4.49	4.64		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
MeFOSAA	2355-31-9	<1.92	1.92	4.64		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
EtFOSAA	2991-50-6	<1.59	1.59	4.64		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
PFUnA	2058-94-8	<1.22	1.22	4.64		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
PFDS	335-77-3	<1.43	1.43	4.64		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
11Cl-PF3OUdS	763051-92-9	<2.80	2.80	4.64		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
10:2 FTS	120226-60-0	<3.63	3.63	4.64		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
PFDoA	307-55-1	<0.919	0.919	4.64		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
MeFOSA	31506-32-8	<4.45	4.45	23.2		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
PFTrDA	72629-94-8	<0.573	0.573	4.64		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
PFDoS	79780-39-5	<4.84	4.84	5.80		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
PFTeDA	376-06-7	<0.876	0.876	4.64		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
EtFOSA	4151-50-2	<5.93	5.93	23.2		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
PFHxDA	67905-19-5	<0.341	0.341	4.64		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
PFODA	16517-11-6	<7.13	7.13	8.13		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
MeFOSE	24448-09-7	<7.05	7.05	23.2		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
EtFOSE	1691-99-2	<11.0	11.0	23.2		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	109	25 - 150			B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1

Sample ID: OUTFALL 15
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001479-01	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 09:30	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	98.4	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
13C3-PFBS	IS	88.7	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
13C3-HFPO-DA	IS	87.8	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
13C2-4:2 FTS	IS	90.7	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
13C2-PFHxA	IS	79.7	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
13C4-PFHpA	IS	87.4	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
13C3-PFHxS	IS	85.5	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
13C2-6:2 FTS	IS	90.6	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
13C5-PFNA	IS	86.8	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
13C8-PFOA	IS	61.2	10 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
13C2-PFOA	IS	94.1	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
13C8-PFOS	IS	79.5	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
13C2-PFDA	IS	78.1	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
13C2-8:2 FTS	IS	97.9	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
d3-MeFOSAA	IS	83.2	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
13C2-PFUnA	IS	87.2	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
d5-EtFOSAA	IS	79.4	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
13C2-10:2 FTS	IS	75.2	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
13C2-PFDoA	IS	77.3	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
d3-MeFOSA	IS	17.9	10 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
13C2-PFTeDA	IS	80.8	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
d5-EtFOSA	IS	16.2	10 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
13C2-PFHxDA	IS	73.8	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
d7-MeFOSE	IS	51.9	10 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1
d9-EtFOSE	IS	51.4	10 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:17	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OUTFALL 19
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001479-02	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 09:50	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	27.3	0.829	4.55		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
PFPeA	2706-90-3	62.2	1.46	4.55		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
PFBS	375-73-5	27.0	2.04	4.55		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
4:2 FTS	757124-72-4	<1.58	1.58	4.55		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
PFHxA	307-24-4	52.0	2.48	4.55		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
PFPeS	2706-91-4	26.3	2.75	4.55		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
HFPO-DA	13252-13-6	<5.48	5.48	5.69		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
PFHpA	375-85-9	23.4	0.672	4.55		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
ADONA	919005-14-4	<0.821	0.821	4.55		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
PFHxS	355-46-4	130	1.08	4.55		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
6:2 FTS	27619-97-2	9.13	2.27	4.55		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
PFOA	335-67-1	18.5	0.740	4.55		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
PFHpS	375-92-8	12.5	1.07	4.55		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
PFNA	375-95-1	2.41	0.921	4.55	J	B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
PFOSA	754-91-6	6.14	2.01	4.55		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
PFOS	1763-23-1	700	0.918	4.55		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
9CI-PF3ONS	756426-58-1	<1.65	1.65	4.55		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
PFDA	335-76-2	1.82	1.69	4.55	J	B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
8:2 FTS	39108-34-4	6.36	2.34	4.55		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
PFNS	68259-12-1	<4.40	4.40	4.55		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
MeFOSAA	2355-31-9	<1.88	1.88	4.55		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
EtFOSAA	2991-50-6	<1.56	1.56	4.55		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
PFUnA	2058-94-8	<1.19	1.19	4.55		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
PFDS	335-77-3	<1.40	1.40	4.55		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
11CI-PF3OUdS	763051-92-9	<2.74	2.74	4.55		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
10:2 FTS	120226-60-0	<3.56	3.56	4.55		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
PFDoA	307-55-1	<0.901	0.901	4.55		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
MeFOSA	31506-32-8	<4.36	4.36	22.7		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
PFTrDA	72629-94-8	<0.562	0.562	4.55		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
PFDoS	79780-39-5	<4.74	4.74	5.69		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
PFTeDA	376-06-7	<0.859	0.859	4.55		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
EtFOSA	4151-50-2	<5.81	5.81	22.7		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
PFHxDA	67905-19-5	<0.334	0.334	4.55		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
PFODA	16517-11-6	<6.98	6.98	7.96		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
MeFOSE	24448-09-7	<6.90	6.90	22.7		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
EtFOSE	1691-99-2	<10.7	10.7	22.7		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C3-PFBA	IS	114	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1	

Sample ID: OUTFALL 19 **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001479-02	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 09:50	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	98.6	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
13C3-PFBS	IS	92.4	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
13C3-HFPO-DA	IS	93.5	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
13C2-4:2 FTS	IS	90.0	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
13C2-PFHxA	IS	87.2	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
13C4-PFHpA	IS	93.6	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
13C3-PFHxS	IS	95.7	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
13C2-6:2 FTS	IS	93.8	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
13C5-PFNA	IS	89.8	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
13C8-PFOA	IS	60.3	10 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
13C2-PFOA	IS	94.7	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
13C8-PFOS	IS	78.1	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
13C2-PFDA	IS	85.1	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
13C2-8:2 FTS	IS	105	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
d3-MeFOSAA	IS	86.1	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
13C2-PFUnA	IS	88.6	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
d5-EtFOSAA	IS	84.7	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
13C2-10:2 FTS	IS	84.6	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
13C2-PFDoA	IS	76.8	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
d3-MeFOSA	IS	17.3	10 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
13C2-PFTeDA	IS	79.6	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
d5-EtFOSA	IS	16.6	10 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
13C2-PFHxDA	IS	80.4	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
d7-MeFOSE	IS	53.9	10 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1
d9-EtFOSE	IS	57.8	10 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 18:28	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OUTFALL 18
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001479-03	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 10:10	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	9.09	0.840	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
PFPeA	2706-90-3	<1.47	1.47	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
PFBS	375-73-5	<2.06	2.06	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
4:2 FTS	757124-72-4	<1.60	1.60	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
PFHxA	307-24-4	<2.51	2.51	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
PFPeS	2706-91-4	<2.79	2.79	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
HFPO-DA	13252-13-6	<5.55	5.55	5.76		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
PFHpA	375-85-9	<0.681	0.681	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
ADONA	919005-14-4	<0.832	0.832	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
PFHxS	355-46-4	<1.09	1.09	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
6:2 FTS	27619-97-2	<2.30	2.30	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
PFOA	335-67-1	2.56	0.750	4.61	J	B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
PFHpS	375-92-8	<1.08	1.08	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
PFNA	375-95-1	<0.933	0.933	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
PFOSA	754-91-6	5.45	2.04	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
PFOS	1763-23-1	2.89	0.930	4.61	J	B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
9Cl-PF3ONS	756426-58-1	<1.67	1.67	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
PFDA	335-76-2	<1.72	1.72	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
8:2 FTS	39108-34-4	<2.37	2.37	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
PFNS	68259-12-1	<4.46	4.46	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
MeFOSAA	2355-31-9	<1.90	1.90	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
EtFOSAA	2991-50-6	<1.58	1.58	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
PFUnA	2058-94-8	<1.21	1.21	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
PFDS	335-77-3	<1.42	1.42	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
11Cl-PF3OUdS	763051-92-9	<2.78	2.78	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
10:2 FTS	120226-60-0	<3.61	3.61	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
PFDoA	307-55-1	<0.913	0.913	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
MeFOSA	31506-32-8	<4.41	4.41	23.0		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
PFTrDA	72629-94-8	<0.569	0.569	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
PFDoS	79780-39-5	<4.80	4.80	5.76		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
PFTeDA	376-06-7	<0.870	0.870	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
EtFOSA	4151-50-2	<5.89	5.89	23.0		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
PFHxDA	67905-19-5	<0.339	0.339	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
PFODA	16517-11-6	<7.07	7.07	8.07		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
MeFOSE	24448-09-7	<6.99	6.99	23.0		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
EtFOSE	1691-99-2	<10.9	10.9	23.0		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C3-PFBA	IS	107	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1	

Sample ID: OUTFALL 18 **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001479-03	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 10:10	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	91.5	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
13C3-PFBS	IS	89.5	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
13C3-HFPO-DA	IS	88.8	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
13C2-4:2 FTS	IS	87.0	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
13C2-PFHxA	IS	83.6	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
13C4-PFHpA	IS	82.3	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
13C3-PFHxS	IS	89.3	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
13C2-6:2 FTS	IS	95.5	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
13C5-PFNA	IS	82.2	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
13C8-PFOA	IS	64.5	10 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
13C2-PFOA	IS	90.5	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
13C8-PFOS	IS	79.7	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
13C2-PFDA	IS	83.1	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
13C2-8:2 FTS	IS	90.0	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
d3-MeFOSAA	IS	83.5	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
13C2-PFUnA	IS	83.3	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
d5-EtFOSAA	IS	76.5	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
13C2-10:2 FTS	IS	75.9	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
13C2-PFDoA	IS	76.4	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
d3-MeFOSA	IS	31.3	10 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
13C2-PFTeDA	IS	67.9	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
d5-EtFOSA	IS	29.4	10 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
13C2-PFHxDA	IS	63.0	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
d7-MeFOSE	IS	57.4	10 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1
d9-EtFOSE	IS	59.4	10 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 18:38	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OUTFALL 17
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001479-04	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 10:15	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	19.6	0.805	4.42		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
PFPeA	2706-90-3	18.9	1.41	4.42		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
PFBS	375-73-5	2.75	1.98	4.42	J	B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
4:2 FTS	757124-72-4	<1.54	1.54	4.42		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
PFHxA	307-24-4	6.51	2.41	4.42		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
PFPeS	2706-91-4	<2.67	2.67	4.42		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
HFPO-DA	13252-13-6	<5.33	5.33	5.52		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
PFHpA	375-85-9	<0.653	0.653	4.42		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
ADONA	919005-14-4	<0.798	0.798	4.42		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
PFHxS	355-46-4	11.3	1.05	4.42		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
6:2 FTS	27619-97-2	<2.21	2.21	4.42		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
PFOA	335-67-1	3.90	0.719	4.42	J	B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
PFHpS	375-92-8	<1.04	1.04	4.42		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
PFNA	375-95-1	0.944	0.895	4.42	J	B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
PFOSA	754-91-6	4.48	1.96	4.42		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
PFOS	1763-23-1	3.17	0.892	4.42	J	B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
9Cl-PF3ONS	756426-58-1	<1.60	1.60	4.42		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
PFDA	335-76-2	<1.65	1.65	4.42		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
8:2 FTS	39108-34-4	<2.28	2.28	4.42		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
PFNS	68259-12-1	<4.28	4.28	4.42		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
MeFOSAA	2355-31-9	<1.82	1.82	4.42		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
EtFOSAA	2991-50-6	<1.51	1.51	4.42		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
PFUnA	2058-94-8	<1.16	1.16	4.42		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
PFDS	335-77-3	<1.36	1.36	4.42		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
11Cl-PF3OUdS	763051-92-9	<2.66	2.66	4.42		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
10:2 FTS	120226-60-0	<3.46	3.46	4.42		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
PFDoA	307-55-1	<0.875	0.875	4.42		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
MeFOSA	31506-32-8	<4.23	4.23	22.1		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
PFTrDA	72629-94-8	<0.546	0.546	4.42		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
PFDoS	79780-39-5	<4.61	4.61	5.52		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
PFTeDA	376-06-7	<0.834	0.834	4.42		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
EtFOSA	4151-50-2	<5.65	5.65	22.1		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
PFHxDA	67905-19-5	<0.325	0.325	4.42		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
PFODA	16517-11-6	<6.78	6.78	7.73		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
MeFOSE	24448-09-7	<6.71	6.71	22.1		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
EtFOSE	1691-99-2	<10.4	10.4	22.1		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	112	25 - 150			B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1

Sample ID: OUTFALL 17
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001479-04	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 10:15	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	96.2	25 - 150		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
13C3-PFBS	IS	88.4	25 - 150		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
13C3-HFPO-DA	IS	88.6	25 - 150		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
13C2-4:2 FTS	IS	88.8	25 - 150		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
13C2-PFHxA	IS	84.7	25 - 150		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
13C4-PFHpA	IS	87.7	25 - 150		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
13C3-PFHxS	IS	96.4	25 - 150		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
13C2-6:2 FTS	IS	95.6	25 - 150		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
13C5-PFNA	IS	82.0	25 - 150		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
13C8-PFOA	IS	58.6	10 - 150		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
13C2-PFOA	IS	91.8	25 - 150		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
13C8-PFOS	IS	82.9	25 - 150		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
13C2-PFDA	IS	87.4	25 - 150		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
13C2-8:2 FTS	IS	94.8	25 - 150		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
d3-MeFOSAA	IS	87.9	25 - 150		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
13C2-PFUnA	IS	86.4	25 - 150		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
d5-EtFOSAA	IS	86.7	25 - 150		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
13C2-10:2 FTS	IS	72.4	25 - 150		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
13C2-PFDoA	IS	78.3	25 - 150		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
d3-MeFOSA	IS	14.7	10 - 150		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
13C2-PFTeDA	IS	67.6	25 - 150		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
d5-EtFOSA	IS	13.0	10 - 150		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
13C2-PFHxDA	IS	49.0	25 - 150		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
d7-MeFOSE	IS	47.7	10 - 150		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1
d9-EtFOSE	IS	49.1	10 - 150		B0G0137	21-Jul-20	0.113 L	23-Jul-20 18:49	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OUTFALL 10
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001479-05	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 10:35	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	9.85	0.813	4.46		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
PFPeA	2706-90-3	<1.43	1.43	4.46		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
PFBS	375-73-5	<2.00	2.00	4.46		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
4:2 FTS	757124-72-4	<1.55	1.55	4.46		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
PFHxA	307-24-4	2.52	2.43	4.46	J	B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
PFPeS	2706-91-4	<2.70	2.70	4.46		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
HFPO-DA	13252-13-6	<5.38	5.38	5.58		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
PFHpA	375-85-9	<0.659	0.659	4.46		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
ADONA	919005-14-4	<0.805	0.805	4.46		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
PFHxS	355-46-4	3.25	1.06	4.46	J	B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
6:2 FTS	27619-97-2	<2.23	2.23	4.46		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
PFOA	335-67-1	1.75	0.726	4.46	J	B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
PFHpS	375-92-8	<1.04	1.04	4.46		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
PFNA	375-95-1	<0.903	0.903	4.46		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
PFOSA	754-91-6	7.65	1.97	4.46		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
PFOS	1763-23-1	2.43	0.900	4.46	J	B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
9Cl-PF3ONS	756426-58-1	<1.62	1.62	4.46		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
PFDA	335-76-2	<1.66	1.66	4.46		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
8:2 FTS	39108-34-4	<2.30	2.30	4.46		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
PFNS	68259-12-1	<4.32	4.32	4.46		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
MeFOSAA	2355-31-9	<1.84	1.84	4.46		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
EtFOSAA	2991-50-6	<1.53	1.53	4.46		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
PFUnA	2058-94-8	<1.17	1.17	4.46		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
PFDS	335-77-3	<1.37	1.37	4.46		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
11Cl-PF3OUdS	763051-92-9	<2.69	2.69	4.46		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
10:2 FTS	120226-60-0	<3.49	3.49	4.46		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
PFDoA	307-55-1	<0.883	0.883	4.46		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
MeFOSA	31506-32-8	<4.27	4.27	22.3		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
PFTrDA	72629-94-8	<0.551	0.551	4.46		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
PFDoS	79780-39-5	<4.65	4.65	5.58		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
PFTeDA	376-06-7	<0.842	0.842	4.46		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
EtFOSA	4151-50-2	<5.70	5.70	22.3		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
PFHxDA	67905-19-5	<0.328	0.328	4.46		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
PFODA	16517-11-6	<6.85	6.85	7.81		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
MeFOSE	24448-09-7	<6.77	6.77	22.3		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
EtFOSE	1691-99-2	<10.5	10.5	22.3		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	120	25 - 150			B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1

Sample ID: OUTFALL 10 **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001479-05	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 10:35	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	103	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
13C3-PFBS	IS	92.9	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
13C3-HFPO-DA	IS	92.6	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
13C2-4:2 FTS	IS	89.6	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
13C2-PFHxA	IS	91.4	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
13C4-PFHpA	IS	94.0	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
13C3-PFHxS	IS	96.0	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
13C2-6:2 FTS	IS	97.5	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
13C5-PFNA	IS	96.8	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
13C8-PFOA	IS	55.9	10 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
13C2-PFOA	IS	99.3	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
13C8-PFOS	IS	90.4	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
13C2-PFDA	IS	82.7	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
13C2-8:2 FTS	IS	92.0	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
d3-MeFOSAA	IS	86.4	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
13C2-PFUnA	IS	90.7	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
d5-EtFOSAA	IS	83.9	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
13C2-10:2 FTS	IS	79.9	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
13C2-PFDoA	IS	80.6	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
d3-MeFOSA	IS	18.0	10 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
13C2-PFTeDA	IS	71.8	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
d5-EtFOSA	IS	16.7	10 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
13C2-PFHxDA	IS	69.1	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
d7-MeFOSE	IS	49.3	10 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1
d9-EtFOSE	IS	49.8	10 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:00	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OUTFALL 11
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001479-06	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 10:45	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	9.39	0.831	4.56		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
PFPeA	2706-90-3	<1.46	1.46	4.56		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
PFBS	375-73-5	<2.04	2.04	4.56		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
4:2 FTS	757124-72-4	<1.59	1.59	4.56		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
PFHxA	307-24-4	<2.49	2.49	4.56		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
PFPeS	2706-91-4	<2.76	2.76	4.56		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
HFPO-DA	13252-13-6	<5.50	5.50	5.70		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
PFHpA	375-85-9	<0.674	0.674	4.56		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
ADONA	919005-14-4	<0.823	0.823	4.56		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
PFHxS	355-46-4	1.90	1.08	4.56	J	B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
6:2 FTS	27619-97-2	<2.28	2.28	4.56		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
PFOA	335-67-1	2.30	0.742	4.56	J	B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
PFHpS	375-92-8	<1.07	1.07	4.56		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
PFNA	375-95-1	<0.924	0.924	4.56		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
PFOSA	754-91-6	9.83	2.02	4.56		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
PFOS	1763-23-1	3.41	0.920	4.56	J	B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
9Cl-PF3ONS	756426-58-1	<1.65	1.65	4.56		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
PFDA	335-76-2	<1.70	1.70	4.56		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
8:2 FTS	39108-34-4	<2.35	2.35	4.56		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
PFNS	68259-12-1	<4.41	4.41	4.56		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
MeFOSAA	2355-31-9	<1.88	1.88	4.56		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
EtFOSAA	2991-50-6	<1.56	1.56	4.56		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
PFUnA	2058-94-8	<1.20	1.20	4.56		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
PFDS	335-77-3	<1.40	1.40	4.56		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
11Cl-PF3OUdS	763051-92-9	<2.75	2.75	4.56		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
10:2 FTS	120226-60-0	<3.57	3.57	4.56		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
PFDoA	307-55-1	<0.903	0.903	4.56		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
MeFOSA	31506-32-8	<4.37	4.37	22.8		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
PFTrDA	72629-94-8	<0.563	0.563	4.56		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
PFDoS	79780-39-5	<4.76	4.76	5.70		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
PFTeDA	376-06-7	<0.861	0.861	4.56		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
EtFOSA	4151-50-2	<5.83	5.83	22.8		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
PFHxDA	67905-19-5	<0.335	0.335	4.56		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
PFODA	16517-11-6	<7.00	7.00	7.98		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
MeFOSE	24448-09-7	<6.92	6.92	22.8		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
EtFOSE	1691-99-2	<10.8	10.8	22.8		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	124	25 - 150			B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1

Sample ID: OUTFALL 11 **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001479-06	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 10:45	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	104	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
13C3-PFBS	IS	98.7	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
13C3-HFPO-DA	IS	96.0	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
13C2-4:2 FTS	IS	96.5	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
13C2-PFHxA	IS	91.4	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
13C4-PFHpA	IS	91.6	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
13C3-PFHxS	IS	101	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
13C2-6:2 FTS	IS	103	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
13C5-PFNA	IS	97.6	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
13C8-PFOA	IS	53.4	10 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
13C2-PFOA	IS	104	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
13C8-PFOS	IS	88.6	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
13C2-PFDA	IS	90.2	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
13C2-8:2 FTS	IS	97.2	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
d3-MeFOSAA	IS	90.5	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
13C2-PFUnA	IS	88.9	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
d5-EtFOSAA	IS	84.1	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
13C2-10:2 FTS	IS	77.1	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
13C2-PFDoA	IS	80.4	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
d3-MeFOSA	IS	11.0	10 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
13C2-PFTeDA	IS	75.4	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
d5-EtFOSA	IS	11.5	10 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
13C2-PFHxDA	IS	71.3	25 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
d7-MeFOSE	IS	44.5	10 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1
d9-EtFOSE	IS	45.8	10 - 150		B0G0137	21-Jul-20	0.110 L	23-Jul-20 19:10	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OUTFALL 12
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001479-07	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 10:55	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	8.30	0.800	4.39		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
PFPeA	2706-90-3	<1.40	1.40	4.39		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
PFBS	375-73-5	<1.96	1.96	4.39		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
4:2 FTS	757124-72-4	<1.52	1.52	4.39		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
PFHxA	307-24-4	3.03	2.39	4.39	J	B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
PFPeS	2706-91-4	<2.65	2.65	4.39		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
HFPO-DA	13252-13-6	<5.29	5.29	5.48		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
PFHpA	375-85-9	<0.648	0.648	4.39		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
ADONA	919005-14-4	<0.792	0.792	4.39		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
PFHxS	355-46-4	<1.04	1.04	4.39		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
6:2 FTS	27619-97-2	<2.19	2.19	4.39		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
PFOA	335-67-1	2.38	0.714	4.39	J	B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
PFHpS	375-92-8	<1.03	1.03	4.39		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
PFNA	375-95-1	<0.888	0.888	4.39		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
PFOSA	754-91-6	10.9	1.94	4.39		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
PFOS	1763-23-1	2.77	0.885	4.39	J	B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
9CI-PF3ONS	756426-58-1	<1.59	1.59	4.39		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
PFDA	335-76-2	<1.63	1.63	4.39		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
8:2 FTS	39108-34-4	<2.26	2.26	4.39		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
PFNS	68259-12-1	<4.24	4.24	4.39		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
MeFOSAA	2355-31-9	<1.81	1.81	4.39		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
EtFOSAA	2991-50-6	<1.50	1.50	4.39		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
PFUnA	2058-94-8	<1.15	1.15	4.39		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
PFDS	335-77-3	<1.35	1.35	4.39		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
11CI-PF3OUdS	763051-92-9	<2.64	2.64	4.39		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
10:2 FTS	120226-60-0	<3.43	3.43	4.39		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
PFDoA	307-55-1	<0.869	0.869	4.39		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
MeFOSA	31506-32-8	<4.20	4.20	21.9		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
PFTrDA	72629-94-8	<0.542	0.542	4.39		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
PFDoS	79780-39-5	<4.57	4.57	5.48		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
PFTeDA	376-06-7	<0.828	0.828	4.39		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
EtFOSA	4151-50-2	<5.61	5.61	21.9		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
PFHxDA	67905-19-5	<0.322	0.322	4.39		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
PFODA	16517-11-6	<6.73	6.73	7.68		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
MeFOSE	24448-09-7	<6.66	6.66	21.9		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
EtFOSE	1691-99-2	<10.4	10.4	21.9		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	124	25 - 150		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1

Sample ID: OUTFALL 12 **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001479-07	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 10:55	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	99.9	25 - 150		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
13C3-PFBS	IS	95.8	25 - 150		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
13C3-HFPO-DA	IS	88.1	25 - 150		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
13C2-4:2 FTS	IS	97.2	25 - 150		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
13C2-PFHxA	IS	92.2	25 - 150		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
13C4-PFHpA	IS	90.6	25 - 150		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
13C3-PFHxS	IS	89.6	25 - 150		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
13C2-6:2 FTS	IS	103	25 - 150		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
13C5-PFNA	IS	98.4	25 - 150		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
13C8-PFOA	IS	59.9	10 - 150		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
13C2-PFOA	IS	101	25 - 150		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
13C8-PFOS	IS	86.1	25 - 150		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
13C2-PFDA	IS	89.6	25 - 150		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
13C2-8:2 FTS	IS	97.4	25 - 150		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
d3-MeFOSAA	IS	95.2	25 - 150		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
13C2-PFUnA	IS	93.7	25 - 150		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
d5-EtFOSAA	IS	85.6	25 - 150		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
13C2-10:2 FTS	IS	91.1	25 - 150		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
13C2-PFDoA	IS	82.2	25 - 150		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
d3-MeFOSA	IS	15.1	10 - 150		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
13C2-PFTeDA	IS	81.9	25 - 150		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
d5-EtFOSA	IS	13.7	10 - 150		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
13C2-PFHxDA	IS	71.5	25 - 150		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
d7-MeFOSE	IS	48.3	10 - 150		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1
d9-EtFOSE	IS	49.7	10 - 150		B0G0137	21-Jul-20	0.114 L	23-Jul-20 19:21	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OUTFALL 13
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001479-08	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 11:10	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	10.3	0.840	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
PFPeA	2706-90-3	<1.47	1.47	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
PFBS	375-73-5	<2.06	2.06	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
4:2 FTS	757124-72-4	<1.60	1.60	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
PFHxA	307-24-4	<2.51	2.51	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
PFPeS	2706-91-4	<2.79	2.79	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
HFPO-DA	13252-13-6	<5.55	5.55	5.76		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
PFHpA	375-85-9	<0.681	0.681	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
ADONA	919005-14-4	<0.832	0.832	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
PFHxS	355-46-4	1.88	1.09	4.61	J	B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
6:2 FTS	27619-97-2	<2.30	2.30	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
PFOA	335-67-1	2.48	0.750	4.61	J	B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
PFHpS	375-92-8	<1.08	1.08	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
PFNA	375-95-1	<0.933	0.933	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
PFOSA	754-91-6	8.24	2.04	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
PFOS	1763-23-1	5.13	0.930	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
9Cl-PF3ONS	756426-58-1	<1.67	1.67	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
PFDA	335-76-2	<1.72	1.72	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
8:2 FTS	39108-34-4	<2.37	2.37	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
PFNS	68259-12-1	<4.46	4.46	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
MeFOSAA	2355-31-9	<1.90	1.90	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
EtFOSAA	2991-50-6	<1.58	1.58	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
PFUnA	2058-94-8	<1.21	1.21	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
PFDS	335-77-3	<1.42	1.42	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
11Cl-PF3OUdS	763051-92-9	<2.78	2.78	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
10:2 FTS	120226-60-0	<3.61	3.61	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
PFDoA	307-55-1	<0.913	0.913	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
MeFOSA	31506-32-8	<4.41	4.41	23.0		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
PFTrDA	72629-94-8	<0.569	0.569	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
PFDoS	79780-39-5	<4.81	4.81	5.76		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
PFTeDA	376-06-7	<0.870	0.870	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
EtFOSA	4151-50-2	<5.89	5.89	23.0		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
PFHxDA	67905-19-5	<0.339	0.339	4.61		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
PFODA	16517-11-6	<7.08	7.08	8.07		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
MeFOSE	24448-09-7	<6.99	6.99	23.0		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
EtFOSE	1691-99-2	<10.9	10.9	23.0		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	121	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1

Sample ID: OUTFALL 13
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001479-08	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 11:10	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	98.9	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
13C3-PFBS	IS	88.0	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
13C3-HFPO-DA	IS	92.2	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
13C2-4:2 FTS	IS	92.0	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
13C2-PFHxA	IS	89.3	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
13C4-PFHpA	IS	93.3	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
13C3-PFHxS	IS	91.8	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
13C2-6:2 FTS	IS	102	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
13C5-PFNA	IS	92.6	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
13C8-PFOA	IS	55.3	10 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
13C2-PFOA	IS	95.9	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
13C8-PFOS	IS	79.8	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
13C2-PFDA	IS	85.5	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
13C2-8:2 FTS	IS	75.4	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
d3-MeFOSAA	IS	84.5	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
13C2-PFUnA	IS	86.4	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
d5-EtFOSAA	IS	75.8	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
13C2-10:2 FTS	IS	75.2	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
13C2-PFDoA	IS	82.3	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
d3-MeFOSA	IS	17.2	10 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
13C2-PFTeDA	IS	68.7	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
d5-EtFOSA	IS	15.7	10 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
13C2-PFHxDA	IS	65.6	25 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
d7-MeFOSE	IS	45.5	10 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1
d9-EtFOSE	IS	45.1	10 - 150		B0G0137	21-Jul-20	0.108 L	23-Jul-20 19:31	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OUTFALL 14
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001479-09	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 11:30	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	8.83	0.815	4.47		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
PFPeA	2706-90-3	<1.43	1.43	4.47		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
PFBS	375-73-5	<2.00	2.00	4.47		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
4:2 FTS	757124-72-4	<1.55	1.55	4.47		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
PFHxA	307-24-4	<2.44	2.44	4.47		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
PFPeS	2706-91-4	<2.70	2.70	4.47		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
HFPO-DA	13252-13-6	<5.39	5.39	5.59		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
PFHpA	375-85-9	<0.660	0.660	4.47		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
ADONA	919005-14-4	<0.807	0.807	4.47		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
PFHxS	355-46-4	2.78	1.06	4.47	J	B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
6:2 FTS	27619-97-2	<2.24	2.24	4.47		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
PFOA	335-67-1	1.91	0.728	4.47	J	B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
PFHpS	375-92-8	<1.05	1.05	4.47		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
PFNA	375-95-1	<0.905	0.905	4.47		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
PFOSA	754-91-6	10.3	1.98	4.47		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
PFOS	1763-23-1	3.52	0.902	4.47	J	B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
9Cl-PF3ONS	756426-58-1	<1.62	1.62	4.47		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
PFDA	335-76-2	<1.67	1.67	4.47		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
8:2 FTS	39108-34-4	<2.30	2.30	4.47		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
PFNS	68259-12-1	<4.32	4.32	4.47		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
MeFOSAA	2355-31-9	<1.84	1.84	4.47		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
EtFOSAA	2991-50-6	<1.53	1.53	4.47		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
PFUnA	2058-94-8	<1.17	1.17	4.47		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
PFDS	335-77-3	<1.37	1.37	4.47		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
11Cl-PF3OUdS	763051-92-9	<2.69	2.69	4.47		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
10:2 FTS	120226-60-0	<3.50	3.50	4.47		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
PFDoA	307-55-1	<0.885	0.885	4.47		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
MeFOSA	31506-32-8	<4.28	4.28	22.4		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
PFTrDA	72629-94-8	<0.552	0.552	4.47		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
PFDoS	79780-39-5	<4.66	4.66	5.59		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
PFTeDA	376-06-7	<0.844	0.844	4.47		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
EtFOSA	4151-50-2	<5.71	5.71	22.4		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
PFHxDA	67905-19-5	<0.329	0.329	4.47		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
PFODA	16517-11-6	<6.86	6.86	7.82		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
MeFOSE	24448-09-7	<6.78	6.78	22.4		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
EtFOSE	1691-99-2	<10.5	10.5	22.4		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	118	25 - 150			B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1

Sample ID: OUTFALL 14 **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001479-09	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 11:30	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	102	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
13C3-PFBS	IS	93.3	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
13C3-HFPO-DA	IS	93.0	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
13C2-4:2 FTS	IS	94.5	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
13C2-PFHxA	IS	83.2	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
13C4-PFHpA	IS	88.5	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
13C3-PFHxS	IS	91.2	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
13C2-6:2 FTS	IS	95.9	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
13C5-PFNA	IS	85.8	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
13C8-PFOA	IS	48.8	10 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
13C2-PFOA	IS	98.1	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
13C8-PFOS	IS	83.2	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
13C2-PFDA	IS	84.9	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
13C2-8:2 FTS	IS	93.5	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
d3-MeFOSAA	IS	86.4	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
13C2-PFUnA	IS	86.9	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
d5-EtFOSAA	IS	79.9	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
13C2-10:2 FTS	IS	82.6	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
13C2-PFDoA	IS	78.2	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
d3-MeFOSA	IS	15.1	10 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
13C2-PFTeDA	IS	77.5	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
d5-EtFOSA	IS	13.0	10 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
13C2-PFHxDA	IS	71.4	25 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
d7-MeFOSE	IS	42.6	10 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1
d9-EtFOSE	IS	45.6	10 - 150		B0G0137	21-Jul-20	0.112 L	23-Jul-20 19:42	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OUTFALL 03
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001479-10	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 12:15	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	17.8	0.793	4.35		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
PFPeA	2706-90-3	39.5	1.39	4.35		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
PFBS	375-73-5	2.48	1.95	4.35	J, Q	B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
4:2 FTS	757124-72-4	<1.51	1.51	4.35		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
PFHxA	307-24-4	41.1	2.37	4.35		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
PFPeS	2706-91-4	2.67	2.63	4.35	J	B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
HFPO-DA	13252-13-6	<5.24	5.24	5.44		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
PFHpA	375-85-9	15.3	0.643	4.35		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
ADONA	919005-14-4	<0.785	0.785	4.35		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
PFHxS	355-46-4	31.0	1.03	4.35		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
6:2 FTS	27619-97-2	<2.17	2.17	4.35		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
PFOA	335-67-1	51.8	0.708	4.35		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
PFHpS	375-92-8	<1.02	1.02	4.35		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
PFNA	375-95-1	9.09	0.881	4.35		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
PFOSA	754-91-6	12.1	1.92	4.35		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
PFOS	1763-23-1	33.5	0.877	4.35		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
9Cl-PF3ONS	756426-58-1	<1.58	1.58	4.35		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
PFDA	335-76-2	20.9	1.62	4.35		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
8:2 FTS	39108-34-4	2.59	2.24	4.35	J	B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
PFNS	68259-12-1	<4.21	4.21	4.35		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
MeFOSAA	2355-31-9	<1.79	1.79	4.35		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
EtFOSAA	2991-50-6	<1.49	1.49	4.35		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
PFUnA	2058-94-8	<1.14	1.14	4.35		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
PFDS	335-77-3	<1.34	1.34	4.35		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
11Cl-PF3OUdS	763051-92-9	<2.62	2.62	4.35		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
10:2 FTS	120226-60-0	<3.40	3.40	4.35		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
PFDoA	307-55-1	2.56	0.861	4.35	J	B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
MeFOSA	31506-32-8	<4.16	4.16	21.7		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
PFTTrDA	72629-94-8	<0.537	0.537	4.35		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
PFDoS	79780-39-5	<4.53	4.53	5.44		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
PFTeDA	376-06-7	<0.821	0.821	4.35		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
EtFOSA	4151-50-2	<5.56	5.56	21.7		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
PFHxDA	67905-19-5	<0.320	0.320	4.35		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
PFODA	16517-11-6	<6.68	6.68	7.61		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
MeFOSE	24448-09-7	<6.60	6.60	21.7		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
EtFOSE	1691-99-2	<10.3	10.3	21.7		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	117	25 - 150			B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1

Sample ID: OUTFALL 03 **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001479-10	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 12:15	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	103	25 - 150		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
13C3-PFBS	IS	95.0	25 - 150		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
13C3-HFPO-DA	IS	85.4	25 - 150		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
13C2-4:2 FTS	IS	94.2	25 - 150		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
13C2-PFHxA	IS	90.9	25 - 150		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
13C4-PFHpA	IS	95.9	25 - 150		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
13C3-PFHxS	IS	91.3	25 - 150		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
13C2-6:2 FTS	IS	99.2	25 - 150		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
13C5-PFNA	IS	86.7	25 - 150		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
13C8-PFOA	IS	46.8	10 - 150		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
13C2-PFOA	IS	98.8	25 - 150		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
13C8-PFOS	IS	79.7	25 - 150		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
13C2-PFDA	IS	86.4	25 - 150		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
13C2-8:2 FTS	IS	102	25 - 150		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
d3-MeFOSAA	IS	76.7	25 - 150		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
13C2-PFUnA	IS	84.9	25 - 150		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
d5-EtFOSAA	IS	69.6	25 - 150		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
13C2-10:2 FTS	IS	61.0	25 - 150		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
13C2-PFDoA	IS	66.2	25 - 150		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
d3-MeFOSA	IS	10.7	10 - 150		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
13C2-PFTeDA	IS	54.9	25 - 150		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
d5-EtFOSA	IS	9.50	10 - 150	H	B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
13C2-PFHxDA	IS	53.2	25 - 150		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
d7-MeFOSE	IS	33.8	10 - 150		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1
d9-EtFOSE	IS	33.6	10 - 150		B0G0137	21-Jul-20	0.115 L	23-Jul-20 19:52	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank
Conc.	Concentration
CRS	Cleanup Recovery Standard
D	Dilution
DL	Detection Limit
E	The associated compound concentration exceeded the calibration range of the instrument
H	Recovery and/or RPD was outside laboratory acceptance limits
I	Chemical Interference
IS	Internal Standard
J	The amount detected is below the Reporting Limit/LOQ
LOD	Limit of Detection
LOQ	Limit of Quantitation
M	Estimated Maximum Possible Concentration (CA Region 2 projects only)
MDL	Method Detection Limit
NA	Not applicable
ND	Not Detected
OPR	Ongoing Precision and Recovery sample
P	The reported concentration may include contribution from chlorinated diphenyl ether(s).
Q	The ion transition ratio is outside of the acceptance criteria.
RL	Reporting Limit
TEQ	Toxic Equivalency
U	Not Detected (specific projects only)
*	See Cover Letter

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

Vista Analytical Laboratory Certifications

Accrediting Authority	Certificate Number
Alaska Department of Environmental Conservation	17-013
Arkansas Department of Environmental Quality	19-013-0
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777-23
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2018017
Massachusetts Department of Environmental Protection	N/A
Michigan Department of Environmental Quality	9932
Minnesota Department of Health	1521520
New Hampshire Environmental Accreditation Program	207718-B
New Jersey Department of Environmental Protection	190001
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-010
Pennsylvania Department of Environmental Protection	016
Texas Commission on Environmental Quality	T104704189-19-10
Vermont Department of Health	VT-4042
Virginia Department of General Services	10272
Washington Department of Ecology	C584-19
Wisconsin Department of Natural Resources	998036160

Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request.

