Appendix B – Laboratory Analytical Data Package

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

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NELAP Certification Number: CA00046L
DoD-ELAP Certification Number 4064.01 L
State Certification Number: CA1312L

January 06, 2023 L

David Conner L
Tidewater, Inc. L
5835 Avenida Encinas, Suite 118 L
Carlsbad, CA 92208 L

RE: NASA JPL
22L0004L

Enclosed are the results of analyses for samples received by our laboratory on 12/1/2022. If you L have any questions concerning this report, please feel free to contact me.L

I certify that this data package is in compliance with the terms and conditions of the contract, both L technically and for completeness. These test results meet all requirements of NELAC and DoD QSM. L Release of the hard copy has been authorized by the Laboratory Manager or designee, as verified L by the following signature.L

Sincerely, n

Greg Salata For Gregory Salatan
Project Managern

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Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:56o

Data Validatable Report

Analysis Case Narrative

PFAS: Manual integrations were performed for this method in accordance with APPL's SOP. Chromatograms after manual t integration are enclosed for specific samples and analytes. Abbreviated flags for technical justification are listed on the t chromatogram. Some extracted internal standards recovered outside of control limits in some samples, these samples were t diluted and recovered in control, unless stated otherwise.t

The extracted internal standards D3-NMeFOSA and D5-NEtFOSA recovered below the lower control limit in sample 01 - t MW-24-S5-112922.t

The extracted internal standards D3-NMeFOSA and D5-NEtFOSA recovered below the lower control limit in sample 04 - t MW-24-S2-112922.t

The extracted internal standard D3-NMeFOSA recovered below the lower control limit in sample 05 - DUP-2-112922.t

The extracted internal standards D3-NMeFOSA and D5-NEtFOSA recovered below the lower control limit in sample 06 - t MW-17-S5-112922.t

The extracted internal standards D3-NMeFOSA, D5-NEtFOSA, and D9-NEtFOSE recovered below the lower control limit in t sample MW-17-S4-112922.t

The extracted internal standards D3-NMeFOSA and D5-NEtFOSA recovered below the lower control limit in sample 17 - t MW-12-S4-112822.t

The extracted internal standards D3-NMeFOSA and D5-NEtFOSA recovered below the lower control limit in sample 19 - t MW-12-S2-112822.t

The extracted internal standards D3-NMeFOSA and D5-NEtFOSA recovered below the lower control limit in sample 20 - t SB-1-112822.t

The extracted internal standards D3-NMeFOSA and D9-NEtFOSE recovered below the lower control limit in sample 22 - t EQP-1-112822.t

The extracted internal standards D3-NMeFOSA and D5-NEtFOSA recovered below the lower control limit in sample 28 - t FB-3-113022.t

The extracted internal standards D3-NMeFOSA, D5-NEtFOSA, and D9-NEtFOSE recovered below the lower control limit in the t BBL0076-BLK1, BBL0076-BS1, BBL0076-BSD1.The analyte PFDoA recovered with high RPD between the t BBL0076-BS1/BSD1.t

The analytes 8:2FTS recovered below the lower control limit in the BBL0076-MRL1. The analyte PFOSA recovered above the t upper control limit. The extracted internal standard D5-NEtFOSA recovered below the lower control limit.t

The analyte PFNS recovered below the lower control limit in the BBL0076-MS1/MSD1 performed on sample 15 – t MW-4-S2-112822. The extracted internal standards D3-NMeFOSA and D9-NEtFOSE recovered below the lower control limits. t The analytes PFTrDA and PFNS recovered with high RPD between the MS/MSD.t

The analytes PFNA, PFUnA, 8:2FTS, and NMeFOSAA recovered above the upper control limit in the BBL0249-BS1. The t extracted internal standards D3-NMeFOSA and D5-NEtFOSA recovered below the lower control limit in the BBL0249-BSD1.t

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Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

The analytes PFDoA and PFOSA recovered above the upper control limit in the BBL0249-MRL1. t
The analyte PFUnA recovered with high RPD between the BBL0296-BS1/BSD1. The extracted internal standards t
D3-NMeFOSA, D5-NEtFOSA, and D7-NMeFOSE, recovered below the lower control limit in the BBL0296-BSD1. t

The analytes PFUnA, PFDoA, PFTeDA, PFNS, PFDS, NMeFOSAA, NMeFOSE, and 11-ClPF3OUdS recovered above the upper t
control limit in the BBL0296-MRL1. t

The extracted internal standards D3-NMeFOSA and D5-NEtFOSA recovered below the lower control limit in the BBL0371-BLK1. t

The extracted internal standards D3-NMeFOSA and D5-NEtFOSA recovered below the lower control limit in the BBL0371-BS1 t
and the BBL0371-BSD1. The analyte PFTeDA recovered with high RPD between the BBL0371-BS1/BSD1. t

The analytes PFTeDA and NMeFOSE recovered below the lower control limit in the BBL0371-MRL1. The analyte NEtFOSE t
recovered above the upper control limit. The extracted internal standard D3-tNMeFOSA recovered below the lower control limit. t

The analytes 6:2FTS and NEtFOSE recovered above the upper control limit in the SB03769-LCV1. t

The analyte PFUnA recovered above the upper control limit in the SB03858-LCV1. t

The analytes PFDA and HFPO-DA recovered above the upper control limit in the SB03860-LCV1. The analyte PFDoA recovered t
below the lower control limit. t

The analyte PFUnA recovered above the upper control limit in the SB03860-CCV1. t

Samples in this Reportn

Lab IDn	Sample	Matrixn	Date Sampledn	Date Receivedn
22L0004-01o	MW-24-S5-112922o	Watero	11/29/2022 08:45o	12/01/2022o
22L0004-02o	MW-24-S4-112922o	Watero	11/29/2022 09:10o	12/01/2022o
22L0004-03o	MW-24-S3-112922o	Watero	11/29/2022 09:35o	12/01/2022o
22L0004-04o	MW-24-S2-112922o	Watero	11/29/2022 10:00o	12/01/2022o
22L0004-05o	DUP-2-112922o	Watero	11/29/2022 10:10o	12/01/2022o
22L0004-06o	MW-17-S5-112922o	Watero	11/29/2022 12:10o	12/01/2022o
22L0004-07o	MW-17-S4-112922o	Watero	11/29/2022 12:25o	12/01/2022o
22L0004-08o	MW-17-S3-112922o	Watero	11/29/2022 12:50o	12/01/2022o
22L0004-09o	DUP-3-112922o	Watero	11/29/2022 13:00o	12/01/2022o
22L0004-10o	MW-17-S2-112922o	Watero	11/29/2022 13:30o	12/01/2022o
22L0004-11o	SB-2-112922o	Watero	11/29/2022 13:50o	12/01/2022o
22L0004-12o	MW-4-S5-112822o	Watero	11/28/2022 09:35o	12/01/2022o
22L0004-13o	DUP-1-112822o	Watero	11/28/2022 09:45o	12/01/2022o
22L0004-14o	MW-4-S4-112822o	Watero	11/28/2022 10:30o	12/01/2022o
22L0004-15o	MW-4-S2-112822o	Watero	11/28/2022 10:55o	12/01/2022o
22L0004-16o	MW-12-S5-112822o	Watero	11/28/2022 13:15o	12/01/2022o
22L0004-17o	MW-12-S4-112822o	Watero	11/28/2022 13:50o	12/01/2022o
22L0004-18o	MW-12-S3-112822o	Watero	11/28/2022 14:20o	12/01/2022o
22L0004-19o	MW-12-S2-112822o	Watero	11/28/2022 14:45o	12/01/2022o
22L0004-20o	SB-1-112822o	Watero	11/28/2022 14:55o	12/01/2022o
22L0004-21o	FB-1-112822o	Watero	11/28/2022 15:15o	12/01/2022o

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Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Samples in this Reportn

(Continued)n

Lab IDn	Sample	Matrixn	Date Sampledn	Date Receivedn
22L0004-22o	EQP-1-112822o	Watero	11/28/2022 15:00o	12/01/2022o
22L0004-23o	EQP-2-112922o	Watero	11/29/2022 14:00o	12/01/2022o
22L0004-24o	FB-2-112922o	Watero	11/29/2022 14:15o	12/01/2022o
22L0004-25o	MW-15-113022o	Watero	11/30/2022 09:40o	12/01/2022o
22L0004-26o	SB-3-113022o	Watero	11/30/2022 09:50o	12/01/2022o
22L0004-27o	EQP-3-113022o	Watero	11/30/2022 09:55o	12/01/2022o
22L0004-28o	FB-3-113022o	Watero	11/30/2022 10:00o	12/01/2022o

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Containers Receivedn

Lab IDn	Container Typen	Countn	Preservation Checkn
22L0004-01t			
	250mL Pt	2t	
22L0004-02t			
	250mL Pt	2t	
22L0004-03t			
	250mL Pt	2t	
22L0004-04t			
	250mL Pt	2t	
22L0004-05t			
	250mL Pt	2t	
22L0004-06t			
	250mL Pt	2t	
22L0004-07t			
	250mL Pt	2t	
22L0004-08t			
	250mL Pt	2t	
22L0004-09t			
	250mL Pt	2t	
22L0004-10t			
	250mL Pt	2t	
22L0004-11t			
	250mL Pt	2t	
22L0004-12t			
	250mL Pt	2t	
22L0004-13t			
	250mL Pt	2t	
22L0004-14t			
	250mL Pt	2t	
22L0004-15t			
	250mL Pt	4t	
22L0004-16t			
	250mL Pt	2t	

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22L0004-17t		
	250mL Pt	2t
22L0004-18t		
	250mL Pt	2t
22L0004-19t		
	250mL Pt	2t
22L0004-20t		
	250mL Pt	2t
22L0004-21t		
	50mL Centrifuge Tubest	1t
22L0004-22t		
	250mL Pt	2t
22L0004-23t		
	250mL Pt	2t
22L0004-24t		
	50mL Centrifuge Tubest	1t
22L0004-25t		
	250mL Pt	2t
22L0004-26t		
	250mL Pt	2t
22L0004-27t		
	250mL Pt	2t
22L0004-28t		
	50mL Centrifuge Tubest	1t

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Sample Results

Sample: MW-24-S5-112922
22L0004-01 (Water)a

Per- nd Polyfluoroalkyl Substances

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.18 Uo	2.8o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPEAo	0.18 Uo	1.4o	0.18o	0.055o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXAo	0.18 Uo	0.71o	0.18o	0.057o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPAo	0.18 Uo	0.71o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOAo	0.21 Jo	0.71o	0.18o	0.073o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNAo	0.18 Uo	0.71o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDAo	0.18 Uo	0.71o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFUnAo	0.18 Uo	0.71o	0.18o	0.071o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDOAo	0.18 Uo	0.71o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTRDAo	0.18 Uo	0.71o	0.18o	0.051o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTEDAo	0.18 Uo	0.71o	0.18o	0.076o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFBSo	0.18 Uo	0.71o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPESo	0.18 Uo	0.71o	0.18o	0.051o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXSo	0.18 Uo	0.71o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPSo	0.18 Uo	0.71o	0.18o	0.050o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSo	0.18 Uo	0.71o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNSo	0.35 Uo	0.71o	0.35o	0.22o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDSo	0.18 Uo	0.71o	0.18o	0.057o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
4:2FTSo	0.35 Uo	2.8o	0.35o	0.096o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
6:2FTSo	0.18 Uo	2.8o	0.18o	0.080o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
8:2FTSo	0.53 Uo	2.8o	0.53o	0.18o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSAo	0.18 Jo	2.8o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAo	1.8 Uo	2.8o	1.8o	0.87o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAo	1.8 Uo	2.8o	1.8o	0.87o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAAo	0.18 Uo	0.71o	0.18o	0.064o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAAo	0.18 Uo	0.71o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSEo	1.1 Uo	2.8o	1.1o	0.53o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSEo	1.1 Uo	2.8o	1.1o	0.53o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
HFPO-DAo	0.88 Uo	1.4o	0.88o	0.43o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
ADONAo	0.53 Uo	1.4o	0.53o	0.23o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
9CL-PF3ONSo	0.53 Uo	1.4o	0.53o	0.21o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
11CL-PF3OUDSo	0.53 Uo	1.4o	0.53o	0.21o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
Surrogate: 13C4-PFBAo	*101%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFPEAo	*88.6%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFHXAo	*104%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C4-PFHPAo	*93.1%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOAo	*104%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C9-PFNAo	*95.5%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C6-PFDAo	*89.3%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C7-PFUnAo	*97.8%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFDOAo	*91.4%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFTEDAo	*92.4%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFBSo	*110%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFHXSo	*103%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSo	*96.0%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

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Sample Results

(Continued)a

Sample: MW-24-S5-112922 (Continued)a

22L0004-01 (Water)a

Per- nd Polyfluoroalkyl Substances (Continued)a

Analyteo	Result	/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*135%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-6:2FTSo	*105%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-8:2FTSo	*104%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSAo	*66.1%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*35.3%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*36.1%o*	*S1o*		*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*37.8%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*41.6%o*	*S1o*		*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAAo	*107%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAAo	*111%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D7-NMEFOSEo	*46.3%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D7-NMEFOSEo	*52.2%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D9-NETFOSEo	*51.7%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-HFPO-DAo	*98.3%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

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Sample Results

(Continued)a

Sample: MW-24-S4-112922

22L0004-02 (Water)a

Per- nd Polyfluoroalkyl Substances

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.17 Uo	2.8o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPEAo	0.17 Uo	1.4o	0.17o	0.053o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXAo	0.17 Uo	0.69o	0.17o	0.055o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPAo	0.17 Uo	0.69o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOAo	0.26 JoIR1, o	0.69o	0.17o	0.071o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNAo	0.17 Uo	0.69o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDAo	0.17 Uo	0.69o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFUnAo	0.17 Uo	0.69o	0.17o	0.069o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDOAo	0.17 Uo	0.69o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTRDAo	0.17 Uo	0.69o	0.17o	0.050o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTEDAo	0.17 Uo	0.69o	0.17o	0.074o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFBSo	0.17 Uo	0.69o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPESo	0.17 Uo	0.69o	0.17o	0.050o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXSo	0.17 Uo	0.69o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPSo	0.17 Uo	0.69o	0.17o	0.048o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSo	0.17 Uo	0.69o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNSo	0.34 Uo	0.69o	0.34o	0.21o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDSo	0.17 Uo	0.69o	0.17o	0.055o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
4:2FTSo	0.34 Uo	2.8o	0.34o	0.093o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
6:2FTSo	0.17 Uo	2.8o	0.17o	0.077o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
8:2FTSo	0.52 Uo	2.8o	0.52o	0.17o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSAo	0.14 Jo	2.8o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAo	1.7 Uo	2.8o	1.7o	0.85o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAo	1.7 Uo	2.8o	1.7o	0.85o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAAo	0.17 Uo	0.69o	0.17o	0.062o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAAo	0.17 Uo	0.69o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSEo	1.0 Uo	2.8o	1.0o	0.52o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSEo	1.0 Uo	2.8o	1.0o	0.52o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
HFPO-DAo	0.86 Uo	1.4o	0.86o	0.42o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
ADONAo	0.52 Uo	1.4o	0.52o	0.22o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
9CL-PF3ONSo	0.52 Uo	1.4o	0.52o	0.20o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
11CL-PF3OUDSo	0.52 Uo	1.4o	0.52o	0.21o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
Surrogate: 13C4-PFBAo	*104%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFPEAo	*82.8%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFHXAo	*109%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C4-PFHPAo	*91.0%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOAo	*106%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C9-PFNAo	*104%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C6-PFDAo	*100%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C7-PFUnAo	*104%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFDOAo	*97.9%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFTEDAo	*68.0%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFBSo	*94.4%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFHXSo	*102%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSo	*105%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results
(Continued)a

Sample: MW-24-S4-112922 (Continued)a
22L0004-02 (Water)a

Per- nd Polyfluoroalkyl Substances (Continued)a

Analyteo	Result	/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*103%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-6:2FTSo	*93.7%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-8:2FTSo	*102%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSAo	*66.2%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*42.4%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*59.1%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*43.8%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*73.0%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAAo	*102%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAAo	*95.5%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D7-NMEFOSEo	*52.9%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D9-NETFOSEo	*53.9%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-HFPO-DAo	*90.6%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o
5835 Avenida Encinas, Suite 118o
Carlsbad, CA 92208o

Project:oNASA JPLo
Project Number:oNASA JPL SIo
Project Manager:oDavid Connero

Reported:o01/06/2023 15:56o

Sample Results
(Continued)a

Sample: MW-24-S3-112922
22L0004-03 (Water)a

Per- nd Polyfluoroalkyl Substances

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.68 Jo	2.7o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPEAo	1.6o	1.4o	0.17o	0.053o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXAo	1.3o IR2o	0.68o	0.17o	0.055o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPAo	0.60 Jo	0.68o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOAo	2.3o MI4o	0.68o	0.17o	0.070o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNAo	0.31 Jo	0.68o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDAo	0.37 JoIR2, o	0.68o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFUnAo	0.17 Uo	0.68o	0.17o	0.068o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDOAo	0.17 Uo	0.68o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTRDAo	0.17 Uo	0.68o	0.17o	0.049o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTEDAo	0.17 Uo	0.68o	0.17o	0.073o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFBSo	0.36 Jo	0.68o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPESo	0.23 JoIR2, o	0.68o	0.17o	0.049o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXSo	0.82o	0.68o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPSo	0.17 Uo	0.68o	0.17o	0.048o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSo	0.70o MI4o	0.68o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNSo	0.34 Uo	0.68o	0.34o	0.21o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDSo	0.17 Uo	0.68o	0.17o	0.055o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
4:2FTSo	0.34 Uo	2.7o	0.34o	0.092o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
6:2FTSo	0.17 Uo	2.7o	0.17o	0.077o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
8:2FTSo	0.51 Uo	2.7o	0.51o	0.17o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSAo	0.20 Jo	2.7o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAo	1.7 Uo	2.7o	1.7o	0.84o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAo	1.7 Uo	2.7o	1.7o	0.84o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAAo	0.17 Uo	0.68o	0.17o	0.061o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAAo	0.17 Uo	0.68o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSEo	1.0 Uo	2.7o	1.0o	0.51o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSEo	1.0 Uo	2.7o	1.0o	0.51o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
HFPO-DAo	0.85 Uo	1.4o	0.85o	0.42o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
ADONAo	0.51 Uo	1.4o	0.51o	0.22o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
9CL-PF3ONSo	0.51 Uo	1.4o	0.51o	0.20o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
11CL-PF3OUDSo	0.51 Uo	1.4o	0.51o	0.20o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
Surrogate: 13C4-PFBAo	*102%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFPEAo	*91.1%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFHXAo	*97.3%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C4-PFHPAo	*105%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOAo	*99.9%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C9-PFNAo	*113%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C6-PFDAo	*97.4%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C7-PFUnAo	*92.2%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFDOAo	*65.7%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFTEDAo	*58.5%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFBSo	*94.5%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFHXSo	*98.7%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSo	*84.3%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results
(Continued)a

Sample: MW-24-S3-112922 (Continued)a
22L0004-03 (Water)a

Per- nd Polyfluoroalkyl Substances (Continued)a

Analyteo	Result	/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*118%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-6:2FTSo	*105%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-8:2FTSo	*106%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSAo	*55.6%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*37.3%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*52.9%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*38.6%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*51.3%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAAo	*105%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAAo	*98.8%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D7-NMEFOSEo	*42.1%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D7-NMEFOSEo	*63.2%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D9-NETFOSEo	*46.7%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D9-NETFOSEo	*68.8%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-HFPO-DAo	*90.8%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results

(Continued)a

Sample: MW-24-S2-112922

22L0004-04 (Water)a

Per- nd Polyfluoroalkyl Substances

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	1.4 Jo	2.7o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPEAo	2.3o	1.4o	0.17o	0.053o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXAo	1.5o	0.68o	0.17o	0.054o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPAo	0.70o	0.68o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOAo	0.68 Jo	0.68o	0.17o	0.070o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNAo	0.17 Uo	0.68o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDAo	0.17 Uo	0.68o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFUnAo	0.17 Uo	0.68o	0.17o	0.068o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDOAo	0.17 Uo	0.68o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTRDAo	0.17 Uo	0.68o	0.17o	0.049o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTEDAo	0.17 Uo	0.68o	0.17o	0.073o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFBSo	0.84o	0.68o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPESo	0.62 Jo	0.68o	0.17o	0.049o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXSo	2.3o	0.68o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPSo	0.17 Uo	0.68o	0.17o	0.048o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSo	0.33 JoMI4, o	0.68o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNSo	0.34 Uo	0.68o	0.34o	0.21o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDSo	0.17 Uo	0.68o	0.17o	0.054o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
4:2FTSo	0.34 Uo	2.7o	0.34o	0.092o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
6:2FTSo	0.17 Uo	2.7o	0.17o	0.077o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
8:2FTSo	0.51 Uo	2.7o	0.51o	0.17o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSAo	0.17 Uo	2.7o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAo	1.7 Uo	2.7o	1.7o	0.84o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAo	1.7 Uo	2.7o	1.7o	0.84o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAAo	0.17 Uo	0.68o	0.17o	0.061o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAAo	0.17 Uo	0.68o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSEo	1.0 Uo	2.7o	1.0o	0.51o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSEo	1.0 Uo	2.7o	1.0o	0.51o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
HFPO-DAo	0.85 Uo	1.4o	0.85o	0.42o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
ADONAo	0.51 Uo	1.4o	0.51o	0.22o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
9CL-PF3ONSo	0.51 Uo	1.4o	0.51o	0.20o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
11CL-PF3OUDSo	0.51 Uo	1.4o	0.51o	0.20o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
Surrogate: 13C4-PFBAo	*96.1%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFPEAo	*90.1%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFHXAo	*111%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C4-PFHPAo	*104%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOAo	*105%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C9-PFNAo	*118%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C6-PFDAo	*91.0%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C7-PFUnAo	*110%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFDOAo	*81.7%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFTEDAo	*83.2%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFBSo	*103%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFHXSo	*101%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSo	*95.0%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results

(Continued)a

Sample: MW-24-S2-112922 (Continued)a

22L0004-04 (Water)a

Per- nd Polyfluoroalkyl Substances (Continued)a

Analyteo	Result	/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*120%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-6:2FTSo	*101%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-8:2FTSo	*92.5%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSAo	*69.3%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*41.6%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*43.9%o*	*S1o*		*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*39.3%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*42.5%o*	*S1o*		*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAAo	*100%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAAo	*105%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D7-NMEFOSEo	*47.3%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D7-NMEFOSEo	*62.7%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D9-NETFOSEo	*51.9%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-HFPO-DAo	*102%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results

(Continued)a

Sample: DUP-2-112922

22L0004-05 (Water)a

Per- nd Polyfluoroalkyl Substances

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	1.3 Jo	2.7o	0.17o	0.042o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPEAo	2.4o	1.3o	0.17o	0.052o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXAo	1.3o	0.67o	0.17o	0.054o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPAo	0.70o	0.67o	0.17o	0.042o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOAo	0.83o MI4o	0.67o	0.17o	0.069o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNAo	0.17 Uo	0.67o	0.17o	0.042o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDAo	0.17 Uo	0.67o	0.17o	0.042o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFUnAo	0.17 Uo	0.67o	0.17o	0.067o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDOAo	0.17 Uo	0.67o	0.17o	0.042o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTRDAo	0.17 Uo	0.67o	0.17o	0.049o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTEDAo	0.17 Uo	0.67o	0.17o	0.072o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFBSo	0.65 Jo	0.67o	0.17o	0.042o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPESo	0.66 Jo	0.67o	0.17o	0.049o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXSo	2.2o	0.67o	0.17o	0.042o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPSo	0.17 Uo	0.67o	0.17o	0.047o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSo	0.55 JoMI4, o	0.67o	0.17o	0.042o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNSo	0.34 Uo	0.67o	0.34o	0.21o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDSo	0.17 Uo	0.67o	0.17o	0.054o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
4:2FTSo	0.34 Uo	2.7o	0.34o	0.091o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
6:2FTSo	0.17 Uo	2.7o	0.17o	0.076o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
8:2FTSo	0.50 Uo	2.7o	0.50o	0.17o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSAo	0.17 Uo	2.7o	0.17o	0.042o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAo	1.7 Uo	2.7o	1.7o	0.83o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAo	1.7 Uo	2.7o	1.7o	0.83o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAAo	0.17 Uo	0.67o	0.17o	0.061o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAAo	0.17 Uo	0.67o	0.17o	0.042o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSEo	1.0 Uo	2.7o	1.0o	0.50o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSEo	1.0 Uo	2.7o	1.0o	0.50o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
HFPO-DAo	0.84 Uo	1.3o	0.84o	0.41o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
ADONAo	0.50 Uo	1.3o	0.50o	0.22o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
9CL-PF3ONSo	0.50 Uo	1.3o	0.50o	0.20o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
11CL-PF3OUDSo	0.50 Uo	1.3o	0.50o	0.20o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
Surrogate: 13C4-PFBAo	*107%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFPEAo	*105%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFHXAo	*116%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C4-PFHPAo	*110%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOAo	*119%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C9-PFNAo	*111%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C6-PFDAo	*108%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C7-PFUnAo	*124%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFDOAo	*97.3%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFTEDAo	*94.1%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFBSo	*119%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFHXSo	*113%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSo	*130%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results
(Continued)a