NELAP Accredited Test Methods

MATRIX: Air	
Description of Test	Method
Determination of Polychlorinated p-Dioxins & Polychlorinated Dibenzofurans	EPA 23
Determination of Polychlorinated p-Dioxins & Polychlorinated Dibenzofurans	EPA TO-9A

MATRIX: Biological Tissue	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Drinking Water	
Description of Test	Method
2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD) GC/HRMS	EPA 1613/1613B
1,4-Dioxane (1,4-Diethyleneoxide) analysis by GC/HRMS	EPA 522
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	ISO 25101 2009

MATRIX: Non-Potable Water	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Dioxin by GC/HRMS	EPA 613
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Solids	
Description of Test	Method
Tetra-Octa Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A



CHAIN OF CUSTODY

For Laboratory Use Only

Work Order #: 2001479 Temp: 16.5 °C
 Storage ID: R-13, WR-2 Storage Secured: Yes No

Project ID: MSN WET WEATHER STORM SAMPLES PO#: MSNPF1 Sampler: C. Behnke
 (name)

TAT Standard: 21 days
 (check one): Rush (surcharge may apply)
 14 days 7 days Specify: _____

Relinquished by (printed name and signature) [Signature] Date 7/13/20 Time 1300 Received by (printed name and signature) William Wright Date 07/14/20 Time 09:11

Relinquished by (printed name and signature) _____ Date _____ Time _____ Received by (printed name and signature) _____ Date _____ Time _____

SHIP TO: Vista Analytical Laboratory
 1104 Windfield Way
 El Dorado Hills, CA 95762
 (916) 673-1520 * Fax (916) 673-0106

Method of Shipment: _____ Tracking No.: _____

ATTN: _____

Add Analysis(es) Requested

Container(s)	PFAS by Isotope Dilution	EPA Method 537 (DW only)
_____	_____	_____

Sample ID	Date	Time	Location/ Sample Description	Add Analysis(es) Requested							Comments	
				Quantity	Type	Matrix	PFOA/PFOS	UCMR3 PFAS List:6	537.1 List: 14 or 18 (Circle One)	EPA Draft List of 24		OTHER: Please attach analyte list
OUTFALL 15	7/9/20	0930		2	P	AQ					*	
OUTFALL 19	7/9/20	0950		2	P	AQ					*	* WISCONSIN PFAS LIST
OUTFALL 18	7/9/20	1010		2	P	AQ					*	
OUTFALL 17	7/9/20	1015		2	P	AQ					*	
OUTFALL 10	7/9/20	1035		2	P	AQ					*	
OUTFALL 11	7/9/20	1045		2	P	AQ					*	
OUTFALL 12	7/9/20	1055		2	P	AQ					*	
OUTFALL 13	7/9/20	1110		2	P	AQ					*	
OUTFALL 14	7/9/20	1130		2	P	AQ					*	
OUTFALL 03	7/9/20	1215		2	P	AQ					*	

Special Instructions/Comments: _____

SEND DOCUMENTATION AND RESULTS TO:

Name: CHEIS CIECIEK
 Company: LIMNOTECH
 Address: 501 AVIS DRIVE
 City: ANN ARBOR MI 48108
 Phone: 734 732 1200
 Email: CCIECIEK@LIMNOTECH.COM

Container Types: P= HDPE, PJ= HDPE Jar
 PY= Polypropylene, O = Other: _____

Bottle Preservation Type: _____
 TZ = Trizma: _____

Matrix Types: AQ = Aqueous, DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment,
 SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum, O = Other: _____

Sample Log-In Checklist

 Page # 1 of 1

 Vista Work Order #: 2001479 TAT std

Samples Arrival:	Date/Time		Initials:		Location:		
	<u>07/14/20 09:11</u>		<u>www</u>		<u>WR-2</u>		
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac	<input type="checkbox"/> GLS	<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered	<input type="checkbox"/> Other
Preservation:	<input checked="" type="checkbox"/> Ice		<input type="checkbox"/> Blue Ice		<input type="checkbox"/> Dry Ice		<input type="checkbox"/> None
Temp °C:	<u>1.5</u> (uncorrected)		Probe used: Y / <input checked="" type="checkbox"/> N		Thermometer ID: <u>IR-3</u>		
Temp °C:	<u>1.5</u> (corrected)						
					Shelf/Rack: <u>NA</u>		

	YES	NO	NA
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Custody Seals Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Airbill <u>1of4</u> Trk # <u>3947 7925 1799</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Container	<input checked="" type="checkbox"/> Vista	<input type="checkbox"/> Client	<input checked="" type="checkbox"/> Retain
	<input type="checkbox"/> Return	<input type="checkbox"/> Dispose	
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chain of Custody / Sample Documentation Complete?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Holding Time Acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Logged In:	Date/Time		Initials:
	<u>07/15/20 0911</u>		<u>www</u>
	Location: <u>R-13, WR-2</u>		
	Shelf/Rack: <u>A-3, E-4</u>		
COC Anomaly/Sample Acceptance Form completed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Comments:

CoC/Label Reconciliation Report WO# 2001479

LabNumber	CoC Sample ID	SampleAlias	Sample Date/Time	Container	BaseMatrix	Sample Comments
2001479-01	A OUTFALL 15	<input checked="" type="checkbox"/>	09-Jul-20 09:30	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001479-01	B OUTFALL 15	<input checked="" type="checkbox"/>	09-Jul-20 09:30	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001479-02	A OUTFALL 19	<input checked="" type="checkbox"/>	09-Jul-20 09:50	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001479-02	B OUTFALL 19	<input checked="" type="checkbox"/>	09-Jul-20 09:50	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001479-03	A OUTFALL 18	<input checked="" type="checkbox"/>	09-Jul-20 10:10	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001479-03	B OUTFALL 18	<input checked="" type="checkbox"/>	09-Jul-20 10:10	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001479-04	A OUTFALL 17	<input checked="" type="checkbox"/>	09-Jul-20 10:15	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001479-04	B OUTFALL 17	<input checked="" type="checkbox"/>	09-Jul-20 10:15	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001479-05	A OUTFALL 10	<input checked="" type="checkbox"/>	09-Jul-20 10:35	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001479-05	B OUTFALL 10	<input checked="" type="checkbox"/>	09-Jul-20 10:35	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001479-06	A OUTFALL 11	<input checked="" type="checkbox"/>	09-Jul-20 10:45	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001479-06	B OUTFALL 11	<input checked="" type="checkbox"/>	09-Jul-20 10:45	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001479-07	A OUTFALL 12	<input checked="" type="checkbox"/>	09-Jul-20 10:55	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001479-07	B OUTFALL 12	<input checked="" type="checkbox"/>	09-Jul-20 10:55	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001479-08	A OUTFALL 13	<input checked="" type="checkbox"/>	09-Jul-20 11:10	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001479-08	B OUTFALL 13	<input checked="" type="checkbox"/>	09-Jul-20 11:10	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001479-09	A OUTFALL 14	<input checked="" type="checkbox"/>	09-Jul-20 11:30	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001479-09	B OUTFALL 14	<input checked="" type="checkbox"/>	09-Jul-20 11:30	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001479-10	A OUTFALL 03	<input checked="" type="checkbox"/>	09-Jul-20 12:15	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001479-10	B OUTFALL 03	<input checked="" type="checkbox"/>	09-Jul-20 12:15	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous

Checkmarks indicate that information on the COC reconciled with the sample label.
Any discrepancies are noted in the following columns.

	Yes	No	NA
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Adequate Sample Volume?	✓		
Container Type Appropriate for Analysis(es)	✓		
Preservation Documented: Na2S2O3 Trizma <u>None</u> Other		✓	✓
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓

Comments:

Verified by/Date: 07/15/20

July 29, 2020

Vista Work Order No. 2001480

Mr. Chris Cieciek
LimnoTech, Inc.
501 Avis Drive
Ann Arbor, MI 48108

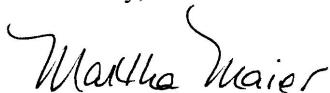
Dear Mr. Cieciek,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on July 14, 2020 under your Project Name 'MSN Wet Weather Storm Samples'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,



Martha Maier
Laboratory Director



Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Work Order No. 2001480

Case Narrative

Sample Condition on Receipt:

Fifteen aqueous samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology.

Analytical Notes:

PFAS Isotope Dilution Method

Samples "DA001-01" and "DA001-03" contained particulate and were centrifuged prior to extraction.

The samples were extracted and analyzed for a selected list of PFAS using Vista's PFAS Isotope Dilution Method. The results for PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Results for all other analytes include the linear isomers only.

Holding Times

The samples were extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank above the Reporting Limit. The OPR recoveries were within the method acceptance criteria.

The internal standard recoveries outside the acceptance criteria are flagged with an "H" qualifier.

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Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
2001480-01	OUTFALL 30	08-Jul-20 12:10	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001480-02	OUTFALL 37	08-Jul-20 12:35	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001480-03	OUTFALL 39	08-Jul-20 13:00	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001480-04	OUTFALL 22	08-Jul-20 13:10	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001480-05	OUTFALL 21	08-Jul-20 13:30	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001480-06	DA021-04 ALT	08-Jul-20 13:55	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001480-07	DA021-06 ALT	08-Jul-20 14:25	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001480-08	DA032-03 A	08-Jul-20 14:40	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001480-09	DA032-03 B	08-Jul-20 14:45	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001480-10	DA032-X	08-Jul-20 15:05	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001480-11	DA001-01	09-Jul-20 08:05	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001480-12	DA032-15	09-Jul-20 08:30	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001480-13	DA001-03	09-Jul-20 08:20	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001480-14	OUTFALL 07	09-Jul-20 08:45	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001480-15	DA032-08	09-Jul-20 09:10	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL

ANALYTICAL RESULTS

Sample ID: Method Blank
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	B0G0136-BLK1	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples						

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	ND	0.729	4.00		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
PFPeA	2706-90-3	ND	1.28	4.00		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
PFBS	375-73-5	ND	1.79	4.00		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
4:2 FTS	757124-72-4	ND	1.39	4.00		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
PFHxA	307-24-4	ND	2.18	4.00		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
PFPeS	2706-91-4	ND	2.42	4.00		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
HFPO-DA	13252-13-6	ND	4.82	5.00		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
PFHpA	375-85-9	ND	0.591	4.00		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
ADONA	919005-14-4	ND	0.722	4.00		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
PFHxS	355-46-4	ND	0.947	4.00		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
6:2 FTS	27619-97-2	ND	2.00	4.00		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
PFOA	335-67-1	ND	0.651	4.00		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
PFHpS	375-92-8	ND	0.937	4.00		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
PFNA	375-95-1	ND	0.810	4.00		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
PFOSA	754-91-6	ND	1.77	4.00		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
PFOS	1763-23-1	ND	0.807	4.00		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
9Cl-PF3ONS	756426-58-1	ND	1.45	4.00		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
PFDA	335-76-2	ND	1.49	4.00		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
8:2 FTS	39108-34-4	ND	2.06	4.00		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
PFNS	68259-12-1	ND	3.87	4.00		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
MeFOSAA	2355-31-9	ND	1.65	4.00		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
EtFOSAA	2991-50-6	ND	1.37	4.00		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
PFUnA	2058-94-8	ND	1.05	4.00		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
PFDS	335-77-3	ND	1.23	4.00		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
11Cl-PF3OUdS	763051-92-9	ND	2.41	4.00		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
10:2 FTS	120226-60-0	ND	3.13	4.00		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
PFDoA	307-55-1	ND	0.792	4.00		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
MeFOSA	31506-32-8	ND	3.83	20.0		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
PFTrDA	72629-94-8	ND	0.494	4.00		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
PFDoS	79780-39-5	ND	4.17	5.00		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
PFTeDA	376-06-7	ND	0.755	4.00		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
EtFOSA	4151-50-2	ND	5.11	20.0		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
PFHxDA	67905-19-5	ND	0.294	4.00		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
PFODA	16517-11-6	ND	6.14	7.00		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
MeFOSE	24448-09-7	ND	6.07	20.0		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
EtFOSE	1691-99-2	ND	9.44	20.0		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	152	25 - 150	H	B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1

Sample ID: Method Blank **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	B0G0136-BLK1	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples						

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	98.2	25 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
13C3-PFBS	IS	96.7	25 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
13C3-HFPO-DA	IS	86.4	25 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
13C2-4:2 FTS	IS	82.3	25 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
13C2-PFHxA	IS	89.2	25 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
13C4-PFHpA	IS	93.5	25 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
13C3-PFHxS	IS	99.9	25 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
13C2-6:2 FTS	IS	92.8	25 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
13C5-PFNA	IS	86.2	25 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
13C8-PFOA	IS	36.1	10 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
13C2-PFOA	IS	91.3	25 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
13C8-PFOS	IS	74.5	25 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
13C2-PFDA	IS	88.6	25 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
13C2-8:2 FTS	IS	76.8	25 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
d3-MeFOSAA	IS	67.1	25 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
13C2-PFUnA	IS	77.9	25 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
d5-EtFOSAA	IS	62.6	25 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
13C2-10:2 FTS	IS	59.9	25 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
13C2-PFDoA	IS	86.0	25 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
d3-MeFOSA	IS	14.7	10 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
13C2-PFTeDA	IS	74.0	25 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
d5-EtFOSA	IS	13.4	10 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
13C2-PFHxDA	IS	58.6	25 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
d7-MeFOSE	IS	21.6	10 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1
d9-EtFOSE	IS	22.1	10 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:42	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OPR

PFAS Isotope Dilution Method

Client Data					Laboratory Data							
Name:	LimnoTech, Inc.	Matrix:	Aqueous		Lab Sample:	B0G0136-BS1	Column:	BEH C18				
Project:	MSN Wet Weather Storm Samples											

Analyte	CAS Number	Amt Found (ng/L)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	8.30	8.00	104	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
PFPeA	2706-90-3	7.25	8.00	90.6	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
PFBS	375-73-5	8.87	8.00	111	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
4:2 FTS	757124-72-4	7.53	8.00	94.1	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
PFHxA	307-24-4	8.68	8.00	108	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
PFPeS	2706-91-4	7.99	8.00	99.8	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
HFPO-DA	13252-13-6	7.32	8.00	91.5	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
PFHpA	375-85-9	7.15	8.00	89.4	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
ADONA	919005-14-4	7.79	8.00	97.3	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
PFHxS	355-46-4	8.53	8.00	107	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
6:2 FTS	27619-97-2	8.82	8.00	110	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
PFOA	335-67-1	7.58	8.00	94.8	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
PFHpS	375-92-8	6.34	8.00	79.2	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
PFNA	375-95-1	8.38	8.00	105	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
PFOSA	754-91-6	7.37	8.00	92.1	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
PFOS	1763-23-1	10.2	8.00	128	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
9Cl-PF3ONS	756426-58-1	7.75	8.00	96.8	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
PFDA	335-76-2	8.19	8.00	102	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
8:2 FTS	39108-34-4	7.79	8.00	97.4	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
PFNS	68259-12-1	6.97	8.00	87.2	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
MeFOSAA	2355-31-9	6.86	8.00	85.7	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
EtFOSAA	2991-50-6	6.20	8.00	77.5	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
PFUnA	2058-94-8	7.66	8.00	95.7	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
PFDS	335-77-3	7.17	8.00	89.6	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
11Cl-PF3OUdS	763051-92-9	7.58	8.00	94.8	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
10:2 FTS	120226-60-0	7.28	8.00	91.0	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
PFDoA	307-55-1	7.98	8.00	99.8	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
MeFOSA	31506-32-8	39.5	40.0	98.9	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
PFTTrDA	72629-94-8	7.03	8.00	87.9	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
PFDoS	79780-39-5	7.44	8.00	93.1	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
PFTTeDA	376-06-7	7.99	8.00	99.8	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
EtFOSA	4151-50-2	40.9	40.0	102	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
PFHxDA	67905-19-5	7.88	8.00	98.5	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
PFODA	16517-11-6	6.13	8.00	76.6	50 - 150	J	B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1

Sample ID: OPR

PFAS Isotope Dilution Method

Client Data					Laboratory Data						
Name:	LimnoTech, Inc.	Matrix:	Aqueous		Lab Sample:	B0G0136-BS1	Column:	BEH C18			
Project:	MSN Wet Weather Storm Samples										

Analyte	CAS Number	Amt Found (ng/L)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
MeFOSE	24448-09-7	45.5	40.0	114	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
EtFOSE	1691-99-2	55.7	40.0	139	50 - 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
Labeled Standards		Type		% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA		IS		150	25- 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
13C3-PFPeA		IS		98.0	25- 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
13C3-PFBS		IS		93.7	25- 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
13C3-HFPO-DA		IS		89.0	25- 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
13C2-4:2 FTS		IS		98.4	25- 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
13C2-PFHxA		IS		88.8	25- 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
13C4-PFHpA		IS		95.6	25- 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
13C3-PFHxS		IS		97.1	25- 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
13C2-6:2 FTS		IS		92.0	25- 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
13C5-PFNA		IS		81.2	25- 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
13C8-PFOSA		IS		43.9	10- 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
13C2-PFOA		IS		93.7	25- 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
13C8-PFOS		IS		88.7	25- 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
13C2-PFDA		IS		87.4	25- 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
13C2-8:2 FTS		IS		88.4	25- 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
d3-MeFOSAA		IS		81.4	25- 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
13C2-PFUnA		IS		83.7	25- 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
d5-EtFOSAA		IS		73.1	25- 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
13C2-10:2 FTS		IS		71.9	25- 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
13C2-PFDoA		IS		87.0	25- 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
d3-MeFOSA		IS		15.8	10- 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
13C2-PFTeDA		IS		78.4	25- 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
d5-EtFOSA		IS		14.1	10- 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
13C2-PFHxDA		IS		71.5	25- 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
d7-MeFOSE		IS		24.5	10- 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1
d9-EtFOSE		IS		27.1	10- 150		B0G0136	20-Jul-20	0.125 L	22-Jul-20 17:52	1

Sample ID: OUTFALL 30

PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001480-01	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 12:10	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	11.2	0.806	4.42		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
PFPeA	2706-90-3	8.72	1.42	4.42		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
PFBS	375-73-5	2.83	1.98	4.42	J	B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
4:2 FTS	757124-72-4	ND	1.54	4.42		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
PFHxA	307-24-4	9.11	2.41	4.42		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
PFPeS	2706-91-4	ND	2.68	4.42		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
HFPO-DA	13252-13-6	ND	5.33	5.53		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
PFHpA	375-85-9	4.22	0.654	4.42	J	B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
ADONA	919005-14-4	ND	0.798	4.42		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
PFHxS	355-46-4	23.4	1.05	4.42		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
6:2 FTS	27619-97-2	3.06	2.21	4.42	J	B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
PFOA	335-67-1	10.1	0.720	4.42		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
PFHpS	375-92-8	ND	1.04	4.42		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
PFNA	375-95-1	1.85	0.896	4.42	J	B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
PFOSA	754-91-6	14.2	1.96	4.42		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
PFOS	1763-23-1	47.3	0.892	4.42		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
9CI-PF3ONS	756426-58-1	ND	1.60	4.42		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
PFDA	335-76-2	2.54	1.65	4.42	J	B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
8:2 FTS	39108-34-4	ND	2.28	4.42		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
PFNS	68259-12-1	ND	4.28	4.42		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
MeFOSAA	2355-31-9	ND	1.82	4.42		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
EtFOSAA	2991-50-6	ND	1.51	4.42		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
PFUnA	2058-94-8	ND	1.16	4.42		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
PFDS	335-77-3	ND	1.36	4.42		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
11CI-PF3OUdS	763051-92-9	ND	2.66	4.42		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
10:2 FTS	120226-60-0	ND	3.46	4.42		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
PFDoA	307-55-1	ND	0.876	4.42		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
MeFOSA	31506-32-8	ND	4.24	22.1		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
PFTrDA	72629-94-8	ND	0.546	4.42		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
PFDoS	79780-39-5	ND	4.61	5.53		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
PFTeDA	376-06-7	ND	0.835	4.42		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
EtFOSA	4151-50-2	ND	5.65	22.1		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
PFHxDA	67905-19-5	ND	0.325	4.42		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
PFODA	16517-11-6	ND	6.79	7.74		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
MeFOSE	24448-09-7	ND	6.71	22.1		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
EtFOSE	1691-99-2	ND	10.4	22.1		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	155	25 - 150	H	B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1

Sample ID: OUTFALL 30 **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001480-01	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 12:10	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	96.2	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
13C3-PFBS	IS	96.1	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
13C3-HFPO-DA	IS	85.7	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
13C2-4:2 FTS	IS	81.7	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
13C2-PFHxA	IS	92.6	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
13C4-PFHpA	IS	93.5	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
13C3-PFHxS	IS	97.1	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
13C2-6:2 FTS	IS	96.8	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
13C5-PFNA	IS	78.4	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
13C8-PFOA	IS	61.4	10 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
13C2-PFOA	IS	89.9	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
13C8-PFOS	IS	93.3	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
13C2-PFDA	IS	102	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
13C2-8:2 FTS	IS	82.2	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
d3-MeFOSAA	IS	87.4	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
13C2-PFUnA	IS	95.0	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
d5-EtFOSAA	IS	82.5	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
13C2-10:2 FTS	IS	89.5	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
13C2-PFDoA	IS	89.9	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
d3-MeFOSA	IS	46.7	10 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
13C2-PFTeDA	IS	63.2	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
d5-EtFOSA	IS	45.3	10 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
13C2-PFHxDA	IS	56.7	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
d7-MeFOSE	IS	53.7	10 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1
d9-EtFOSE	IS	58.9	10 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 18:02	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OUTFALL 37
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001480-02	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 12:35	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	9.07	0.864	4.74		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
PFPeA	2706-90-3	18.4	1.52	4.74		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
PFBS	375-73-5	8.22	2.12	4.74		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
4:2 FTS	757124-72-4	ND	1.65	4.74		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
PFHxA	307-24-4	18.9	2.58	4.74		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
PFPeS	2706-91-4	9.51	2.87	4.74		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
HFPO-DA	13252-13-6	ND	5.71	5.93		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
PFHpA	375-85-9	6.38	0.701	4.74		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
ADONA	919005-14-4	ND	0.856	4.74		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
PFHxS	355-46-4	96.3	1.12	4.74		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
6:2 FTS	27619-97-2	38.3	2.37	4.74		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
PFOA	335-67-1	17.6	0.772	4.74		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
PFHpS	375-92-8	4.65	1.11	4.74	J	B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
PFNA	375-95-1	3.03	0.960	4.74	J	B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
PFOSA	754-91-6	9.15	2.10	4.74		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
PFOS	1763-23-1	384	0.957	4.74		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
9Cl-PF3ONS	756426-58-1	ND	1.72	4.74		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
PFDA	335-76-2	ND	1.77	4.74		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
8:2 FTS	39108-34-4	12.3	2.44	4.74		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
PFNS	68259-12-1	ND	4.59	4.74		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
MeFOSAA	2355-31-9	ND	1.96	4.74		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
EtFOSAA	2991-50-6	ND	1.62	4.74		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
PFUnA	2058-94-8	ND	1.24	4.74		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
PFDS	335-77-3	ND	1.46	4.74		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
11Cl-PF3OUdS	763051-92-9	ND	2.86	4.74		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
10:2 FTS	120226-60-0	ND	3.71	4.74		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
PFDoA	307-55-1	ND	0.939	4.74		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
MeFOSA	31506-32-8	ND	4.54	23.7		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
PFTrDA	72629-94-8	ND	0.586	4.74		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
PFDoS	79780-39-5	ND	4.94	5.93		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
PFTeDA	376-06-7	ND	0.895	4.74		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
EtFOSA	4151-50-2	ND	6.06	23.7		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
PFHxDA	67905-19-5	ND	0.349	4.74		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
PFODA	16517-11-6	ND	7.28	8.30		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
MeFOSE	24448-09-7	ND	7.20	23.7		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
EtFOSE	1691-99-2	ND	11.2	23.7		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	165	25 - 150	H	B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1

Sample ID: OUTFALL 37
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001480-02	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 12:35	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	102	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
13C3-PFBS	IS	100	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
13C3-HFPO-DA	IS	93.5	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
13C2-4:2 FTS	IS	92.4	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
13C2-PFHxA	IS	95.0	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
13C4-PFHpA	IS	97.7	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
13C3-PFHxS	IS	103	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
13C2-6:2 FTS	IS	94.2	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
13C5-PFNA	IS	83.7	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
13C8-PFOA	IS	55.6	10 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
13C2-PFOA	IS	87.7	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
13C8-PFOS	IS	86.5	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
13C2-PFDA	IS	105	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
13C2-8:2 FTS	IS	97.7	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
d3-MeFOSAA	IS	88.5	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
13C2-PFUnA	IS	91.4	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
d5-EtFOSAA	IS	75.6	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
13C2-10:2 FTS	IS	74.4	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
13C2-PFDoA	IS	98.4	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
d3-MeFOSA	IS	15.0	10 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
13C2-PFTeDA	IS	74.5	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
d5-EtFOSA	IS	14.7	10 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
13C2-PFHxDA	IS	63.8	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
d7-MeFOSE	IS	44.3	10 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1
d9-EtFOSE	IS	51.2	10 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 18:13	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OUTFALL 39
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001480-03	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 13:00	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	9.96	0.858	4.71		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
PFPeA	2706-90-3	3.58	1.51	4.71	J	B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
PFBS	375-73-5	2.16	2.11	4.71	J	B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
4:2 FTS	757124-72-4	ND	1.64	4.71		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
PFHxA	307-24-4	5.49	2.57	4.71	Q	B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
PFPeS	2706-91-4	ND	2.85	4.71		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
HFPO-DA	13252-13-6	ND	5.68	5.89		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
PFHpA	375-85-9	1.65	0.696	4.71	J	B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
ADONA	919005-14-4	ND	0.850	4.71		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
PFHxS	355-46-4	27.4	1.12	4.71		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
6:2 FTS	27619-97-2	ND	2.36	4.71		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
PFOA	335-67-1	3.59	0.767	4.71	J	B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
PFHpS	375-92-8	ND	1.10	4.71		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
PFNA	375-95-1	0.978	0.954	4.71	J, Q	B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
PFOSA	754-91-6	4.26	2.08	4.71	J, Q	B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
PFOS	1763-23-1	101	0.950	4.71		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
9Cl-PF3ONS	756426-58-1	ND	1.71	4.71		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
PFDA	335-76-2	ND	1.75	4.71		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
8:2 FTS	39108-34-4	ND	2.43	4.71		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
PFNS	68259-12-1	ND	4.56	4.71		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
MeFOSAA	2355-31-9	ND	1.94	4.71		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
EtFOSAA	2991-50-6	ND	1.61	4.71		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
PFUnA	2058-94-8	ND	1.24	4.71		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
PFDS	335-77-3	ND	1.45	4.71		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
11Cl-PF3OUdS	763051-92-9	ND	2.84	4.71		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
10:2 FTS	120226-60-0	ND	3.69	4.71		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
PFDoA	307-55-1	ND	0.933	4.71		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
MeFOSA	31506-32-8	ND	4.51	23.6		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
PFTrDA	72629-94-8	ND	0.582	4.71		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
PFDoS	79780-39-5	ND	4.91	5.89		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
PFTeDA	376-06-7	ND	0.889	4.71		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
EtFOSA	4151-50-2	ND	6.02	23.6		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
PFHxDA	67905-19-5	ND	0.346	4.71		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
PFODA	16517-11-6	ND	7.23	8.24		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
MeFOSE	24448-09-7	ND	7.15	23.6		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
EtFOSE	1691-99-2	ND	11.1	23.6		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	34.7	25 - 150			B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1

Sample ID: OUTFALL 39 **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001480-03	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 13:00	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	89.0	25 - 150		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
13C3-PFBS	IS	95.8	25 - 150		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
13C3-HFPO-DA	IS	80.8	25 - 150		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
13C2-4:2 FTS	IS	88.7	25 - 150		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
13C2-PFHxA	IS	84.7	25 - 150		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
13C4-PFHpA	IS	89.2	25 - 150		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
13C3-PFHxS	IS	103	25 - 150		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
13C2-6:2 FTS	IS	87.0	25 - 150		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
13C5-PFNA	IS	80.4	25 - 150		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
13C8-PFOA	IS	62.9	10 - 150		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
13C2-PFOA	IS	87.7	25 - 150		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
13C8-PFOS	IS	84.7	25 - 150		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
13C2-PFDA	IS	91.7	25 - 150		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
13C2-8:2 FTS	IS	87.4	25 - 150		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
d3-MeFOSAA	IS	83.3	25 - 150		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
13C2-PFUnA	IS	82.8	25 - 150		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
d5-EtFOSAA	IS	80.4	25 - 150		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
13C2-10:2 FTS	IS	69.9	25 - 150		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
13C2-PFDoA	IS	90.8	25 - 150		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
d3-MeFOSA	IS	40.1	10 - 150		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
13C2-PFTeDA	IS	62.1	25 - 150		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
d5-EtFOSA	IS	36.3	10 - 150		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
13C2-PFHxDA	IS	46.3	25 - 150		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
d7-MeFOSE	IS	42.9	10 - 150		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1
d9-EtFOSE	IS	48.8	10 - 150		B0G0136	20-Jul-20	0.106 L	22-Jul-20 18:23	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OUTFALL 22
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001480-04	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 13:10	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	9.94	0.824	4.52		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
PFPeA	2706-90-3	9.90	1.45	4.52		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
PFBS	375-73-5	2.47	2.02	4.52	J	B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
4:2 FTS	757124-72-4	ND	1.57	4.52		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
PFHxA	307-24-4	8.73	2.46	4.52		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
PFPeS	2706-91-4	ND	2.73	4.52		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
HFPO-DA	13252-13-6	ND	5.45	5.65		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
PFHpA	375-85-9	4.89	0.668	4.52	Q	B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
ADONA	919005-14-4	ND	0.816	4.52		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
PFHxS	355-46-4	34.7	1.07	4.52		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
6:2 FTS	27619-97-2	3.51	2.26	4.52	J	B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
PFOA	335-67-1	6.12	0.736	4.52		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
PFHpS	375-92-8	ND	1.06	4.52		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
PFNA	375-95-1	2.91	0.915	4.52	J	B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
PFOSA	754-91-6	13.0	2.00	4.52		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
PFOS	1763-23-1	153	0.912	4.52		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
9CI-PF3ONS	756426-58-1	ND	1.64	4.52		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
PFDA	335-76-2	ND	1.68	4.52		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
8:2 FTS	39108-34-4	ND	2.33	4.52		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
PFNS	68259-12-1	ND	4.37	4.52		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
MeFOSAA	2355-31-9	ND	1.86	4.52		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
EtFOSAA	2991-50-6	ND	1.55	4.52		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
PFUnA	2058-94-8	ND	1.19	4.52		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
PFDS	335-77-3	ND	1.39	4.52		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
11CI-PF3OUdS	763051-92-9	ND	2.72	4.52		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
10:2 FTS	120226-60-0	ND	3.54	4.52		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
PFDoA	307-55-1	ND	0.895	4.52		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
MeFOSA	31506-32-8	ND	4.33	22.6		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
PFTrDA	72629-94-8	ND	0.558	4.52		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
PFDoS	79780-39-5	ND	4.71	5.65		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
PFTeDA	376-06-7	ND	0.853	4.52		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
EtFOSA	4151-50-2	ND	5.77	22.6		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
PFHxDA	67905-19-5	ND	0.332	4.52		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
PFODA	16517-11-6	ND	6.94	7.91		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
MeFOSE	24448-09-7	ND	6.86	22.6		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
EtFOSE	1691-99-2	ND	10.7	22.6		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	158	25 - 150	H	B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1

Sample ID: OUTFALL 22 **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001480-04	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 13:10	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	107	25 - 150		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
13C3-PFBS	IS	103	25 - 150		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
13C3-HFPO-DA	IS	92.2	25 - 150		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
13C2-4:2 FTS	IS	104	25 - 150		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
13C2-PFHxA	IS	101	25 - 150		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
13C4-PFHpA	IS	102	25 - 150		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
13C3-PFHxS	IS	111	25 - 150		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
13C2-6:2 FTS	IS	90.9	25 - 150		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
13C5-PFNA	IS	86.9	25 - 150		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
13C8-PFOA	IS	66.5	10 - 150		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
13C2-PFOA	IS	96.8	25 - 150		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
13C8-PFOS	IS	90.0	25 - 150		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
13C2-PFDA	IS	104	25 - 150		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
13C2-8:2 FTS	IS	102	25 - 150		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
d3-MeFOSAA	IS	97.4	25 - 150		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
13C2-PFUnA	IS	101	25 - 150		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
d5-EtFOSAA	IS	89.1	25 - 150		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
13C2-10:2 FTS	IS	85.1	25 - 150		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
13C2-PFDoA	IS	108	25 - 150		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
d3-MeFOSA	IS	39.7	10 - 150		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
13C2-PFTeDA	IS	87.4	25 - 150		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
d5-EtFOSA	IS	37.2	10 - 150		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
13C2-PFHxDA	IS	86.1	25 - 150		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
d7-MeFOSE	IS	55.0	10 - 150		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1
d9-EtFOSE	IS	60.1	10 - 150		B0G0136	20-Jul-20	0.111 L	22-Jul-20 18:33	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OUTFALL 21
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001480-05	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 13:30	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	218	0.839	4.60		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
PFPeA	2706-90-3	668	1.47	4.60		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
PFBS	375-73-5	638	2.06	4.60		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
4:2 FTS	757124-72-4	13.4	1.60	4.60		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
PFHxA	307-24-4	811	2.51	4.60		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
PFPeS	2706-91-4	771	2.79	4.60		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
HFPO-DA	13252-13-6	ND	5.55	5.76		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
PFHpA	375-85-9	202	0.680	4.60		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
ADONA	919005-14-4	ND	0.831	4.60		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
PFHxS	355-46-4	5070	5.45	23.0	D	B0G0136	20-Jul-20	0.109 L	24-Jul-20 00:10	5
6:2 FTS	27619-97-2	1740	2.30	4.60		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
PFOA	335-67-1	422	0.749	4.60		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
PFHpS	375-92-8	253	1.08	4.60		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
PFNA	375-95-1	36.2	0.932	4.60		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
PFOSA	754-91-6	23.9	2.04	4.60		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
PFOS	1763-23-1	8490	4.65	23.0	D	B0G0136	20-Jul-20	0.109 L	24-Jul-20 00:10	5
9Cl-PF3ONS	756426-58-1	ND	1.67	4.60		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
PFDA	335-76-2	4.86	1.72	4.60		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
8:2 FTS	39108-34-4	207	2.37	4.60		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
PFNS	68259-12-1	7.14	4.46	4.60	Q	B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
MeFOSAA	2355-31-9	ND	1.90	4.60		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
EtFOSAA	2991-50-6	ND	1.58	4.60		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
PFUnA	2058-94-8	ND	1.21	4.60		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
PFDS	335-77-3	ND	1.42	4.60		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
11Cl-PF3OUdS	763051-92-9	ND	2.77	4.60		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
10:2 FTS	120226-60-0	ND	3.60	4.60		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
PFDoA	307-55-1	ND	0.912	4.60		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
MeFOSA	31506-32-8	ND	4.41	23.0		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
PFTrDA	72629-94-8	ND	0.569	4.60		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
PFDoS	79780-39-5	ND	4.80	5.76		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
PFTeDA	376-06-7	ND	0.869	4.60		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
EtFOSA	4151-50-2	ND	5.88	23.0		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
PFHxDA	67905-19-5	ND	0.338	4.60		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
PFODA	16517-11-6	ND	7.07	8.06		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
MeFOSE	24448-09-7	ND	6.99	23.0		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
EtFOSE	1691-99-2	ND	10.9	23.0		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	157	25 - 150	H	B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1

Sample ID: OUTFALL 21 **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001480-05	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 13:30	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	96.4	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
13C3-PFBS	IS	92.1	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
13C3-HFPO-DA	IS	85.5	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
13C2-4:2 FTS	IS	98.7	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
13C2-PFHxA	IS	89.6	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
13C4-PFHpA	IS	95.8	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
13C3-PFHxS	IS	72.0	25 - 150	D	B0G0136	20-Jul-20	0.109 L	24-Jul-20 00:10	5
13C2-6:2 FTS	IS	87.5	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
13C5-PFNA	IS	81.0	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
13C8-PFOA	IS	60.5	10 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
13C2-PFOA	IS	95.9	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
13C8-PFOS	IS	91.5	25 - 150	D	B0G0136	20-Jul-20	0.109 L	24-Jul-20 00:10	5
13C2-PFDA	IS	102	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
13C2-8:2 FTS	IS	92.6	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
d3-MeFOSAA	IS	88.9	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
13C2-PFUnA	IS	97.0	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
d5-EtFOSAA	IS	80.9	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
13C2-10:2 FTS	IS	82.2	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
13C2-PFDoA	IS	98.0	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
d3-MeFOSA	IS	41.7	10 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
13C2-PFTeDA	IS	77.2	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
d5-EtFOSA	IS	43.0	10 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
13C2-PFHxDA	IS	71.6	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
d7-MeFOSE	IS	58.5	10 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1
d9-EtFOSE	IS	58.0	10 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 18:44	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: DA021-04 ALT

PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001480-06	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 13:55	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	ND	0.831	4.56		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
PFPeA	2706-90-3	ND	1.46	4.56		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
PFBS	375-73-5	ND	2.04	4.56		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
4:2 FTS	757124-72-4	ND	1.58	4.56		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
PFHxA	307-24-4	8.35	2.48	4.56		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
PFPeS	2706-91-4	ND	2.76	4.56		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
HFPO-DA	13252-13-6	ND	5.49	5.70		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
PFHpA	375-85-9	ND	0.673	4.56		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
ADONA	919005-14-4	ND	0.823	4.56		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
PFHxS	355-46-4	6.38	1.08	4.56		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
6:2 FTS	27619-97-2	8.14	2.28	4.56		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
PFOA	335-67-1	1.23	0.742	4.56	J	B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
PFHpS	375-92-8	ND	1.07	4.56		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
PFNA	375-95-1	ND	0.923	4.56		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
PFOSA	754-91-6	3.87	2.02	4.56	J	B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
PFOS	1763-23-1	22.1	0.920	4.56		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
9Cl-PF3ONS	756426-58-1	ND	1.65	4.56		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
PFDA	335-76-2	ND	1.70	4.56		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
8:2 FTS	39108-34-4	ND	2.35	4.56		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
PFNS	68259-12-1	ND	4.41	4.56		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
MeFOSAA	2355-31-9	ND	1.88	4.56		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
EtFOSAA	2991-50-6	ND	1.56	4.56		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
PFUnA	2058-94-8	ND	1.20	4.56		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
PFDS	335-77-3	ND	1.40	4.56		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
11Cl-PF3OUdS	763051-92-9	ND	2.75	4.56		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
10:2 FTS	120226-60-0	ND	3.57	4.56		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
PFDoA	307-55-1	ND	0.903	4.56		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
MeFOSA	31506-32-8	ND	4.36	22.8		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
PFTrDA	72629-94-8	ND	0.563	4.56		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
PFDoS	79780-39-5	ND	4.75	5.70		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
PFTeDA	376-06-7	ND	0.860	4.56		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
EtFOSA	4151-50-2	ND	5.82	22.8		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
PFHxDA	67905-19-5	ND	0.335	4.56		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
PFODA	16517-11-6	ND	7.00	7.98		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
MeFOSE	24448-09-7	ND	6.92	22.8		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
EtFOSE	1691-99-2	ND	10.8	22.8		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	156	25 - 150	H	B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1

Sample ID: DA021-04 ALT **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001480-06	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 13:55	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	89.0	25 - 150		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
13C3-PFBS	IS	103	25 - 150		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
13C3-HFPO-DA	IS	89.6	25 - 150		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
13C2-4:2 FTS	IS	89.4	25 - 150		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
13C2-PFHxA	IS	90.2	25 - 150		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
13C4-PFHpA	IS	91.1	25 - 150		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
13C3-PFHxS	IS	92.5	25 - 150		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
13C2-6:2 FTS	IS	102	25 - 150		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
13C5-PFNA	IS	85.9	25 - 150		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
13C8-PFOA	IS	59.7	10 - 150		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
13C2-PFOA	IS	91.0	25 - 150		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
13C8-PFOS	IS	99.4	25 - 150		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
13C2-PFDA	IS	89.7	25 - 150		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
13C2-8:2 FTS	IS	84.5	25 - 150		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
d3-MeFOSAA	IS	95.2	25 - 150		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
13C2-PFUnA	IS	85.9	25 - 150		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
d5-EtFOSAA	IS	89.1	25 - 150		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
13C2-10:2 FTS	IS	88.9	25 - 150		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
13C2-PFDoA	IS	83.1	25 - 150		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
d3-MeFOSA	IS	22.0	10 - 150		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
13C2-PFTeDA	IS	79.7	25 - 150		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
d5-EtFOSA	IS	20.2	10 - 150		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
13C2-PFHxDA	IS	85.3	25 - 150		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
d7-MeFOSE	IS	50.1	10 - 150		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1
d9-EtFOSE	IS	54.0	10 - 150		B0G0136	20-Jul-20	0.110 L	24-Jul-20 01:02	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: DA021-06 ALT

PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001480-07	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 14:25	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	7.05	0.867	4.76		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
PFPeA	2706-90-3	13.8	1.52	4.76		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
PFBS	375-73-5	2.49	2.13	4.76	J, Q	B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
4:2 FTS	757124-72-4	ND	1.65	4.76		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
PFHxA	307-24-4	9.05	2.59	4.76		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
PFPeS	2706-91-4	ND	2.88	4.76		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
HFPO-DA	13252-13-6	ND	5.73	5.95		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
PFHpA	375-85-9	ND	0.703	4.76		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
ADONA	919005-14-4	ND	0.858	4.76		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
PFHxS	355-46-4	8.93	1.13	4.76		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
6:2 FTS	27619-97-2	2.72	2.38	4.76	J	B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
PFOA	335-67-1	2.65	0.774	4.76	J	B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
PFHpS	375-92-8	ND	1.11	4.76		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
PFNA	375-95-1	ND	0.963	4.76		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
PFOSA	754-91-6	18.1	2.10	4.76		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
PFOS	1763-23-1	9.40	0.960	4.76		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
9Cl-PF3ONS	756426-58-1	ND	1.72	4.76		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
PFDA	335-76-2	ND	1.77	4.76		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
8:2 FTS	39108-34-4	ND	2.45	4.76		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
PFNS	68259-12-1	ND	4.60	4.76		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
MeFOSAA	2355-31-9	ND	1.96	4.76		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
EtFOSAA	2991-50-6	ND	1.63	4.76		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
PFUnA	2058-94-8	ND	1.25	4.76		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
PFDS	335-77-3	ND	1.46	4.76		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
11Cl-PF3OUdS	763051-92-9	ND	2.87	4.76		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
10:2 FTS	120226-60-0	ND	3.72	4.76		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
PFDoA	307-55-1	ND	0.942	4.76		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
MeFOSA	31506-32-8	ND	4.55	23.8		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
PFTrDA	72629-94-8	ND	0.587	4.76		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
PFDoS	79780-39-5	ND	4.96	5.95		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
PFTeDA	376-06-7	ND	0.898	4.76		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
EtFOSA	4151-50-2	ND	6.08	23.8		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
PFHxDA	67905-19-5	ND	0.350	4.76		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
PFODA	16517-11-6	ND	7.30	8.32		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
MeFOSE	24448-09-7	ND	7.22	23.8		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
EtFOSE	1691-99-2	ND	11.2	23.8		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	157	25 - 150	H	B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1

Sample ID: DA021-06 ALT

PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001480-07	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 14:25	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	94.7	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
13C3-PFBS	IS	107	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
13C3-HFPO-DA	IS	82.2	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
13C2-4:2 FTS	IS	108	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
13C2-PFHxA	IS	93.6	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
13C4-PFHpA	IS	90.4	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
13C3-PFHxS	IS	103	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
13C2-6:2 FTS	IS	98.4	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
13C5-PFNA	IS	83.1	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
13C8-PFOA	IS	63.3	10 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
13C2-PFOA	IS	93.0	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
13C8-PFOS	IS	94.0	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
13C2-PFDA	IS	98.6	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
13C2-8:2 FTS	IS	86.4	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
d3-MeFOSAA	IS	93.6	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
13C2-PFUnA	IS	96.1	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
d5-EtFOSAA	IS	88.0	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
13C2-10:2 FTS	IS	83.3	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
13C2-PFDoA	IS	97.4	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
d3-MeFOSA	IS	40.1	10 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
13C2-PFTeDA	IS	73.2	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
d5-EtFOSA	IS	37.9	10 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
13C2-PFHxDA	IS	53.5	25 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
d7-MeFOSE	IS	48.6	10 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1
d9-EtFOSE	IS	57.9	10 - 150		B0G0136	20-Jul-20	0.105 L	22-Jul-20 19:36	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: DA032-03 A

PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001480-08	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 14:40	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	84.8	0.847	4.65		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
PFPeA	2706-90-3	296	1.49	4.65		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
PFBS	375-73-5	126	2.08	4.65		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
4:2 FTS	757124-72-4	8.43	1.61	4.65		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
PFHxA	307-24-4	374	2.53	4.65		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
PFPeS	2706-91-4	147	2.81	4.65		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
HFPO-DA	13252-13-6	ND	5.60	5.81		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
PFHpA	375-85-9	161	0.686	4.65		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
ADONA	919005-14-4	ND	0.839	4.65		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
PFHxS	355-46-4	1650	1.10	4.65		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
6:2 FTS	27619-97-2	683	2.32	4.65		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
PFOA	335-67-1	303	0.756	4.65		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
PFHpS	375-92-8	124	1.09	4.65		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
PFNA	375-95-1	50.8	0.941	4.65		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
PFOSA	754-91-6	322	2.06	4.65		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
PFOS	1763-23-1	5950	4.69	23.2	D	B0G0136	20-Jul-20	0.108 L	24-Jul-20 01:23	5
9Cl-PF3ONS	756426-58-1	ND	1.68	4.65		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
PFDA	335-76-2	10.2	1.73	4.65		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
8:2 FTS	39108-34-4	689	2.39	4.65		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
PFNS	68259-12-1	6.80	4.49	4.65		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
MeFOSAA	2355-31-9	ND	1.92	4.65		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
EtFOSAA	2991-50-6	ND	1.59	4.65		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
PFUnA	2058-94-8	ND	1.22	4.65		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
PFDS	335-77-3	ND	1.43	4.65		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
11Cl-PF3OUdS	763051-92-9	ND	2.80	4.65		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
10:2 FTS	120226-60-0	21.8	3.64	4.65		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
PFDoA	307-55-1	1.22	0.920	4.65	J	B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
MeFOSA	31506-32-8	ND	4.45	23.2		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
PFTrDA	72629-94-8	ND	0.574	4.65		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
PFDoS	79780-39-5	ND	4.84	5.81		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
PFTeDA	376-06-7	ND	0.877	4.65		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
EtFOSA	4151-50-2	ND	5.94	23.2		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
PFHxDA	67905-19-5	ND	0.341	4.65		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
PFODA	16517-11-6	ND	7.13	8.13		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
MeFOSE	24448-09-7	ND	7.05	23.2		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
EtFOSE	1691-99-2	ND	11.0	23.2		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	142	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1

Sample ID: DA032-03 A **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001480-08	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 14:40	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	88.1	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
13C3-PFBS	IS	87.7	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
13C3-HFPO-DA	IS	83.3	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
13C2-4:2 FTS	IS	90.9	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
13C2-PFHxA	IS	81.9	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
13C4-PFHpA	IS	93.5	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
13C3-PFHxS	IS	94.0	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
13C2-6:2 FTS	IS	83.7	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
13C5-PFNA	IS	74.2	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
13C8-PFOA	IS	59.2	10 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
13C2-PFOA	IS	85.0	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
13C8-PFOS	IS	101	25 - 150	D	B0G0136	20-Jul-20	0.108 L	24-Jul-20 01:23	5
13C2-PFDA	IS	95.9	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
13C2-8:2 FTS	IS	87.0	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
d3-MeFOSAA	IS	80.3	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
13C2-PFUnA	IS	87.7	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
d5-EtFOSAA	IS	79.0	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
13C2-10:2 FTS	IS	69.2	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
13C2-PFDoA	IS	92.2	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
d3-MeFOSA	IS	33.1	10 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
13C2-PFTeDA	IS	82.2	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
d5-EtFOSA	IS	31.6	10 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
13C2-PFHxDA	IS	71.5	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
d7-MeFOSE	IS	58.3	10 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1
d9-EtFOSE	IS	58.5	10 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 19:46	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: DA032-03 B
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001480-09	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 14:45	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	84.8	0.835	4.58		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
PFPeA	2706-90-3	295	1.47	4.58		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
PFBS	375-73-5	122	2.05	4.58		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
4:2 FTS	757124-72-4	7.90	1.59	4.58		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
PFHxA	307-24-4	363	2.50	4.58		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
PFPeS	2706-91-4	126	2.77	4.58		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
HFPO-DA	13252-13-6	ND	5.52	5.73		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
PFHpA	375-85-9	187	0.677	4.58		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
ADONA	919005-14-4	ND	0.827	4.58		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
PFHxS	355-46-4	1510	1.09	4.58		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
6:2 FTS	27619-97-2	741	2.29	4.58		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
PFOA	335-67-1	313	0.746	4.58		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
PFHpS	375-92-8	133	1.07	4.58		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
PFNA	375-95-1	50.2	0.928	4.58		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
PFOSA	754-91-6	342	2.03	4.58		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
PFOS	1763-23-1	6280	4.62	22.9	D	B0G0136	20-Jul-20	0.109 L	24-Jul-20 01:33	5
9Cl-PF3ONS	756426-58-1	ND	1.66	4.58		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
PFDA	335-76-2	10.5	1.71	4.58		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
8:2 FTS	39108-34-4	746	2.36	4.58		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
PFNS	68259-12-1	5.12	4.43	4.58		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
MeFOSAA	2355-31-9	ND	1.89	4.58		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
EtFOSAA	2991-50-6	ND	1.57	4.58		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
PFUnA	2058-94-8	ND	1.20	4.58		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
PFDS	335-77-3	1.58	1.41	4.58	J, Q	B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
11Cl-PF3OUdS	763051-92-9	ND	2.76	4.58		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
10:2 FTS	120226-60-0	9.83	3.59	4.58		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
PFDoA	307-55-1	ND	0.908	4.58		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
MeFOSA	31506-32-8	ND	4.39	22.9		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
PFTTrDA	72629-94-8	ND	0.566	4.58		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
PFDoS	79780-39-5	ND	4.78	5.73		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
PFTeDA	376-06-7	ND	0.865	4.58		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
EtFOSA	4151-50-2	ND	5.86	22.9		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
PFHxDA	67905-19-5	ND	0.337	4.58		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
PFODA	16517-11-6	ND	7.04	8.02		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
MeFOSE	24448-09-7	ND	6.96	22.9		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
EtFOSE	1691-99-2	ND	10.8	22.9		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	141	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1

Sample ID: DA032-03 B **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001480-09	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 14:45	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	87.3	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
13C3-PFBS	IS	87.8	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
13C3-HFPO-DA	IS	74.1	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
13C2-4:2 FTS	IS	84.7	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
13C2-PFHxA	IS	83.6	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
13C4-PFHpA	IS	83.6	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
13C3-PFHxS	IS	88.2	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
13C2-6:2 FTS	IS	73.5	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
13C5-PFNA	IS	76.8	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
13C8-PFOA	IS	58.7	10 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
13C2-PFOA	IS	84.3	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
13C8-PFOS	IS	91.0	25 - 150	D	B0G0136	20-Jul-20	0.109 L	24-Jul-20 01:33	5
13C2-PFDA	IS	91.1	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
13C2-8:2 FTS	IS	88.9	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
d3-MeFOSAA	IS	78.1	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
13C2-PFUnA	IS	76.9	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
d5-EtFOSAA	IS	72.8	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
13C2-10:2 FTS	IS	75.7	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
13C2-PFDoA	IS	90.8	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
d3-MeFOSA	IS	26.5	10 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
13C2-PFTeDA	IS	79.4	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
d5-EtFOSA	IS	28.4	10 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
13C2-PFHxDA	IS	68.7	25 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
d7-MeFOSE	IS	49.4	10 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1
d9-EtFOSE	IS	54.0	10 - 150		B0G0136	20-Jul-20	0.109 L	22-Jul-20 19:57	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: DA032-X

PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001480-10	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 15:05	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	62.1	0.793	4.35		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
PFPeA	2706-90-3	144	1.39	4.35		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
PFBS	375-73-5	113	1.95	4.35		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
4:2 FTS	757124-72-4	ND	1.51	4.35		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
PFHxA	307-24-4	171	2.37	4.35		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
PFPeS	2706-91-4	88.7	2.63	4.35		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
HFPO-DA	13252-13-6	ND	5.24	5.44		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
PFHpA	375-85-9	79.3	0.643	4.35		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
ADONA	919005-14-4	ND	0.785	4.35		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
PFHxS	355-46-4	645	1.03	4.35		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
6:2 FTS	27619-97-2	51.0	2.17	4.35		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
PFOA	335-67-1	112	0.708	4.35		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
PFHpS	375-92-8	34.2	1.02	4.35		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
PFNA	375-95-1	25.6	0.881	4.35		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
PFOSA	754-91-6	26.0	1.92	4.35		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
PFOS	1763-23-1	1670	0.877	4.35		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
9Cl-PF3ONS	756426-58-1	ND	1.58	4.35		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
PFDA	335-76-2	2.91	1.62	4.35	J, Q	B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
8:2 FTS	39108-34-4	36.8	2.24	4.35		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
PFNS	68259-12-1	ND	4.21	4.35		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
MeFOSAA	2355-31-9	ND	1.79	4.35		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
EtFOSAA	2991-50-6	ND	1.49	4.35		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
PFUnA	2058-94-8	ND	1.14	4.35		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
PFDS	335-77-3	ND	1.34	4.35		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
11Cl-PF3OUdS	763051-92-9	ND	2.62	4.35		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
10:2 FTS	120226-60-0	ND	3.40	4.35		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
PFDoA	307-55-1	ND	0.861	4.35		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
MeFOSA	31506-32-8	ND	4.16	21.7		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
PFTrDA	72629-94-8	ND	0.537	4.35		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
PFDoS	79780-39-5	ND	4.53	5.44		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
PFTeDA	376-06-7	ND	0.821	4.35		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
EtFOSA	4151-50-2	ND	5.56	21.7		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
PFHxDA	67905-19-5	ND	0.320	4.35		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
PFODA	16517-11-6	ND	6.68	7.61		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
MeFOSE	24448-09-7	ND	6.60	21.7		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
EtFOSE	1691-99-2	ND	10.3	21.7		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	154	25 - 150	H	B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1

Sample ID: DA032-X **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001480-10	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 15:05	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	94.6	25 - 150		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
13C3-PFBS	IS	103	25 - 150		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
13C3-HFPO-DA	IS	91.8	25 - 150		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
13C2-4:2 FTS	IS	93.3	25 - 150		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
13C2-PFHxA	IS	91.5	25 - 150		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
13C4-PFHpA	IS	86.3	25 - 150		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
13C3-PFHxS	IS	85.9	25 - 150		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
13C2-6:2 FTS	IS	101	25 - 150		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
13C5-PFNA	IS	85.7	25 - 150		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
13C8-PFOA	IS	73.6	10 - 150		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
13C2-PFOA	IS	90.4	25 - 150		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
13C8-PFOS	IS	96.9	25 - 150		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
13C2-PFDA	IS	85.5	25 - 150		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
13C2-8:2 FTS	IS	83.4	25 - 150		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
d3-MeFOSAA	IS	95.8	25 - 150		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
13C2-PFUnA	IS	83.5	25 - 150		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
d5-EtFOSAA	IS	89.6	25 - 150		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
13C2-10:2 FTS	IS	80.9	25 - 150		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
13C2-PFDoA	IS	87.0	25 - 150		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
d3-MeFOSA	IS	38.4	10 - 150		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
13C2-PFTeDA	IS	85.1	25 - 150		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
d5-EtFOSA	IS	39.8	10 - 150		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
13C2-PFHxDA	IS	78.2	25 - 150		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
d7-MeFOSE	IS	65.5	10 - 150		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1
d9-EtFOSE	IS	68.7	10 - 150		B0G0136	20-Jul-20	0.115 L	24-Jul-20 01:43	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: DA001-01

PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001480-11	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 08:05	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	20.3	0.827	4.54		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
PFPeA	2706-90-3	52.1	1.45	4.54		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
PFBS	375-73-5	3.49	2.03	4.54	J	B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
4:2 FTS	757124-72-4	ND	1.58	4.54		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
PFHxA	307-24-4	67.3	2.47	4.54		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
PFPeS	2706-91-4	4.65	2.75	4.54	Q	B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
HFPO-DA	13252-13-6	ND	5.47	5.67		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
PFHpA	375-85-9	23.8	0.671	4.54		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
ADONA	919005-14-4	ND	0.819	4.54		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
PFHxS	355-46-4	25.1	1.07	4.54		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
6:2 FTS	27619-97-2	5.19	2.27	4.54		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
PFOA	335-67-1	81.2	0.739	4.54		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
PFHpS	375-92-8	1.42	1.06	4.54	J	B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
PFNA	375-95-1	10.4	0.919	4.54		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
PFOSA	754-91-6	5.89	2.01	4.54		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
PFOS	1763-23-1	65.3	0.916	4.54		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
9Cl-PF3ONS	756426-58-1	ND	1.65	4.54		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
PFDA	335-76-2	34.2	1.69	4.54		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
8:2 FTS	39108-34-4	ND	2.34	4.54		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
PFNS	68259-12-1	ND	4.39	4.54		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
MeFOSAA	2355-31-9	ND	1.87	4.54		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
EtFOSAA	2991-50-6	ND	1.55	4.54		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
PFUnA	2058-94-8	3.92	1.19	4.54	J, Q	B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
PFDS	335-77-3	ND	1.40	4.54		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
11Cl-PF3OUdS	763051-92-9	ND	2.74	4.54		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
10:2 FTS	120226-60-0	ND	3.55	4.54		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
PFDoA	307-55-1	16.7	0.899	4.54		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
MeFOSA	31506-32-8	ND	4.35	22.7		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
PFTrDA	72629-94-8	ND	0.561	4.54		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
PFDoS	79780-39-5	ND	4.73	5.67		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
PFTeDA	376-06-7	4.83	0.857	4.54		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
EtFOSA	4151-50-2	ND	5.80	22.7		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
PFHxDA	67905-19-5	ND	0.334	4.54		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
PFODA	16517-11-6	ND	6.97	7.94		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
MeFOSE	24448-09-7	ND	6.89	22.7		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
EtFOSE	1691-99-2	ND	10.7	22.7		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	162	25 - 150	H	B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1

Sample ID: DA001-01

PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001480-11	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 08:05	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	99.3	25 - 150		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
13C3-PFBS	IS	96.9	25 - 150		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
13C3-HFPO-DA	IS	86.1	25 - 150		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
13C2-4:2 FTS	IS	98.8	25 - 150		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
13C2-PFHxA	IS	94.3	25 - 150		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
13C4-PFHpA	IS	96.0	25 - 150		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
13C3-PFHxS	IS	104	25 - 150		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
13C2-6:2 FTS	IS	88.9	25 - 150		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
13C5-PFNA	IS	80.5	25 - 150		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
13C8-PFOA	IS	65.5	10 - 150		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
13C2-PFOA	IS	91.6	25 - 150		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
13C8-PFOS	IS	81.9	25 - 150		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
13C2-PFDA	IS	91.2	25 - 150		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
13C2-8:2 FTS	IS	98.7	25 - 150		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
d3-MeFOSAA	IS	82.4	25 - 150		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
13C2-PFUnA	IS	89.3	25 - 150		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
d5-EtFOSAA	IS	78.3	25 - 150		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
13C2-10:2 FTS	IS	84.9	25 - 150		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
13C2-PFDoA	IS	87.3	25 - 150		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
d3-MeFOSA	IS	40.5	10 - 150		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
13C2-PFTeDA	IS	81.7	25 - 150		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
d5-EtFOSA	IS	36.6	10 - 150		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
13C2-PFHxDA	IS	72.6	25 - 150		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
d7-MeFOSE	IS	54.2	10 - 150		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1
d9-EtFOSE	IS	56.6	10 - 150		B0G0136	20-Jul-20	0.110 L	22-Jul-20 20:17	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: DA032-15
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001480-12	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 08:30	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	20.0	0.840	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
PFPeA	2706-90-3	39.4	1.48	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
PFBS	375-73-5	16.1	2.06	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
4:2 FTS	757124-72-4	ND	1.60	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
PFHxA	307-24-4	45.9	2.51	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
PFPeS	2706-91-4	19.1	2.79	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
HFPO-DA	13252-13-6	ND	5.55	5.76		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
PFHpA	375-85-9	20.0	0.681	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
ADONA	919005-14-4	ND	0.832	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
PFHxS	355-46-4	180	1.09	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
6:2 FTS	27619-97-2	43.9	2.30	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
PFOA	335-67-1	37.5	0.750	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
PFHpS	375-92-8	7.33	1.08	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
PFNA	375-95-1	3.76	0.933	4.61	J, Q	B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
PFOSA	754-91-6	11.7	2.04	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
PFOS	1763-23-1	429	0.930	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
9Cl-PF3ONS	756426-58-1	ND	1.67	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
PFDA	335-76-2	ND	1.72	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
8:2 FTS	39108-34-4	12.0	2.37	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
PFNS	68259-12-1	ND	4.46	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
MeFOSAA	2355-31-9	ND	1.90	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
EtFOSAA	2991-50-6	ND	1.58	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
PFUnA	2058-94-8	ND	1.21	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
PFDS	335-77-3	ND	1.42	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
11Cl-PF3OUdS	763051-92-9	ND	2.78	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
10:2 FTS	120226-60-0	ND	3.61	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
PFDoA	307-55-1	ND	0.913	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
MeFOSA	31506-32-8	ND	4.41	23.0		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
PFTrDA	72629-94-8	ND	0.569	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
PFDoS	79780-39-5	ND	4.81	5.76		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
PFTeDA	376-06-7	ND	0.870	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
EtFOSA	4151-50-2	ND	5.89	23.0		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
PFHxDA	67905-19-5	ND	0.339	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
PFODA	16517-11-6	ND	7.08	8.07		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
MeFOSE	24448-09-7	ND	7.00	23.0		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
EtFOSE	1691-99-2	ND	10.9	23.0		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	153	25 - 150	H	B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1

Sample ID: DA032-15 **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001480-12	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 08:30	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	96.2	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
13C3-PFBS	IS	96.4	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
13C3-HFPO-DA	IS	88.7	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
13C2-4:2 FTS	IS	95.6	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
13C2-PFHxA	IS	91.7	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
13C4-PFHpA	IS	95.4	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
13C3-PFHxS	IS	94.5	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
13C2-6:2 FTS	IS	93.7	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
13C5-PFNA	IS	87.6	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
13C8-PFOA	IS	68.4	10 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
13C2-PFOA	IS	85.8	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
13C8-PFOS	IS	89.5	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
13C2-PFDA	IS	83.8	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
13C2-8:2 FTS	IS	102	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
d3-MeFOSAA	IS	90.1	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
13C2-PFUnA	IS	87.8	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
d5-EtFOSAA	IS	83.9	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
13C2-10:2 FTS	IS	77.5	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
13C2-PFDoA	IS	93.5	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
d3-MeFOSA	IS	42.1	10 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
13C2-PFTeDA	IS	84.3	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
d5-EtFOSA	IS	41.0	10 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
13C2-PFHxDA	IS	77.0	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
d7-MeFOSE	IS	58.8	10 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1
d9-EtFOSE	IS	66.4	10 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:28	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: DA001-03

PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001480-13	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 08:20	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	92.8	0.840	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
PFPeA	2706-90-3	281	1.48	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
PFBS	375-73-5	3.55	2.06	4.61	J	B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
4:2 FTS	757124-72-4	ND	1.60	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
PFHxA	307-24-4	382	2.51	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
PFPeS	2706-91-4	ND	2.79	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
HFPO-DA	13252-13-6	ND	5.56	5.76		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
PFHpA	375-85-9	120	0.681	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
ADONA	919005-14-4	ND	0.832	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
PFHxS	355-46-4	14.0	1.09	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
6:2 FTS	27619-97-2	10.7	2.31	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
PFOA	335-67-1	291	0.750	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
PFHpS	375-92-8	ND	1.08	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
PFNA	375-95-1	19.9	0.934	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
PFOSA	754-91-6	5.78	2.04	4.61	Q	B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
PFOS	1763-23-1	33.6	0.930	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
9Cl-PF3ONS	756426-58-1	ND	1.67	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
PFDA	335-76-2	28.7	1.72	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
8:2 FTS	39108-34-4	ND	2.37	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
PFNS	68259-12-1	ND	4.46	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
MeFOSAA	2355-31-9	ND	1.90	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
EtFOSAA	2991-50-6	ND	1.58	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
PFUnA	2058-94-8	1.32	1.21	4.61	J, Q	B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
PFDS	335-77-3	ND	1.42	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
11Cl-PF3OUdS	763051-92-9	ND	2.78	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
10:2 FTS	120226-60-0	ND	3.61	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
PFDoA	307-55-1	4.61	0.913	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
MeFOSA	31506-32-8	ND	4.42	23.1		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
PFTrDA	72629-94-8	ND	0.569	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
PFDoS	79780-39-5	ND	4.81	5.76		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
PFTeDA	376-06-7	2.26	0.870	4.61	J	B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
EtFOSA	4151-50-2	ND	5.89	23.1		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
PFHxDA	67905-19-5	ND	0.339	4.61		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
PFODA	16517-11-6	ND	7.08	8.07		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
MeFOSE	24448-09-7	ND	7.00	23.1		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
EtFOSE	1691-99-2	ND	10.9	23.1		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	140	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1

Sample ID: DA001-03

PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001480-13	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 08:20	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	90.9	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
13C3-PFBS	IS	93.4	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
13C3-HFPO-DA	IS	79.5	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
13C2-4:2 FTS	IS	82.0	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
13C2-PFHxA	IS	86.2	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
13C4-PFHpA	IS	91.2	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
13C3-PFHxS	IS	99.4	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
13C2-6:2 FTS	IS	77.9	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
13C5-PFNA	IS	77.6	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
13C8-PFOA	IS	65.1	10 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
13C2-PFOA	IS	85.7	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
13C8-PFOS	IS	87.4	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
13C2-PFDA	IS	83.1	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
13C2-8:2 FTS	IS	89.6	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
d3-MeFOSAA	IS	79.5	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
13C2-PFUnA	IS	77.6	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
d5-EtFOSAA	IS	77.8	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
13C2-10:2 FTS	IS	73.1	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
13C2-PFDoA	IS	82.1	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
d3-MeFOSA	IS	44.9	10 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
13C2-PFTeDA	IS	73.2	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
d5-EtFOSA	IS	43.0	10 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
13C2-PFHxDA	IS	63.9	25 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
d7-MeFOSE	IS	52.4	10 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1
d9-EtFOSE	IS	53.5	10 - 150		B0G0136	20-Jul-20	0.108 L	22-Jul-20 20:38	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OUTFALL 07
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001480-14	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 08:45	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	9.40	0.849	4.66		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
PFPeA	2706-90-3	ND	1.49	4.66		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
PFBS	375-73-5	ND	2.08	4.66		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
4:2 FTS	757124-72-4	ND	1.62	4.66		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
PFHxA	307-24-4	3.11	2.54	4.66	J	B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
PFPeS	2706-91-4	ND	2.82	4.66		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
HFPO-DA	13252-13-6	ND	5.61	5.82		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
PFHpA	375-85-9	1.68	0.688	4.66	J, Q	B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
ADONA	919005-14-4	ND	0.840	4.66		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
PFHxS	355-46-4	7.58	1.10	4.66		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
6:2 FTS	27619-97-2	ND	2.33	4.66		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
PFOA	335-67-1	3.46	0.758	4.66	J	B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
PFHpS	375-92-8	ND	1.09	4.66		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
PFNA	375-95-1	ND	0.943	4.66		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
PFOSA	754-91-6	14.5	2.06	4.66		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
PFOS	1763-23-1	5.42	0.939	4.66	Q	B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
9Cl-PF3ONS	756426-58-1	ND	1.69	4.66		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
PFDA	335-76-2	ND	1.73	4.66		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
8:2 FTS	39108-34-4	ND	2.40	4.66		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
PFNS	68259-12-1	ND	4.50	4.66		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
MeFOSAA	2355-31-9	ND	1.92	4.66		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
EtFOSAA	2991-50-6	ND	1.59	4.66		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
PFUnA	2058-94-8	ND	1.22	4.66		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
PFDS	335-77-3	ND	1.43	4.66		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
11Cl-PF3OUdS	763051-92-9	ND	2.81	4.66		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
10:2 FTS	120226-60-0	ND	3.64	4.66		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
PFDoA	307-55-1	ND	0.922	4.66		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
MeFOSA	31506-32-8	ND	4.46	23.3		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
PFTrDA	72629-94-8	ND	0.575	4.66		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
PFDoS	79780-39-5	ND	4.85	5.82		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
PFTeDA	376-06-7	ND	0.879	4.66		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
EtFOSA	4151-50-2	ND	5.95	23.3		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
PFHxDA	67905-19-5	ND	0.342	4.66		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
PFODA	16517-11-6	ND	7.15	8.15		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
MeFOSE	24448-09-7	ND	7.07	23.3		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
EtFOSE	1691-99-2	ND	11.0	23.3		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	148	25 - 150		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1

Sample ID: OUTFALL 07 **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001480-14	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 08:45	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	88.8	25 - 150		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
13C3-PFBS	IS	88.6	25 - 150		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
13C3-HFPO-DA	IS	92.0	25 - 150		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
13C2-4:2 FTS	IS	96.3	25 - 150		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
13C2-PFHxA	IS	84.3	25 - 150		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
13C4-PFHpA	IS	95.2	25 - 150		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
13C3-PFHxS	IS	86.4	25 - 150		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
13C2-6:2 FTS	IS	87.0	25 - 150		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
13C5-PFNA	IS	78.6	25 - 150		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
13C8-PFOA	IS	67.0	10 - 150		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
13C2-PFOA	IS	86.6	25 - 150		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
13C8-PFOS	IS	79.9	25 - 150		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
13C2-PFDA	IS	92.7	25 - 150		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
13C2-8:2 FTS	IS	88.9	25 - 150		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
d3-MeFOSAA	IS	78.7	25 - 150		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
13C2-PFUnA	IS	88.2	25 - 150		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
d5-EtFOSAA	IS	71.9	25 - 150		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
13C2-10:2 FTS	IS	65.6	25 - 150		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
13C2-PFDoA	IS	93.1	25 - 150		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
d3-MeFOSA	IS	42.6	10 - 150		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
13C2-PFTeDA	IS	68.1	25 - 150		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
d5-EtFOSA	IS	40.4	10 - 150		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
13C2-PFHxDA	IS	59.2	25 - 150		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
d7-MeFOSE	IS	55.0	10 - 150		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1
d9-EtFOSE	IS	59.2	10 - 150		B0G0136	20-Jul-20	0.107 L	22-Jul-20 20:48	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: DA032-08

PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001480-15	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 09:10	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	21.1	0.807	4.43		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
PFPeA	2706-90-3	40.5	1.42	4.43		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
PFBS	375-73-5	22.0	1.98	4.43		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
4:2 FTS	757124-72-4	ND	1.54	4.43		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
PFHxA	307-24-4	46.0	2.41	4.43		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
PFPeS	2706-91-4	26.2	2.68	4.43		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
HFPO-DA	13252-13-6	ND	5.34	5.54		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
PFHpA	375-85-9	25.1	0.655	4.43		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
ADONA	919005-14-4	ND	0.800	4.43		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
PFHxS	355-46-4	184	1.05	4.43		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
6:2 FTS	27619-97-2	46.6	2.21	4.43		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
PFOA	335-67-1	39.9	0.721	4.43		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
PFHpS	375-92-8	10.2	1.04	4.43		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
PFNA	375-95-1	4.34	0.897	4.43	J	B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
PFOSA	754-91-6	5.63	1.96	4.43	Q	B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
PFOS	1763-23-1	516	0.894	4.43		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
9Cl-PF3ONS	756426-58-1	ND	1.61	4.43		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
PFDA	335-76-2	ND	1.65	4.43		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
8:2 FTS	39108-34-4	14.8	2.28	4.43		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
PFNS	68259-12-1	ND	4.29	4.43		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
MeFOSAA	2355-31-9	ND	1.83	4.43		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
EtFOSAA	2991-50-6	ND	1.52	4.43		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
PFUnA	2058-94-8	ND	1.16	4.43		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
PFDS	335-77-3	ND	1.36	4.43		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
11Cl-PF3OUdS	763051-92-9	ND	2.67	4.43		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
10:2 FTS	120226-60-0	ND	3.47	4.43		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
PFDoA	307-55-1	ND	0.877	4.43		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
MeFOSA	31506-32-8	ND	4.24	22.1		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
PFTrDA	72629-94-8	ND	0.547	4.43		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
PFDoS	79780-39-5	ND	4.62	5.54		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
PFTeDA	376-06-7	ND	0.836	4.43		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
EtFOSA	4151-50-2	ND	5.66	22.1		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
PFHxDA	67905-19-5	ND	0.326	4.43		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
PFODA	16517-11-6	ND	6.80	7.75		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
MeFOSE	24448-09-7	ND	6.72	22.1		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
EtFOSE	1691-99-2	ND	10.5	22.1		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	157	25 - 150	H	B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1

Sample ID: DA032-08 **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001480-15	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 09:10	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	99.3	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
13C3-PFBS	IS	90.8	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
13C3-HFPO-DA	IS	89.1	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
13C2-4:2 FTS	IS	90.6	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
13C2-PFHxA	IS	94.1	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
13C4-PFHpA	IS	91.4	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
13C3-PFHxS	IS	112	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
13C2-6:2 FTS	IS	100	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
13C5-PFNA	IS	90.2	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
13C8-PFOA	IS	62.3	10 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
13C2-PFOA	IS	89.5	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
13C8-PFOS	IS	88.4	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
13C2-PFDA	IS	94.7	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
13C2-8:2 FTS	IS	89.3	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
d3-MeFOSAA	IS	95.2	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
13C2-PFUnA	IS	97.1	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
d5-EtFOSAA	IS	86.5	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
13C2-10:2 FTS	IS	88.8	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
13C2-PFDoA	IS	91.3	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
d3-MeFOSA	IS	30.6	10 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
13C2-PFTeDA	IS	89.4	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
d5-EtFOSA	IS	30.6	10 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
13C2-PFHxDA	IS	83.5	25 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
d7-MeFOSE	IS	56.2	10 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1
d9-EtFOSE	IS	62.9	10 - 150		B0G0136	20-Jul-20	0.113 L	22-Jul-20 20:59	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank
Conc.	Concentration
CRS	Cleanup Recovery Standard
D	Dilution
DL	Detection Limit
E	The associated compound concentration exceeded the calibration range of the instrument
H	Recovery and/or RPD was outside laboratory acceptance limits
I	Chemical Interference
IS	Internal Standard
J	The amount detected is below the Reporting Limit/LOQ
LOD	Limit of Detection
LOQ	Limit of Quantitation
M	Estimated Maximum Possible Concentration (CA Region 2 projects only)
MDL	Method Detection Limit
NA	Not applicable
ND	Not Detected
OPR	Ongoing Precision and Recovery sample
P	The reported concentration may include contribution from chlorinated diphenyl ether(s).
Q	The ion transition ratio is outside of the acceptance criteria.
RL	Reporting Limit
TEQ	Toxic Equivalency
U	Not Detected (specific projects only)
*	See Cover Letter

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

Vista Analytical Laboratory Certifications

Accrediting Authority	Certificate Number
Alaska Department of Environmental Conservation	17-013
Arkansas Department of Environmental Quality	19-013-0
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777-23
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2018017
Massachusetts Department of Environmental Protection	N/A
Michigan Department of Environmental Quality	9932
Minnesota Department of Health	1521520
New Hampshire Environmental Accreditation Program	207718-B
New Jersey Department of Environmental Protection	190001
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-010
Pennsylvania Department of Environmental Protection	016
Texas Commission on Environmental Quality	T104704189-19-10
Vermont Department of Health	VT-4042
Virginia Department of General Services	10272
Washington Department of Ecology	C584-19
Wisconsin Department of Natural Resources	998036160

Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request.

NELAP Accredited Test Methods

MATRIX: Air	
Description of Test	Method
Determination of Polychlorinated p-Dioxins & Polychlorinated Dibenzofurans	EPA 23
Determination of Polychlorinated p-Dioxins & Polychlorinated Dibenzofurans	EPA TO-9A

MATRIX: Biological Tissue	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Drinking Water	
Description of Test	Method
2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD) GC/HRMS	EPA 1613/1613B
1,4-Dioxane (1,4-Diethyleneoxide) analysis by GC/HRMS	EPA 522
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	ISO 25101 2009

MATRIX: Non-Potable Water	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Dioxin by GC/HRMS	EPA 613
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Solids	
Description of Test	Method
Tetra-Octa Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A



CHAIN OF CUSTODY

For Laboratory Use Only
 Work Order #: 2001480 Temp: 3.1 °C
 Storage ID: R-13/WP-2 Storage Secured: Yes No

Project ID: MSN NET WEATHER PO#: MSNPF1 Sampler: C. Behrke
STORM SAMPLES (name)

TAT Standard: 21 days
 (check one): Rush (surcharge may apply)
 14 days 7 days Specify: _____

Relinquished by (printed name and signature) [Signature] Date 7/13/20 Time 1300
 Received by (printed name and signature) William Wright William R. [Signature] Date 07/14/20 Time 09:11

SHIP TO: Vista Analytical Laboratory
 1104 Windfield Way
 El Dorado Hills, CA 95762
 (916) 673-1520 * Fax (916) 673-0106

Method of Shipment: _____
 Tracking No.: _____

ATTN: _____

Add Analysis(es) Requested

Container(s) _____

PFAS by Isotope Dilution _____

EPA Method 537 (DW only) _____

OTHER: Please attach analyte list _____

PFAS by Isotope Dilution _____

UCMR3 PFAS List: 6 _____

537.1 List: 14 or 18 (Circle One) _____

EPA Draft List of 24 _____

PFAS by Isotope Dilution _____

UCMR3 PFAS List: 6 _____

537.1 List of 14 _____

537.1 List of 18 _____

Sample ID	Date	Time	Location/ Sample Description	Quantity	Type	Matrix	PFAS by Isotope Dilution	UCMR3 PFAS List: 6	537.1 List: 14 or 18 (Circle One)	EPA Draft List of 24	OTHER: Please attach analyte list	PFAS by Isotope Dilution	UCMR3 PFAS List: 6	537.1 List of 14	537.1 List of 18	Comments
OUTFALL 30	7/8/20	1210		2	P	AQ					*					
OUTFALL 37	7/8/20	1235		2	P	AQ					*					* WISCONSIN PFAS LIST
OUTFALL 39	7/8/20	1300		2	P	AQ					*					
OUTFALL 22	7/8/20	1310		2	P	AQ					*					
OUTFALL 21	7/8/20	1330		2	P	AQ					*					
DA021-04 ALT	7/8/20	1355		2	P	AQ					*					
DA021-06 ALT	7/8/20	1425		2	P	AQ					*					
DA032-03 A	7/8/20	1440		2	P	AQ					*					
DA032-03 B	7/8/20	1445		2	P	AQ					*					
DA032-X	7/8/20	1505		2	P	AQ					*					

Special Instructions/Comments: _____

Name: CHRIS CIECIK
 Company: LIMNOTECH
 Address: 501 AVIS DRIVE
 City: ANN ARBOR MI 48108
 Phone: 734-332-1200
 Email: cciecik@limno.com

SEND DOCUMENTATION AND RESULTS TO:

Container Types: P= HDPE, PJ= HDPE Jar
 PY= Polypropylene, O = Other: _____

Bottle Preservation Type: _____
 TZ = Trizma: _____

Matrix Types: AQ = Aqueous, DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment,
 SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum, O = Other: _____



CHAIN OF CUSTODY

For Laboratory Use Only
 Work Order #: 2001480 Temp: 3.1 °C
 Storage ID: R-13/WR-2 Storage Secured: Yes No

Project ID: MSN WET WEATHER STORM SAMPLES PO#: MSNPF1 Sampler: C. Schute
 (name)

TAT Standard: 21 days
 (check one): Rush (surcharge may apply)
 14 days 7 days Specify: _____

Relinquished by (printed name and signature) [Signature] Date 7/13/20 Time 1300
 Received by (printed name and signature) William R. Wickett [Signature] Date 07/14/20 Time 09:11

Relinquished by (printed name and signature) _____ Date _____ Time _____
 Received by (printed name and signature) _____ Date _____ Time _____

SHIP TO: Vista Analytical Laboratory
 1104 Windfield Way
 El Dorado Hills, CA 95762
 (916) 673-1520 * Fax (916) 673-0106
 ATTN: _____
 Method of Shipment: _____
 Tracking No.: _____

Quantity	Type	Matrix	PFOA/PFOS	UCMR3 PFAS List 6	537.1 List: 14 or 18 (Circle One)	EPA Draft List of 24	OTHER: Please attach analyte list	PFOA/PFOS	UCMR3 PFAS List 6	537.1 List of 14	537.1 List of 18	EPA Method 537 (DW only)	Comments
2	P	AQ					*						
2	P	AQ					*						* WISCONSIN PFAS LIST
2	P	AQ					*						
2	P	AQ					*						
2	P	AQ					*						

Sample ID	Date	Time	Location/ Sample Description
DA001-01	7/9/20	0805	
DA032-15	7/9/20	0830	
DA001-03	7/9/20	0820	
OUTFALL 07	7/9/20	0845	
DA032-08	7/9/20	0910	

Special Instructions/Comments:

SEND DOCUMENTATION AND RESULTS TO:

Name: CHRIS CIECIEH
 Company: LIMNOTECH
 Address: 501 AVIS DRIVE
 City: ANN ARBOR MI 48106
 Phone: 734 332 1200
 Email: CCIECIEH@LIMNO.COM

Container Types: P= HDPE, PJ= HDPE Jar
 Bottle Preservation Type: TZ = Trizma: _____
 Matrix Types: AQ = Aqueous, DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment,
 PY= Polypropylene, O = Other: _____
 SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum, O = Other: _____

Sample Log-In Checklist

 Page # 1 of 1

 Vista Work Order #: 2001480

 TAT Std

Samples Arrival:	Date/Time: 07/14/20 09:11	Initials: WRW	Location: WR-2
			Shelf/Rack: NA
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
		<input type="checkbox"/> GLS	<input type="checkbox"/> DHL
		<input type="checkbox"/> Hand Delivered	<input type="checkbox"/> Other
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C: 3.1 (uncorrected)	Probe used: Y / (N)		Thermometer ID: IR-3
Temp °C: 3.1 (corrected)			

	YES	NO	NA
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Custody Seals Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Airbill <u>204</u> Trk # <u>3947 7925 1803</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Container	<input checked="" type="checkbox"/> Vista	<input type="checkbox"/> Client	<input checked="" type="checkbox"/> Retain
	<input type="checkbox"/> Return	<input type="checkbox"/> Dispose	
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chain of Custody / Sample Documentation Complete?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Holding Time Acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Logged In:	Date/Time: 07/15/20 09:31	Initials: KS	Location: R-13 WR-2
			Shelf/Rack: A-3 E-4
COC Anomaly/Sample Acceptance Form completed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Comments:

CoC/Label Reconciliation Report WO# 2001480

LabNumber	CoC Sample ID	SampleAlias	Sample Date/Time	Container	BaseMatrix	Sample Comments
2001480-01	A OUTFALL 30	<input checked="" type="checkbox"/>	08-Jul-20 12:10	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001480-01	B OUTFALL 30	<input checked="" type="checkbox"/>	08-Jul-20 12:10	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001480-02	A OUTFALL 37	<input checked="" type="checkbox"/>	08-Jul-20 12:35	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001480-02	B OUTFALL 37	<input checked="" type="checkbox"/>	08-Jul-20 12:35	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001480-03	A OUTFALL 39	<input checked="" type="checkbox"/>	08-Jul-20 13:00	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001480-03	B OUTFALL 39	<input checked="" type="checkbox"/>	08-Jul-20 13:00	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001480-04	A OUTFALL 22	<input checked="" type="checkbox"/>	08-Jul-20 13:10	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001480-04	B OUTFALL 22	<input checked="" type="checkbox"/>	08-Jul-20 13:10	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001480-05	A OUTFALL 21	<input checked="" type="checkbox"/>	08-Jul-20 13:30	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001480-05	B OUTFALL 21	<input checked="" type="checkbox"/>	08-Jul-20 13:30	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001480-06	A DA021-04 ALT	<input checked="" type="checkbox"/>	08-Jul-20 13:55	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001480-06	B DA021-04 ALT	<input checked="" type="checkbox"/>	08-Jul-20 13:55	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001480-07	A DA021-06 ALT	<input checked="" type="checkbox"/>	08-Jul-20 14:25	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001480-07	B DA021-06 ALT	<input checked="" type="checkbox"/>	08-Jul-20 14:25	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001480-08	A DA032-03 A	<input checked="" type="checkbox"/>	08-Jul-20 14:40	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001480-08	B DA032-03 A	<input checked="" type="checkbox"/>	08-Jul-20 14:40	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001480-09	A DA032-03 B	<input checked="" type="checkbox"/>	08-Jul-20 14:45	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001480-09	B DA032-03 B	<input checked="" type="checkbox"/>	08-Jul-20 14:45	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001480-10	A DA032-X	<input checked="" type="checkbox"/>	08-Jul-20 15:05	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001480-10	B DA032-X	<input checked="" type="checkbox"/>	08-Jul-20 15:05	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001480-11	A DA001-01	<input checked="" type="checkbox"/>	09-Jul-20 08:05	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001480-11	B DA001-01	<input checked="" type="checkbox"/>	09-Jul-20 08:05	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001480-12	A DA032-15	<input checked="" type="checkbox"/>	09-Jul-20 08:30	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001480-12	B DA032-15	<input checked="" type="checkbox"/>	09-Jul-20 08:30	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001480-13	A DA001-03	<input checked="" type="checkbox"/>	09-Jul-20 08:20	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001480-13	B DA001-03	<input checked="" type="checkbox"/>	09-Jul-20 08:20	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001480-14	A OUTFALL 07	<input checked="" type="checkbox"/>	09-Jul-20 08:45	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001480-14	B OUTFALL 07	<input checked="" type="checkbox"/>	09-Jul-20 08:45	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001480-15	A DA032-08	<input checked="" type="checkbox"/>	09-Jul-20 09:10	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous



Checkmarks indicate that information on the COC reconciled with the sample label.
Any discrepancies are noted in the following columns.

	Yes	No	NA	Comments:
Sample Container Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sample Custody Seals Intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Adequate Sample Volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Container Type Appropriate for Analysis(es)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Preservation Documented: Na ₂ S ₂ O ₃ Trizma <u>None</u> Other	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Verified by/Date: Ka 07/15/20

August 04, 2020

Vista Work Order No. 2001481

Mr. Chris Cieciek
LimnoTech, Inc.
501 Avis Drive
Ann Arbor, MI 48108

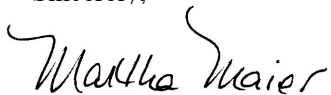
Dear Mr. Cieciek,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on July 14, 2020 under your Project Name 'MSN Wet Weather Storm Samples'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,



Martha Maier
Laboratory Director



Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Work Order No. 2001481

Case Narrative

Sample Condition on Receipt:

Ten aqueous samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology.

Analytical Notes:

PFAS Isotope Dilution Method

The samples were extracted and analyzed for a selected list of PFAS using Vista's PFAS Isotope Dilution Method. The results for PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Results for all other analytes include the linear isomers only.

Holding Times

The samples were extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank above the Reporting Limit. The OPR recoveries were within the method acceptance criteria.

The internal standard recoveries outside the acceptance criteria are listed in the table below.

QC Anomalies

LabNumber	SampleName	Analysis	Analyte	Flag	%Rec
2001481-02	DA032-13	PFAS Isotope Dilution Method	13C3-PFBA	H	158
2001481-04	DA032-09 B	PFAS Isotope Dilution Method	13C3-PFBA	H	155
2001481-06	DA032-10 ALT	PFAS Isotope Dilution Method	13C3-PFBA	H	164
2001481-07	DA032-12 A	PFAS Isotope Dilution Method	13C3-PFBA	H	161
2001481-10	OUTFALL 29	PFAS Isotope Dilution Method	13C3-PFBA	H	157

H = Recovery was outside laboratory acceptance criteria.

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Continuing Calibration.....	167
Initial Calibration.....	270

Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
2001481-01	DA032-05	08-Jul-20 15:20	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001481-02	DA032-13	08-Jul-20 15:35	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001481-03	DA032-09 A	08-Jul-20 15:50	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001481-04	DA032-09 B	08-Jul-20 15:55	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001481-05	DA032-14	08-Jul-20 16:10	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001481-06	DA032-10 ALT	08-Jul-20 16:20	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001481-07	DA032-12 A	08-Jul-20 16:40	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001481-08	DA032-12 B	08-Jul-20 16:50	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001481-09	DUP-070820	08-Jul-20 00:00	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001481-10	OUTFALL 29	09-Jul-20 07:55	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL

ANALYTICAL RESULTS

Sample ID: Method Blank					PFAS Isotope Dilution Method					
Client Data				Laboratory Data						
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	B0G0140-BLK1	Column:	BEH C18			
Project:	MSN Wet Weather Storm Samples									
Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	<0.365	0.365	2.00		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
PFPeA	2706-90-3	<0.640	0.640	2.00		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
PFBS	375-73-5	<0.895	0.895	2.00		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
4:2 FTS	757124-72-4	<0.695	0.695	2.00		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
PFHxA	307-24-4	<1.09	1.09	2.00		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
PFPeS	2706-91-4	<1.21	1.21	2.00		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
HFPO-DA	13252-13-6	<2.41	2.41	2.50		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
PFHpA	375-85-9	<0.296	0.296	2.00		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
ADONA	919005-14-4	<0.361	0.361	2.00		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
PFHxS	355-46-4	<0.474	0.474	2.00		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
6:2 FTS	27619-97-2	<1.00	1.00	2.00		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
PFOA	335-67-1	<0.326	0.326	2.00		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
PFHpS	375-92-8	<0.469	0.469	2.00		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
PFNA	375-95-1	<0.405	0.405	2.00		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
PFOSA	754-91-6	<0.885	0.885	2.00		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
PFOS	1763-23-1	<0.404	0.404	2.00		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
9Cl-PF3ONS	756426-58-1	<0.725	0.725	2.00		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
PFDA	335-76-2	<0.745	0.745	2.00		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
8:2 FTS	39108-34-4	<1.03	1.03	2.00		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
PFNS	68259-12-1	<1.94	1.94	2.00		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
MeFOSAA	2355-31-9	<0.825	0.825	2.00		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
EtFOSAA	2991-50-6	<0.685	0.685	2.00		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
PFUnA	2058-94-8	<0.525	0.525	2.00		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
PFDS	335-77-3	<0.615	0.615	2.00		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
11Cl-PF3OUdS	763051-92-9	<1.21	1.21	2.00		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
10:2 FTS	120226-60-0	<1.57	1.57	2.00		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
PFDoA	307-55-1	<0.396	0.396	2.00		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
MeFOSA	31506-32-8	<1.92	1.92	10.0		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
PFTTrDA	72629-94-8	<0.247	0.247	2.00		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
PFDoS	79780-39-5	<2.09	2.09	2.50		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
PFTeDA	376-06-7	<0.378	0.378	2.00		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
EtFOSA	4151-50-2	<2.56	2.56	10.0		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
PFHxDA	67905-19-5	<0.147	0.147	2.00		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
PFODA	16517-11-6	<3.07	3.07	3.50		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
MeFOSE	24448-09-7	<3.04	3.04	10.0		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
EtFOSE	1691-99-2	<4.72	4.72	10.0		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C3-PFBA	IS	147	25 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1	

Sample ID: Method Blank **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	B0G0140-BLK1	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples						

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	92.7	25 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
13C3-PFBS	IS	90.1	25 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
13C3-HFPO-DA	IS	84.3	25 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
13C2-4:2 FTS	IS	90.5	25 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
13C2-PFHxA	IS	84.9	25 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
13C4-PFHpA	IS	90.7	25 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
13C3-PFHxS	IS	93.9	25 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
13C2-6:2 FTS	IS	101	25 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
13C5-PFNA	IS	85.0	25 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
13C8-PFOA	IS	50.9	10 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
13C2-PFOA	IS	83.4	25 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
13C8-PFOS	IS	81.5	25 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
13C2-PFDA	IS	84.5	25 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
13C2-8:2 FTS	IS	89.8	25 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
d3-MeFOSAA	IS	77.1	25 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
13C2-PFUnA	IS	73.3	25 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
d5-EtFOSAA	IS	70.9	25 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
13C2-10:2 FTS	IS	68.9	25 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
13C2-PFDoA	IS	75.3	25 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
d3-MeFOSA	IS	20.2	10 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
13C2-PFTeDA	IS	64.9	25 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
d5-EtFOSA	IS	19.2	10 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
13C2-PFHxDA	IS	60.1	25 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
d7-MeFOSE	IS	30.6	10 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1
d9-EtFOSE	IS	32.3	10 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:09	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OPR

PFAS Isotope Dilution Method

Client Data					Laboratory Data							
Name:	LimnoTech, Inc.	Matrix:	Aqueous		Lab Sample:	B0G0140-BS1	Column:	BEH C18				
Project:	MSN Wet Weather Storm Samples											

Analyte	CAS Number	Amt Found (ng/L)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	8.33	8.00	104	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
PFPeA	2706-90-3	8.24	8.00	103	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
PFBS	375-73-5	8.02	8.00	100	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
4:2 FTS	757124-72-4	7.71	8.00	96.4	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
PFHxA	307-24-4	8.07	8.00	101	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
PFPeS	2706-91-4	9.41	8.00	118	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
HFPO-DA	13252-13-6	7.39	8.00	92.4	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
PFHpA	375-85-9	7.50	8.00	93.7	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
ADONA	919005-14-4	7.90	8.00	98.7	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
PFHxS	355-46-4	7.62	8.00	95.2	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
6:2 FTS	27619-97-2	6.98	8.00	87.2	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
PFOA	335-67-1	7.51	8.00	93.9	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
PFHpS	375-92-8	6.29	8.00	78.7	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
PFNA	375-95-1	7.89	8.00	98.7	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
PFOSA	754-91-6	6.20	8.00	77.5	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
PFOS	1763-23-1	8.65	8.00	108	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
9Cl-PF3ONS	756426-58-1	6.74	8.00	84.2	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
PFDA	335-76-2	6.96	8.00	87.0	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
8:2 FTS	39108-34-4	8.15	8.00	102	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
PFNS	68259-12-1	7.07	8.00	88.4	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
MeFOSAA	2355-31-9	7.37	8.00	92.1	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
EtFOSAA	2991-50-6	7.34	8.00	91.8	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
PFUnA	2058-94-8	7.98	8.00	99.8	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
PFDS	335-77-3	6.39	8.00	79.9	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
11Cl-PF3OUdS	763051-92-9	8.41	8.00	105	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
10:2 FTS	120226-60-0	7.07	8.00	88.3	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
PFDoA	307-55-1	9.08	8.00	114	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
MeFOSA	31506-32-8	37.9	40.0	94.6	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
PFTTrDA	72629-94-8	8.36	8.00	105	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
PFDoS	79780-39-5	8.39	8.00	105	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
PFTTeDA	376-06-7	7.74	8.00	96.8	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
EtFOSA	4151-50-2	40.5	40.0	101	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
PFHxDA	67905-19-5	8.51	8.00	106	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
PFODA	16517-11-6	5.44	8.00	68.0	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1

Sample ID: OPR

PFAS Isotope Dilution Method

Client Data					Laboratory Data						
Name:	LimnoTech, Inc.	Matrix:	Aqueous		Lab Sample:	B0G0140-BS1	Column:	BEH C18			
Project:	MSN Wet Weather Storm Samples										

Analyte	CAS Number	Amt Found (ng/L)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
MeFOSE	24448-09-7	40.5	40.0	101	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
EtFOSE	1691-99-2	42.5	40.0	106	50 - 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
Labeled Standards		Type		% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA		IS		145	25- 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
13C3-PFPeA		IS		87.9	25- 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
13C3-PFBS		IS		90.3	25- 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
13C3-HFPO-DA		IS		83.2	25- 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
13C2-4:2 FTS		IS		96.3	25- 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
13C2-PFHxA		IS		83.6	25- 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
13C4-PFHpA		IS		90.3	25- 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
13C3-PFHxS		IS		94.3	25- 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
13C2-6:2 FTS		IS		88.0	25- 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
13C5-PFNA		IS		77.4	25- 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
13C8-PFOSA		IS		53.7	10- 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
13C2-PFOA		IS		82.0	25- 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
13C8-PFOS		IS		80.2	25- 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
13C2-PFDA		IS		89.0	25- 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
13C2-8:2 FTS		IS		75.4	25- 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
d3-MeFOSAA		IS		74.0	25- 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
13C2-PFUnA		IS		75.5	25- 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
d5-EtFOSAA		IS		68.0	25- 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
13C2-10:2 FTS		IS		68.3	25- 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
13C2-PFDoA		IS		75.2	25- 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
d3-MeFOSA		IS		21.9	10- 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
13C2-PFTeDA		IS		71.7	25- 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
d5-EtFOSA		IS		19.3	10- 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
13C2-PFHxDA		IS		64.0	25- 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
d7-MeFOSE		IS		35.6	10- 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1
d9-EtFOSE		IS		36.4	10- 150		B0G0140	20-Jul-20	0.250 L	22-Jul-20 21:20	1