Sample: DUP-2-112922 (Continued)a
22L0004-05 (Water)a

Per- nd Polyfluoroalkyl Substances (Continued)a

Analyteo	Result	/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*135%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-6:2FTSo	*121%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-8:2FTSo	*127%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSAo	*86.3%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*47.0%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*49.8%o*	*S1o*		*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*45.1%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*54.4%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAAo	*132%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAAo	*140%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D7-NMEFOSEo	*58.9%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D9-NETFOSEo	*62.6%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-HFPO-DAo	*102%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results

(Continued)a

Sample: MW-17-S5-112922

22L0004-06 (Water)a

Per- nd Polyfluoroalkyl Substances

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.39 Jo	2.8o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPEAo	0.83 Jo	1.4o	0.17o	0.054o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXAo	0.59 Jo	0.69o	0.17o	0.056o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPAo	0.28 JoIR2, o	0.69o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOAo	1.5o	0.69o	0.17o	0.071o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNAo	0.17 Uo	0.69o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDAo	0.17 Uo	0.69o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFUnAo	0.17 Uo	0.69o	0.17o	0.069o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDOAo	0.17 Uo	0.69o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTRDAo	0.17 Uo	0.69o	0.17o	0.050o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTEDAo	0.17 Uo	0.69o	0.17o	0.075o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFBSo	0.47 Jo	0.69o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPESo	0.36 Jo	0.69o	0.17o	0.050o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXSo	1.3o	0.69o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPSo	0.17 Uo	0.69o	0.17o	0.049o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSo	2.0o	0.69o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNSo	0.35 Uo	0.69o	0.35o	0.21o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDSo	0.17 Uo	0.69o	0.17o	0.056o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
4:2FTSo	0.35 Uo	2.8o	0.35o	0.094o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
6:2FTSo	0.17 Uo	2.8o	0.17o	0.078o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
8:2FTSo	0.52 Uo	2.8o	0.52o	0.18o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSAo	0.17 Uo	2.8o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAo	1.7 Uo	2.8o	1.7o	0.86o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAo	1.7 Uo	2.8o	1.7o	0.85o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAAo	0.17 Uo	0.69o	0.17o	0.062o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAAo	0.17 Uo	0.69o	0.17o	0.043o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSEo	1.0 Uo	2.8o	1.0o	0.52o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSEo	1.0 Uo	2.8o	1.0o	0.52o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
HFPO-DAo	0.87 Uo	1.4o	0.87o	0.43o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
ADONAo	0.52 Uo	1.4o	0.52o	0.23o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
9CL-PF3ONSo	0.52 Uo	1.4o	0.52o	0.20o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
11CL-PF3OUDSo	0.52 Uo	1.4o	0.52o	0.21o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
Surrogate: 13C4-PFBAo	*88.8%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFPEAo	*83.0%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFHXAo	*105%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C4-PFHPAo	*92.0%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOAo	*76.8%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C9-PFNAo	*93.2%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C6-PFDAo	*72.0%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C7-PFUnAo	*79.9%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFDOAo	*78.7%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFTEDAo	*61.6%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFBSo	*85.4%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFHXSo	*83.4%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSo	*89.1%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results

(Continued)a

Sample: MW-17-S5-112922 (Continued)a

22L0004-06 (Water)a

Per- nd Polyfluoroalkyl Substances (Continued)a

Analyteo	Result /Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*89.3%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-6:2FTSo	*80.1%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-8:2FTSo	*80.2%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSAo	*70.5%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*41.8%o S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*38.2%o S1o*		*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*42.2%o S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*44.8%o S1o*		*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAAo	*81.1%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAAo	*98.6%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D7-NMEFOSEo	*50.5%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D9-NETFOSEo	*55.1%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-HFPO-DAo	*100%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results

(Continued)a

Sample: MW-17-S4-112922

22L0004-07 (Water)a

Per- nd Polyfluoroalkyl Substances

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.68 Jo	2.9o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPEAo	1.0 Jo	1.4o	0.18o	0.055o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXAo	1.0o IR2o	0.71o	0.18o	0.057o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPAo	0.82o	0.71o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOAo	2.3o	0.71o	0.18o	0.073o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNAo	0.36 Jo	0.71o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDAo	0.30 Jo	0.71o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFUnAo	0.18 Uo	0.71o	0.18o	0.071o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDOAo	0.18 Uo	0.71o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTRDAo	0.18 Uo	0.71o	0.18o	0.052o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTEDAo	0.18 Uo	0.71o	0.18o	0.077o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFBSo	0.50 Jo	0.71o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPESo	0.27 Jo	0.71o	0.18o	0.052o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXSo	1.2o	0.71o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPSo	0.18 Uo	0.71o	0.18o	0.050o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSo	2.0o MI4o	0.71o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNSo	0.36 Uo	0.71o	0.36o	0.22o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDSo	0.18 Uo	0.71o	0.18o	0.057o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
4:2FTSo	0.36 Uo	2.9o	0.36o	0.096o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
6:2FTSo	0.18 Uo	2.9o	0.18o	0.080o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
8:2FTSo	0.53 Uo	2.9o	0.53o	0.18o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSAo	0.15 Jo	2.9o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAo	1.8 Uo	2.9o	1.8o	0.88o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAo	1.8 Uo	2.9o	1.8o	0.88o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAAo	0.18 Uo	0.71o	0.18o	0.064o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAAo	0.18 Uo	0.71o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSEo	1.1 Uo	2.9o	1.1o	0.53o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSEo	1.1 Uo	2.9o	1.1o	0.53o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
HFPO-DAo	0.89 Uo	1.4o	0.89o	0.44o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
ADONAo	0.53 Uo	1.4o	0.53o	0.23o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
9CL-PF3ONSo	0.53 Uo	1.4o	0.53o	0.21o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
11CL-PF3OUDSo	0.53 Uo	1.4o	0.53o	0.21o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
Surrogate: 13C4-PFBAo	*95.1%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFPEAo	*98.0%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFHXAo	*112%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C4-PFHPAo	*99.5%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOAo	*96.4%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C9-PFNAo	*107%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C6-PFDAo	*97.7%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C7-PFUnAo	*103%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFDOAo	*79.9%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFTEDAo	*75.7%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFBSo	*108%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFHXSo	*99.4%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSo	*94.1%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results

(Continued)a

Sample: MW-17-S4-112922 (Continued)a

22L0004-07 (Water)a

Per- nd Polyfluoroalkyl Substances (Continued)a

Analyteo	Result	/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*122%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-6:2FTSo	*117%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-8:2FTSo	*116%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSAo	*60.2%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*42.0%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*43.5%o*	*S1o*		*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*37.9%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*46.7%o*	*S1o*		*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAAo	*101%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAAo	*106%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D7-NMEFOSEo	*45.7%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D7-NMEFOSEo	*48.3%o*	*S1o*		*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D9-NETFOSEo	*47.9%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D9-NETFOSEo	*50.8%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-HFPO-DAo	*104%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results

(Continued)a

Sample: MW-17-S3-112922

22L0004-08 (Water)a

Per- nd Polyfluoroalkyl Substances

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	1.0 Jo	2.9o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPEAo	1.8o	1.4o	0.18o	0.056o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXAo	1.2o	0.72o	0.18o	0.057o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPAo	0.68 Jo	0.72o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOAo	2.3o	0.72o	0.18o	0.073o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNAo	0.37 Jo	0.72o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDAo	1.4o	0.72o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFUnAo	0.18 Uo	0.72o	0.18o	0.072o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDOAo	0.18 Uo	0.72o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTRDAo	0.18 Uo	0.72o	0.18o	0.052o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTEDAo	0.18 Uo	0.72o	0.18o	0.077o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFBSo	2.2o	0.72o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPESo	0.56 Jo	0.72o	0.18o	0.052o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXSo	1.4o	0.72o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPSo	0.18 Uo	0.72o	0.18o	0.050o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSo	6.6o	0.72o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNSo	0.36 Uo	0.72o	0.36o	0.22o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDSo	0.18 Uo	0.72o	0.18o	0.057o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
4:2FTSo	0.36 Uo	2.9o	0.36o	0.097o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
6:2FTSo	0.18 Uo	2.9o	0.18o	0.081o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
8:2FTSo	0.54 Uo	2.9o	0.54o	0.18o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSAo	0.13 Jo	2.9o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAo	1.8 Uo	2.9o	1.8o	0.88o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAo	1.8 Uo	2.9o	1.8o	0.88o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAAo	0.18 Uo	0.72o	0.18o	0.065o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAAo	0.18 Uo	0.72o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSEo	1.1 Uo	2.9o	1.1o	0.54o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSEo	1.1 Uo	2.9o	1.1o	0.54o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
HFPO-DAo	0.90 Uo	1.4o	0.90o	0.44o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
ADONAo	0.54 Uo	1.4o	0.54o	0.23o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
9CL-PF3ONSo	0.54 Uo	1.4o	0.54o	0.21o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
11CL-PF3OUDSo	0.54 Uo	1.4o	0.54o	0.22o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
Surrogate: 13C4-PFBAo	*96.3%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFPEAo	*96.2%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFHXAo	*116%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C4-PFHPAo	*134%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOAo	*98.2%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C9-PFNAo	*106%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C6-PFDAo	*86.6%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C7-PFUnAo	*86.8%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFDOAo	*78.5%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFTEDAo	*70.1%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFBSo	*80.1%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFHXSo	*91.9%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSo	*97.0%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results

(Continued)a

Sample: MW-17-S3-112922 (Continued)a

22L0004-08 (Water)a

Per- nd Polyfluoroalkyl Substances (Continued)a

Analyteo	Result	/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*102%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-6:2FTSo	*91.6%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-8:2FTSo	*96.4%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSAo	*74.4%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*44.0%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*64.4%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*44.0%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*58.4%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAAo	*168%o*	*S2o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAAo	*115%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAAo	*120%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D7-NMEFOSEo	*51.1%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D9-NETFOSEo	*52.3%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-HFPO-DAo	*102%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results

(Continued)a

Sample: DUP-3-112922

22L0004-09 (Water)a

Per- nd Polyfluoroalkyl Substances

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.80 Jo	2.8o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPEAo	1.9o	1.4o	0.18o	0.054o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXAo	1.4o IR2o	0.70o	0.18o	0.056o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPAo	0.92o	0.70o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOAo	2.0o MI4o	0.70o	0.18o	0.072o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNAo	0.53 Jo	0.70o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDAo	0.91o	0.70o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFUnAo	0.18 Uo	0.70o	0.18o	0.070o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDOAo	0.18 Uo	0.70o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTRDAo	0.18 Uo	0.70o	0.18o	0.051o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTEDAo	0.18 Uo	0.70o	0.18o	0.076o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFBSo	2.4o	0.70o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPESo	0.53 Jo	0.70o	0.18o	0.051o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXSo	1.4o	0.70o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPSo	0.18 Uo	0.70o	0.18o	0.049o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSo	5.9o	0.70o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNSo	0.35 Uo	0.70o	0.35o	0.22o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDSo	0.18 Uo	0.70o	0.18o	0.056o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
4:2FTSo	0.35 Uo	2.8o	0.35o	0.095o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
6:2FTSo	0.18 Uo	2.8o	0.18o	0.079o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
8:2FTSo	0.53 Uo	2.8o	0.53o	0.18o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSAo	0.18 Uo	2.8o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAo	1.8 Uo	2.8o	1.8o	0.87o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAo	1.8 Uo	2.8o	1.8o	0.86o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAAo	0.18 Uo	0.70o	0.18o	0.063o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAAo	0.18 Uo	0.70o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSEo	1.1 Uo	2.8o	1.1o	0.53o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSEo	1.1 Uo	2.8o	1.1o	0.53o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
HFPO-DAo	0.88 Uo	1.4o	0.88o	0.43o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
ADONAo	0.53 Uo	1.4o	0.53o	0.23o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
9CL-PF3ONSo	0.53 Uo	1.4o	0.53o	0.21o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
11CL-PF3OUDSo	0.53 Uo	1.4o	0.53o	0.21o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
Surrogate: 13C4-PFBAo	*95.5%o*	*50-150o*				*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFPEAo	*90.8%o*	*50-150o*				*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFHXAo	*108%o*	*50-150o*				*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C4-PFHPAo	*103%o*	*50-150o*				*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOAo	*102%o*	*50-150o*				*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C9-PFNAo	*98.4%o*	*50-150o*				*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C6-PFDAo	*102%o*	*50-150o*				*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C7-PFUnAo	*106%o*	*50-150o*				*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFDOAo	*73.3%o*	*50-150o*				*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFTEDAo	*71.0%o*	*50-150o*				*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFBSo	*90.2%o*	*50-150o*				*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFHXSo	*102%o*	*50-150o*				*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSo	*87.9%o*	*50-150o*				*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

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Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results
(Continued)a

Sample: DUP-3-112922 (Continued)a
22L0004-09 (Water)a

Per- nd Polyfluoroalkyl Substances (Continued)a

Analyteo	Result /Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*113%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-6:2FTSo	*93.8%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-8:2FTSo	*115%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSAo	*64.2%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*39.5%o S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*54.9%o*		*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*39.6%o S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*53.4%o*		*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAAo	*191%o S2o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAAo	*106%o*		*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAAo	*97.2%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D7-NMEFOSEo	*43.3%o S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D7-NMEFOSEo	*52.6%o*		*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D9-NETFOSEo	*44.3%o S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D9-NETFOSEo	*63.2%o*		*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-HFPO-DAo	*103%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results

(Continued)a

Sample: MW-17-S2-112922

22L0004-10 (Water)a

Per- nd Polyfluoroalkyl Substances

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.18 Uo	2.9o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPEAo	0.18 Uo	1.4o	0.18o	0.055o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXAo	0.18 Uo	0.72o	0.18o	0.057o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPAo	0.18 Uo	0.72o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOAo	0.23 Jo	0.72o	0.18o	0.073o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNAo	0.18 Uo	0.72o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDAo	0.18 Uo	0.72o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFUnAo	0.18 Uo	0.72o	0.18o	0.072o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDOAo	0.18 Uo	0.72o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTRDAo	0.18 Uo	0.72o	0.18o	0.052o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTEDAo	0.18 Uo	0.72o	0.18o	0.077o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFBSo	1.3o	0.72o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPESo	0.18 Uo	0.72o	0.18o	0.052o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXSo	0.54 Jo	0.72o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPSo	0.18 Uo	0.72o	0.18o	0.050o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSo	0.83o MI4o	0.72o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNSo	0.36 Uo	0.72o	0.36o	0.22o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDSo	0.18 Uo	0.72o	0.18o	0.057o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
4:2FTSo	0.36 Uo	2.9o	0.36o	0.097o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
6:2FTSo	0.18 Uo	2.9o	0.18o	0.080o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
8:2FTSo	0.54 Uo	2.9o	0.54o	0.18o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSAo	0.18 Uo	2.9o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAo	1.8 Uo	2.9o	1.8o	0.88o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAo	1.8 Uo	2.9o	1.8o	0.88o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAAo	0.18 Uo	0.72o	0.18o	0.064o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAAo	0.18 Uo	0.72o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSEo	1.1 Uo	2.9o	1.1o	0.54o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSEo	1.1 Uo	2.9o	1.1o	0.54o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
HFPO-DAo	0.89 Uo	1.4o	0.89o	0.44o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
ADONAo	0.54 Uo	1.4o	0.54o	0.23o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
9CL-PF3ONSo	0.54 Uo	1.4o	0.54o	0.21o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
11CL-PF3OUDSo	0.54 Uo	1.4o	0.54o	0.21o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
Surrogate: 13C4-PFBAo	*104%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFPEAo	*93.8%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFHXAo	*103%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C4-PFHPAo	*104%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOAo	*98.9%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C9-PFNAo	*101%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C6-PFDAo	*81.1%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C7-PFUnAo	*107%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFDOAo	*84.2%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFTEDAo	*66.6%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFBSo	*111%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFHXSo	*105%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSo	*118%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results
(Continued)a

Sample: MW-17-S2-112922 (Continued)a
22L0004-10 (Water)a

Per- nd Polyfluoroalkyl Substances (Continued)a

Analyteo	Result /Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*136%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-6:2FTSo	*124%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-8:2FTSo	*118%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSAo	*83.1%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*50.9%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*55.1%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAAo	*115%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAAo	*108%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D7-NMEFOSEo	*66.5%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D9-NETFOSEo	*67.4%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-HFPO-DAo	*99.0%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results

(Continued)a

Sample: SB-2-112922

22L0004-11 (Water)a

Per- nd Polyfluoroalkyl Substances

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.18 Uo	2.8o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPEAo	0.18 Uo	1.4o	0.18o	0.055o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXAo	0.18 Uo	0.70o	0.18o	0.056o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPAo	0.18 Uo	0.70o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOAo	0.19 Jo	0.70o	0.18o	0.072o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNAo	0.18 Uo	0.70o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDAo	0.18 Uo	0.70o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFUnAo	0.18 Uo	0.70o	0.18o	0.070o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDOAo	0.18 Uo	0.70o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTRDAo	0.18 Uo	0.70o	0.18o	0.051o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTEDAo	0.18 Uo	0.70o	0.18o	0.076o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFBSo	0.18 Uo	0.70o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPESo	0.18 Uo	0.70o	0.18o	0.051o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXSo	0.18 Uo	0.70o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPSo	0.18 Uo	0.70o	0.18o	0.049o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSo	0.059 JoIR2, o	0.70o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNSo	0.35 Uo	0.70o	0.35o	0.22o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDSo	0.18 Uo	0.70o	0.18o	0.056o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
4:2FTSo	0.35 Uo	2.8o	0.35o	0.095o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
6:2FTSo	0.18 Uo	2.8o	0.18o	0.079o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
8:2FTSo	0.53 Uo	2.8o	0.53o	0.18o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSAo	0.18 Uo	2.8o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAo	1.8 Uo	2.8o	1.8o	0.87o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAo	1.8 Uo	2.8o	1.8o	0.87o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAAo	0.18 Uo	0.70o	0.18o	0.063o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAAo	0.18 Uo	0.70o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSEo	1.1 Uo	2.8o	1.1o	0.53o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSEo	1.1 Uo	2.8o	1.1o	0.53o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
HFPO-DAo	0.88 Uo	1.4o	0.88o	0.43o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
ADONAo	0.53 Uo	1.4o	0.53o	0.23o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
9CL-PF3ONSo	0.53 Uo	1.4o	0.53o	0.21o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
11CL-PF3OUDSo	0.53 Uo	1.4o	0.53o	0.21o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
Surrogate: 13C4-PFBAo	*104%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFPEAo	*98.4%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFHXAo	*109%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C4-PFHPAo	*104%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOAo	*91.5%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C9-PFNAo	*112%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C6-PFDAo	*101%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C7-PFUnAo	*102%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFDOAo	*86.8%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFTEDAo	*80.7%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFBSo	*95.6%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFHXSo	*106%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSo	*98.2%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results
(Continued)a

Sample: SB-2-112922 (Continued)a
22L0004-11 (Water)a

Per- nd Polyfluoroalkyl Substances (Continued)a

Analyteo	Result	/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*111%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-6:2FTSo	*96.6%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-8:2FTSo	*95.2%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSAo	*63.2%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*32.1%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*52.9%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*39.0%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*64.6%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAAo	*92.0%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAAo	*92.4%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D7-NMEFOSEo	*50.2%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D9-NETFOSEo	*55.0%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-HFPO-DAo	*110%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results

(Continued)a

Sample: MW-4-S5-112822

22L0004-12 (Water)a

Per- nd Polyfluoroalkyl Substances

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.36 Jo	3.0o	0.19o	0.047o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPEAo	0.72 Jo	1.5o	0.19o	0.058o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXAo	0.48 Jo	0.75o	0.19o	0.060o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPAo	0.28 Jo	0.75o	0.19o	0.047o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOAo	0.27 Jo	0.75o	0.19o	0.076o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNAo	0.19 Uo	0.75o	0.19o	0.047o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDAo	0.19 Uo	0.75o	0.19o	0.047o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFUnAo	0.19 Uo	0.75o	0.19o	0.075o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDOAo	0.19 Uo	0.75o	0.19o	0.047o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTRDAo	0.19 Uo	0.75o	0.19o	0.054o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTEDAo	0.19 Uo	0.75o	0.19o	0.080o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFBSo	0.79o	0.75o	0.19o	0.047o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPESo	0.40 Jo	0.75o	0.19o	0.054o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXSo	0.42 Jo	0.75o	0.19o	0.047o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPSo	0.19 Uo	0.75o	0.19o	0.052o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSo	0.14 Jo	0.75o	0.19o	0.047o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNSo	0.37 Uo	0.75o	0.37o	0.23o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDSo	0.19 Uo	0.75o	0.19o	0.060o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
4:2FTSo	0.37 Uo	3.0o	0.37o	0.10o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
6:2FTSo	0.19 Uo	3.0o	0.19o	0.084o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
8:2FTSo	0.56 Uo	3.0o	0.56o	0.19o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSAo	0.19 Uo	3.0o	0.19o	0.047o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAo	1.9 Uo	3.0o	1.9o	0.92o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAo	1.9 Uo	3.0o	1.9o	0.92o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAAo	0.19 Uo	0.75o	0.19o	0.067o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAAo	0.19 Uo	0.75o	0.19o	0.047o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSEo	1.1 Uo	3.0o	1.1o	0.56o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSEo	1.1 Uo	3.0o	1.1o	0.56o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
HFPO-DAo	0.93 Uo	1.5o	0.93o	0.46o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
ADONAo	0.56 Uo	1.5o	0.56o	0.24o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
9CL-PF3ONSo	0.56 Uo	1.5o	0.56o	0.22o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
11CL-PF3OUDSo	0.56 Uo	1.5o	0.56o	0.22o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
Surrogate: 13C4-PFBAo	*105%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFPEAo	*95.9%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFHXAo	*113%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C4-PFHPAo	*108%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOAo	*107%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C9-PFNAo	*120%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C6-PFDAo	*99.5%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C7-PFUnAo	*65.6%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFDOAo	*83.3%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFTEDAo	*76.4%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFBSo	*103%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFHXSo	*96.8%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSo	*106%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results
(Continued)a

Sample: MW-4-S5-112822 (Continued)a
22L0004-12 (Water)a

Per- nd Polyfluoroalkyl Substances (Continued)a

Analyteo	Result	/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*124%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-6:2FTSo	*110%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-8:2FTSo	*112%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSAo	*66.4%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*29.4%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*61.9%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*40.7%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*56.8%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAAo	*111%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAAo	*110%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D7-NMEFOSEo	*47.1%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D7-NMEFOSEo	*82.7%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D9-NETFOSEo	*53.9%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-HFPO-DAo	*103%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results