Sample ID: DA032-05

PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001481-01	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 15:20	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	103	0.813	4.46		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
PFPeA	2706-90-3	325	1.43	4.46		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
PFBS	375-73-5	145	2.00	4.46		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
4:2 FTS	757124-72-4	11.3	1.55	4.46		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
PFHxA	307-24-4	428	2.43	4.46		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
PFPeS	2706-91-4	133	2.70	4.46	Q	B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
HFPO-DA	13252-13-6	<5.37	5.37	5.57		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
PFHpA	375-85-9	205	0.659	4.46		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
ADONA	919005-14-4	<0.805	0.805	4.46		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
PFHxS	355-46-4	2010	1.06	4.46		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
6:2 FTS	27619-97-2	778	2.23	4.46		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
PFOA	335-67-1	380	0.726	4.46		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
PFHpS	375-92-8	148	1.04	4.46		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
PFNA	375-95-1	62.0	0.903	4.46		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
PFOSA	754-91-6	492	1.97	4.46		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
PFOS	1763-23-1	9620	4.50	22.3	D	B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:25	5
9Cl-PF3ONS	756426-58-1	<1.62	1.62	4.46		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
PFDA	335-76-2	14.1	1.66	4.46		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
8:2 FTS	39108-34-4	1160	2.30	4.46		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
PFNS	68259-12-1	9.81	4.31	4.46		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
MeFOSAA	2355-31-9	<1.84	1.84	4.46		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
EtFOSAA	2991-50-6	<1.53	1.53	4.46		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
PFUnA	2058-94-8	<1.17	1.17	4.46		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
PFDS	335-77-3	2.39	1.37	4.46	J, Q	B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
11Cl-PF3OUdS	763051-92-9	<2.69	2.69	4.46		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
10:2 FTS	120226-60-0	7.68	3.49	4.46		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
PFDoA	307-55-1	<0.883	0.883	4.46		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
MeFOSA	31506-32-8	<4.27	4.27	22.3		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
PFTrDA	72629-94-8	<0.551	0.551	4.46		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
PFDoS	79780-39-5	<4.65	4.65	5.57		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
PFTeDA	376-06-7	<0.842	0.842	4.46		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
EtFOSA	4151-50-2	<5.70	5.70	22.3		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
PFHxDA	67905-19-5	<0.328	0.328	4.46		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
PFODA	16517-11-6	<6.84	6.84	7.80		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
MeFOSE	24448-09-7	<6.77	6.77	22.3		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
EtFOSE	1691-99-2	<10.5	10.5	22.3		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C3-PFBA	IS	146	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1	

Sample ID: DA032-05

PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001481-01	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 15:20	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	95.0	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
13C3-PFBS	IS	88.2	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
13C3-HFPO-DA	IS	80.1	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
13C2-4:2 FTS	IS	88.5	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
13C2-PFHxA	IS	84.0	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
13C4-PFHpA	IS	92.8	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
13C3-PFHxS	IS	83.1	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
13C2-6:2 FTS	IS	84.0	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
13C5-PFNA	IS	78.4	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
13C8-PFOA	IS	59.0	10 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
13C2-PFOA	IS	87.4	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
13C8-PFOS	IS	84.5	25 - 150	D	B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:25	5
13C2-PFDA	IS	76.2	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
13C2-8:2 FTS	IS	77.4	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
d3-MeFOSAA	IS	86.9	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
13C2-PFUnA	IS	91.2	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
d5-EtFOSAA	IS	81.3	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
13C2-10:2 FTS	IS	83.6	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
13C2-PFDoA	IS	91.4	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
d3-MeFOSA	IS	32.9	10 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
13C2-PFTeDA	IS	85.2	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
d5-EtFOSA	IS	33.8	10 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
13C2-PFHxDA	IS	80.2	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
d7-MeFOSE	IS	51.8	10 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1
d9-EtFOSE	IS	57.8	10 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 21:30	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: DA032-13

PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001481-02	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 15:35	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	39.8	0.816	4.48		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
PFPeA	2706-90-3	110	1.43	4.48		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
PFBS	375-73-5	99.6	2.00	4.48		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
4:2 FTS	757124-72-4	3.64	1.56	4.48	J	B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
PFHxA	307-24-4	137	2.44	4.48		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
PFPeS	2706-91-4	87.6	2.71	4.48		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
HFPO-DA	13252-13-6	<5.40	5.40	5.60		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
PFHpA	375-85-9	45.7	0.662	4.48		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
ADONA	919005-14-4	<0.808	0.808	4.48		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
PFHxS	355-46-4	581	1.06	4.48		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
6:2 FTS	27619-97-2	136	2.24	4.48		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
PFOA	335-67-1	60.3	0.729	4.48		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
PFHpS	375-92-8	41.7	1.05	4.48		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
PFNA	375-95-1	4.59	0.907	4.48		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
PFOSA	754-91-6	9.86	1.98	4.48		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
PFOS	1763-23-1	2110	0.903	4.48		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
9Cl-PF3ONS	756426-58-1	<1.62	1.62	4.48		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
PFDA	335-76-2	<1.67	1.67	4.48		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
8:2 FTS	39108-34-4	38.4	2.31	4.48		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
PFNS	68259-12-1	<4.33	4.33	4.48		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
MeFOSAA	2355-31-9	<1.85	1.85	4.48		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
EtFOSAA	2991-50-6	<1.53	1.53	4.48		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
PFUnA	2058-94-8	<1.18	1.18	4.48		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
PFDS	335-77-3	<1.38	1.38	4.48		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
11Cl-PF3OUdS	763051-92-9	<2.70	2.70	4.48		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
10:2 FTS	120226-60-0	<3.50	3.50	4.48		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
PFDoA	307-55-1	<0.887	0.887	4.48		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
MeFOSA	31506-32-8	<4.29	4.29	22.4		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
PFTrDA	72629-94-8	<0.553	0.553	4.48		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
PFDoS	79780-39-5	<4.67	4.67	5.60		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
PFTeDA	376-06-7	<0.845	0.845	4.48		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
EtFOSA	4151-50-2	<5.72	5.72	22.4		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
PFHxDA	67905-19-5	<0.329	0.329	4.48		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
PFODA	16517-11-6	<6.87	6.87	7.84		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
MeFOSE	24448-09-7	<6.80	6.80	22.4		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
EtFOSE	1691-99-2	<10.6	10.6	22.4		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	158	25 - 150	H	B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1

Sample ID: DA032-13

PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001481-02	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 15:35	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	90.1	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
13C3-PFBS	IS	97.3	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
13C3-HFPO-DA	IS	94.1	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
13C2-4:2 FTS	IS	88.9	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
13C2-PFHxA	IS	92.1	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
13C4-PFHpA	IS	90.0	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
13C3-PFHxS	IS	84.0	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
13C2-6:2 FTS	IS	91.7	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
13C5-PFNA	IS	91.3	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
13C8-PFOA	IS	61.9	10 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
13C2-PFOA	IS	86.6	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
13C8-PFOS	IS	99.6	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
13C2-PFDA	IS	88.7	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
13C2-8:2 FTS	IS	88.6	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
d3-MeFOSAA	IS	88.8	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
13C2-PFUnA	IS	93.3	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
d5-EtFOSAA	IS	89.6	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
13C2-10:2 FTS	IS	81.8	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
13C2-PFDoA	IS	66.2	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
d3-MeFOSA	IS	21.7	10 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
13C2-PFTeDA	IS	82.6	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
d5-EtFOSA	IS	20.8	10 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
13C2-PFHxDA	IS	85.9	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
d7-MeFOSE	IS	49.4	10 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1
d9-EtFOSE	IS	53.7	10 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 02:35	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: DA032-09 A
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001481-03	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 15:50	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	24.7	0.812	4.45		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
PFPeA	2706-90-3	46.1	1.43	4.45		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
PFBS	375-73-5	8.78	1.99	4.45		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
4:2 FTS	757124-72-4	<1.55	1.55	4.45		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
PFHxA	307-24-4	48.1	2.43	4.45		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
PFPeS	2706-91-4	13.4	2.69	4.45	Q	B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
HFPO-DA	13252-13-6	<5.37	5.37	5.57		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
PFHpA	375-85-9	30.4	0.658	4.45		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
ADONA	919005-14-4	<0.804	0.804	4.45		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
PFHxS	355-46-4	180	1.05	4.45		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
6:2 FTS	27619-97-2	67.7	2.23	4.45		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
PFOA	335-67-1	53.9	0.725	4.45		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
PFHpS	375-92-8	10.4	1.04	4.45		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
PFNA	375-95-1	7.56	0.902	4.45		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
PFOSA	754-91-6	29.8	1.97	4.45		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
PFOS	1763-23-1	514	0.899	4.45		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
9Cl-PF3ONS	756426-58-1	<1.61	1.61	4.45		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
PFDA	335-76-2	4.14	1.66	4.45	J	B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
8:2 FTS	39108-34-4	12.1	2.29	4.45		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
PFNS	68259-12-1	<4.31	4.31	4.45		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
MeFOSAA	2355-31-9	<1.84	1.84	4.45		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
EtFOSAA	2991-50-6	<1.53	1.53	4.45		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
PFUnA	2058-94-8	<1.17	1.17	4.45		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
PFDS	335-77-3	<1.37	1.37	4.45		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
11Cl-PF3OUdS	763051-92-9	<2.68	2.68	4.45		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
10:2 FTS	120226-60-0	<3.48	3.48	4.45		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
PFDoA	307-55-1	<0.882	0.882	4.45		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
MeFOSA	31506-32-8	<4.26	4.26	22.3		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
PFTrDA	72629-94-8	<0.550	0.550	4.45		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
PFDoS	79780-39-5	<4.64	4.64	5.57		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
PFTeDA	376-06-7	<0.841	0.841	4.45		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
EtFOSA	4151-50-2	<5.69	5.69	22.3		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
PFHxDA	67905-19-5	<0.327	0.327	4.45		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
PFODA	16517-11-6	<6.84	6.84	7.79		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
MeFOSE	24448-09-7	<6.76	6.76	22.3		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
EtFOSE	1691-99-2	<10.5	10.5	22.3		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	143	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1

Sample ID: DA032-09 A

PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001481-03	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 15:50	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	87.4	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
13C3-PFBS	IS	88.9	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
13C3-HFPO-DA	IS	81.6	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
13C2-4:2 FTS	IS	89.7	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
13C2-PFHxA	IS	79.0	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
13C4-PFHpA	IS	87.6	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
13C3-PFHxS	IS	93.0	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
13C2-6:2 FTS	IS	79.3	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
13C5-PFNA	IS	78.4	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
13C8-PFOA	IS	60.4	10 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
13C2-PFOA	IS	82.8	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
13C8-PFOS	IS	82.1	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
13C2-PFDA	IS	87.7	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
13C2-8:2 FTS	IS	84.1	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
d3-MeFOSAA	IS	82.2	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
13C2-PFUnA	IS	85.6	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
d5-EtFOSAA	IS	75.8	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
13C2-10:2 FTS	IS	75.4	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
13C2-PFDoA	IS	84.5	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
d3-MeFOSA	IS	40.8	10 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
13C2-PFTeDA	IS	76.3	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
d5-EtFOSA	IS	39.2	10 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
13C2-PFHxDA	IS	73.9	25 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
d7-MeFOSE	IS	57.9	10 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1
d9-EtFOSE	IS	59.0	10 - 150		B0G0140	20-Jul-20	0.112 L	22-Jul-20 22:22	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: DA032-09 B
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001481-04	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 15:55	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	29.0	0.791	4.34		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
PFPeA	2706-90-3	63.3	1.39	4.34		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
PFBS	375-73-5	12.8	1.94	4.34		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
4:2 FTS	757124-72-4	<1.51	1.51	4.34		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
PFHxA	307-24-4	67.5	2.36	4.34		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
PFPeS	2706-91-4	14.8	2.62	4.34		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
HFPO-DA	13252-13-6	<5.23	5.23	5.42		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
PFHpA	375-85-9	48.2	0.641	4.34		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
ADONA	919005-14-4	<0.783	0.783	4.34		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
PFHxS	355-46-4	268	1.03	4.34		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
6:2 FTS	27619-97-2	97.3	2.17	4.34		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
PFOA	335-67-1	74.9	0.706	4.34		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
PFHpS	375-92-8	20.2	1.02	4.34		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
PFNA	375-95-1	11.8	0.878	4.34		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
PFOSA	754-91-6	17.1	1.92	4.34		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
PFOS	1763-23-1	947	0.875	4.34		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
9Cl-PF3ONS	756426-58-1	<1.57	1.57	4.34		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
PFDA	335-76-2	7.87	1.62	4.34		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
8:2 FTS	39108-34-4	23.0	2.23	4.34		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
PFNS	68259-12-1	<4.20	4.20	4.34		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
MeFOSAA	2355-31-9	<1.79	1.79	4.34		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
EtFOSAA	2991-50-6	<1.49	1.49	4.34		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
PFUnA	2058-94-8	<1.14	1.14	4.34		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
PFDS	335-77-3	<1.33	1.33	4.34		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
11Cl-PF3OUdS	763051-92-9	<2.61	2.61	4.34		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
10:2 FTS	120226-60-0	<3.39	3.39	4.34		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
PFDoA	307-55-1	<0.859	0.859	4.34		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
MeFOSA	31506-32-8	<4.15	4.15	21.7		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
PFTTrDA	72629-94-8	<0.536	0.536	4.34		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
PFDoS	79780-39-5	<4.52	4.52	5.42		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
PFTeDA	376-06-7	<0.819	0.819	4.34		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
EtFOSA	4151-50-2	<5.54	5.54	21.7		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
PFHxDA	67905-19-5	<0.319	0.319	4.34		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
PFODA	16517-11-6	<6.66	6.66	7.59		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
MeFOSE	24448-09-7	<6.58	6.58	21.7		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
EtFOSE	1691-99-2	<10.2	10.2	21.7		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	155	25 - 150	H	B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1

Sample ID: DA032-09 B

PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001481-04	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 15:55	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	95.4	25 - 150		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
13C3-PFBS	IS	102	25 - 150		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
13C3-HFPO-DA	IS	93.7	25 - 150		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
13C2-4:2 FTS	IS	87.6	25 - 150		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
13C2-PFHxA	IS	96.7	25 - 150		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
13C4-PFHpA	IS	87.1	25 - 150		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
13C3-PFHxS	IS	87.4	25 - 150		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
13C2-6:2 FTS	IS	101	25 - 150		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
13C5-PFNA	IS	89.9	25 - 150		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
13C8-PFOA	IS	61.2	10 - 150		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
13C2-PFOA	IS	92.0	25 - 150		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
13C8-PFOS	IS	103	25 - 150		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
13C2-PFDA	IS	90.6	25 - 150		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
13C2-8:2 FTS	IS	87.2	25 - 150		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
d3-MeFOSAA	IS	91.6	25 - 150		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
13C2-PFUnA	IS	71.7	25 - 150		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
d5-EtFOSAA	IS	88.3	25 - 150		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
13C2-10:2 FTS	IS	84.2	25 - 150		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
13C2-PFDoA	IS	78.5	25 - 150		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
d3-MeFOSA	IS	34.5	10 - 150		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
13C2-PFTeDA	IS	83.5	25 - 150		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
d5-EtFOSA	IS	34.4	10 - 150		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
13C2-PFHxDA	IS	78.5	25 - 150		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
d7-MeFOSE	IS	53.5	10 - 150		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1
d9-EtFOSE	IS	60.8	10 - 150		B0G0140	20-Jul-20	0.115 L	24-Jul-20 03:17	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: DA032-14
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001481-05	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 16:10	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	20.9	0.799	4.38		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
PFPeA	2706-90-3	31.5	1.40	4.38		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
PFBS	375-73-5	15.6	1.96	4.38		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
4:2 FTS	757124-72-4	<1.52	1.52	4.38		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
PFHxA	307-24-4	39.0	2.39	4.38		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
PFPeS	2706-91-4	17.6	2.65	4.38	Q	B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
HFPO-DA	13252-13-6	<5.28	5.28	5.48		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
PFHpA	375-85-9	17.4	0.648	4.38		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
ADONA	919005-14-4	<0.791	0.791	4.38		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
PFHxS	355-46-4	208	1.04	4.38		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
6:2 FTS	27619-97-2	17.5	2.19	4.38		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
PFOA	335-67-1	37.4	0.713	4.38		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
PFHpS	375-92-8	7.64	1.03	4.38		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
PFNA	375-95-1	5.53	0.888	4.38		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
PFOSA	754-91-6	14.0	1.94	4.38		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
PFOS	1763-23-1	350	0.884	4.38		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
9Cl-PF3ONS	756426-58-1	<1.59	1.59	4.38		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
PFDA	335-76-2	<1.63	1.63	4.38		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
8:2 FTS	39108-34-4	25.7	2.26	4.38		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
PFNS	68259-12-1	<4.24	4.24	4.38		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
MeFOSAA	2355-31-9	<1.81	1.81	4.38		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
EtFOSAA	2991-50-6	<1.50	1.50	4.38		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
PFUnA	2058-94-8	<1.15	1.15	4.38		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
PFDS	335-77-3	<1.35	1.35	4.38		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
11Cl-PF3OUdS	763051-92-9	<2.64	2.64	4.38		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
10:2 FTS	120226-60-0	<3.43	3.43	4.38		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
PFDoA	307-55-1	<0.868	0.868	4.38		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
MeFOSA	31506-32-8	<4.20	4.20	21.9		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
PFTrDA	72629-94-8	<0.541	0.541	4.38		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
PFDoS	79780-39-5	<4.57	4.57	5.48		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
PFTeDA	376-06-7	<0.827	0.827	4.38		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
EtFOSA	4151-50-2	<5.60	5.60	21.9		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
PFHxDA	67905-19-5	<0.322	0.322	4.38		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
PFODA	16517-11-6	<6.73	6.73	7.67		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
MeFOSE	24448-09-7	<6.65	6.65	21.9		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
EtFOSE	1691-99-2	<10.3	10.3	21.9		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C3-PFBA	IS	149	25 - 150		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1	

Sample ID: DA032-14 **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001481-05	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 16:10	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	96.1	25 - 150		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
13C3-PFBS	IS	93.4	25 - 150		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
13C3-HFPO-DA	IS	87.9	25 - 150		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
13C2-4:2 FTS	IS	90.0	25 - 150		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
13C2-PFHxA	IS	88.9	25 - 150		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
13C4-PFHpA	IS	89.1	25 - 150		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
13C3-PFHxS	IS	95.7	25 - 150		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
13C2-6:2 FTS	IS	88.0	25 - 150		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
13C5-PFNA	IS	79.2	25 - 150		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
13C8-PFOA	IS	57.2	10 - 150		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
13C2-PFOA	IS	85.7	25 - 150		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
13C8-PFOS	IS	95.3	25 - 150		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
13C2-PFDA	IS	81.9	25 - 150		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
13C2-8:2 FTS	IS	83.7	25 - 150		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
d3-MeFOSAA	IS	75.5	25 - 150		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
13C2-PFUnA	IS	86.7	25 - 150		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
d5-EtFOSAA	IS	83.9	25 - 150		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
13C2-10:2 FTS	IS	75.8	25 - 150		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
13C2-PFDoA	IS	95.2	25 - 150		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
d3-MeFOSA	IS	29.2	10 - 150		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
13C2-PFTeDA	IS	75.9	25 - 150		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
d5-EtFOSA	IS	27.7	10 - 150		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
13C2-PFHxDA	IS	65.9	25 - 150		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
d7-MeFOSE	IS	58.2	10 - 150		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1
d9-EtFOSE	IS	53.8	10 - 150		B0G0140	20-Jul-20	0.114 L	22-Jul-20 22:43	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: DA032-10 ALT
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001481-06	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 16:20	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	13.3	0.814	4.47		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
PFPeA	2706-90-3	11.6	1.43	4.47		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
PFBS	375-73-5	4.74	2.00	4.47		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
4:2 FTS	757124-72-4	<1.55	1.55	4.47		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
PFHxA	307-24-4	15.1	2.43	4.47		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
PFPeS	2706-91-4	3.76	2.70	4.47	J, Q	B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
HFPO-DA	13252-13-6	<5.38	5.38	5.58		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
PFHpA	375-85-9	4.76	0.660	4.47		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
ADONA	919005-14-4	<0.806	0.806	4.47		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
PFHxS	355-46-4	50.6	1.06	4.47		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
6:2 FTS	27619-97-2	<2.23	2.23	4.47		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
PFOA	335-67-1	18.3	0.727	4.47		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
PFHpS	375-92-8	<1.05	1.05	4.47		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
PFNA	375-95-1	<0.904	0.904	4.47		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
PFOSA	754-91-6	9.65	1.98	4.47		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
PFOS	1763-23-1	57.0	0.901	4.47		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
9Cl-PF3ONS	756426-58-1	<1.62	1.62	4.47		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
PFDA	335-76-2	<1.66	1.66	4.47		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
8:2 FTS	39108-34-4	<2.30	2.30	4.47		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
PFNS	68259-12-1	<4.32	4.32	4.47		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
MeFOSAA	2355-31-9	<1.84	1.84	4.47		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
EtFOSAA	2991-50-6	<1.53	1.53	4.47		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
PFUnA	2058-94-8	<1.17	1.17	4.47		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
PFDS	335-77-3	<1.37	1.37	4.47		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
11Cl-PF3OUdS	763051-92-9	<2.69	2.69	4.47		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
10:2 FTS	120226-60-0	<3.49	3.49	4.47		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
PFDoA	307-55-1	<0.884	0.884	4.47		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
MeFOSA	31506-32-8	<4.28	4.28	22.3		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
PFTrDA	72629-94-8	<0.552	0.552	4.47		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
PFDoS	79780-39-5	<4.66	4.66	5.58		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
PFTeDA	376-06-7	<0.843	0.843	4.47		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
EtFOSA	4151-50-2	<5.71	5.71	22.3		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
PFHxDA	67905-19-5	<0.328	0.328	4.47		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
PFODA	16517-11-6	<6.86	6.86	7.82		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
MeFOSE	24448-09-7	<6.78	6.78	22.3		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
EtFOSE	1691-99-2	<10.5	10.5	22.3		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	164	25 - 150	H	B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1

Sample ID: DA032-10 ALT **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001481-06	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 16:20	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	96.8	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
13C3-PFBS	IS	115	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
13C3-HFPO-DA	IS	92.3	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
13C2-4:2 FTS	IS	100	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
13C2-PFHxA	IS	101	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
13C4-PFHpA	IS	92.7	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
13C3-PFHxS	IS	93.6	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
13C2-6:2 FTS	IS	105	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
13C5-PFNA	IS	90.5	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
13C8-PFOA	IS	67.6	10 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
13C2-PFOA	IS	97.5	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
13C8-PFOS	IS	114	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
13C2-PFDA	IS	101	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
13C2-8:2 FTS	IS	97.7	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
d3-MeFOSAA	IS	99.0	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
13C2-PFUnA	IS	94.3	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
d5-EtFOSAA	IS	82.7	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
13C2-10:2 FTS	IS	77.1	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
13C2-PFDoA	IS	85.3	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
d3-MeFOSA	IS	42.5	10 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
13C2-PFTeDA	IS	85.8	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
d5-EtFOSA	IS	38.9	10 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
13C2-PFHxDA	IS	80.6	25 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
d7-MeFOSE	IS	56.3	10 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1
d9-EtFOSE	IS	61.3	10 - 150		B0G0140	20-Jul-20	0.112 L	24-Jul-20 03:27	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: DA032-12 A
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001481-07	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 16:40	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	13.7	0.825	4.52		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
PFPeA	2706-90-3	13.0	1.45	4.52		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
PFBS	375-73-5	3.83	2.02	4.52	J	B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
4:2 FTS	757124-72-4	<1.57	1.57	4.52		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
PFHxA	307-24-4	11.8	2.47	4.52		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
PFPeS	2706-91-4	3.85	2.74	4.52	J, Q	B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
HFPO-DA	13252-13-6	<5.45	5.45	5.66		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
PFHpA	375-85-9	3.79	0.668	4.52	J	B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
ADONA	919005-14-4	<0.817	0.817	4.52		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
PFHxS	355-46-4	40.4	1.07	4.52		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
6:2 FTS	27619-97-2	<2.26	2.26	4.52		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
PFOA	335-67-1	12.3	0.736	4.52		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
PFHpS	375-92-8	<1.06	1.06	4.52		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
PFNA	375-95-1	1.05	0.916	4.52	J	B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
PFOSA	754-91-6	14.0	2.00	4.52		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
PFOS	1763-23-1	125	0.913	4.52		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
9Cl-PF3ONS	756426-58-1	<1.64	1.64	4.52		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
PFDA	335-76-2	<1.69	1.69	4.52		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
8:2 FTS	39108-34-4	<2.33	2.33	4.52		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
PFNS	68259-12-1	<4.38	4.38	4.52		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
MeFOSAA	2355-31-9	<1.87	1.87	4.52		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
EtFOSAA	2991-50-6	<1.55	1.55	4.52		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
PFUnA	2058-94-8	<1.19	1.19	4.52		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
PFDS	335-77-3	<1.39	1.39	4.52		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
11Cl-PF3OUdS	763051-92-9	<2.73	2.73	4.52		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
10:2 FTS	120226-60-0	<3.54	3.54	4.52		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
PFDoA	307-55-1	<0.896	0.896	4.52		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
MeFOSA	31506-32-8	<4.33	4.33	22.6		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
PFTrDA	72629-94-8	<0.559	0.559	4.52		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
PFDoS	79780-39-5	<4.72	4.72	5.66		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
PFTeDA	376-06-7	<0.854	0.854	4.52		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
EtFOSA	4151-50-2	<5.78	5.78	22.6		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
PFHxDA	67905-19-5	<0.333	0.333	4.52		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
PFODA	16517-11-6	<6.94	6.94	7.92		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
MeFOSE	24448-09-7	<6.87	6.87	22.6		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
EtFOSE	1691-99-2	<10.7	10.7	22.6		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	161	25 - 150	H	B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1

Sample ID: DA032-12 A **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001481-07	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 16:40	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	95.8	25 - 150		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
13C3-PFBS	IS	104	25 - 150		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
13C3-HFPO-DA	IS	90.7	25 - 150		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
13C2-4:2 FTS	IS	95.4	25 - 150		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
13C2-PFHxA	IS	94.6	25 - 150		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
13C4-PFHpA	IS	93.6	25 - 150		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
13C3-PFHxS	IS	92.8	25 - 150		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
13C2-6:2 FTS	IS	84.2	25 - 150		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
13C5-PFNA	IS	85.9	25 - 150		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
13C8-PFOA	IS	70.7	10 - 150		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
13C2-PFOA	IS	90.4	25 - 150		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
13C8-PFOS	IS	105	25 - 150		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
13C2-PFDA	IS	92.3	25 - 150		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
13C2-8:2 FTS	IS	85.9	25 - 150		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
d3-MeFOSAA	IS	93.6	25 - 150		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
13C2-PFUnA	IS	93.8	25 - 150		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
d5-EtFOSAA	IS	85.1	25 - 150		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
13C2-10:2 FTS	IS	77.6	25 - 150		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
13C2-PFDoA	IS	84.6	25 - 150		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
d3-MeFOSA	IS	27.2	10 - 150		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
13C2-PFTeDA	IS	90.3	25 - 150		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
d5-EtFOSA	IS	26.0	10 - 150		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
13C2-PFHxDA	IS	78.5	25 - 150		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
d7-MeFOSE	IS	56.6	10 - 150		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1
d9-EtFOSE	IS	61.1	10 - 150		B0G0140	20-Jul-20	0.111 L	24-Jul-20 03:38	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: DA032-12 B
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001481-08	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 16:50	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	18.0	0.841	4.62		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
PFPeA	2706-90-3	32.8	1.48	4.62		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
PFBS	375-73-5	16.9	2.07	4.62		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
4:2 FTS	757124-72-4	<1.60	1.60	4.62		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
PFHxA	307-24-4	42.1	2.52	4.62		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
PFPeS	2706-91-4	19.4	2.79	4.62	Q	B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
HFPO-DA	13252-13-6	<5.56	5.56	5.77		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
PFHpA	375-85-9	15.6	0.682	4.62		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
ADONA	919005-14-4	<0.833	0.833	4.62		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
PFHxS	355-46-4	187	1.09	4.62		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
6:2 FTS	27619-97-2	10.0	2.31	4.62		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
PFOA	335-67-1	54.2	0.751	4.62		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
PFHpS	375-92-8	4.30	1.08	4.62	J	B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
PFNA	375-95-1	2.93	0.935	4.62	J	B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
PFOSA	754-91-6	11.1	2.04	4.62		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
PFOS	1763-23-1	162	0.931	4.62		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
9Cl-PF3ONS	756426-58-1	<1.67	1.67	4.62		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
PFDA	335-76-2	<1.72	1.72	4.62		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
8:2 FTS	39108-34-4	2.39	2.38	4.62	J	B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
PFNS	68259-12-1	<4.47	4.47	4.62		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
MeFOSAA	2355-31-9	<1.90	1.90	4.62		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
EtFOSAA	2991-50-6	<1.58	1.58	4.62		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
PFUnA	2058-94-8	<1.21	1.21	4.62		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
PFDS	335-77-3	<1.42	1.42	4.62		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
11Cl-PF3OUdS	763051-92-9	<2.78	2.78	4.62		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
10:2 FTS	120226-60-0	<3.61	3.61	4.62		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
PFDoA	307-55-1	<0.914	0.914	4.62		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
MeFOSA	31506-32-8	<4.42	4.42	23.1		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
PFTrDA	72629-94-8	<0.570	0.570	4.62		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
PFDoS	79780-39-5	<4.81	4.81	5.77		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
PFTeDA	376-06-7	<0.871	0.871	4.62		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
EtFOSA	4151-50-2	<5.90	5.90	23.1		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
PFHxDA	67905-19-5	<0.339	0.339	4.62		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
PFODA	16517-11-6	<7.08	7.08	8.08		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
MeFOSE	24448-09-7	<7.00	7.00	23.1		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
EtFOSE	1691-99-2	<10.9	10.9	23.1		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	148	25 - 150			B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1

Sample ID: DA032-12 B **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001481-08	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 16:50	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	91.5	25 - 150		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
13C3-PFBS	IS	96.4	25 - 150		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
13C3-HFPO-DA	IS	82.9	25 - 150		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
13C2-4:2 FTS	IS	88.9	25 - 150		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
13C2-PFHxA	IS	85.9	25 - 150		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
13C4-PFHpA	IS	93.9	25 - 150		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
13C3-PFHxS	IS	96.4	25 - 150		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
13C2-6:2 FTS	IS	94.4	25 - 150		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
13C5-PFNA	IS	74.1	25 - 150		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
13C8-PFOA	IS	58.1	10 - 150		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
13C2-PFOA	IS	85.8	25 - 150		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
13C8-PFOS	IS	85.3	25 - 150		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
13C2-PFDA	IS	97.6	25 - 150		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
13C2-8:2 FTS	IS	85.2	25 - 150		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
d3-MeFOSAA	IS	85.4	25 - 150		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
13C2-PFUnA	IS	84.1	25 - 150		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
d5-EtFOSAA	IS	88.2	25 - 150		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
13C2-10:2 FTS	IS	89.2	25 - 150		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
13C2-PFDoA	IS	101	25 - 150		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
d3-MeFOSA	IS	24.9	10 - 150		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
13C2-PFTeDA	IS	86.8	25 - 150		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
d5-EtFOSA	IS	24.4	10 - 150		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
13C2-PFHxDA	IS	83.8	25 - 150		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
d7-MeFOSE	IS	48.5	10 - 150		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1
d9-EtFOSE	IS	52.2	10 - 150		B0G0140	20-Jul-20	0.108 L	22-Jul-20 23:14	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: DUP-070820

PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001481-09	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 00:00	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	107	0.829	4.55		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
PFPeA	2706-90-3	301	1.45	4.55		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
PFBS	375-73-5	149	2.03	4.55		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
4:2 FTS	757124-72-4	8.35	1.58	4.55		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
PFHxA	307-24-4	385	2.48	4.55		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
PFPeS	2706-91-4	132	2.75	4.55	Q	B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
HFPO-DA	13252-13-6	<5.48	5.48	5.68		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
PFHpA	375-85-9	194	0.672	4.55		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
ADONA	919005-14-4	<0.821	0.821	4.55		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
PFHxS	355-46-4	1880	1.08	4.55		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
6:2 FTS	27619-97-2	677	2.27	4.55		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
PFOA	335-67-1	346	0.740	4.55		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
PFHpS	375-92-8	156	1.07	4.55		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
PFNA	375-95-1	57.6	0.921	4.55		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
PFOSA	754-91-6	418	2.01	4.55		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
PFOS	1763-23-1	7320	4.59	22.7	D	B0G0140	20-Jul-20	0.110 L	24-Jul-20 03:48	5
9Cl-PF3ONS	756426-58-1	<1.65	1.65	4.55		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
PFDA	335-76-2	11.4	1.69	4.55		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
8:2 FTS	39108-34-4	878	2.34	4.55		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
PFNS	68259-12-1	7.55	4.40	4.55		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
MeFOSAA	2355-31-9	<1.88	1.88	4.55		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
EtFOSAA	2991-50-6	<1.56	1.56	4.55		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
PFUnA	2058-94-8	<1.19	1.19	4.55		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
PFDS	335-77-3	1.95	1.40	4.55	J	B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
11Cl-PF3OUdS	763051-92-9	<2.74	2.74	4.55		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
10:2 FTS	120226-60-0	9.23	3.56	4.55		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
PFDoA	307-55-1	<0.900	0.900	4.55		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
MeFOSA	31506-32-8	<4.35	4.35	22.7		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
PFTrDA	72629-94-8	<0.562	0.562	4.55		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
PFDoS	79780-39-5	<4.74	4.74	5.68		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
PFTeDA	376-06-7	<0.858	0.858	4.55		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
EtFOSA	4151-50-2	<5.81	5.81	22.7		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
PFHxDA	67905-19-5	<0.334	0.334	4.55		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
PFODA	16517-11-6	<6.98	6.98	7.96		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
MeFOSE	24448-09-7	<6.90	6.90	22.7		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
EtFOSE	1691-99-2	<10.7	10.7	22.7		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C3-PFBA	IS	145	25 - 150		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1	