(Continued)a

Sample: DUP-1-112822

22L0004-13 (Water)a

Per- nd Polyfluoroalkyl Substances

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.61 Jo	2.8o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPEAo	1.0 Jo	1.4o	0.18o	0.055o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXAo	0.97o	0.70o	0.18o	0.056o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPAo	0.41 Jo	0.70o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOAo	0.94o	0.70o	0.18o	0.072o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNAo	0.18 Uo	0.70o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDAo	0.17 Jo	0.70o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFUnAo	0.18 Uo	0.70o	0.18o	0.070o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDOAo	0.18 Uo	0.70o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTRDAo	0.18 Uo	0.70o	0.18o	0.051o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTEDAo	0.18 Uo	0.70o	0.18o	0.076o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFBSo	4.9o	0.70o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPESo	0.29 Jo	0.70o	0.18o	0.051o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXSo	0.44 Jo	0.70o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPSo	0.18 Uo	0.70o	0.18o	0.049o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSo	0.18 Uo	0.70o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNSo	0.35 Uo	0.70o	0.35o	0.22o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDSo	0.18 Uo	0.70o	0.18o	0.056o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
4:2FTSo	0.35 Uo	2.8o	0.35o	0.095o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
6:2FTSo	0.18 Uo	2.8o	0.18o	0.079o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
8:2FTSo	0.53 Uo	2.8o	0.53o	0.18o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSAo	0.18 Uo	2.8o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAo	1.8 Uo	2.8o	1.8o	0.87o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAo	1.8 Uo	2.8o	1.8o	0.87o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAAo	0.18 Uo	0.70o	0.18o	0.063o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAAo	0.21 Jo	0.70o	0.18o	0.044o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSEo	1.1 Uo	2.8o	1.1o	0.53o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSEo	1.1 Uo	2.8o	1.1o	0.53o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
HFPO-DAo	0.88 Uo	1.4o	0.88o	0.43o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
ADONAo	0.53 Uo	1.4o	0.53o	0.23o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
9CL-PF3ONSo	0.53 Uo	1.4o	0.53o	0.21o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
11CL-PF3OUDSo	0.53 Uo	1.4o	0.53o	0.21o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
Surrogate: 13C4-PFBAo	*102%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFPEAo	*91.2%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFHXAo	*109%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C4-PFHPAo	*102%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOAo	*111%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C9-PFNAo	*108%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C6-PFDAo	*95.6%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C7-PFUnAo	*58.4%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFDOAo	*76.2%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFTEDAo	*72.7%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFBSo	*113%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFHXSo	*106%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSo	*94.3%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results
(Continued)a

Sample: DUP-1-112822 (Continued)a
22L0004-13 (Water)a

Per- nd Polyfluoroalkyl Substances (Continued)a

Analyteo	Result	/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*142%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-6:2FTSo	*112%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-8:2FTSo	*112%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSAo	*63.1%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*26.7%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*55.4%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*39.3%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*62.1%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAAo	*108%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAAo	*82.8%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D7-NMEFOSEo	*44.6%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D7-NMEFOSEo	*68.7%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D9-NETFOSEo	*48.9%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D9-NETFOSEo	*72.3%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-HFPO-DAo	*99.7%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

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Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results

(Continued)a

Sample: MW-4-S4-112822

22L0004-14 (Water)a

Per- nd Polyfluoroalkyl Substances

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.18 Uo	2.9o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPEAo	0.46 Jo	1.5o	0.18o	0.056o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXAo	0.33 Jo	0.73o	0.18o	0.058o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPAo	0.18 Jo	0.73o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOAo	0.40 JoMI4, o	0.73o	0.18o	0.075o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNAo	0.18 Uo	0.73o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDAo	0.18 Uo	0.73o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFUnAo	0.18 Uo	0.73o	0.18o	0.073o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDOAo	0.18 Uo	0.73o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTRDAo	0.18 Uo	0.73o	0.18o	0.053o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTEDAo	0.18 Uo	0.73o	0.18o	0.078o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFBSo	0.39 Jo	0.73o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPESo	0.24 Jo	0.73o	0.18o	0.053o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXSo	0.28 Jo	0.73o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPSo	0.18 Uo	0.73o	0.18o	0.051o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSo	0.15 Jo	0.73o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNSo	0.36 Uo	0.73o	0.36o	0.22o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDSo	0.18 Uo	0.73o	0.18o	0.058o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
4:2FTSo	0.36 Uo	2.9o	0.36o	0.098o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
6:2FTSo	0.40 Jo	2.9o	0.18o	0.082o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
8:2FTSo	0.55 Uo	2.9o	0.55o	0.18o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSAo	0.18 Uo	2.9o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAo	1.8 Uo	2.9o	1.8o	0.90o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAo	1.8 Uo	2.9o	1.8o	0.90o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAAo	0.18 Uo	0.73o	0.18o	0.066o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAAo	0.18 Uo	0.73o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSEo	1.1 Uo	2.9o	1.1o	0.55o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSEo	1.1 Uo	2.9o	1.1o	0.55o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
HFPO-DAo	0.91 Uo	1.5o	0.91o	0.45o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
ADONAo	0.55 Uo	1.5o	0.55o	0.24o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
9CL-PF3ONSo	0.55 Uo	1.5o	0.55o	0.21o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
11CL-PF3OUDSo	0.55 Uo	1.5o	0.55o	0.22o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
Surrogate: 13C4-PFBAo	*101%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFPEAo	*93.5%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFHXAo	*106%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C4-PFHPAo	*107%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOAo	*106%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C9-PFNAo	*95.1%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C6-PFDAo	*86.9%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C7-PFUnAo	*93.2%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFDOAo	*88.4%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFTEDAo	*79.5%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFBSo	*110%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFHXSo	*94.0%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSo	*101%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results
(Continued)a

Sample: MW-4-S4-112822 (Continued)a
22L0004-14 (Water)a

Per- nd Polyfluoroalkyl Substances (Continued)a

Analyteo	Result	/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*124%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-6:2FTSo	*109%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-8:2FTSo	*104%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSAo	*89.3%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*41.7%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*70.5%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*56.6%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAAo	*110%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAAo	*127%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D7-NMEFOSEo	*58.5%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D9-NETFOSEo	*63.0%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-HFPO-DAo	*96.0%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o
5835 Avenida Encinas, Suite 118o
Carlsbad, CA 92208o

Project:oNASA JPLo
Project Number:oNASA JPL SIo
Project Manager:oDavid Connero

Reported:o01/06/2023 15:56o

Sample Results
(Continued)a

Sample: MW-4-S2-112822
22L0004-15 (Water)a

Per- nd Polyfluoroalkyl Substances

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	2.0 Jo	2.9o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPEAo	3.8o	1.4o	0.18o	0.056o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXAo	2.3o	0.72o	0.18o	0.058o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPAo	0.89o	0.72o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOAo	1.1o MI4o	0.72o	0.18o	0.074o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNAo	0.18 Uo	0.72o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDAo	0.18 Uo	0.72o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFUnAo	0.18 Uo	0.72o	0.18o	0.072o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDOAo	0.18 Uo	0.72o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTRDAo	0.18 Uo	0.72o	0.18o	0.052o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTEDAo	0.18 Uo	0.72o	0.18o	0.078o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFBSo	2.9o	0.72o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPESo	1.2o	0.72o	0.18o	0.052o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXSo	2.0o	0.72o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPSo	0.18 Uo	0.72o	0.18o	0.051o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSo	0.20 JoMI4, o	0.72o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNSo	0.36 Uo	0.72o	0.36o	0.22o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDSo	0.18 Uo	0.72o	0.18o	0.058o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
4:2FTSo	0.36 Uo	2.9o	0.36o	0.098o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
6:2FTSo	0.18 Uo	2.9o	0.18o	0.081o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
8:2FTSo	0.54 Uo	2.9o	0.54o	0.18o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSAo	0.18 Uo	2.9o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAo	1.8 Uo	2.9o	1.8o	0.89o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAo	1.8 Uo	2.9o	1.8o	0.89o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAAo	0.18 Uo	0.72o	0.18o	0.065o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAAo	0.18 Uo	0.72o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSEo	1.1 Uo	2.9o	1.1o	0.54o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSEo	1.1 Uo	2.9o	1.1o	0.54o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
HFPO-DAo	0.90 Uo	1.4o	0.90o	0.44o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
ADONAo	0.54 Uo	1.4o	0.54o	0.23o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
9CL-PF3ONSo	0.54 Uo	1.4o	0.54o	0.21o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
11CL-PF3OUDSo	0.54 Uo	1.4o	0.54o	0.22o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
Surrogate: 13C4-PFBAo	*104%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFPEAo	*105%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFHXAo	*117%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C4-PFHPAo	*109%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOAo	*109%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C9-PFNAo	*94.3%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C6-PFDAo	*105%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C7-PFUnAo	*112%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFDOAo	*101%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFTEDAo	*91.5%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFBSo	*114%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFHXSo	*110%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSo	*107%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results
(Continued)a

Sample: MW-4-S2-112822 (Continued)a
22L0004-15 (Water)a

Per- nd Polyfluoroalkyl Substances (Continued)a

Analyteo	Result	/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*143%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-6:2FTSo	*103%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-8:2FTSo	*103%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSAo	*71.3%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*41.4%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*66.3%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*56.5%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAAo	*94.5%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAAo	*112%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D7-NMEFOSEo	*55.7%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D9-NETFOSEo	*62.9%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-HFPO-DAo	*110%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results

(Continued)a

Sample: MW-12-S5-112822
22L0004-16 (Water)a

Per- nd Polyfluoroalkyl Substances

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.66 Jo	2.9o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPEAo	0.66 Jo	1.4o	0.18o	0.055o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXAo	1.1o	0.71o	0.18o	0.057o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPAo	0.56 Jo	0.71o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOAo	3.5o MI4o	0.71o	0.18o	0.073o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNAo	0.45 Jo	0.71o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDAo	1.1o IR2o	0.71o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFUnAo	0.14 JoIR2, o	0.71o	0.18o	0.071o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDOAo	0.18 Uo	0.71o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTRDAo	0.18 Uo	0.71o	0.18o	0.052o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTEDAo	0.18 Uo	0.71o	0.18o	0.077o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFBSo	0.36 Jo	0.71o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPESo	0.18 Uo	0.71o	0.18o	0.052o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXSo	0.29 Jo	0.71o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPSo	0.18 Uo	0.71o	0.18o	0.050o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSo	2.0o MI4o	0.71o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNSo	0.36 Uo	0.71o	0.36o	0.22o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDSo	0.18 Uo	0.71o	0.18o	0.057o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
4:2FTSo	0.36 Uo	2.9o	0.36o	0.096o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
6:2FTSo	0.18 Uo	2.9o	0.18o	0.080o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
8:2FTSo	0.54 Uo	2.9o	0.54o	0.18o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSAo	0.29 Jo	2.9o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAo	1.8 Uo	2.9o	1.8o	0.88o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAo	1.8 Uo	2.9o	1.8o	0.88o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAAo	0.48 Jo	0.71o	0.18o	0.064o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAAo	0.58 Jo	0.71o	0.18o	0.045o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSEo	1.1 Uo	2.9o	1.1o	0.54o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSEo	1.1 Uo	2.9o	1.1o	0.54o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
HFPO-DAo	0.89 Uo	1.4o	0.89o	0.44o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
ADONAo	0.54 Uo	1.4o	0.54o	0.23o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
9CL-PF3ONSo	0.54 Uo	1.4o	0.54o	0.21o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
11CL-PF3OUDSo	0.54 Uo	1.4o	0.54o	0.21o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
Surrogate: 13C4-PFBAo	*97.4%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFPEAo	*93.3%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFHXAo	*109%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C4-PFHPAo	*114%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOAo	*101%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C9-PFNAo	*108%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C6-PFDAo	*89.9%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C7-PFUnAo	*65.1%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFDOAo	*62.2%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFTEDAo	*53.1%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFBSo	*95.2%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFHXSo	*103%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSo	*102%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results
(Continued)a

Sample: MW-12-S5-112822 (Continued)a
22L0004-16 (Water)a

Per- nd Polyfluoroalkyl Substances (Continued)a

Analyteo	Result	/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*126%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-6:2FTSo	*134%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-8:2FTSo	*180%o*	*S2o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-8:2FTSo	*119%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSAo	*66.2%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*43.2%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*54.2%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*46.3%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*59.3%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAAo	*127%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAAo	*97.0%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D7-NMEFOSEo	*47.4%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D7-NMEFOSEo	*54.6%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D9-NETFOSEo	*45.1%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D9-NETFOSEo	*52.5%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-HFPO-DAo	*105%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results