Sample ID: DUP-070820 **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001481-09	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	08-Jul-20 00:00	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	91.5	25 - 150		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
13C3-PFBS	IS	89.6	25 - 150		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
13C3-HFPO-DA	IS	88.0	25 - 150		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
13C2-4:2 FTS	IS	93.3	25 - 150		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
13C2-PFHxA	IS	85.1	25 - 150		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
13C4-PFHpA	IS	84.2	25 - 150		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
13C3-PFHxS	IS	83.5	25 - 150		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
13C2-6:2 FTS	IS	82.0	25 - 150		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
13C5-PFNA	IS	81.0	25 - 150		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
13C8-PFOA	IS	59.9	10 - 150		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
13C2-PFOA	IS	83.2	25 - 150		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
13C8-PFOS	IS	101	25 - 150	D	B0G0140	20-Jul-20	0.110 L	24-Jul-20 03:48	5
13C2-PFDA	IS	87.8	25 - 150		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
13C2-8:2 FTS	IS	86.6	25 - 150		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
d3-MeFOSAA	IS	81.5	25 - 150		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
13C2-PFUnA	IS	93.0	25 - 150		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
d5-EtFOSAA	IS	81.7	25 - 150		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
13C2-10:2 FTS	IS	69.6	25 - 150		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
13C2-PFDoA	IS	90.7	25 - 150		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
d3-MeFOSA	IS	31.4	10 - 150		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
13C2-PFTeDA	IS	76.5	25 - 150		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
d5-EtFOSA	IS	29.6	10 - 150		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
13C2-PFHxDA	IS	79.7	25 - 150		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
d7-MeFOSE	IS	49.6	10 - 150		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1
d9-EtFOSE	IS	57.6	10 - 150		B0G0140	20-Jul-20	0.110 L	22-Jul-20 23:24	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OUTFALL 29
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001481-10	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 07:55	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	8.00	0.835	4.58		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
PFPeA	2706-90-3	6.02	1.47	4.58		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
PFBS	375-73-5	<2.05	2.05	4.58		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
4:2 FTS	757124-72-4	<1.59	1.59	4.58		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
PFHxA	307-24-4	6.10	2.50	4.58		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
PFPeS	2706-91-4	<2.77	2.77	4.58		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
HFPO-DA	13252-13-6	<5.52	5.52	5.73		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
PFHpA	375-85-9	2.68	0.677	4.58	J	B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
ADONA	919005-14-4	<0.827	0.827	4.58		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
PFHxS	355-46-4	10.6	1.08	4.58		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
6:2 FTS	27619-97-2	<2.29	2.29	4.58		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
PFOA	335-67-1	6.76	0.746	4.58		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
PFHpS	375-92-8	<1.07	1.07	4.58		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
PFNA	375-95-1	<0.928	0.928	4.58		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
PFOSA	754-91-6	21.0	2.03	4.58		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
PFOS	1763-23-1	7.27	0.924	4.58		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
9Cl-PF3ONS	756426-58-1	<1.66	1.66	4.58		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
PFDA	335-76-2	<1.71	1.71	4.58		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
8:2 FTS	39108-34-4	<2.36	2.36	4.58		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
PFNS	68259-12-1	<4.43	4.43	4.58		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
MeFOSAA	2355-31-9	<1.89	1.89	4.58		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
EtFOSAA	2991-50-6	<1.57	1.57	4.58		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
PFUnA	2058-94-8	<1.20	1.20	4.58		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
PFDS	335-77-3	<1.41	1.41	4.58		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
11Cl-PF3OUdS	763051-92-9	<2.76	2.76	4.58		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
10:2 FTS	120226-60-0	<3.59	3.59	4.58		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
PFDoA	307-55-1	<0.907	0.907	4.58		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
MeFOSA	31506-32-8	<4.39	4.39	22.9		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
PFTrDA	72629-94-8	<0.566	0.566	4.58		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
PFDoS	79780-39-5	<4.78	4.78	5.73		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
PFTeDA	376-06-7	<0.865	0.865	4.58		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
EtFOSA	4151-50-2	<5.85	5.85	22.9		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
PFHxDA	67905-19-5	<0.337	0.337	4.58		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
PFODA	16517-11-6	<7.03	7.03	8.02		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
MeFOSE	24448-09-7	<6.95	6.95	22.9		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
EtFOSE	1691-99-2	<10.8	10.8	22.9		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	157	25 - 150	H	B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1

Sample ID: OUTFALL 29 **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001481-10	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 07:55	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	93.6	25 - 150		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
13C3-PFBS	IS	108	25 - 150		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
13C3-HFPO-DA	IS	102	25 - 150		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
13C2-4:2 FTS	IS	89.8	25 - 150		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
13C2-PFHxA	IS	96.7	25 - 150		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
13C4-PFHpA	IS	92.2	25 - 150		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
13C3-PFHxS	IS	89.6	25 - 150		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
13C2-6:2 FTS	IS	98.8	25 - 150		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
13C5-PFNA	IS	86.8	25 - 150		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
13C8-PFOA	IS	70.1	10 - 150		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
13C2-PFOA	IS	92.7	25 - 150		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
13C8-PFOS	IS	112	25 - 150		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
13C2-PFDA	IS	96.6	25 - 150		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
13C2-8:2 FTS	IS	81.6	25 - 150		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
d3-MeFOSAA	IS	90.6	25 - 150		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
13C2-PFUnA	IS	84.4	25 - 150		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
d5-EtFOSAA	IS	84.0	25 - 150		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
13C2-10:2 FTS	IS	80.1	25 - 150		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
13C2-PFDoA	IS	84.6	25 - 150		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
d3-MeFOSA	IS	37.3	10 - 150		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
13C2-PFTeDA	IS	81.1	25 - 150		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
d5-EtFOSA	IS	37.1	10 - 150		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
13C2-PFHxDA	IS	85.4	25 - 150		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
d7-MeFOSE	IS	60.5	10 - 150		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1
d9-EtFOSE	IS	63.2	10 - 150		B0G0140	20-Jul-20	0.109 L	24-Jul-20 03:58	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank
Conc.	Concentration
CRS	Cleanup Recovery Standard
D	Dilution
DL	Detection Limit
E	The associated compound concentration exceeded the calibration range of the instrument
H	Recovery and/or RPD was outside laboratory acceptance limits
I	Chemical Interference
IS	Internal Standard
J	The amount detected is below the Reporting Limit/LOQ
LOD	Limit of Detection
LOQ	Limit of Quantitation
M	Estimated Maximum Possible Concentration (CA Region 2 projects only)
MDL	Method Detection Limit
NA	Not applicable
ND	Not Detected
OPR	Ongoing Precision and Recovery sample
P	The reported concentration may include contribution from chlorinated diphenyl ether(s).
Q	The ion transition ratio is outside of the acceptance criteria.
RL	Reporting Limit
TEQ	Toxic Equivalency
U	Not Detected (specific projects only)
*	See Cover Letter

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

Vista Analytical Laboratory Certifications

Accrediting Authority	Certificate Number
Alaska Department of Environmental Conservation	17-013
Arkansas Department of Environmental Quality	19-013-0
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777-23
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2018017
Massachusetts Department of Environmental Protection	N/A
Michigan Department of Environmental Quality	9932
Minnesota Department of Health	1521520
New Hampshire Environmental Accreditation Program	207718-B
New Jersey Department of Environmental Protection	190001
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-010
Pennsylvania Department of Environmental Protection	016
Texas Commission on Environmental Quality	T104704189-19-10
Vermont Department of Health	VT-4042
Virginia Department of General Services	10272
Washington Department of Ecology	C584-19
Wisconsin Department of Natural Resources	998036160

Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request.

NELAP Accredited Test Methods

MATRIX: Air	
Description of Test	Method
Determination of Polychlorinated p-Dioxins & Polychlorinated Dibenzofurans	EPA 23
Determination of Polychlorinated p-Dioxins & Polychlorinated Dibenzofurans	EPA TO-9A

MATRIX: Biological Tissue	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Drinking Water	
Description of Test	Method
2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD) GC/HRMS	EPA 1613/1613B
1,4-Dioxane (1,4-Diethyleneoxide) analysis by GC/HRMS	EPA 522
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	ISO 25101 2009

MATRIX: Non-Potable Water	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Dioxin by GC/HRMS	EPA 613
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Solids	
Description of Test	Method
Tetra-Octa Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A



CHAIN OF CUSTODY

For Laboratory Use Only
 Work Order #: 2001481 Temp: 3.1 °C
 Storage ID: R-13/WR-2 Storage Secured. Yes No

Project ID: MSN WET WEATHER STORM SAMPLES PO#: MSNPF1 Sampler: C. Behnke
 (name)

TAT Standard: 21 days
 (check one): Rush (surcharge may apply) 14 days 7 days Specify: _____

Relinquished by (printed name and signature) [Signature] Date 7/13/20 Time 1300 Received by (printed name and signature) William W. Wight [Signature] Date 07/14/20 Time 09:11

Relinquished by (printed name and signature) _____ Date _____ Time _____ Received by (printed name and signature) _____ Date _____ Time _____

SHIP TO: Vista Analytical Laboratory
 1104 Windfield Way
 El Dorado Hills, CA 95762
 (916) 673-1520 * Fax (916) 673-0106
 Method of Shipment: _____
 Tracking No.: _____
 ATTN: _____

Add Analysis(es) Requested
 Container(s) _____
 PFAS by Isotope Dilution _____
 EPA Method 537 (DW only) _____
 PFOA/PFOs _____
 UCMR3 PFAS List: 6 _____
 537.1 List: 14 or 18 (Circle One) _____
 EPA Draft List of 24 _____
 OTHER: Please attach analyte list _____
 PFOA/PFOs _____
 UCMR3 PFAS List: 6 _____
 537.1 List of 14 _____
 537.1 List of 18 _____

Sample ID	Date	Time	Location/ Sample Description	Quantity	Type	Matrix	PFOA/PFOs	UCMR3 PFAS List: 6	537.1 List: 14 or 18 (Circle One)	EPA Draft List of 24	OTHER: Please attach analyte list	PFOA/PFOs	UCMR3 PFAS List: 6	537.1 List of 14	537.1 List of 18	Comments
DA032-05	7/8/20	1520		2	P	AQ					*					
DA032-13	7/8/20	1535		2	P	AQ					*					* WISCONSIN PFAS LIST
DA032-09 A	7/8/20	1550		2	P	AQ					*					
DA032-09 B	7/8/20	1555		2	P	AQ					*					
DA032-14	7/8/20	1610		2	P	AQ					*					
DA032-10 ALT	7/8/20	1620		2	P	AQ					*					
DA032-12 A	7/8/20	1640		2	P	AQ					*					
DA032-12 B	7/8/20	1650		2	P	AQ					*					
DUP-070820	7/8/20	—		2	P	AQ					*					
OUTFALL 29	7/9/20	0755		2	P	AQ					*					

Special Instructions/Comments: _____
 Name: CHRIS CIECIK
 Company: LIMNOTECH
 Address: 501 AVIS DRIVE
 City: ANN ARBOR MI 48108
 Phone: 734-332-1200
 Email: CCIECIK@LIMNO.COM

SEND DOCUMENTATION AND RESULTS TO:

Container Types: P= HDPE, PJ= HDPE Jar
 Bottle Preservation Type: TZ = Trizma: _____
 Matrix Types: AQ = Aqueous, DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment, SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum, O = Other: _____
 PY= Polypropylene, O = Other: _____

Sample Log-In Checklist

 Page # 1 of 1

 Vista Work Order #: 2001481

 TAT Std

Samples Arrival:	Date/Time: 07/14/20 09:11	Initials: WRW	Location: WR-2
			Shelf/Rack: NA
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
		<input type="checkbox"/> GLS	<input type="checkbox"/> DHL
		<input type="checkbox"/> Hand Delivered	<input type="checkbox"/> Other
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C: 3.1 (uncorrected)	Probe used: Y <input checked="" type="checkbox"/> N		Thermometer ID: IR-3
Temp °C: 3.1 (corrected)			

	YES	NO	NA
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Custody Seals Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Airbill <u>204</u> Trk # <u>3947 7925 1803</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Container	<input checked="" type="checkbox"/> Vista	<input type="checkbox"/> Client	<input type="checkbox"/> Retain
	<input type="checkbox"/> Return	<input type="checkbox"/> Dispose	
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chain of Custody / Sample Documentation Complete?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Holding Time Acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Logged In:	Date/Time: 07/15/20 0933	Initials: KS	Location: R-13 WR-2
			Shelf/Rack: A-3 E-4
COC Anomaly/Sample Acceptance Form completed?			<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>

Comments:

CoC/Label Reconciliation Report WO# 2001481

LabNumber	CoC Sample ID	SampleAlias	Sample Date/Time	Container	BaseMatrix	Sample Comments
2001481-01	A DA032-05	<input checked="" type="checkbox"/>	08-Jul-20 15:20	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001481-01	B DA032-05	<input checked="" type="checkbox"/>	08-Jul-20 15:20	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001481-02	A DA032-13	<input checked="" type="checkbox"/>	08-Jul-20 15:35	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001481-02	B DA032-13	<input checked="" type="checkbox"/>	08-Jul-20 15:35	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001481-03	A DA032-09 A	<input checked="" type="checkbox"/>	08-Jul-20 15:50	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001481-03	B DA032-09 A	<input checked="" type="checkbox"/>	08-Jul-20 15:50	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001481-04	A DA032-09 B	<input checked="" type="checkbox"/>	08-Jul-20 15:55	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001481-04	B DA032-09 B	<input checked="" type="checkbox"/>	08-Jul-20 15:55	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001481-05	A DA032-14	<input checked="" type="checkbox"/>	08-Jul-20 16:10	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001481-05	B DA032-14	<input checked="" type="checkbox"/>	08-Jul-20 16:10	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001481-06	A DA032-10 ALT	<input checked="" type="checkbox"/>	08-Jul-20 16:20	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001481-06	B DA032-10 ALT	<input checked="" type="checkbox"/>	08-Jul-20 16:20	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001481-07	A DA032-12 A	<input checked="" type="checkbox"/>	08-Jul-20 16:40	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001481-07	B DA032-12 A	<input checked="" type="checkbox"/>	08-Jul-20 16:40	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001481-08	A DA032-12 B	<input checked="" type="checkbox"/>	08-Jul-20 16:50	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001481-08	B DA032-12 B	<input checked="" type="checkbox"/>	08-Jul-20 16:50	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001481-09	A DUP-070820	<input checked="" type="checkbox"/>	08-Jul-20 00:00	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001481-09	B DUP-070820	<input checked="" type="checkbox"/>	08-Jul-20 00:00	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001481-10	A OUTFALL 29	<input checked="" type="checkbox"/>	09-Jul-20 07:55	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001481-10	B OUTFALL 29	<input checked="" type="checkbox"/>	09-Jul-20 07:55	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous

Checkmarks indicate that information on the COC reconciled with the sample label.
Any discrepancies are noted in the following columns.

	Yes	No	NA	Comments:
Sample Container Intact?	✓			
Sample Custody Seals Intact?			✓	
Adequate Sample Volume?	✓			
Container Type Appropriate for Analysis(es)	✓			
Preservation Documented: Na ₂ S ₂ O ₃ Trizma <u>None</u> Other		✓	✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓	

Verified by/Date: KA 07/15/20

August 06, 2020

Vista Work Order No. 2001482

Mr. Chris Cieciek
LimnoTech, Inc.
501 Avis Drive
Ann Arbor, MI 48108

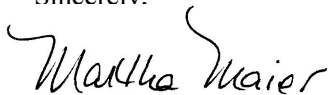
Dear Mr. Cieciek,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on July 14, 2020 under your Project Name 'MSN Wet Weather Storm Samples'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,



Martha Maier
Laboratory Director



Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Work Order No. 2001482

Case Narrative

Sample Condition on Receipt:

Fourteen aqueous samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology.

Analytical Notes:

PFAS Isotope Dilution Method

Samples "OUTFALL 05", "OUTFALL 24" and "OUTFALL 25" contained particulate and were centrifuged prior to extraction.

The samples were extracted and analyzed for a selected list of PFAS using Vista's PFAS Isotope Dilution Method. The results for PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Results for all other analytes include the linear isomers only.

Holding Times

The samples were extracted and analyzed within the hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank above the Reporting Limit. The OPR recoveries were within the method acceptance criteria.

The internal standard recoveries outside the acceptance criteria are listed in the table below.

QC Anomalies

LabNumber	SampleName	Analysis	Analyte	Flag	%Rec
2001482-03	OUTFALL 05	PFAS Isotope Dilution Method	13C2-PFHxDA	H	22.7
2001482-09	OUTFALL 24	PFAS Isotope Dilution Method	13C2-PFTeDA	H	23.9
2001482-09	OUTFALL 24	PFAS Isotope Dilution Method	13C2-PFHxDA	H	14.8
2001482-11	OUTFALL 25	PFAS Isotope Dilution Method	13C2-PFTeDA	H	24.1
2001482-11	OUTFALL 25	PFAS Isotope Dilution Method	13C2-PFHxDA	H	16.2
B0G0133-BLK1	B0G0133-BLK1	PFAS Isotope Dilution Method	d3-MeFOSA	H	9.50
B0G0133-BLK1	B0G0133-BLK1	PFAS Isotope Dilution Method	d5-EtFOSA	H	8.50

H = Recovery was outside laboratory acceptance criteria.

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Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
2001482-01	OUTFALL 09	09-Jul-20 13:10	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001482-02	OUTFALL 06	09-Jul-20 13:25	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001482-03	OUTFALL 05	09-Jul-20 13:35	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001482-04	OUTFALL 04	09-Jul-20 13:50	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001482-05	OUTFALL 32	09-Jul-20 14:25	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001482-06	OUTFALL 01	09-Jul-20 14:40	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001482-07	OUTFALL 28	09-Jul-20 14:50	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001482-08	OUTFALL 27	09-Jul-20 14:55	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001482-09	OUTFALL 24	09-Jul-20 15:10	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001482-10	OUTFALL A	09-Jul-20 15:20	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001482-11	OUTFALL 25	09-Jul-20 15:25	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001482-12	OUTFALL 36	09-Jul-20 15:35	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001482-13	FIELD BLANK-070920	09-Jul-20 16:45	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
2001482-14	DUPLICATE-070920	09-Jul-20 00:00	14-Jul-20 09:11	HDPE Bottle, 125 mL HDPE Bottle, 125 mL

ANALYTICAL RESULTS

Sample ID: Method Blank					PFAS Isotope Dilution Method					
Client Data				Laboratory Data						
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	B0G0133-BLK1	Column:	BEH C18			
Project:	MSN Wet Weather Storm Samples									
Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	<0.729	0.729	4.00		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
PFPeA	2706-90-3	<1.28	1.28	4.00		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
PFBS	375-73-5	<1.79	1.79	4.00		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
4:2 FTS	757124-72-4	<1.39	1.39	4.00		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
PFHxA	307-24-4	<2.18	2.18	4.00		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
PFPeS	2706-91-4	<2.42	2.42	4.00		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
HFPO-DA	13252-13-6	<4.82	4.82	5.00		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
PFHpA	375-85-9	<0.591	0.591	4.00		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
ADONA	919005-14-4	<0.722	0.722	4.00		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
PFHxS	355-46-4	<0.947	0.947	4.00		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
6:2 FTS	27619-97-2	<2.00	2.00	4.00		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
PFOA	335-67-1	<0.651	0.651	4.00		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
PFHpS	375-92-8	<0.937	0.937	4.00		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
PFNA	375-95-1	<0.810	0.810	4.00		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
PFOSA	754-91-6	<1.77	1.77	4.00		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
PFOS	1763-23-1	<0.807	0.807	4.00		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
9Cl-PF3ONS	756426-58-1	<1.45	1.45	4.00		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
PFDA	335-76-2	<1.49	1.49	4.00		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
8:2 FTS	39108-34-4	<2.06	2.06	4.00		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
PFNS	68259-12-1	<3.87	3.87	4.00		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
MeFOSAA	2355-31-9	<1.65	1.65	4.00		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
EtFOSAA	2991-50-6	<1.37	1.37	4.00		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
PFUnA	2058-94-8	<1.05	1.05	4.00		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
PFDS	335-77-3	<1.23	1.23	4.00		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
11Cl-PF3OUdS	763051-92-9	<2.41	2.41	4.00		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
10:2 FTS	120226-60-0	<3.13	3.13	4.00		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
PFDoA	307-55-1	<0.792	0.792	4.00		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
MeFOSA	31506-32-8	<3.83	3.83	20.0		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
PFTTrDA	72629-94-8	<0.494	0.494	4.00		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
PFDoS	79780-39-5	<4.17	4.17	5.00		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
PFTeDA	376-06-7	<0.755	0.755	4.00		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
EtFOSA	4151-50-2	<5.11	5.11	20.0		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
PFHxDA	67905-19-5	<0.294	0.294	4.00		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
PFODA	16517-11-6	<6.14	6.14	7.00		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
MeFOSE	24448-09-7	<6.07	6.07	20.0		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
EtFOSE	1691-99-2	<9.44	9.44	20.0		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C3-PFBA	IS	53.1	25 - 150		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1	

Sample ID: Method Blank **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	B0G0133-BLK1	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples						

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	68.1	25 - 150		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
13C3-PFBS	IS	73.4	25 - 150		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
13C3-HFPO-DA	IS	69.6	25 - 150		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
13C2-4:2 FTS	IS	84.0	25 - 150		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
13C2-PFHxA	IS	72.2	25 - 150		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
13C4-PFHpA	IS	73.4	25 - 150		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
13C3-PFHxS	IS	75.2	25 - 150		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
13C2-6:2 FTS	IS	65.8	25 - 150		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
13C5-PFNA	IS	69.6	25 - 150		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
13C8-PFOA	IS	28.9	10 - 150		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
13C2-PFOA	IS	74.9	25 - 150		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
13C8-PFOS	IS	73.7	25 - 150		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
13C2-PFDA	IS	65.2	25 - 150		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
13C2-8:2 FTS	IS	89.6	25 - 150		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
d3-MeFOSAA	IS	56.7	25 - 150		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
13C2-PFUnA	IS	67.8	25 - 150		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
d5-EtFOSAA	IS	52.9	25 - 150		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
13C2-10:2 FTS	IS	74.6	25 - 150		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
13C2-PFDoA	IS	59.0	25 - 150		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
d3-MeFOSA	IS	9.50	10 - 150	H	B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
13C2-PFTeDA	IS	55.8	25 - 150		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
d5-EtFOSA	IS	8.50	10 - 150	H	B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
13C2-PFHxDA	IS	49.0	25 - 150		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
d7-MeFOSE	IS	20.8	10 - 150		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1
d9-EtFOSE	IS	24.1	10 - 150		B0G0133	25-Jul-20	0.125 L	28-Jul-20 16:08	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OPR						PFAS Isotope Dilution Method					
Client Data					Laboratory Data						
Name:	LimnoTech, Inc.		Matrix:	Aqueous		Lab Sample:	B0G0133-BS1		Column:	BEH C18	
Project:	MSN Wet Weather Storm Samples										
Analyte	CAS Number	Amt Found (ng/L)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	7.56	8.00	94.5	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
PFPeA	2706-90-3	7.54	8.00	94.2	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
PFBS	375-73-5	7.92	8.00	99.0	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
4:2 FTS	757124-72-4	7.62	8.00	95.3	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
PFHxA	307-24-4	7.92	8.00	99.0	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
PFPeS	2706-91-4	9.00	8.00	112	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
HFPO-DA	13252-13-6	6.32	8.00	79.0	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
PFHpA	375-85-9	8.80	8.00	110	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
ADONA	919005-14-4	7.03	8.00	87.9	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
PFHxS	355-46-4	5.71	8.00	71.4	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
6:2 FTS	27619-97-2	8.41	8.00	105	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
PFOA	335-67-1	8.22	8.00	103	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
PFHpS	375-92-8	9.65	8.00	121	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
PFNA	375-95-1	7.74	8.00	96.7	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
PFOSA	754-91-6	8.71	8.00	109	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
PFOS	1763-23-1	7.04	8.00	88.0	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
9Cl-PF3ONS	756426-58-1	7.30	8.00	91.3	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
PFDA	335-76-2	9.39	8.00	117	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
8:2 FTS	39108-34-4	7.79	8.00	97.4	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
PFNS	68259-12-1	7.01	8.00	87.6	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
MeFOSAA	2355-31-9	8.75	8.00	109	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
EtFOSAA	2991-50-6	6.91	8.00	86.4	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
PFUnA	2058-94-8	8.11	8.00	101	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
PFDS	335-77-3	6.95	8.00	86.9	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
11Cl-PF3OUdS	763051-92-9	9.41	8.00	118	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
10:2 FTS	120226-60-0	10.1	8.00	126	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
PFDoA	307-55-1	8.12	8.00	101	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
MeFOSA	31506-32-8	51.6	40.0	129	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
PFTTrDA	72629-94-8	9.11	8.00	114	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
PFDoS	79780-39-5	8.12	8.00	102	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
PFTTeDA	376-06-7	8.70	8.00	109	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
EtFOSA	4151-50-2	39.4	40.0	98.6	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
PFHxDA	67905-19-5	8.20	8.00	102	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
PFODA	16517-11-6	6.24	8.00	78.0	50 - 150	J	B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1

Sample ID: OPR

PFAS Isotope Dilution Method

Client Data					Laboratory Data						
Name:	LimnoTech, Inc.	Matrix:	Aqueous		Lab Sample:	B0G0133-BS1	Column:	BEH C18			
Project:	MSN Wet Weather Storm Samples										

Analyte	CAS Number	Amt Found (ng/L)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
MeFOSE	24448-09-7	54.3	40.0	136	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
EtFOSE	1691-99-2	26.7	40.0	66.8	50 - 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
Labeled Standards		Type		% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA		IS		87.8	25- 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
13C3-PFPeA		IS		71.5	25- 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
13C3-PFBS		IS		74.0	25- 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
13C3-HFPO-DA		IS		70.6	25- 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
13C2-4:2 FTS		IS		73.4	25- 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
13C2-PFHxA		IS		68.4	25- 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
13C4-PFHpA		IS		74.2	25- 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
13C3-PFHxS		IS		78.0	25- 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
13C2-6:2 FTS		IS		72.2	25- 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
13C5-PFNA		IS		67.5	25- 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
13C8-PFOA		IS		29.7	10- 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
13C2-PFOA		IS		74.4	25- 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
13C8-PFOS		IS		69.2	25- 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
13C2-PFDA		IS		61.4	25- 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
13C2-8:2 FTS		IS		75.8	25- 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
d3-MeFOSAA		IS		55.5	25- 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
13C2-PFUnA		IS		63.9	25- 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
d5-EtFOSAA		IS		56.7	25- 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
13C2-10:2 FTS		IS		43.9	25- 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
13C2-PFDoA		IS		52.4	25- 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
d3-MeFOA		IS		10.3	10- 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
13C2-PFTeDA		IS		52.0	25- 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
d5-EtFOA		IS		10.8	10- 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
13C2-PFHxDA		IS		42.2	25- 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
d7-MeFOSE		IS		22.6	10- 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1
d9-EtFOSE		IS		25.2	10- 150		B0G0133	25-Jul-20	0.125 L	27-Jul-20 12:58	1

Sample ID: OUTFALL 09
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001482-01	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 13:10	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	9.85	0.847	4.65		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
PFPeA	2706-90-3	<1.49	1.49	4.65		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
PFBS	375-73-5	2.11	2.08	4.65	J	B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
4:2 FTS	757124-72-4	<1.62	1.62	4.65		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
PFHxA	307-24-4	3.98	2.53	4.65	J	B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
PFPeS	2706-91-4	<2.81	2.81	4.65		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
HFPO-DA	13252-13-6	<5.60	5.60	5.81		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
PFHpA	375-85-9	1.53	0.687	4.65	J	B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
ADONA	919005-14-4	<0.839	0.839	4.65		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
PFHxS	355-46-4	11.5	1.10	4.65		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
6:2 FTS	27619-97-2	<2.32	2.32	4.65		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
PFOA	335-67-1	5.06	0.757	4.65		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
PFHpS	375-92-8	<1.09	1.09	4.65		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
PFNA	375-95-1	<0.942	0.942	4.65		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
PFOSA	754-91-6	18.3	2.06	4.65		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
PFOS	1763-23-1	7.56	0.938	4.65		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
9Cl-PF3ONS	756426-58-1	<1.69	1.69	4.65		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
PFDA	335-76-2	<1.73	1.73	4.65		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
8:2 FTS	39108-34-4	<2.39	2.39	4.65		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
PFNS	68259-12-1	<4.50	4.50	4.65		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
MeFOSAA	2355-31-9	<1.92	1.92	4.65		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
EtFOSAA	2991-50-6	<1.59	1.59	4.65		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
PFUnA	2058-94-8	<1.22	1.22	4.65		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
PFDS	335-77-3	<1.43	1.43	4.65		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
11Cl-PF3OUdS	763051-92-9	<2.80	2.80	4.65		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
10:2 FTS	120226-60-0	<3.64	3.64	4.65		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
PFDoA	307-55-1	<0.921	0.921	4.65		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
MeFOSA	31506-32-8	<4.45	4.45	23.2		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
PFTrDA	72629-94-8	<0.574	0.574	4.65		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
PFDoS	79780-39-5	<4.85	4.85	5.81		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
PFTeDA	376-06-7	<0.878	0.878	4.65		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
EtFOSA	4151-50-2	<5.94	5.94	23.2		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
PFHxDA	67905-19-5	<0.342	0.342	4.65		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
PFODA	16517-11-6	<7.14	7.14	8.14		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
MeFOSE	24448-09-7	<7.06	7.06	23.2		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
EtFOSE	1691-99-2	<11.0	11.0	23.2		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	99.9	25 - 150			B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1

Sample ID: OUTFALL 09 **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001482-01	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 13:10	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	74.0	25 - 150		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
13C3-PFBS	IS	77.2	25 - 150		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
13C3-HFPO-DA	IS	69.6	25 - 150		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
13C2-4:2 FTS	IS	73.5	25 - 150		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
13C2-PFHxA	IS	76.6	25 - 150		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
13C4-PFHpA	IS	73.0	25 - 150		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
13C3-PFHxS	IS	74.4	25 - 150		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
13C2-6:2 FTS	IS	68.2	25 - 150		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
13C5-PFNA	IS	74.4	25 - 150		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
13C8-PFOA	IS	47.9	10 - 150		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
13C2-PFOA	IS	71.1	25 - 150		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
13C8-PFOS	IS	76.2	25 - 150		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
13C2-PFDA	IS	65.0	25 - 150		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
13C2-8:2 FTS	IS	80.5	25 - 150		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
d3-MeFOSAA	IS	71.7	25 - 150		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
13C2-PFUnA	IS	64.4	25 - 150		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
d5-EtFOSAA	IS	67.1	25 - 150		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
13C2-10:2 FTS	IS	65.1	25 - 150		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
13C2-PFDoA	IS	55.9	25 - 150		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
d3-MeFOSA	IS	21.5	10 - 150		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
13C2-PFTeDA	IS	53.4	25 - 150		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
d5-EtFOSA	IS	19.9	10 - 150		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
13C2-PFHxDA	IS	47.2	25 - 150		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
d7-MeFOSE	IS	45.7	10 - 150		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1
d9-EtFOSE	IS	45.6	10 - 150		B0G0133	25-Jul-20	0.108 L	27-Jul-20 13:40	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OUTFALL 06
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001482-02	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 13:25	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	9.46	0.822	4.51		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
PFPeA	2706-90-3	<1.44	1.44	4.51		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
PFBS	375-73-5	2.78	2.02	4.51	J	B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
4:2 FTS	757124-72-4	<1.57	1.57	4.51		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
PFHxA	307-24-4	3.04	2.46	4.51	J	B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
PFPeS	2706-91-4	<2.73	2.73	4.51		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
HFPO-DA	13252-13-6	<5.44	5.44	5.64		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
PFHpA	375-85-9	<0.667	0.667	4.51		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
ADONA	919005-14-4	<0.815	0.815	4.51		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
PFHxS	355-46-4	7.32	1.07	4.51		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
6:2 FTS	27619-97-2	<2.26	2.26	4.51		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
PFOA	335-67-1	4.74	0.734	4.51		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
PFHpS	375-92-8	<1.06	1.06	4.51		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
PFNA	375-95-1	<0.914	0.914	4.51		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
PFOSA	754-91-6	24.9	2.00	4.51		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
PFOS	1763-23-1	9.49	0.910	4.51		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
9Cl-PF3ONS	756426-58-1	<1.64	1.64	4.51		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
PFDA	335-76-2	<1.68	1.68	4.51		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
8:2 FTS	39108-34-4	<2.32	2.32	4.51		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
PFNS	68259-12-1	<4.37	4.37	4.51		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
MeFOSAA	2355-31-9	<1.86	1.86	4.51		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
EtFOSAA	2991-50-6	<1.55	1.55	4.51		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
PFUnA	2058-94-8	<1.18	1.18	4.51		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
PFDS	335-77-3	<1.39	1.39	4.51		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
11Cl-PF3OUdS	763051-92-9	<2.72	2.72	4.51		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
10:2 FTS	120226-60-0	<3.53	3.53	4.51		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
PFDoA	307-55-1	<0.894	0.894	4.51		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
MeFOSA	31506-32-8	<4.32	4.32	22.6		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
PFTrDA	72629-94-8	<0.557	0.557	4.51		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
PFDoS	79780-39-5	<4.70	4.70	5.64		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
PFTeDA	376-06-7	<0.852	0.852	4.51		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
EtFOSA	4151-50-2	<5.76	5.76	22.6		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
PFHxDA	67905-19-5	<0.332	0.332	4.51		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
PFODA	16517-11-6	<6.93	6.93	7.90		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
MeFOSE	24448-09-7	<6.85	6.85	22.6		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
EtFOSE	1691-99-2	<10.6	10.6	22.6		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	116	25 - 150			B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1

Sample ID: OUTFALL 06 **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001482-02	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 13:25	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	71.8	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
13C3-PFBS	IS	77.1	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
13C3-HFPO-DA	IS	73.8	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
13C2-4:2 FTS	IS	76.8	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
13C2-PFHxA	IS	74.9	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
13C4-PFHpA	IS	72.3	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
13C3-PFHxS	IS	75.3	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
13C2-6:2 FTS	IS	72.8	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
13C5-PFNA	IS	77.6	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
13C8-PFOA	IS	53.8	10 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
13C2-PFOA	IS	71.7	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
13C8-PFOS	IS	68.1	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
13C2-PFDA	IS	70.7	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
13C2-8:2 FTS	IS	91.5	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
d3-MeFOSAA	IS	77.1	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
13C2-PFUnA	IS	73.7	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
d5-EtFOSAA	IS	73.6	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
13C2-10:2 FTS	IS	64.4	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
13C2-PFDoA	IS	66.7	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
d3-MeFOSA	IS	26.0	10 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
13C2-PFTeDA	IS	53.7	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
d5-EtFOSA	IS	26.0	10 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
13C2-PFHxDA	IS	45.8	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
d7-MeFOSE	IS	47.4	10 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1
d9-EtFOSE	IS	46.1	10 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 13:50	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OUTFALL 05
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001482-03	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 13:35	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	14.0	0.831	4.56		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
PFPeA	2706-90-3	<1.46	1.46	4.56		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
PFBS	375-73-5	2.06	2.04	4.56	J	B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
4:2 FTS	757124-72-4	<1.58	1.58	4.56		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
PFHxA	307-24-4	2.52	2.48	4.56	J	B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
PFPeS	2706-91-4	<2.76	2.76	4.56		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
HFPO-DA	13252-13-6	<5.49	5.49	5.70		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
PFHpA	375-85-9	<0.673	0.673	4.56		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
ADONA	919005-14-4	<0.823	0.823	4.56		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
PFHxS	355-46-4	3.76	1.08	4.56	J	B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
6:2 FTS	27619-97-2	<2.28	2.28	4.56		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
PFOA	335-67-1	2.80	0.742	4.56	J	B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
PFHpS	375-92-8	<1.07	1.07	4.56		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
PFNA	375-95-1	<0.923	0.923	4.56		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
PFOSA	754-91-6	10.1	2.02	4.56		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
PFOS	1763-23-1	6.19	0.919	4.56	Q	B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
9Cl-PF3ONS	756426-58-1	<1.65	1.65	4.56		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
PFDA	335-76-2	<1.70	1.70	4.56		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
8:2 FTS	39108-34-4	<2.35	2.35	4.56		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
PFNS	68259-12-1	<4.41	4.41	4.56		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
MeFOSAA	2355-31-9	<1.88	1.88	4.56		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
EtFOSAA	2991-50-6	<1.56	1.56	4.56		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
PFUnA	2058-94-8	<1.20	1.20	4.56		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
PFDS	335-77-3	<1.40	1.40	4.56		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
11Cl-PF3OUdS	763051-92-9	<2.75	2.75	4.56		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
10:2 FTS	120226-60-0	<3.57	3.57	4.56		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
PFDoA	307-55-1	<0.902	0.902	4.56		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
MeFOSA	31506-32-8	<4.36	4.36	22.8		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
PFTrDA	72629-94-8	<0.563	0.563	4.56		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
PFDoS	79780-39-5	<4.75	4.75	5.70		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
PFTeDA	376-06-7	<0.860	0.860	4.56		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
EtFOSA	4151-50-2	<5.82	5.82	22.8		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
PFHxDA	67905-19-5	<0.335	0.335	4.56		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
PFODA	16517-11-6	<7.00	7.00	7.98		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
MeFOSE	24448-09-7	<6.92	6.92	22.8		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
EtFOSE	1691-99-2	<10.8	10.8	22.8		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	62.4	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1