(Continued)a

Sample: MW-12-S4-112822

22L0004-17 (Water)a

Per- nd Polyfluoroalkyl Substances

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.41 Jo	3.0o	0.19o	0.047o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPEAo	0.58 Jo	1.5o	0.19o	0.058o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXAo	0.76o IR2o	0.75o	0.19o	0.060o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPAo	0.34 Jo	0.75o	0.19o	0.047o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOAo	2.1o MI4o	0.75o	0.19o	0.076o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNAo	0.19 Uo	0.75o	0.19o	0.047o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDAo	0.80o IR2o	0.75o	0.19o	0.047o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFUnAo	0.19 Uo	0.75o	0.19o	0.075o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDOAo	0.19 Uo	0.75o	0.19o	0.047o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTRDAo	0.19 Uo	0.75o	0.19o	0.054o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTEDAo	0.19 Uo	0.75o	0.19o	0.080o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFBSo	0.23 Jo	0.75o	0.19o	0.047o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPESo	0.19 Uo	0.75o	0.19o	0.054o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXSo	0.25 Jo	0.75o	0.19o	0.047o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPSo	0.19 Uo	0.75o	0.19o	0.052o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSo	1.1o MI4o	0.75o	0.19o	0.047o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNSo	0.37 Uo	0.75o	0.37o	0.23o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDSo	0.19 Uo	0.75o	0.19o	0.060o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
4:2FTSo	0.37 Uo	3.0o	0.37o	0.10o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
6:2FTSo	0.19 Uo	3.0o	0.19o	0.084o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
8:2FTSo	0.56 Uo	3.0o	0.56o	0.19o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSAo	0.21 Jo	3.0o	0.19o	0.047o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAo	1.9 Uo	3.0o	1.9o	0.92o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAo	1.9 Uo	3.0o	1.9o	0.92o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAAo	0.26 JoIR1, o	0.75o	0.19o	0.067o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAAo	0.31 Jo	0.75o	0.19o	0.047o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSEo	1.1 Uo	3.0o	1.1o	0.56o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSEo	1.1 Uo	3.0o	1.1o	0.56o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
HFPO-DAo	0.93 Uo	1.5o	0.93o	0.46o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
ADONAo	0.56 Uo	1.5o	0.56o	0.24o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
9CL-PF3ONSo	0.56 Uo	1.5o	0.56o	0.22o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
11CL-PF3OUDSo	0.56 Uo	1.5o	0.56o	0.22o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
Surrogate: 13C4-PFBAo	*94.4%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFPEAo	*92.7%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFHXAo	*111%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C4-PFHPAo	*108%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOAo	*103%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C9-PFNAo	*95.3%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C6-PFDAo	*90.9%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C7-PFUnAo	*78.1%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFDOAo	*69.4%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFTEDAo	*63.3%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFBSo	*100%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFHXSo	*100%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSo	*98.1%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results

(Continued)a

Sample: MW-12-S4-112822 (Continued)a

22L0004-17 (Water)a

Per- nd Polyfluoroalkyl Substances (Continued)a

Analyteo	Result	/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*133%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-6:2FTSo	*130%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-8:2FTSo	*137%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSAo	*57.7%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*39.8%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*44.3%o*	*S1o*		*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*41.0%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*49.0%o*	*S1o*		*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAAo	*116%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAAo	*91.2%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D7-NMEFOSEo	*42.6%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D7-NMEFOSEo	*51.8%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D9-NETFOSEo	*43.9%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D9-NETFOSEo	*52.8%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-HFPO-DAo	*108%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results

(Continued)a

Sample: MW-12-S3-112822

22L0004-18 (Water)a

Per- nd Polyfluoroalkyl Substances

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.87 Jo	3.0o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPEAo	0.63 Jo	1.5o	0.18o	0.057o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXAo	0.53 Jo	0.74o	0.18o	0.059o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPAo	0.31 Jo	0.74o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOAo	1.4o MI4o	0.74o	0.18o	0.076o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNAo	0.18 Uo	0.74o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDAo	0.23 Jo	0.74o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFUnAo	0.18 Uo	0.74o	0.18o	0.074o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDOAo	0.18 Uo	0.74o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTRDAo	0.18 Uo	0.74o	0.18o	0.054o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTEDAo	0.18 Uo	0.74o	0.18o	0.079o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFBSo	0.24 Jo	0.74o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPESo	0.087 Jo	0.74o	0.18o	0.054o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXSo	0.41 Jo	0.74o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPSo	0.18 Uo	0.74o	0.18o	0.052o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSo	0.62 JoMI4, o	0.74o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNSo	0.37 Uo	0.74o	0.37o	0.23o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDSo	0.18 Uo	0.74o	0.18o	0.059o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
4:2FTSo	0.37 Uo	3.0o	0.37o	0.10o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
6:2FTSo	0.18 Uo	3.0o	0.18o	0.083o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
8:2FTSo	0.55 Uo	3.0o	0.55o	0.19o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSAo	0.18 Uo	3.0o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAo	1.8 Uo	3.0o	1.8o	0.91o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAo	1.8 Uo	3.0o	1.8o	0.91o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAAo	0.18 Uo	0.74o	0.18o	0.066o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAAo	0.18 Uo	0.74o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSEo	1.1 Uo	3.0o	1.1o	0.55o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSEo	1.1 Uo	3.0o	1.1o	0.55o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
HFPO-DAo	0.92 Uo	1.5o	0.92o	0.45o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
ADONAo	0.55 Uo	1.5o	0.55o	0.24o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
9CL-PF3ONSo	0.55 Uo	1.5o	0.55o	0.22o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
11CL-PF3OUDSo	0.55 Uo	1.5o	0.55o	0.22o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
Surrogate: 13C4-PFBAo	*98.4%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFPEAo	*87.8%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFHXAo	*113%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C4-PFHPAo	*98.2%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOAo	*109%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C9-PFNAo	*102%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C6-PFDAo	*91.8%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C7-PFUnAo	*83.5%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFDOAo	*63.0%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFTEDAo	*59.2%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFBSo	*97.5%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFHXSo	*103%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSo	*110%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results
(Continued)a

Sample: MW-12-S3-112822 (Continued)a
22L0004-18 (Water)a

Per- nd Polyfluoroalkyl Substances (Continued)a

Analyteo	Result	/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*117%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-6:2FTSo	*111%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-8:2FTSo	*128%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSAo	*73.6%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*43.3%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*66.7%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*45.1%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*62.7%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAAo	*110%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAAo	*111%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D7-NMEFOSEo	*46.3%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D7-NMEFOSEo	*65.8%o*			*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D9-NETFOSEo	*53.2%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-HFPO-DAo	*98.2%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results

(Continued)a

Sample: MW-12-S2-112822

22L0004-19 (Water)a

Per- nd Polyfluoroalkyl Substances

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	8.1o	2.9o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPEAo	11o	1.5o	0.18o	0.057o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXAo	9.2o	0.73o	0.18o	0.059o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPAo	5.0o	0.73o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOAo	9.5o	0.73o	0.18o	0.075o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNAo	1.2o	0.73o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDAo	0.18 Uo	0.73o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFUnAo	0.18 Uo	0.73o	0.18o	0.073o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDOAo	0.18 Uo	0.73o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTRDAo	0.18 Uo	0.73o	0.18o	0.053o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTEDAo	0.18 Uo	0.73o	0.18o	0.079o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFBSo	7.4o	0.73o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPESo	0.19 Jo	0.73o	0.18o	0.053o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXSo	0.73o	0.73o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPSo	0.18 Uo	0.73o	0.18o	0.051o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSo	3.8o	0.73o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNSo	0.37 Uo	0.73o	0.37o	0.23o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDSo	0.18 Uo	0.73o	0.18o	0.059o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
4:2FTSo	0.37 Uo	2.9o	0.37o	0.099o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
6:2FTSo	0.18 Uo	2.9o	0.18o	0.082o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
8:2FTSo	0.55 Uo	2.9o	0.55o	0.18o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSAo	0.18 Uo	2.9o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAo	1.8 Uo	2.9o	1.8o	0.90o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAo	1.8 Uo	2.9o	1.8o	0.90o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAAo	0.18 Uo	0.73o	0.18o	0.066o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAAo	0.18 Uo	0.73o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSEo	1.1 Uo	2.9o	1.1o	0.55o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSEo	1.1 Uo	2.9o	1.1o	0.55o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
HFPO-DAo	0.91 Uo	1.5o	0.91o	0.45o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
ADONAo	0.55 Uo	1.5o	0.55o	0.24o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
9CL-PF3ONSo	0.55 Uo	1.5o	0.55o	0.22o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
11CL-PF3OUDSo	0.55 Uo	1.5o	0.55o	0.22o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
Surrogate: 13C4-PFBAo	*105%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFPEAo	*89.4%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFHXAo	*107%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C4-PFHPAo	*88.2%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOAo	*117%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C9-PFNAo	*110%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C6-PFDAo	*111%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C7-PFUnAo	*107%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFDOAo	*90.7%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFTEDAo	*86.8%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFBSo	*97.1%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFHXSo	*93.8%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSo	*104%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results

(Continued)a

Sample: MW-12-S2-112822 (Continued)a

22L0004-19 (Water)a

Per- nd Polyfluoroalkyl Substances (Continued)a

Analyteo	Result	/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*117%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-6:2FTSo	*99.3%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-8:2FTSo	*106%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSAo	*72.8%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*47.5%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*47.3%o*	*S1o*		*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*49.8%o*	*S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*48.4%o*	*S1o*		*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAAo	*105%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAAo	*124%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D7-NMEFOSEo	*64.4%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D9-NETFOSEo	*64.2%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-HFPO-DAo	*94.2%o*			*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results

(Continued)a

Sample: SB-1-112822

22L0004-20 (Water)a

Per- nd Polyfluoroalkyl Substances

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.18 Uo	3.0o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPEAo	0.18 Uo	1.5o	0.18o	0.057o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXAo	0.18 Uo	0.74o	0.18o	0.059o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPAo	0.18 Uo	0.74o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOAo	0.17 Jo	0.74o	0.18o	0.076o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNAo	0.18 Uo	0.74o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDAo	0.18 Uo	0.74o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFUnAo	0.18 Uo	0.74o	0.18o	0.074o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDOAo	0.18 Uo	0.74o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTRDAo	0.18 Uo	0.74o	0.18o	0.054o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFTEDAo	0.18 Uo	0.74o	0.18o	0.080o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFBSo	0.18 Uo	0.74o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFPESo	0.18 Uo	0.74o	0.18o	0.054o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHXSo	0.18 Uo	0.74o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFHPSo	0.18 Uo	0.74o	0.18o	0.052o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSo	0.12 JoMI4, o	0.74o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFNSo	0.37 Uo	0.74o	0.37o	0.23o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFDSo	0.18 Uo	0.74o	0.18o	0.059o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
4:2FTSo	0.37 Uo	3.0o	0.37o	0.10o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
6:2FTSo	0.18 Uo	3.0o	0.18o	0.083o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
8:2FTSo	0.55 Uo	3.0o	0.55o	0.19o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
PFOSAo	0.18 Uo	3.0o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAo	1.8 Uo	3.0o	1.8o	0.91o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAo	1.8 Uo	3.0o	1.8o	0.91o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSAAo	0.18 Uo	0.74o	0.18o	0.067o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSAAo	0.18 Uo	0.74o	0.18o	0.046o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NMeFOSEo	1.1 Uo	3.0o	1.1o	0.55o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
NEtFOSEo	1.1 Uo	3.0o	1.1o	0.55o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
HFPO-DAo	0.92 Uo	1.5o	0.92o	0.45o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
ADONAo	0.55 Uo	1.5o	0.55o	0.24o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
9CL-PF3ONSo	0.55 Uo	1.5o	0.55o	0.22o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
11CL-PF3OUDSo	0.55 Uo	1.5o	0.55o	0.22o	ng/Lo	12/10/22o	1o	Table B-15o	BBL0076o
Surrogate: 13C4-PFBAo	*117%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFPEAo	*88.1%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C5-PFHXAo	*113%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C4-PFHPAo	*110%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOAo	*103%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C9-PFNAo	*119%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C6-PFDAo	*99.9%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C7-PFUnAo	*106%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFDOAo	*105%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-PFTEDAo	*94.4%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFBSo	*118%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-PFHXSo	*110%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSo	*108%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results
(Continued)a

Sample: SB-1-112822 (Continued)a
22L0004-20 (Water)a

Per- nd Polyfluoroalkyl Substances (Continued)a

Analyteo	Result /Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*125%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-6:2FTSo	*122%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C2-8:2FTSo	*126%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C8-PFOSAo	*66.4%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*31.7%o S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAo	*36.3%o S1o*		*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*31.4%o S1o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAo	*41.6%o S1o*		*50-150o*			*12/10/22o*	10o	*Table B-15o*	*BBL0076o*
Surrogate: D3-NMEFOSAAo	*98.7%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D5-NETFOSAAo	*109%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D7-NMEFOSEo	*51.3%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: D9-NETFOSEo	*56.0%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*
Surrogate: 13C3-HFPO-DAo	*96.8%o*		*50-150o*			*12/10/22o*	1o	*Table B-15o*	*BBL0076o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results

(Continued)a

Sample: FB-1-112822

22L0004-21 (Water)a

Per- nd Polyfluoroalkyl Substances

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.97 Uo	16o	0.97o	0.24o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFPEAo	0.97 Uo	7.8o	0.97o	0.30o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFHXAo	0.97 Uo	3.9o	0.97o	0.31o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFHPAo	0.97 Uo	3.9o	0.97o	0.24o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFOAo	0.97 Uo	3.9o	0.97o	0.40o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFNAo	0.97 Uo	3.9o	0.97o	0.24o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFDAo	0.97 Uo	3.9o	0.97o	0.24o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFUnAo	0.97 Uo	3.9o	0.97o	0.39o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFDOAo	0.97 Uo	3.9o	0.97o	0.24o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFTRDAo	0.97 Uo	3.9o	0.97o	0.28o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFTEDAo	0.97 Uo	3.9o	0.97o	0.42o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFBSo	0.97 Uo	3.9o	0.97o	0.24o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFPESo	0.97 Uo	3.9o	0.97o	0.28o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFHXSo	0.97 Uo	3.9o	0.97o	0.24o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFHPSo	0.97 Uo	3.9o	0.97o	0.27o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFOSo	0.97 Uo	3.9o	0.97o	0.24o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFNSo	1.9 Uo	3.9o	1.9o	1.2o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFDSo	0.97 Uo	3.9o	0.97o	0.31o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
4:2FTSo	1.9 Uo	16o	1.9o	0.52o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
6:2FTSo	0.97 Uo	16o	0.97o	0.44o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
8:2FTSo	2.9 Uo	16o	2.9o	0.98o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFOSAo	0.97 Uo	16o	0.97o	0.24o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
NMeFOSAo	9.7 Uo	16o	9.7o	4.8o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
NEtFOSAo	9.7 Uo	16o	9.7o	4.8o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
NMeFOSAAo	0.97 Uo	3.9o	0.97o	0.35o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
NEtFOSAAo	0.97 Uo	3.9o	0.97o	0.24o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
NMeFOSEo	5.8 Uo	16o	5.8o	2.9o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
NEtFOSEo	5.8 Uo	16o	5.8o	2.9o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
HFPO-DAo	4.9 Uo	7.8o	4.9o	2.4o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
ADONAo	2.9 Uo	7.8o	2.9o	1.3o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
9CL-PF3ONSo	2.9 Uo	7.8o	2.9o	1.1o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
11CL-PF3OUDSo	2.9 Uo	7.8o	2.9o	1.2o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
Surrogate: 13C4-PFBAo	*86.9%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C5-PFPEAo	*91.1%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C5-PFHXAo	*90.1%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C4-PFHPAo	*91.6%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C8-PFOAo	*80.8%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C9-PFNAo	*86.1%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C6-PFDAo	*73.2%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C7-PFUnAo	*79.4%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C2-PFDOAo	*90.7%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C2-PFTEDAo	*80.8%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C3-PFBSo	*91.6%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C3-PFHXSo	*97.5%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C8-PFOSo	*77.3%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*

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Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results
(Continued)a

Sample: FB-1-112822 (Continued)a
22L0004-21 (Water)a

Per- nd Polyfluoroalkyl Substances (Continued)a

Analyteo	Result /Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*105%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C2-6:2FTSo	*86.8%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C2-8:2FTSo	*90.5%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C8-PFOSAo	*86.9%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: D3-NMEFOSAo	*55.5%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: D5-NETFOSAo	*54.6%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: D3-NMEFOSAAo	*85.6%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: D5-NETFOSAAo	*90.8%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: D7-NMEFOSEo	*78.5%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: D9-NETFOSEo	*79.6%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C3-HFPO-DAo	*86.9%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*

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Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results

(Continued)a

Sample: EQP-1-112822

22L0004-22 (Water)a

Per- nd Polyfluoroalkyl Substances

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.18 Uo	2.9o	0.18o	0.045o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFPEAo	0.18 Uo	1.4o	0.18o	0.056o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFHXAo	0.18 Uo	0.72o	0.18o	0.058o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFHPAo	0.18 Uo	0.72o	0.18o	0.045o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFOAo	0.23 Jo	0.72o	0.18o	0.074o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFNAo	0.18 Uo	0.72o	0.18o	0.045o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFDAo	0.18 UoIR1, o	0.72o	0.18o	0.045o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFUnAo	0.18 Uo	0.72o	0.18o	0.072o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFDOAo	0.18 Uo	0.72o	0.18o	0.045o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFTRDAo	0.18 Uo	0.72o	0.18o	0.052o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFTEDAo	0.18 Uo	0.72o	0.18o	0.078o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFBSo	0.18 Uo	0.72o	0.18o	0.045o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFPESo	0.18 Uo	0.72o	0.18o	0.052o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFHXSo	0.18 Uo	0.72o	0.18o	0.045o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFHPSo	0.18 Uo	0.72o	0.18o	0.051o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFOSo	0.18 Uo	0.72o	0.18o	0.045o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFNSo	0.36 Uo	0.72o	0.36o	0.22o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFDSo	0.18 Uo	0.72o	0.18o	0.058o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
4:2FTSo	0.36 Uo	2.9o	0.36o	0.098o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
6:2FTSo	0.18 Uo	2.9o	0.18o	0.081o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
8:2FTSo	0.54 Uo	2.9o	0.54o	0.18o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFOSAo	0.18 Uo	2.9o	0.18o	0.045o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
NMeFOSAo	1.8 Uo	2.9o	1.8o	0.89o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
NEtFOSAo	1.8 Uo	2.9o	1.8o	0.89o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
NMeFOSAAo	0.18 Uo	0.72o	0.18o	0.065o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
NEtFOSAAo	0.18 Uo	0.72o	0.18o	0.045o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
NMeFOSEo	1.1 Uo	2.9o	1.1o	0.54o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
NEtFOSEo	1.1 Uo	2.9o	1.1o	0.54o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
HFPO-DAo	0.90 Uo	1.4o	0.90o	0.44o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
ADONAo	0.54 Uo	1.4o	0.54o	0.24o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
9CL-PF3ONSo	0.54 Uo	1.4o	0.54o	0.21o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
11CL-PF3OUDSo	0.54 Uo	1.4o	0.54o	0.22o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
Surrogate: 13C4-PFBAo	*92.7%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C5-PFPEAo	*100%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C5-PFHXAo	*100%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C4-PFHPAo	*92.0%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C8-PFOAo	*99.3%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C9-PFNAo	*99.3%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C6-PFDAo	*110%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C7-PFUnAo	*118%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C2-PFDOAo	*99.9%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C2-PFTEDAo	*104%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C3-PFBSo	*107%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C3-PFHXSo	*108%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C8-PFOSo	*87.1%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*

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Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results
(Continued)a

Sample: EQP-1-112822 (Continued)a
22L0004-22 (Water)a

Per- nd Polyfluoroalkyl Substances (Continued)a

Analyteo	Result	/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*108%o*			*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C2-6:2FTSo	*118%o*			*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C2-8:2FTSo	*119%o*			*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C8-PFOSAo	*64.2%o*			*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: D3-NMEFOSAo	*42.4%o*	*S1o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: D3-NMEFOSAo	*48.9%o*	*S1o*		*50-150o*			*12/15/22o*	10o	*Table B-15o*	*BBL0296o*
Surrogate: D5-NETFOSAo	*35.6%o*	*S1o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: D5-NETFOSAo	*50.0%o*			*50-150o*			*12/15/22o*	10o	*Table B-15o*	*BBL0296o*
Surrogate: D3-NMEFOSAAo	*80.0%o*			*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: D5-NETFOSAAo	*111%o*			*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: D7-NMEFOSEo	*42.4%o*	*S1o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: D7-NMEFOSEo	*61.9%o*			*50-150o*			*12/15/22o*	10o	*Table B-15o*	*BBL0296o*
Surrogate: D9-NETFOSEo	*41.2%o*	*S1o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: D9-NETFOSEo	*46.5%o*	*S1o*		*50-150o*			*12/15/22o*	10o	*Table B-15o*	*BBL0296o*
Surrogate: 13C3-HFPO-DAo	*99.4%o*			*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*

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Tidewater, Inc.o
5835 Avenida Encinas, Suite 118o
Carlsbad, CA 92208o

Project:oNASA JPLo
Project Number:oNASA JPL SIo
Project Manager:oDavid Connero

Reported:o01/06/2023 15:56o

Sample Results
(Continued)a

Sample: EQP-2-112922
22L0004-23 (Water)a

Per- nd Polyfluoroalkyl Substances

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.18 Uo	2.9o	0.18o	0.046o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFPEAo	0.18 Uo	1.5o	0.18o	0.057o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFHXAo	0.18 Uo	0.74o	0.18o	0.059o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFHPAo	0.18 Uo	0.74o	0.18o	0.046o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFOAo	0.18 Uo	0.74o	0.18o	0.075o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFNAo	0.18 Uo	0.74o	0.18o	0.046o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFDAo	0.18 Uo	0.74o	0.18o	0.046o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFUnAo	0.18 Uo	0.74o	0.18o	0.074o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFDOAo	0.18 Uo	0.74o	0.18o	0.046o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFTRDAo	0.18 Uo	0.74o	0.18o	0.053o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFTEDAo	0.18 Uo	0.74o	0.18o	0.079o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFBSo	0.18 Uo	0.74o	0.18o	0.046o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFPESo	0.18 Uo	0.74o	0.18o	0.053o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFHXSo	0.18 Uo	0.74o	0.18o	0.046o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFHPSo	0.18 Uo	0.74o	0.18o	0.051o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFOSo	0.11 JoIR2, o	0.74o	0.18o	0.046o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFNSo	0.37 Uo	0.74o	0.37o	0.23o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFDSo	0.18 Uo	0.74o	0.18o	0.059o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
4:2FTSo	0.37 Uo	2.9o	0.37o	0.099o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
6:2FTSo	0.18 Uo	2.9o	0.18o	0.083o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
8:2FTSo	0.55 Uo	2.9o	0.55o	0.19o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFOSAo	0.18 Uo	2.9o	0.18o	0.046o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
NMeFOSAo	1.8 Uo	2.9o	1.8o	0.91o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
NEtFOSAo	1.8 Uo	2.9o	1.8o	0.90o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
NMeFOSAAo	0.18 Uo	0.74o	0.18o	0.066o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
NEtFOSAAo	0.18 Uo	0.74o	0.18o	0.046o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
NMeFOSEo	1.1 Uo	2.9o	1.1o	0.55o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
NEtFOSEo	1.1 Uo	2.9o	1.1o	0.55o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
HFPO-DAo	0.92 Uo	1.5o	0.92o	0.45o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
ADONAo	0.55 Uo	1.5o	0.55o	0.24o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
9CL-PF3ONSo	0.55 Uo	1.5o	0.55o	0.22o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
11CL-PF3OUDSo	0.55 Uo	1.5o	0.55o	0.22o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
Surrogate: 13C4-PFBAo	*99.2%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C5-PFPEAo	*99.1%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C5-PFHXAo	*100%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C4-PFHPAo	*91.3%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C8-PFOAo	*109%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C9-PFNAo	*90.6%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C6-PFDAo	*102%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C7-PFUnAo	*114%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C2-PFDOAo	*96.4%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C2-PFTEDAo	*131%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C3-PFBSo	*105%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C3-PFHXSo	*99.0%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C8-PFOSo	*86.1%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*

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Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results
(Continued)a

Sample: EQP-2-112922 (Continued)a
22L0004-23 (Water)a

Per- nd Polyfluoroalkyl Substances (Continued)a

Analyteo	Result /Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*99.2%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C2-6:2FTSo	*99.0%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C2-8:2FTSo	*89.8%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C8-PFOSAo	*85.9%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: D3-NMEFOSAo	*54.9%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: D5-NETFOSAo	*60.3%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: D3-NMEFOSAAo	*83.2%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: D5-NETFOSAAo	*99.7%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: D7-NMEFOSEo	*63.0%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: D9-NETFOSEo	*62.1%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C3-HFPO-DAo	*93.6%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*

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Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results