Sample ID: OUTFALL 05 **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001482-03	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 13:35	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	64.6	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
13C3-PFBS	IS	74.9	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
13C3-HFPO-DA	IS	77.5	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
13C2-4:2 FTS	IS	76.7	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
13C2-PFHxA	IS	75.0	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
13C4-PFHpA	IS	71.5	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
13C3-PFHxS	IS	75.8	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
13C2-6:2 FTS	IS	74.0	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
13C5-PFNA	IS	73.5	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
13C8-PFOA	IS	53.2	10 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
13C2-PFOA	IS	70.3	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
13C8-PFOS	IS	75.4	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
13C2-PFDA	IS	71.2	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
13C2-8:2 FTS	IS	84.7	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
d3-MeFOSAA	IS	72.7	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
13C2-PFUnA	IS	59.2	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
d5-EtFOSAA	IS	74.1	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
13C2-10:2 FTS	IS	60.3	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
13C2-PFDoA	IS	59.2	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
d3-MeFOSA	IS	28.7	10 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
13C2-PFTeDA	IS	35.9	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
d5-EtFOSA	IS	29.0	10 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
13C2-PFHxDA	IS	22.7	25 - 150	H	B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
d7-MeFOSE	IS	36.2	10 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1
d9-EtFOSE	IS	41.1	10 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 14:01	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OUTFALL 04
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001482-04	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 13:50	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	8.92	0.837	4.59		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
PFPeA	2706-90-3	7.46	1.47	4.59		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
PFBS	375-73-5	2.05	2.05	4.59	J	B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
4:2 FTS	757124-72-4	<1.60	1.60	4.59		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
PFHxA	307-24-4	3.84	2.50	4.59	J, Q	B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
PFPeS	2706-91-4	<2.78	2.78	4.59		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
HFPO-DA	13252-13-6	<5.53	5.53	5.74		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
PFHpA	375-85-9	1.78	0.678	4.59	J, Q	B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
ADONA	919005-14-4	<0.829	0.829	4.59		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
PFHxS	355-46-4	8.39	1.09	4.59		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
6:2 FTS	27619-97-2	<2.30	2.30	4.59		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
PFOA	335-67-1	4.13	0.747	4.59	J	B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
PFHpS	375-92-8	<1.08	1.08	4.59		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
PFNA	375-95-1	<0.930	0.930	4.59		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
PFOSA	754-91-6	21.1	2.03	4.59		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
PFOS	1763-23-1	6.02	0.926	4.59		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
9Cl-PF3ONS	756426-58-1	<1.66	1.66	4.59		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
PFDA	335-76-2	<1.71	1.71	4.59		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
8:2 FTS	39108-34-4	<2.36	2.36	4.59		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
PFNS	68259-12-1	<4.44	4.44	4.59		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
MeFOSAA	2355-31-9	<1.89	1.89	4.59		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
EtFOSAA	2991-50-6	<1.57	1.57	4.59		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
PFUnA	2058-94-8	<1.21	1.21	4.59		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
PFDS	335-77-3	<1.41	1.41	4.59		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
11Cl-PF3OUdS	763051-92-9	<2.77	2.77	4.59		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
10:2 FTS	120226-60-0	<3.59	3.59	4.59		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
PFDoA	307-55-1	<0.909	0.909	4.59		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
MeFOSA	31506-32-8	<4.40	4.40	23.0		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
PFTrDA	72629-94-8	<0.567	0.567	4.59		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
PFDoS	79780-39-5	<4.79	4.79	5.74		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
PFTeDA	376-06-7	<0.867	0.867	4.59		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
EtFOSA	4151-50-2	<5.87	5.87	23.0		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
PFHxDA	67905-19-5	<0.337	0.337	4.59		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
PFODA	16517-11-6	<7.05	7.05	8.03		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
MeFOSE	24448-09-7	<6.97	6.97	23.0		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
EtFOSE	1691-99-2	<10.8	10.8	23.0		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	118	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1

Sample ID: OUTFALL 04 **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001482-04	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 13:50	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	72.1	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
13C3-PFBS	IS	77.1	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
13C3-HFPO-DA	IS	73.5	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
13C2-4:2 FTS	IS	79.7	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
13C2-PFHxA	IS	82.3	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
13C4-PFHpA	IS	75.4	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
13C3-PFHxS	IS	78.3	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
13C2-6:2 FTS	IS	66.0	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
13C5-PFNA	IS	67.0	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
13C8-PFOA	IS	50.1	10 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
13C2-PFOA	IS	74.1	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
13C8-PFOS	IS	75.5	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
13C2-PFDA	IS	75.6	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
13C2-8:2 FTS	IS	70.7	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
d3-MeFOSAA	IS	75.7	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
13C2-PFUnA	IS	72.1	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
d5-EtFOSAA	IS	65.9	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
13C2-10:2 FTS	IS	69.4	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
13C2-PFDoA	IS	63.3	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
d3-MeFOSA	IS	22.8	10 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
13C2-PFTeDA	IS	58.1	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
d5-EtFOSA	IS	21.3	10 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
13C2-PFHxDA	IS	51.2	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
d7-MeFOSE	IS	46.8	10 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1
d9-EtFOSE	IS	43.8	10 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 14:11	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OUTFALL 32
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001482-05	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 14:25	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	20.2	0.819	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
PFPeA	2706-90-3	41.7	1.44	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
PFBS	375-73-5	20.9	2.01	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
4:2 FTS	757124-72-4	<1.56	1.56	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
PFHxA	307-24-4	50.3	2.45	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
PFPeS	2706-91-4	27.7	2.72	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
HFPO-DA	13252-13-6	<5.42	5.42	5.62		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
PFHpA	375-85-9	25.8	0.664	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
ADONA	919005-14-4	<0.811	0.811	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
PFHxS	355-46-4	205	1.06	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
6:2 FTS	27619-97-2	57.0	2.25	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
PFOA	335-67-1	40.6	0.731	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
PFHpS	375-92-8	10.1	1.05	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
PFNA	375-95-1	4.23	0.910	4.49	J, Q	B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
PFOSA	754-91-6	18.3	1.99	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
PFOS	1763-23-1	528	0.907	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
9CI-PF3ONS	756426-58-1	<1.63	1.63	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
PFDA	335-76-2	<1.67	1.67	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
8:2 FTS	39108-34-4	14.1	2.31	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
PFNS	68259-12-1	<4.35	4.35	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
MeFOSAA	2355-31-9	<1.85	1.85	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
EtFOSAA	2991-50-6	<1.54	1.54	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
PFUnA	2058-94-8	<1.18	1.18	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
PFDS	335-77-3	<1.38	1.38	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
11CI-PF3OUdS	763051-92-9	<2.71	2.71	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
10:2 FTS	120226-60-0	<3.52	3.52	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
PFDoA	307-55-1	<0.890	0.890	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
MeFOSA	31506-32-8	<4.30	4.30	22.5		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
PFTTrDA	72629-94-8	<0.555	0.555	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
PFDoS	79780-39-5	<4.68	4.68	5.62		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
PFTeDA	376-06-7	<0.848	0.848	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
EtFOSA	4151-50-2	<5.74	5.74	22.5		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
PFHxDA	67905-19-5	<0.330	0.330	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
PFODA	16517-11-6	<6.90	6.90	7.86		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
MeFOSE	24448-09-7	<6.82	6.82	22.5		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
EtFOSE	1691-99-2	<10.6	10.6	22.5		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	114	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1

Sample ID: OUTFALL 32 **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001482-05	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 14:25	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	76.2	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
13C3-PFBS	IS	81.9	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
13C3-HFPO-DA	IS	70.8	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
13C2-4:2 FTS	IS	75.9	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
13C2-PFHxA	IS	81.5	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
13C4-PFHpA	IS	77.3	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
13C3-PFHxS	IS	81.2	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
13C2-6:2 FTS	IS	71.8	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
13C5-PFNA	IS	75.5	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
13C8-PFOA	IS	50.1	10 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
13C2-PFOA	IS	78.8	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
13C8-PFOS	IS	77.7	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
13C2-PFDA	IS	74.4	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
13C2-8:2 FTS	IS	72.0	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
d3-MeFOSAA	IS	75.2	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
13C2-PFUnA	IS	71.7	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
d5-EtFOSAA	IS	68.7	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
13C2-10:2 FTS	IS	71.2	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
13C2-PFDoA	IS	62.6	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
d3-MeFOSA	IS	14.7	10 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
13C2-PFTeDA	IS	69.6	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
d5-EtFOSA	IS	15.5	10 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
13C2-PFHxDA	IS	65.6	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
d7-MeFOSE	IS	44.6	10 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1
d9-EtFOSE	IS	43.2	10 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 14:53	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OUTFALL 01
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001482-06	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 14:40	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	16.4	0.808	4.43		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
PFPeA	2706-90-3	40.2	1.42	4.43		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
PFBS	375-73-5	<1.98	1.98	4.43		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
4:2 FTS	757124-72-4	<1.54	1.54	4.43		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
PFHxA	307-24-4	54.4	2.42	4.43		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
PFPeS	2706-91-4	<2.68	2.68	4.43		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
HFPO-DA	13252-13-6	<5.34	5.34	5.54		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
PFHpA	375-85-9	23.1	0.655	4.43		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
ADONA	919005-14-4	<0.800	0.800	4.43		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
PFHxS	355-46-4	15.0	1.05	4.43		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
6:2 FTS	27619-97-2	6.42	2.22	4.43		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
PFOA	335-67-1	74.4	0.721	4.43		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
PFHpS	375-92-8	<1.04	1.04	4.43		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
PFNA	375-95-1	13.4	0.897	4.43		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
PFOSA	754-91-6	6.46	1.96	4.43		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
PFOS	1763-23-1	46.6	0.894	4.43		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
9Cl-PF3ONS	756426-58-1	<1.61	1.61	4.43		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
PFDA	335-76-2	40.1	1.65	4.43		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
8:2 FTS	39108-34-4	<2.28	2.28	4.43		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
PFNS	68259-12-1	<4.29	4.29	4.43		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
MeFOSAA	2355-31-9	<1.83	1.83	4.43		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
EtFOSAA	2991-50-6	<1.52	1.52	4.43		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
PFUnA	2058-94-8	3.63	1.16	4.43	J	B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
PFDS	335-77-3	<1.36	1.36	4.43		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
11Cl-PF3OUdS	763051-92-9	<2.67	2.67	4.43		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
10:2 FTS	120226-60-0	<3.47	3.47	4.43		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
PFDoA	307-55-1	13.2	0.878	4.43		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
MeFOSA	31506-32-8	<4.24	4.24	22.2		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
PFTrDA	72629-94-8	0.999	0.547	4.43	J, Q	B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
PFDoS	79780-39-5	<4.62	4.62	5.54		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
PFTeDA	376-06-7	2.76	0.837	4.43	J	B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
EtFOSA	4151-50-2	<5.66	5.66	22.2		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
PFHxDA	67905-19-5	<0.326	0.326	4.43		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
PFODA	16517-11-6	<6.80	6.80	7.76		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
MeFOSE	24448-09-7	<6.73	6.73	22.2		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
EtFOSE	1691-99-2	<10.5	10.5	22.2		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	127	25 - 150			B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1

Sample ID: OUTFALL 01 **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001482-06	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 14:40	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	77.0	25 - 150		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
13C3-PFBS	IS	78.4	25 - 150		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
13C3-HFPO-DA	IS	79.3	25 - 150		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
13C2-4:2 FTS	IS	80.5	25 - 150		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
13C2-PFHxA	IS	83.3	25 - 150		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
13C4-PFHpA	IS	69.8	25 - 150		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
13C3-PFHxS	IS	81.7	25 - 150		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
13C2-6:2 FTS	IS	81.4	25 - 150		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
13C5-PFNA	IS	72.3	25 - 150		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
13C8-PFOA	IS	52.7	10 - 150		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
13C2-PFOA	IS	74.0	25 - 150		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
13C8-PFOS	IS	73.3	25 - 150		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
13C2-PFDA	IS	79.8	25 - 150		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
13C2-8:2 FTS	IS	95.0	25 - 150		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
d3-MeFOSAA	IS	80.9	25 - 150		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
13C2-PFUnA	IS	80.7	25 - 150		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
d5-EtFOSAA	IS	74.0	25 - 150		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
13C2-10:2 FTS	IS	81.4	25 - 150		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
13C2-PFDoA	IS	73.3	25 - 150		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
d3-MeFOSA	IS	27.8	10 - 150		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
13C2-PFTeDA	IS	57.2	25 - 150		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
d5-EtFOSA	IS	26.6	10 - 150		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
13C2-PFHxDA	IS	46.3	25 - 150		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
d7-MeFOSE	IS	48.9	10 - 150		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1
d9-EtFOSE	IS	50.8	10 - 150		B0G0133	25-Jul-20	0.113 L	27-Jul-20 15:03	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OUTFALL 28
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001482-07	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 14:50	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	11.9	0.797	4.37		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
PFPeA	2706-90-3	9.84	1.40	4.37		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
PFBS	375-73-5	4.49	1.96	4.37		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
4:2 FTS	757124-72-4	<1.52	1.52	4.37		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
PFHxA	307-24-4	12.2	2.38	4.37		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
PFPeS	2706-91-4	5.21	2.65	4.37		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
HFPO-DA	13252-13-6	<5.27	5.27	5.47		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
PFHpA	375-85-9	5.18	0.646	4.37	Q	B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
ADONA	919005-14-4	<0.789	0.789	4.37		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
PFHxS	355-46-4	46.0	1.04	4.37		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
6:2 FTS	27619-97-2	6.00	2.19	4.37		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
PFOA	335-67-1	12.4	0.712	4.37		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
PFHpS	375-92-8	<1.02	1.02	4.37		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
PFNA	375-95-1	1.57	0.886	4.37	J, Q	B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
PFOSA	754-91-6	20.6	1.94	4.37		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
PFOS	1763-23-1	68.7	0.882	4.37		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
9Cl-PF3ONS	756426-58-1	<1.59	1.59	4.37		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
PFDA	335-76-2	<1.63	1.63	4.37		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
8:2 FTS	39108-34-4	<2.25	2.25	4.37		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
PFNS	68259-12-1	<4.23	4.23	4.37		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
MeFOSAA	2355-31-9	<1.80	1.80	4.37		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
EtFOSAA	2991-50-6	<1.50	1.50	4.37		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
PFUnA	2058-94-8	<1.15	1.15	4.37		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
PFDS	335-77-3	<1.34	1.34	4.37		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
11Cl-PF3OUdS	763051-92-9	<2.63	2.63	4.37		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
10:2 FTS	120226-60-0	<3.42	3.42	4.37		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
PFDoA	307-55-1	<0.866	0.866	4.37		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
MeFOSA	31506-32-8	<4.19	4.19	21.9		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
PFTrDA	72629-94-8	<0.540	0.540	4.37		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
PFDoS	79780-39-5	<4.56	4.56	5.47		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
PFTeDA	376-06-7	<0.825	0.825	4.37		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
EtFOSA	4151-50-2	<5.59	5.59	21.9		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
PFHxDA	67905-19-5	<0.321	0.321	4.37		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
PFODA	16517-11-6	<6.71	6.71	7.65		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
MeFOSE	24448-09-7	<6.64	6.64	21.9		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
EtFOSE	1691-99-2	<10.3	10.3	21.9		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	106	25 - 150		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1

Sample ID: OUTFALL 28 **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001482-07	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 14:50	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	73.6	25 - 150		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
13C3-PFBS	IS	70.7	25 - 150		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
13C3-HFPO-DA	IS	69.4	25 - 150		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
13C2-4:2 FTS	IS	76.6	25 - 150		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
13C2-PFHxA	IS	69.7	25 - 150		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
13C4-PFHpA	IS	66.7	25 - 150		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
13C3-PFHxS	IS	70.5	25 - 150		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
13C2-6:2 FTS	IS	75.9	25 - 150		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
13C5-PFNA	IS	74.8	25 - 150		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
13C8-PFOA	IS	46.1	10 - 150		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
13C2-PFOA	IS	72.5	25 - 150		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
13C8-PFOS	IS	75.5	25 - 150		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
13C2-PFDA	IS	74.7	25 - 150		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
13C2-8:2 FTS	IS	78.8	25 - 150		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
d3-MeFOSAA	IS	61.4	25 - 150		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
13C2-PFUnA	IS	75.5	25 - 150		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
d5-EtFOSAA	IS	74.0	25 - 150		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
13C2-10:2 FTS	IS	73.5	25 - 150		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
13C2-PFDoA	IS	48.6	25 - 150		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
d3-MeFOSA	IS	24.0	10 - 150		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
13C2-PFTeDA	IS	52.6	25 - 150		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
d5-EtFOSA	IS	22.7	10 - 150		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
13C2-PFHxDA	IS	42.5	25 - 150		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
d7-MeFOSE	IS	41.9	10 - 150		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1
d9-EtFOSE	IS	38.8	10 - 150		B0G0133	25-Jul-20	0.114 L	27-Jul-20 15:13	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OUTFALL 27
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001482-08	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 14:55	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	12.0	0.865	4.75		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
PFPeA	2706-90-3	9.77	1.52	4.75		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
PFBS	375-73-5	4.60	2.12	4.75	J	B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
4:2 FTS	757124-72-4	<1.65	1.65	4.75		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
PFHxA	307-24-4	9.44	2.59	4.75		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
PFPeS	2706-91-4	5.44	2.87	4.75		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
HFPO-DA	13252-13-6	<5.72	5.72	5.93		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
PFHpA	375-85-9	6.99	0.701	4.75	Q	B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
ADONA	919005-14-4	<0.857	0.857	4.75		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
PFHxS	355-46-4	50.6	1.12	4.75		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
6:2 FTS	27619-97-2	7.56	2.37	4.75		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
PFOA	335-67-1	15.2	0.772	4.75		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
PFHpS	375-92-8	1.61	1.11	4.75	J	B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
PFNA	375-95-1	1.19	0.961	4.75	J	B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
PFOSA	754-91-6	25.0	2.10	4.75	Q	B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
PFOS	1763-23-1	108	0.957	4.75		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
9Cl-PF3ONS	756426-58-1	<1.72	1.72	4.75		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
PFDA	335-76-2	<1.77	1.77	4.75		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
8:2 FTS	39108-34-4	<2.44	2.44	4.75		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
PFNS	68259-12-1	<4.59	4.59	4.75		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
MeFOSAA	2355-31-9	<1.96	1.96	4.75		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
EtFOSAA	2991-50-6	<1.63	1.63	4.75		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
PFUnA	2058-94-8	<1.25	1.25	4.75		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
PFDS	335-77-3	<1.46	1.46	4.75		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
11Cl-PF3OUdS	763051-92-9	<2.86	2.86	4.75		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
10:2 FTS	120226-60-0	<3.71	3.71	4.75		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
PFDoA	307-55-1	<0.940	0.940	4.75		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
MeFOSA	31506-32-8	<4.54	4.54	23.7		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
PFTrDA	72629-94-8	<0.586	0.586	4.75		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
PFDoS	79780-39-5	<4.95	4.95	5.93		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
PFTeDA	376-06-7	<0.896	0.896	4.75		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
EtFOSA	4151-50-2	<6.06	6.06	23.7		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
PFHxDA	67905-19-5	<0.349	0.349	4.75		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
PFODA	16517-11-6	<7.28	7.28	8.30		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
MeFOSE	24448-09-7	<7.20	7.20	23.7		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
EtFOSE	1691-99-2	<11.2	11.2	23.7		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	112	25 - 150		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1

Sample ID: OUTFALL 27
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001482-08	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 14:55	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	78.0	25 - 150		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
13C3-PFBS	IS	77.5	25 - 150		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
13C3-HFPO-DA	IS	72.1	25 - 150		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
13C2-4:2 FTS	IS	77.8	25 - 150		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
13C2-PFHxA	IS	80.8	25 - 150		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
13C4-PFHpA	IS	76.5	25 - 150		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
13C3-PFHxS	IS	80.7	25 - 150		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
13C2-6:2 FTS	IS	73.0	25 - 150		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
13C5-PFNA	IS	77.0	25 - 150		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
13C8-PFOA	IS	51.5	10 - 150		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
13C2-PFOA	IS	76.4	25 - 150		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
13C8-PFOS	IS	80.2	25 - 150		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
13C2-PFDA	IS	77.8	25 - 150		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
13C2-8:2 FTS	IS	87.6	25 - 150		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
d3-MeFOSAA	IS	75.0	25 - 150		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
13C2-PFUnA	IS	73.5	25 - 150		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
d5-EtFOSAA	IS	75.9	25 - 150		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
13C2-10:2 FTS	IS	68.2	25 - 150		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
13C2-PFDoA	IS	70.0	25 - 150		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
d3-MeFOSA	IS	33.8	10 - 150		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
13C2-PFTeDA	IS	57.3	25 - 150		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
d5-EtFOSA	IS	33.2	10 - 150		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
13C2-PFHxDA	IS	37.9	25 - 150		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
d7-MeFOSE	IS	48.7	10 - 150		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1
d9-EtFOSE	IS	46.9	10 - 150		B0G0133	25-Jul-20	0.105 L	27-Jul-20 15:24	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OUTFALL 24
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001482-09	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 15:10	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	30.6	0.819	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
PFPeA	2706-90-3	39.3	1.44	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
PFBS	375-73-5	9.66	2.01	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
4:2 FTS	757124-72-4	<1.56	1.56	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
PFHxA	307-24-4	30.9	2.45	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
PFPeS	2706-91-4	9.32	2.72	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
HFPO-DA	13252-13-6	<5.41	5.41	5.61		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
PFHpA	375-85-9	14.3	0.664	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
ADONA	919005-14-4	<0.811	0.811	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
PFHxS	355-46-4	96.9	1.06	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
6:2 FTS	27619-97-2	5.69	2.25	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
PFOA	335-67-1	12.5	0.731	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
PFHpS	375-92-8	4.13	1.05	4.49	J, Q	B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
PFNA	375-95-1	2.84	0.910	4.49	J, Q	B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
PFOSA	754-91-6	11.5	1.99	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
PFOS	1763-23-1	356	0.906	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
9Cl-PF3ONS	756426-58-1	<1.63	1.63	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
PFDA	335-76-2	1.71	1.67	4.49	J, Q	B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
8:2 FTS	39108-34-4	<2.31	2.31	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
PFNS	68259-12-1	<4.35	4.35	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
MeFOSAA	2355-31-9	<1.85	1.85	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
EtFOSAA	2991-50-6	<1.54	1.54	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
PFUnA	2058-94-8	<1.18	1.18	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
PFDS	335-77-3	<1.38	1.38	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
11Cl-PF3OUdS	763051-92-9	<2.71	2.71	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
10:2 FTS	120226-60-0	<3.51	3.51	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
PFDoA	307-55-1	<0.889	0.889	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
MeFOSA	31506-32-8	<4.30	4.30	22.5		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
PFTrDA	72629-94-8	<0.555	0.555	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
PFDoS	79780-39-5	<4.68	4.68	5.61		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
PFTeDA	376-06-7	<0.848	0.848	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
EtFOSA	4151-50-2	<5.74	5.74	22.5		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
PFHxDA	67905-19-5	<0.330	0.330	4.49		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
PFODA	16517-11-6	<6.89	6.89	7.86		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
MeFOSE	24448-09-7	<6.82	6.82	22.5		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
EtFOSE	1691-99-2	<10.6	10.6	22.5		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	71.7	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1

Sample ID: OUTFALL 24 **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001482-09	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 15:10	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	69.4	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
13C3-PFBS	IS	80.3	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
13C3-HFPO-DA	IS	68.2	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
13C2-4:2 FTS	IS	82.8	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
13C2-PFHxA	IS	77.8	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
13C4-PFHpA	IS	71.4	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
13C3-PFHxS	IS	77.5	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
13C2-6:2 FTS	IS	78.5	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
13C5-PFNA	IS	75.5	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
13C8-PFOA	IS	49.7	10 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
13C2-PFOA	IS	75.8	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
13C8-PFOS	IS	58.0	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
13C2-PFDA	IS	65.5	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
13C2-8:2 FTS	IS	72.4	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
d3-MeFOSAA	IS	72.7	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
13C2-PFUnA	IS	71.8	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
d5-EtFOSAA	IS	69.4	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
13C2-10:2 FTS	IS	46.6	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
13C2-PFDoA	IS	47.3	25 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
d3-MeFOSA	IS	19.4	10 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
13C2-PFTeDA	IS	23.9	25 - 150	H	B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
d5-EtFOSA	IS	20.2	10 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
13C2-PFHxDA	IS	14.8	25 - 150	H	B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
d7-MeFOSE	IS	44.7	10 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1
d9-EtFOSE	IS	36.2	10 - 150		B0G0133	25-Jul-20	0.111 L	27-Jul-20 15:34	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OUTFALL A
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001482-10	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 15:20	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	138	0.826	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
PFPeA	2706-90-3	385	1.45	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
PFBS	375-73-5	318	2.03	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
4:2 FTS	757124-72-4	17.0	1.58	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
PFHxA	307-24-4	505	2.47	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
PFPeS	2706-91-4	378	2.74	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
HFPO-DA	13252-13-6	<5.46	5.46	5.67		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
PFHpA	375-85-9	154	0.670	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
ADONA	919005-14-4	<0.818	0.818	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
PFHxS	355-46-4	2850	1.07	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
6:2 FTS	27619-97-2	1100	2.27	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
PFOA	335-67-1	363	0.738	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
PFHpS	375-92-8	105	1.06	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
PFNA	375-95-1	22.4	0.918	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
PFOSA	754-91-6	11.4	2.01	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
PFOS	1763-23-1	3960	0.915	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
9Cl-PF3ONS	756426-58-1	<1.64	1.64	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
PFDA	335-76-2	2.30	1.69	4.53	J, Q	B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
8:2 FTS	39108-34-4	57.1	2.33	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
PFNS	68259-12-1	<4.39	4.39	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
MeFOSAA	2355-31-9	<1.87	1.87	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
EtFOSAA	2991-50-6	<1.55	1.55	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
PFUnA	2058-94-8	<1.19	1.19	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
PFDS	335-77-3	<1.39	1.39	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
11Cl-PF3OUdS	763051-92-9	<2.73	2.73	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
10:2 FTS	120226-60-0	<3.55	3.55	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
PFDoA	307-55-1	<0.898	0.898	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
MeFOSA	31506-32-8	<4.34	4.34	22.7		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
PFTrDA	72629-94-8	<0.560	0.560	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
PFDoS	79780-39-5	<4.73	4.73	5.67		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
PFTeDA	376-06-7	<0.856	0.856	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
EtFOSA	4151-50-2	<5.79	5.79	22.7		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
PFHxDA	67905-19-5	<0.333	0.333	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
PFODA	16517-11-6	<6.96	6.96	7.93		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
MeFOSE	24448-09-7	<6.88	6.88	22.7		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
EtFOSE	1691-99-2	<10.7	10.7	22.7		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	112	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1

Sample ID: OUTFALL A **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001482-10	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 15:20	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	77.9	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
13C3-PFBS	IS	75.8	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
13C3-HFPO-DA	IS	72.2	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
13C2-4:2 FTS	IS	76.5	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
13C2-PFHxA	IS	76.9	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
13C4-PFHpA	IS	72.9	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
13C3-PFHxS	IS	67.5	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
13C2-6:2 FTS	IS	68.8	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
13C5-PFNA	IS	74.8	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
13C8-PFOA	IS	46.8	10 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
13C2-PFOA	IS	74.1	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
13C8-PFOS	IS	68.9	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
13C2-PFDA	IS	72.0	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
13C2-8:2 FTS	IS	88.8	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
d3-MeFOSAA	IS	72.8	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
13C2-PFUnA	IS	63.2	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
d5-EtFOSAA	IS	65.9	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
13C2-10:2 FTS	IS	71.4	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
13C2-PFDoA	IS	62.3	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
d3-MeFOSA	IS	21.9	10 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
13C2-PFTeDA	IS	65.2	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
d5-EtFOSA	IS	22.3	10 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
13C2-PFHxDA	IS	62.5	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
d7-MeFOSE	IS	46.8	10 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1
d9-EtFOSE	IS	47.0	10 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 15:44	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OUTFALL 25
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001482-11	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 15:25	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	44.0	0.838	4.60		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
PFPeA	2706-90-3	68.6	1.47	4.60		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
PFBS	375-73-5	54.4	2.06	4.60		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
4:2 FTS	757124-72-4	<1.60	1.60	4.60		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
PFHxA	307-24-4	53.2	2.50	4.60		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
PFPeS	2706-91-4	40.9	2.78	4.60		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
HFPO-DA	13252-13-6	<5.54	5.54	5.74		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
PFHpA	375-85-9	20.0	0.679	4.60		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
ADONA	919005-14-4	<0.830	0.830	4.60		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
PFHxS	355-46-4	216	1.09	4.60		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
6:2 FTS	27619-97-2	2.73	2.30	4.60	J	B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
PFOA	335-67-1	21.8	0.748	4.60		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
PFHpS	375-92-8	3.71	1.08	4.60	J	B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
PFNA	375-95-1	2.94	0.931	4.60	J	B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
PFOSA	754-91-6	7.59	2.03	4.60	Q	B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
PFOS	1763-23-1	150	0.927	4.60		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
9Cl-PF3ONS	756426-58-1	<1.67	1.67	4.60		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
PFDA	335-76-2	<1.71	1.71	4.60		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
8:2 FTS	39108-34-4	<2.37	2.37	4.60		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
PFNS	68259-12-1	<4.45	4.45	4.60		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
MeFOSAA	2355-31-9	<1.90	1.90	4.60		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
EtFOSAA	2991-50-6	<1.57	1.57	4.60		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
PFUnA	2058-94-8	<1.21	1.21	4.60		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
PFDS	335-77-3	<1.41	1.41	4.60		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
11Cl-PF3OUdS	763051-92-9	<2.77	2.77	4.60		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
10:2 FTS	120226-60-0	<3.60	3.60	4.60		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
PFDoA	307-55-1	<0.910	0.910	4.60		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
MeFOSA	31506-32-8	<4.40	4.40	23.0		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
PFTrDA	72629-94-8	<0.568	0.568	4.60		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
PFDoS	79780-39-5	<4.79	4.79	5.74		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
PFTeDA	376-06-7	<0.867	0.867	4.60		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
EtFOSA	4151-50-2	<5.87	5.87	23.0		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
PFHxDA	67905-19-5	<0.338	0.338	4.60		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
PFODA	16517-11-6	<7.05	7.05	8.04		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
MeFOSE	24448-09-7	<6.97	6.97	23.0		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
EtFOSE	1691-99-2	<10.8	10.8	23.0		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	66.9	25 - 150			B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1

Sample ID: OUTFALL 25 **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001482-11	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 15:25	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	71.3	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
13C3-PFBS	IS	75.9	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
13C3-HFPO-DA	IS	72.6	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
13C2-4:2 FTS	IS	78.7	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
13C2-PFHxA	IS	78.5	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
13C4-PFHpA	IS	68.4	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
13C3-PFHxS	IS	74.2	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
13C2-6:2 FTS	IS	68.3	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
13C5-PFNA	IS	68.7	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
13C8-PFOA	IS	52.0	10 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
13C2-PFOA	IS	72.9	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
13C8-PFOS	IS	63.3	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
13C2-PFDA	IS	75.1	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
13C2-8:2 FTS	IS	63.7	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
d3-MeFOSAA	IS	80.5	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
13C2-PFUnA	IS	72.7	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
d5-EtFOSAA	IS	56.5	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
13C2-10:2 FTS	IS	59.5	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
13C2-PFDoA	IS	55.4	25 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
d3-MeFOSA	IS	25.8	10 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
13C2-PFTeDA	IS	24.1	25 - 150	H	B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
d5-EtFOSA	IS	26.1	10 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
13C2-PFHxDA	IS	16.2	25 - 150	H	B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
d7-MeFOSE	IS	43.0	10 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1
d9-EtFOSE	IS	39.8	10 - 150		B0G0133	25-Jul-20	0.109 L	27-Jul-20 15:55	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OUTFALL 36
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001482-12	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 15:35	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	106	0.857	4.70		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
PFPeA	2706-90-3	311	1.51	4.70		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
PFBS	375-73-5	275	2.11	4.70		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
4:2 FTS	757124-72-4	10.9	1.63	4.70		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
PFHxA	307-24-4	423	2.56	4.70		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
PFPeS	2706-91-4	323	2.85	4.70		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
HFPO-DA	13252-13-6	<5.67	5.67	5.88		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
PFHpA	375-85-9	118	0.695	4.70		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
ADONA	919005-14-4	<0.849	0.849	4.70		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
PFHxS	355-46-4	2250	1.11	4.70		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
6:2 FTS	27619-97-2	964	2.35	4.70		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
PFOA	335-67-1	314	0.766	4.70		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
PFHpS	375-92-8	106	1.10	4.70		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
PFNA	375-95-1	16.3	0.953	4.70		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
PFOSA	754-91-6	11.1	2.08	4.70		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
PFOS	1763-23-1	3330	0.949	4.70		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
9Cl-PF3ONS	756426-58-1	<1.71	1.71	4.70		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
PFDA	335-76-2	<1.75	1.75	4.70		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
8:2 FTS	39108-34-4	54.6	2.42	4.70		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
PFNS	68259-12-1	<4.55	4.55	4.70		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
MeFOSAA	2355-31-9	<1.94	1.94	4.70		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
EtFOSAA	2991-50-6	<1.61	1.61	4.70		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
PFUnA	2058-94-8	<1.23	1.23	4.70		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
PFDS	335-77-3	<1.45	1.45	4.70		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
11Cl-PF3OUdS	763051-92-9	<2.83	2.83	4.70		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
10:2 FTS	120226-60-0	<3.68	3.68	4.70		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
PFDoA	307-55-1	<0.931	0.931	4.70		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
MeFOSA	31506-32-8	<4.50	4.50	23.5		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
PFTrDA	72629-94-8	<0.581	0.581	4.70		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
PFDoS	79780-39-5	<4.90	4.90	5.88		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
PFTeDA	376-06-7	<0.888	0.888	4.70		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
EtFOSA	4151-50-2	<6.01	6.01	23.5		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
PFHxDA	67905-19-5	<0.346	0.346	4.70		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
PFODA	16517-11-6	<7.22	7.22	8.23		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
MeFOSE	24448-09-7	<7.14	7.14	23.5		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
EtFOSE	1691-99-2	<11.1	11.1	23.5		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	117	25 - 150		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1