(Continued)a

Sample: FB-2-112922

22L0004-24 (Water)a

Per- nd Polyfluoroalkyl Substances

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	1.0 Uo	17o	1.0o	0.26o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFPEAo	1.0 Uo	8.4o	1.0o	0.33o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFHXAo	1.0 Uo	4.2o	1.0o	0.34o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFHPAo	1.0 Uo	4.2o	1.0o	0.26o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFOAo	1.0 Uo	4.2o	1.0o	0.43o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFNAo	1.0 Uo	4.2o	1.0o	0.26o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFDAo	1.0 Uo	4.2o	1.0o	0.26o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFUnAo	1.0 Uo	4.2o	1.0o	0.42o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFDOAo	1.0 Uo	4.2o	1.0o	0.26o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFTRDAo	1.0 Uo	4.2o	1.0o	0.30o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFTEDAo	1.0 Uo	4.2o	1.0o	0.45o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFBSo	1.0 Uo	4.2o	1.0o	0.26o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFPESo	1.0 Uo	4.2o	1.0o	0.30o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFHXSo	1.0 Uo	4.2o	1.0o	0.26o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFHPSo	1.0 Uo	4.2o	1.0o	0.29o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFOSo	1.0 Uo	4.2o	1.0o	0.26o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFNSo	2.1 Uo	4.2o	2.1o	1.3o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFDSo	1.0 Uo	4.2o	1.0o	0.34o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
4:2FTSo	2.1 Uo	17o	2.1o	0.57o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
6:2FTSo	1.0 Uo	17o	1.0o	0.47o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
8:2FTSo	3.1 Uo	17o	3.1o	1.1o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFOSAo	1.0 Uo	17o	1.0o	0.26o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
NMeFOSAo	10 Uo	17o	10o	5.2o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
NEtFOSAo	10 Uo	17o	10o	5.2o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
NMeFOSAAo	1.0 Uo	4.2o	1.0o	0.38o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
NEtFOSAAo	1.0 Uo	4.2o	1.0o	0.26o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
NMeFOSEo	6.3 Uo	17o	6.3o	3.1o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
NEtFOSEo	6.3 Uo	17o	6.3o	3.1o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
HFPO-DAo	5.2 Uo	8.4o	5.2o	2.6o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
ADONAo	3.1 Uo	8.4o	3.1o	1.4o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
9CL-PF3ONSo	3.1 Uo	8.4o	3.1o	1.2o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
11CL-PF3OUDSo	3.1 Uo	8.4o	3.1o	1.3o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
Surrogate: 13C4-PFBAo	*86.0%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C5-PFPEAo	*94.1%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C5-PFHXAo	*94.7%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C4-PFHPAo	*87.2%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C8-PFOAo	*99.3%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C9-PFNAo	*86.8%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C6-PFDAo	*81.7%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C7-PFUnAo	*98.9%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C2-PFDOAo	*89.2%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C2-PFTEDAo	*95.8%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C3-PFBSo	*88.0%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C3-PFHXSo	*91.7%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C8-PFOSo	*97.3%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results
(Continued)a

Sample: FB-2-112922 (Continued)a
22L0004-24 (Water)a

Per- nd Polyfluoroalkyl Substances (Continued)a

Analyteo	Result /Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*98.3%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C2-6:2FTSo	*93.2%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C2-8:2FTSo	*105%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C8-PFOSAo	*103%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: D3-NMEFOSAo	*63.9%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: D5-NETFOSAo	*67.2%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: D3-NMEFOSAAo	*105%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: D5-NETFOSAAo	*116%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: D7-NMEFOSEo	*96.9%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: D9-NETFOSEo	*94.1%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C3-HFPO-DAo	*98.2%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*

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Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results

(Continued)a

Sample: MW-15-113022

22L0004-25 (Water)a

Per- nd Polyfluoroalkyl Substances

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.17 Uo	2.7o	0.17o	0.043o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFPEAo	2.7o	1.4o	0.17o	0.053o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFHXAo	2.0o	0.68o	0.17o	0.055o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFHPAo	1.5o	0.68o	0.17o	0.043o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFOAo	2.5o	0.68o	0.17o	0.070o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFNAo	0.88o	0.68o	0.17o	0.043o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFDAo	0.17 Uo	0.68o	0.17o	0.043o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFUnAo	0.17 Uo	0.68o	0.17o	0.068o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFDOAo	0.17 Uo	0.68o	0.17o	0.043o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFTRDAo	0.17 Uo	0.68o	0.17o	0.050o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFTEDAo	0.17 Uo	0.68o	0.17o	0.073o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFBSo	0.97o	0.68o	0.17o	0.043o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFPESo	0.17 Uo	0.68o	0.17o	0.050o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFHXSo	0.32 Jo	0.68o	0.17o	0.043o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFHPSo	0.17 Uo	0.68o	0.17o	0.048o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFOSo	1.5o	0.68o	0.17o	0.043o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFNSo	0.34 Uo	0.68o	0.34o	0.21o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFDSo	0.17 Uo	0.68o	0.17o	0.055o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
4:2FTSo	0.34 Uo	2.7o	0.34o	0.092o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
6:2FTSo	0.17 Uo	2.7o	0.17o	0.077o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
8:2FTSo	0.51 Uo	2.7o	0.51o	0.17o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFOSAo	0.17 Uo	2.7o	0.17o	0.043o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
NMeFOSAo	1.7 Uo	2.7o	1.7o	0.84o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
NEtFOSAo	1.7 Uo	2.7o	1.7o	0.84o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
NMeFOSAAo	0.17 Uo	0.68o	0.17o	0.061o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
NEtFOSAAo	0.17 Uo	0.68o	0.17o	0.043o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
NMeFOSEo	1.0 Uo	2.7o	1.0o	0.51o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
NEtFOSEo	1.0 Uo	2.7o	1.0o	0.51o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
HFPO-DAo	0.85 Uo	1.4o	0.85o	0.42o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
ADONAo	0.51 Uo	1.4o	0.51o	0.22o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
9CL-PF3ONSo	0.51 Uo	1.4o	0.51o	0.20o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
11CL-PF3OUDSo	0.51 Uo	1.4o	0.51o	0.20o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
Surrogate: 13C4-PFBAo	*95.9%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C5-PFPEAo	*112%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C5-PFHXAo	*105%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C4-PFHPAo	*100%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C8-PFOAo	*102%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C9-PFNAo	*104%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C6-PFDAo	*112%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C7-PFUnAo	*114%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C2-PFDOAo	*86.6%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C2-PFTEDAo	*80.5%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C3-PFBSo	*113%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C3-PFHXSo	*109%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C8-PFOSo	*115%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results
(Continued)a

Sample: MW-15-113022 (Continued)a
22L0004-25 (Water)a

Per- nd Polyfluoroalkyl Substances (Continued)a

Analyteo	Result /Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*127%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C2-6:2FTSo	*125%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C2-8:2FTSo	*105%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C8-PFOSAo	*87.4%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: D3-NMEFOSAo	*51.9%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: D5-NETFOSAo	*48.3%o S1o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: D5-NETFOSAo	*53.4%o*		*50-150o*			*12/15/22o*	10o	*Table B-15o*	*BBL0296o*
Surrogate: D3-NMEFOSAAo	*99.8%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: D5-NETFOSAAo	*117%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: D7-NMEFOSEo	*62.9%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: D9-NETFOSEo	*61.9%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C3-HFPO-DAo	*105%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results

(Continued)a

Sample: SB-3-113022

22L0004-26 (Water)a

Per- nd Polyfluoroalkyl Substances

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.17 Uo	2.8o	0.17o	0.043o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFPEAo	0.17 Uo	1.4o	0.17o	0.054o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFHXAo	0.17 Uo	0.69o	0.17o	0.055o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFHPAo	0.17 Uo	0.69o	0.17o	0.043o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFOAo	0.17 Uo	0.69o	0.17o	0.071o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFNAo	0.17 Uo	0.69o	0.17o	0.043o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFDAo	0.17 Uo	0.69o	0.17o	0.043o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFUnAo	0.17 Uo	0.69o	0.17o	0.069o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFDOAo	0.17 Uo	0.69o	0.17o	0.043o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFTRDAo	0.17 Uo	0.69o	0.17o	0.050o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFTEDAo	0.17 Uo	0.69o	0.17o	0.074o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFBSo	0.17 Uo	0.69o	0.17o	0.043o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFPESo	0.17 Uo	0.69o	0.17o	0.050o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFHXSo	0.17 Uo	0.69o	0.17o	0.043o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFHPSo	0.17 Uo	0.69o	0.17o	0.048o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFOSo	0.17 Uo	0.69o	0.17o	0.043o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFNSo	0.35 Uo	0.69o	0.35o	0.21o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFDSo	0.17 Uo	0.69o	0.17o	0.055o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
4:2FTSo	0.35 Uo	2.8o	0.35o	0.093o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
6:2FTSo	0.17 Uo	2.8o	0.17o	0.078o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
8:2FTSo	0.52 Uo	2.8o	0.52o	0.17o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFOSAo	0.17 Uo	2.8o	0.17o	0.043o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
NMeFOSAo	1.7 Uo	2.8o	1.7o	0.85o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
NEtFOSAo	1.7 Uo	2.8o	1.7o	0.85o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
NMeFOSAAo	0.17 Uo	0.69o	0.17o	0.062o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
NEtFOSAAo	0.17 Uo	0.69o	0.17o	0.043o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
NMeFOSEo	1.0 Uo	2.8o	1.0o	0.52o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
NEtFOSEo	1.0 Uo	2.8o	1.0o	0.52o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
HFPO-DAo	0.86 Uo	1.4o	0.86o	0.42o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
ADONAo	0.52 Uo	1.4o	0.52o	0.22o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
9CL-PF3ONSo	0.52 Uo	1.4o	0.52o	0.20o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
11CL-PF3OUDSo	0.52 Uo	1.4o	0.52o	0.21o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
Surrogate: 13C4-PFBAo	*91.6%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: 13C5-PFPEAo	*85.7%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: 13C5-PFHXAo	*80.4%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: 13C4-PFHPAo	*77.1%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: 13C8-PFOAo	*87.6%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: 13C9-PFNAo	*85.2%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: 13C6-PFDAo	*78.0%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: 13C7-PFUnAo	*93.1%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: 13C2-PFDOAo	*96.6%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: 13C2-PFTEDAo	*89.5%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: 13C3-PFBSo	*102%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: 13C3-PFHXSo	*85.3%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: 13C8-PFOSo	*92.7%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results
(Continued)a

Sample: SB-3-113022 (Continued)a
22L0004-26 (Water)a

Per- nd Polyfluoroalkyl Substances (Continued)a

Analyteo	Result /Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*125%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: 13C2-6:2FTSo	*102%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: 13C2-8:2FTSo	*81.3%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: 13C8-PFOSAo	*99.3%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: D3-NMEFOSAo	*51.8%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: D5-NETFOSAo	*53.9%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: D3-NMEFOSAAo	*94.4%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: D5-NETFOSAAo	*89.2%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: D7-NMEFOSEo	*91.1%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: D9-NETFOSEo	*98.0%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: 13C3-HFPO-DAo	*81.3%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*

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Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results

(Continued)a

Sample: EQP-3-113022

22L0004-27 (Water)a

Per- nd Polyfluoroalkyl Substances

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.18 Uo	2.9o	0.18o	0.046o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFPEAo	0.18 Uo	1.5o	0.18o	0.057o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFHXAo	0.18 Uo	0.73o	0.18o	0.058o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFHPAo	0.18 Uo	0.73o	0.18o	0.046o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFOAo	0.21 Jo	0.73o	0.18o	0.075o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFNAo	0.18 Uo	0.73o	0.18o	0.046o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFDAo	0.18 Uo	0.73o	0.18o	0.046o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFUnAo	0.18 Uo	0.73o	0.18o	0.073o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFDOAo	0.18 Uo	0.73o	0.18o	0.046o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFTRDAo	0.18 Uo	0.73o	0.18o	0.053o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFTEDAo	0.18 Uo	0.73o	0.18o	0.078o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFBSo	0.18 Uo	0.73o	0.18o	0.046o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFPESo	0.18 Uo	0.73o	0.18o	0.053o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFHXSo	0.18 Uo	0.73o	0.18o	0.046o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFHPSo	0.18 Uo	0.73o	0.18o	0.051o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFOSo	0.18 Uo	0.73o	0.18o	0.046o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFNSo	0.36 Uo	0.73o	0.36o	0.22o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFDSo	0.18 Uo	0.73o	0.18o	0.058o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
4:2FTSo	0.36 Uo	2.9o	0.36o	0.098o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
6:2FTSo	0.18 Uo	2.9o	0.18