Sample ID: OUTFALL 36 **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001482-12	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 15:35	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	74.9	25 - 150		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
13C3-PFBS	IS	74.5	25 - 150		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
13C3-HFPO-DA	IS	77.0	25 - 150		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
13C2-4:2 FTS	IS	71.6	25 - 150		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
13C2-PFHxA	IS	74.8	25 - 150		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
13C4-PFHpA	IS	70.0	25 - 150		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
13C3-PFHxS	IS	75.7	25 - 150		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
13C2-6:2 FTS	IS	72.9	25 - 150		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
13C5-PFNA	IS	70.7	25 - 150		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
13C8-PFOA	IS	48.8	10 - 150		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
13C2-PFOA	IS	77.2	25 - 150		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
13C8-PFOS	IS	66.1	25 - 150		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
13C2-PFDA	IS	71.0	25 - 150		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
13C2-8:2 FTS	IS	67.1	25 - 150		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
d3-MeFOSAA	IS	71.6	25 - 150		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
13C2-PFUnA	IS	71.0	25 - 150		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
d5-EtFOSAA	IS	71.0	25 - 150		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
13C2-10:2 FTS	IS	70.2	25 - 150		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
13C2-PFDoA	IS	52.9	25 - 150		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
d3-MeFOSA	IS	21.8	10 - 150		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
13C2-PFTeDA	IS	62.0	25 - 150		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
d5-EtFOSA	IS	21.5	10 - 150		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
13C2-PFHxDA	IS	54.6	25 - 150		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
d7-MeFOSE	IS	47.5	10 - 150		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1
d9-EtFOSE	IS	46.0	10 - 150		B0G0133	25-Jul-20	0.106 L	27-Jul-20 16:05	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: FIELD BLANK-070920
PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001482-13	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 16:45	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	<0.774	0.774	4.25		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
PFPeA	2706-90-3	<1.36	1.36	4.25		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
PFBS	375-73-5	<1.90	1.90	4.25		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
4:2 FTS	757124-72-4	<1.48	1.48	4.25		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
PFHxA	307-24-4	<2.32	2.32	4.25		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
PFPeS	2706-91-4	<2.57	2.57	4.25		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
HFPO-DA	13252-13-6	<5.12	5.12	5.31		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
PFHpA	375-85-9	<0.628	0.628	4.25		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
ADONA	919005-14-4	<0.767	0.767	4.25		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
PFHxS	355-46-4	<1.01	1.01	4.25		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
6:2 FTS	27619-97-2	<2.12	2.12	4.25		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
PFOA	335-67-1	<0.691	0.691	4.25		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
PFHpS	375-92-8	<0.995	0.995	4.25		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
PFNA	375-95-1	<0.860	0.860	4.25		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
PFOSA	754-91-6	<1.88	1.88	4.25		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
PFOS	1763-23-1	0.978	0.857	4.25	J	B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
9Cl-PF3ONS	756426-58-1	<1.54	1.54	4.25		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
PFDA	335-76-2	<1.58	1.58	4.25		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
8:2 FTS	39108-34-4	<2.19	2.19	4.25		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
PFNS	68259-12-1	<4.11	4.11	4.25		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
MeFOSAA	2355-31-9	<1.75	1.75	4.25		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
EtFOSAA	2991-50-6	<1.45	1.45	4.25		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
PFUnA	2058-94-8	<1.12	1.12	4.25		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
PFDS	335-77-3	<1.31	1.31	4.25		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
11Cl-PF3OUdS	763051-92-9	<2.56	2.56	4.25		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
10:2 FTS	120226-60-0	<3.32	3.32	4.25		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
PFDoA	307-55-1	<0.841	0.841	4.25		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
MeFOSA	31506-32-8	<4.07	4.07	21.2		B0G0133	25-Jul-20	0.118 L	04-Aug-20 21:31	1
PFTrDA	72629-94-8	<0.525	0.525	4.25		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
PFDoS	79780-39-5	<4.43	4.43	5.31		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
PFTeDA	376-06-7	<0.802	0.802	4.25		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
EtFOSA	4151-50-2	<5.43	5.43	21.2		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
PFHxDA	67905-19-5	<0.312	0.312	4.25		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
PFODA	16517-11-6	<6.52	6.52	7.43		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
MeFOSE	24448-09-7	<6.45	6.45	21.2		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
EtFOSE	1691-99-2	<10.0	10.0	21.2		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	95.3	25 - 150			B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1

Sample ID: FIELD BLANK-070920 **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001482-13	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 16:45	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	74.3	25 - 150		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
13C3-PFBS	IS	71.4	25 - 150		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
13C3-HFPO-DA	IS	72.4	25 - 150		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
13C2-4:2 FTS	IS	80.2	25 - 150		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
13C2-PFHxA	IS	75.9	25 - 150		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
13C4-PFHpA	IS	72.4	25 - 150		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
13C3-PFHxS	IS	75.9	25 - 150		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
13C2-6:2 FTS	IS	80.0	25 - 150		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
13C5-PFNA	IS	72.3	25 - 150		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
13C8-PFOA	IS	30.6	10 - 150		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
13C2-PFOA	IS	74.6	25 - 150		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
13C8-PFOS	IS	77.1	25 - 150		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
13C2-PFDA	IS	80.0	25 - 150		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
13C2-8:2 FTS	IS	78.9	25 - 150		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
d3-MeFOSAA	IS	68.0	25 - 150		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
13C2-PFUnA	IS	66.6	25 - 150		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
d5-EtFOSAA	IS	63.6	25 - 150		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
13C2-10:2 FTS	IS	69.5	25 - 150		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
13C2-PFDoA	IS	62.4	25 - 150		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
d3-MeFOSA	IS	12.0	10 - 150		B0G0133	25-Jul-20	0.118 L	04-Aug-20 21:31	1
13C2-PFTeDA	IS	59.5	25 - 150		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
d5-EtFOSA	IS	10.9	10 - 150		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
13C2-PFHxDA	IS	55.2	25 - 150		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
d7-MeFOSE	IS	23.3	10 - 150		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1
d9-EtFOSE	IS	25.1	10 - 150		B0G0133	25-Jul-20	0.118 L	27-Jul-20 16:16	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: DUPLICATE-070920

PFAS Isotope Dilution Method

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001482-14	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 00:00	Date Received:	14-Jul-20 09:11		

Analyte	CAS Number	Conc. (ng/L)	MDL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	20.0	0.825	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
PFPeA	2706-90-3	42.2	1.45	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
PFBS	375-73-5	19.0	2.03	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
4:2 FTS	757124-72-4	<1.57	1.57	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
PFHxA	307-24-4	48.3	2.47	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
PFPeS	2706-91-4	24.8	2.74	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
HFPO-DA	13252-13-6	<5.45	5.45	5.66		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
PFHpA	375-85-9	25.3	0.669	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
ADONA	919005-14-4	<0.817	0.817	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
PFHxS	355-46-4	201	1.07	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
6:2 FTS	27619-97-2	50.2	2.26	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
PFOA	335-67-1	41.3	0.737	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
PFHpS	375-92-8	10.3	1.06	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
PFNA	375-95-1	4.08	0.917	4.53	J	B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
PFOSA	754-91-6	16.4	2.00	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
PFOS	1763-23-1	554	0.913	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
9Cl-PF3ONS	756426-58-1	<1.64	1.64	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
PFDA	335-76-2	2.20	1.69	4.53	J, Q	B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
8:2 FTS	39108-34-4	14.4	2.33	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
PFNS	68259-12-1	<4.38	4.38	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
MeFOSAA	2355-31-9	<1.87	1.87	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
EtFOSAA	2991-50-6	<1.55	1.55	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
PFUnA	2058-94-8	<1.19	1.19	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
PFDS	335-77-3	<1.39	1.39	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
11Cl-PF3OUdS	763051-92-9	<2.73	2.73	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
10:2 FTS	120226-60-0	<3.54	3.54	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
PFDoA	307-55-1	<0.896	0.896	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
MeFOSA	31506-32-8	<4.33	4.33	22.6		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
PFTrDA	72629-94-8	<0.559	0.559	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
PFDoS	79780-39-5	<4.72	4.72	5.66		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
PFTeDA	376-06-7	<0.854	0.854	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
EtFOSA	4151-50-2	<5.78	5.78	22.6		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
PFHxDA	67905-19-5	<0.333	0.333	4.53		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
PFODA	16517-11-6	<6.95	6.95	7.92		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
MeFOSE	24448-09-7	<6.87	6.87	22.6		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
EtFOSE	1691-99-2	<10.7	10.7	22.6		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	117	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1

Sample ID: DUPLICATE-070920 **PFAS Isotope Dilution Method**

Client Data				Laboratory Data			
Name:	LimnoTech, Inc.	Matrix:	Aqueous	Lab Sample:	2001482-14	Column:	BEH C18
Project:	MSN Wet Weather Storm Samples	Date Collected:	09-Jul-20 00:00	Date Received:	14-Jul-20 09:11		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFPeA	IS	72.2	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
13C3-PFBS	IS	76.6	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
13C3-HFPO-DA	IS	72.6	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
13C2-4:2 FTS	IS	78.5	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
13C2-PFHxA	IS	73.7	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
13C4-PFHpA	IS	72.8	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
13C3-PFHxS	IS	76.1	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
13C2-6:2 FTS	IS	74.3	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
13C5-PFNA	IS	71.6	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
13C8-PFOA	IS	50.4	10 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
13C2-PFOA	IS	72.2	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
13C8-PFOS	IS	71.5	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
13C2-PFDA	IS	68.6	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
13C2-8:2 FTS	IS	83.1	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
d3-MeFOSAA	IS	72.1	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
13C2-PFUnA	IS	74.6	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
d5-EtFOSAA	IS	68.3	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
13C2-10:2 FTS	IS	65.7	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
13C2-PFDoA	IS	61.6	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
d3-MeFOSA	IS	21.4	10 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
13C2-PFTeDA	IS	62.8	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
d5-EtFOSA	IS	22.4	10 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
13C2-PFHxDA	IS	55.3	25 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
d7-MeFOSE	IS	48.2	10 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1
d9-EtFOSE	IS	46.8	10 - 150		B0G0133	25-Jul-20	0.110 L	27-Jul-20 16:26	1

MDL - Method Detection Limit

RL - Reporting limit

Results reported to MDL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank
Conc.	Concentration
CRS	Cleanup Recovery Standard
D	Dilution
DL	Detection Limit
E	The associated compound concentration exceeded the calibration range of the instrument
H	Recovery and/or RPD was outside laboratory acceptance limits
I	Chemical Interference
IS	Internal Standard
J	The amount detected is below the Reporting Limit/LOQ
LOD	Limit of Detection
LOQ	Limit of Quantitation
M	Estimated Maximum Possible Concentration (CA Region 2 projects only)
MDL	Method Detection Limit
NA	Not applicable
ND	Not Detected
OPR	Ongoing Precision and Recovery sample
P	The reported concentration may include contribution from chlorinated diphenyl ether(s).
Q	The ion transition ratio is outside of the acceptance criteria.
RL	Reporting Limit
TEQ	Toxic Equivalency
U	Not Detected (specific projects only)
*	See Cover Letter

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

Vista Analytical Laboratory Certifications

Accrediting Authority	Certificate Number
Alaska Department of Environmental Conservation	17-013
Arkansas Department of Environmental Quality	19-013-0
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777-23
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2018017
Massachusetts Department of Environmental Protection	N/A
Michigan Department of Environmental Quality	9932
Minnesota Department of Health	1521520
New Hampshire Environmental Accreditation Program	207718-B
New Jersey Department of Environmental Protection	190001
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-010
Pennsylvania Department of Environmental Protection	016
Texas Commission on Environmental Quality	T104704189-19-10
Vermont Department of Health	VT-4042
Virginia Department of General Services	10272
Washington Department of Ecology	C584-19
Wisconsin Department of Natural Resources	998036160

Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request.

NELAP Accredited Test Methods

MATRIX: Air	
Description of Test	Method
Determination of Polychlorinated p-Dioxins & Polychlorinated Dibenzofurans	EPA 23
Determination of Polychlorinated p-Dioxins & Polychlorinated Dibenzofurans	EPA TO-9A

MATRIX: Biological Tissue	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Drinking Water	
Description of Test	Method
2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD) GC/HRMS	EPA 1613/1613B
1,4-Dioxane (1,4-Diethyleneoxide) analysis by GC/HRMS	EPA 522
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	ISO 25101 2009

MATRIX: Non-Potable Water	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Dioxin by GC/HRMS	EPA 613
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Solids	
Description of Test	Method
Tetra-Octa Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A



CHAIN OF CUSTODY

For Laboratory Use Only
 Work Order #: 2001482 Temp: 1.5 °C
 Storage ID: R-13, WR-2 Storage Secured: Yes No

Project ID: MSN WET WEATHER STORM SAMPLES PO#: MSNPF1 Sampler: C. Behate
 (name)

TAT Standard: 21 days
 (check one): Rush (surcharge may apply)
 14 days 7 days Specify: _____

Relinquished by (printed name and signature) [Signature] Date 7/13/20 Time 1300 Received by (printed name and signature) William R Wright Date 07/14/20 Time 09:11

SHIP TO: Vista Analytical Laboratory
 1104 Windfield Way
 El Dorado Hills, CA 95762
 (916) 673-1520 * Fax (916) 673-0106

Method of Shipment: _____ Tracking No.: _____

ATTN: _____

Add Analysis(es) Requested

Container(s)

PFAS by Isotope Dilution

EPA Method 537 (DW only)

OTHER: Please attach analyte list

PFOA/PFOS UCMR3 PFAS List:6
 537.1 List: 14 or 18 (Circle One)
 EPA Draft List of 24

PFOA/PFOS UCMR3 PFAS List:6
 537.1 List of 14
 537.1 List of 18

Sample ID	Date	Time	Location/ Sample Description	Quantity	Type	Matrix	PFOA/PFOS	UCMR3 PFAS List:6	537.1 List: 14 or 18 (Circle One)	EPA Draft List of 24	OTHER: Please attach analyte list	PFOA/PFOS	UCMR3 PFAS List:6	537.1 List of 14	537.1 List of 18	Comments
OUTFALL 09	7/9/20	1310		2	P	AQ					*					* WISCONSIN PFAS LIST
OUTFALL 06	7/9/20	1325		2	P	AQ					*					
OUTFALL 05	7/9/20	1335		2	P	AQ					*					
OUTFALL 04	7/9/20	1350		2	P	AQ					*					
OUTFALL 32	7/9/20	1425		2	P	AQ					*					
OUTFALL 01	7/9/20	1440		2	P	AQ					*					
OUTFALL 28	7/9/20	1450		2	P	AQ					*					
OUTFALL 27	7/9/20	1455		2	P	AQ					*					
OUTFALL 24	7/9/20	1510		2	P	AQ					*					
OUTFALL A	7/9/20	1520		2	P	AQ					*					

Special Instructions/Comments: _____

Name: CHRIS CIECIK
 Company: LIMNOTECH
 Address: 501 AHS DRIVE
 City: ANN ARBOR MI 48106
 Phone: 734 332 1200
 Email: CCIECIK@LIMNO.COM

SEND DOCUMENTATION AND RESULTS TO:

Container Types: P= HDPE, PJ= HDPE Jar
 PY= Polypropylene, O = Other: _____

Bottle Preservation Type: _____
 TZ = Trizma: _____

Matrix Types: AQ = Aqueous, DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment,
 SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum, O = Other: _____



CHAIN OF CUSTODY

For Laboratory Use Only
 Work Order #: 2001482 Temp: 1.5 °C
 Storage ID: R-13, WR-2 Storage Secured: Yes No

Project ID: MSN WET WEATHER STORM SAMPLES PO#: MSNPF1 Sampler: C. Behnke
 (name)

TAT Standard: 21 days
 (check one): Rush (surcharge may apply)
 14 days 7 days Specify: _____

Relinquished by (printed name and signature) [Signature] Date 7/13/20 Time 1300
 Received by (printed name and signature) William R. Kelly Date 07/14/20 Time 09:11

Relinquished by (printed name and signature) _____ Date _____ Time _____
 Received by (printed name and signature) _____ Date _____ Time _____

Sample ID	Date	Time	Location/ Sample Description	Add Analysis(es) Requested										Comments							
				Quantity	Type	Matrix	PFOA/PFOS	UCMR3 PFAS Lists	537.1 List: 14 or 18 (Circle One)	EPA Draft List of 24	OTHER: Please attach analyte list	PFOA/PFOS	UCMR3 PFAS Lists		537.1 List of 14	537.1 List of 18					
OUTFALL 25	7/9/20	1525		2	P	AQ								*							
OUTFALL 36	7/9/20	1535		2	P	AQ								*							* WISCONSIN PFAS LIST
FIELD BLANK - 070920	7/9/20	1645		2	P	AQ								*							
DUPLICATE - 070920	7/9/20	—		2	P	AQ								*							

SHIP TO: Vista Analytical Laboratory
 1104 Windfield Way
 El Dorado Hills, CA 95762
 (916) 673-1520 * Fax (916) 673-0106

Method of Shipment: _____ Tracking No.: _____

Special Instructions/Comments: _____

SEND DOCUMENTATION AND RESULTS TO:

Name: CHRIS CIECIK
 Company: LIMNOTECH
 Address: 501 AVIS DRIVE
 City: ANN ARBOR MI 48108
 Phone: 734 332 1200
 Email: CCIECIK@LIMNO.COM

Container Types: P= HDPE, PJ= HDPE Jar
 PY= Polypropylene, O = Other: _____

Bottle Preservation Type: TZ = Trizma: _____

Matrix Types: AQ = Aqueous, DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment,
 SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum, O = Other: _____

Page # 1 of 1

 Vista Work Order #: 2001482 TAT std

Samples Arrival:	Date/Time: 07/14/20 09:11	Initials: www	Location: WR-2
			Shelf/Rack: NA
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
	<input type="checkbox"/> GLS	<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered
	<input type="checkbox"/> Other		
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C:	1.5 (uncorrected)	Probe used: Y / <input checked="" type="checkbox"/> N	Thermometer ID: IR-3
Temp °C:	1.5 (corrected)		

	YES	NO	NA
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>		
Shipping Custody Seals Intact?	<input checked="" type="checkbox"/>		
Airbill <u>1 of 4</u> Trk # <u>3947 7925 1799</u>	<input checked="" type="checkbox"/>		
Shipping Documentation Present?	<input checked="" type="checkbox"/>		
Shipping Container	<input checked="" type="checkbox"/> Vista	<input type="checkbox"/> Client	<input checked="" type="checkbox"/> Retain
	<input type="checkbox"/> Return	<input type="checkbox"/> Dispose	
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>		
Chain of Custody / Sample Documentation Complete?	<input checked="" type="checkbox"/>		
Holding Time Acceptable?	<input checked="" type="checkbox"/>		
Logged In:	Date/Time: 07/18/20 0937	Initials: WWS	Location: R-13, WR-2 ↓ ↓ Shelf/Rack: 2-3, E-4
COC Anomaly/Sample Acceptance Form completed?		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Comments:

CoC/Label Reconciliation Report WO# 2001482

LabNumber	CoC Sample ID	SampleAlias	Sample Date/Time	Container	BaseMatrix	Sample Comments
2001482-01	A OUTFALL 09	<input checked="" type="checkbox"/>	09-Jul-20 13:10	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001482-01	B OUTFALL 09	<input checked="" type="checkbox"/>	09-Jul-20 13:10	<input type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001482-02	A OUTFALL 06	<input checked="" type="checkbox"/>	09-Jul-20 13:25	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001482-02	B OUTFALL 06	<input checked="" type="checkbox"/>	09-Jul-20 13:25	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001482-03	A OUTFALL 05	<input checked="" type="checkbox"/>	09-Jul-20 13:35	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001482-03	B OUTFALL 05	<input checked="" type="checkbox"/>	09-Jul-20 13:35	<input type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001482-04	A OUTFALL 04	<input checked="" type="checkbox"/>	09-Jul-20 13:50	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001482-04	B OUTFALL 04	<input checked="" type="checkbox"/>	09-Jul-20 13:50	<input type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001482-05	A OUTFALL 32	<input checked="" type="checkbox"/>	09-Jul-20 14:25	<input type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001482-05	B OUTFALL 32	<input checked="" type="checkbox"/>	09-Jul-20 14:25	<input type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001482-06	A OUTFALL 01	<input checked="" type="checkbox"/>	09-Jul-20 14:40	<input type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001482-06	B OUTFALL 01	<input checked="" type="checkbox"/>	09-Jul-20 14:40	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001482-07	A OUTFALL 28	<input checked="" type="checkbox"/>	09-Jul-20 14:50	<input type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001482-07	B OUTFALL 28	<input checked="" type="checkbox"/>	09-Jul-20 14:50	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001482-08	A OUTFALL 27	<input checked="" type="checkbox"/>	09-Jul-20 14:55	<input type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001482-08	B OUTFALL 27	<input checked="" type="checkbox"/>	09-Jul-20 14:55	<input type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001482-09	A OUTFALL 24	<input checked="" type="checkbox"/>	09-Jul-20 15:10	<input type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001482-09	B OUTFALL 24	<input checked="" type="checkbox"/>	09-Jul-20 15:10	<input type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001482-10	A OUTFALL A	<input checked="" type="checkbox"/>	09-Jul-20 15:20	<input type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001482-10	B OUTFALL A	<input checked="" type="checkbox"/>	09-Jul-20 15:20	<input type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001482-11	A OUTFALL 25	<input checked="" type="checkbox"/>	09-Jul-20 15:25	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001482-11	B OUTFALL 25	<input checked="" type="checkbox"/>	09-Jul-20 15:25	<input type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001482-12	A OUTFALL 36	<input checked="" type="checkbox"/>	09-Jul-20 15:35	<input type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001482-12	B OUTFALL 36	<input checked="" type="checkbox"/>	09-Jul-20 15:35	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001482-13	A FIELD BLANK-070920	<input checked="" type="checkbox"/>	09-Jul-20 16:45	<input type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001482-13	B FIELD BLANK-070920	<input checked="" type="checkbox"/>	09-Jul-20 16:45	<input checked="" type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001482-14	A DUPLICATE-070920	<input checked="" type="checkbox"/>	09-Jul-20 00:00	<input type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous
2001482-14	B DUPLICATE-070920	<input checked="" type="checkbox"/>	09-Jul-20 00:00	<input type="checkbox"/>	HDPE Bottle, 125 mL	Aqueous

Checkmarks indicate that information on the COC reconciled with the sample label.
 Any discrepancies are noted in the following columns.

Comments: A No time on sample label

	Yes	No	NA
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Adequate Sample Volume?	✓		
Container Type Appropriate for Analysis(es)	✓		
Preservation Documented: Na ₂ S ₂ O ₃ Trizma <u>None</u> Other		✓	✓
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓

Verified by/Date: KA 07/15/20

Attachment 2

QA/QC Review

Memorandum

From: Carrie Turner

Date: August 21, 2020

Project: MSNPFSW (BRRTS#02-13-584472)

To: Chris Cieciek

CC:

SUBJECT: Review of PFAS Analytical Data from Vista Job Numbers 2001479, 2001480, 2001481, and 2001482 (Sampling Dates 7/8-9/2020)

Summary

An independent data review was conducted for forty-six (46) stormwater samples, (2) field duplicate stormwater samples, and one (1) field blank. Samples were collected in the field and received at the Vista El Dorado (CA) laboratory as shown in Table 1.

Table 1. Summary of Sample Collection and Delivery to the Laboratory.

Sample Collection Date	No. of Soil Samples	No. of Water Samples	No. of Field QC Samples ¹	Laboratory Receipt Date	Laboratory Job Number
7/8/2020	0	10	0	7/14/2020	2001480
7/8/2020	0	8	1	7/14/2020	2001481
7/9/2020	0	10	0	7/14/2020	2001479
7/9/2020	0	5	0	7/14/2020	2001480
7/9/2020	0	1	0	7/14/2020	2001481
7/9/2020	0	12	2	7/14/2020	2001482
Total	0	46	3		

¹ Field QC samples include field blanks, equipment blanks and field duplicate samples.

Sample analysis was conducted using Vista's PFAS Isotope Dilution analytical method. Key modifications from method 537 1.1 include its application to soil and non-drinking water aqueous sample media, quantification using isotope dilution, and a standard analyte list of thirty-six (36) PFAS compounds.

Samples were analyzed in three laboratory batches corresponding to the sampling dates noted in Table 1. The analytical data packages were provided to LimnoTech on July 29, 2020 for job number 2001480; July 30, 2020 for job number 2001479; August 4, 2020 for job number 2001481; and on August 6, 2020 for job number 2001482.

I have no quality concerns with the results for these samples except as noted below. The analyses were completed with few QA/QC problems. Several samples had low recoveries for several isotope

internal standards. Most of the corresponding analytes quantitated with these isotopes were non-detect or at low levels (less than 5x RL) in the affected samples. Several samples also had one or more PFAS analytes with ion transition ratios outside the specified quality criteria. Most of these analytes were detected at low levels (less than 5x RL).

Analytical Quality Measures

All of the samples were extracted and analyzed within method specified hold times. Each laboratory preparation batch was prepared with a method blank and an ongoing precision and recovery (OPR) standard. The preparation batches are shown in Table 2 by job number. No matrix spikes or replicates were prepared for this set of samples.

Table 2. Summary of QA/QC Measures in Preparation Batches

Laboratory Job Number	Preparation Batch	Media Type	No. of Samples	Date of Preparation	MB	OPR	MS	Rep
2001479	BOG0137	Aqueous	10	7/21/2020	Y	Y		
2001480	BOG0136	Aqueous	15	7/20/2020	Y	Y		
2001481	BOD0140	Aqueous	10	7/20/2020	Y	Y		
2001482	BOD0133	Aqueous	14	7/25/2020	Y	Y		

**Associated samples are re-extracted volume to confirm low isotope surrogate recovery.*

QA/QC results can be summarized as follows:

- Laboratory QC:
 - All calibration and continuing calibration standards met applicable QA/QC requirements in all analytical batches.
 - Method and instrument blanks for each preparation batch did not have any target analytes with concentrations above the reporting limit.
 - All blank spikes met the recovery targets for each analyte.
- Field QC:
 - The field blank did not have any target analytes with concentrations above the reporting limit.
 - Two field duplicates were collected. The field duplicates matched well with the original samples (client IDs DA032-05 and Outfall 32), with the same analytes detected in each pair of samples and field duplicates and at similar levels. The RPDs in each sample set tended to be less than 20% for most PFAS analytes. RPDs were not calculated for analytes with detected concentrations within five times the corresponding reporting limit, as per standard EPA data validation methods. The sample and field duplicate for sample DA032-05 had five PFAS analytes where concentrations were too low to calculate the RPD. The sample and



field duplicate for sample Outfall 32 had seven PFAS analytes where concentrations were too low to calculate the RPD.

Sample QA/QC

A summary of the quality of each sample is provided in Table 3. Recoveries of the surrogates (e.g. extracted internal standards) for individual samples were within the specified QA/QC windows, except as indicated. Table 3 also provides a list of the PFAS analytes that exhibited matrix interference based on isotope surrogate recovery.



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Table 3. QA/QC Sample Results

Client Sample ID	Sample Date	Media	Lab Sample ID	Prep Batch	Dilutions	PFAS Analytes Requiring Dilution	PFAS Analytes with Ion Transition Ratios Outside Criteria	Isotope Surrogates with % Recoveries Outside Limits
OUTFALL 15	7/9/20	SW	2001479-01	BOG0137	1:1			
OUTFALL 19	7/9/20	SW	2001479-02	BOG0137	1:1			
OUTFALL 18	7/9/20	SW	2001479-03	BOG0137	1:1			
OUTFALL 17	7/9/20	SW	2001479-04	BOG0137	1:1			
OUTFALL 10	7/9/20	SW	2001479-05	BOG0137	1:1			
OUTFALL 11	7/9/20	SW	2001479-06	BOG0137	1:1			
OUTFALL 12	7/9/20	SW	2001479-07	BOG0137	1:1			
OUTFALL 13	7/9/20	SW	2001479-08	BOG0137	1:1			
OUTFALL 14	7/9/20	SW	2001479-09	BOG0137	1:1			
OUTFALL 03	7/9/20	SW	2001479-10	BOG0137	1:1		PFBS	d5-EtFOSA
OUTFALL 30	7/8/20	SW	2004180-01	BOG0136	1:1			13C3-PFBA
OUTFALL 37	7/8/20	SW	2004180-02	BOG0136	1:1			13C3-PFBA
OUTFALL 39	7/8/20	SW	2004180-03	BOG0136	1:1		PFHxA; PFNA; PFOSA	
OUTFALL 22	7/8/20	SW	2004180-04	BOG0136	1:1		PFHpA	13C3-PFBA
OUTFALL 21	7/8/20	SW	2004180-05	BOG0136	1:1; 1:5	PFHxS (1:5) PFOS (1:5)	PFNS	13C3-PFBA
DA021-04-ALT	7/8/20	SW	2004180-06	BOG0136	1:1			13C3-PFBA

Client Sample ID	Sample Date	Media	Lab Sample ID	Prep Batch	Dilutions	PFAS Analytes Requiring Dilution	PFAS Analytes with Ion Transition Ratios Outside Criteria	Isotope Surrogates with % Recoveries Outside Limits
DA021-06-ALT	7/8/20	SW	2004180-07	BOG0136	1:1		PFBS	13C3-PFBA
DA032-03A	7/8/20	SW	2004180-08	BOG0136	1:1; 1:5	PFOS (1:5)		
DA032-03B	7/8/20	SW	2004180-09	BOG0136	1:1; 1:5	PFOS (1:5)	PFDS	
DA032-X	7/8/20	SW	2004180-10	BOG0136	1:1		PFDA	13C3-PFBA
DA001-01	7/9/20	SW	2004180-11	BOG0136	1:1		PFPeS; PFUnA	13C3-PFBA
DA032-15	7/9/20	SW	2004180-12	BOG0136	1:1		PFNA	13C3-PFBA
DA001-03	7/9/20	SW	2004180-13	BOG0136	1:1		PFOSA; PFUnA	
OUTFALL 07	7/9/20	SW	2004180-14	BOG0136	1:1		PFHpA; PFOS	
DA032-08	7/9/20	SW	2004180-15	BOG0136	1:1		PFOSA	13C3-PFBA
DA032-05	7/8/20	SW	2004181-01	BOG0140	1:1; 1:5	PFOS (1:5)	PFPeS; PFDS	
DA032-13	7/8/20	SW	2004181-02	BOG0140	1:1			13C3-PFBA
DA032-09 A	7/8/20	SW	2004181-03	BOG0140	1:1		PFPeS	
DA032-09 B	7/8/20	SW	2004181-04	BOG0140	1:1			13C3-PFBA
DA032-14	7/8/20	SW	2004181-05	BOG0140	1:1		PFPeS	
DA032-10 ALT	7/8/20	SW	2004181-06	BOG0140	1:1		PFPeS	13C3-PFBA
DA032-12 A	7/8/20	SW	2004181-07	BOG0140	1:1		PFPeS	13C3-PFBA
DA032-12 B	7/8/20	SW	2004181-08	BOG0140	1:1		PFPeS	
DUP-070820	7/8/20	Field QC	2004181-09	BOG0140	1:1; 1:5	PFOS (1:5)	PFPeS	
OUTFALL 29	7/9/20	SW	2004181-10	BOG0140	1:1			13C3-PFBA

Client Sample ID	Sample Date	Media	Lab Sample ID	Prep Batch	Dilutions	PFAS Analytes Requiring Dilution	PFAS Analytes with Ion Transition Ratios Outside Criteria	Isotope Surrogates with % Recoveries Outside Limits
OUTFALL 09	7/9/20	SW	2004182-01	BOG0133	1:1			
OUTFALL 06	7/9/20	SW	2004182-02	BOG0133	1:1			
OUTFALL 05	7/9/20	SW	2004182-03	BOG0133	1:1		PFOS	13C2-PFHxDA
OUTFALL 04	7/9/20	SW	2004182-04	BOG0133	1:1		PFHxA; PFHpA	
OUTFALL 32	7/9/20	SW	2004182-05	BOG0133	1:1		PFNA	
OUTFALL 01	7/9/20	SW	2004182-06	BOG0133	1:1		PFTeDA	
OUTFALL 28	7/9/20	SW	2004182-07	BOG0133	1:1		PFHpA; PFNA	
OUTFALL 27	7/9/20	SW	2004182-08	BOG0133	1:1		PFHpA; PFOSA	
OUTFALL 24	7/9/20	SW	2004182-09	BOG0133	1:1		PFHpS; PFNA;PFDA	13C2-PFTeDA; 13C2-PFHxDA
OUTFALL A	7/9/20	SW	2004182-10	BOG0133	1:1		PFDA	
OUTFALL 25	7/9/20	SW	2004182-11	BOG0133	1:1		PFOSA	13C2-PFTeDA; 13C2-PFHxDA
OUTFALL 36	7/9/20	SW	2004182-12	BOG0133	1:1			
FIELD BLANK	7/9/20	Field QC	2004182-13	BOG0133	1:1			
DUPLICATE-070920	7/9/20	Field QC	2004182-14	BOG0133	1:1		PFDA	

Notes: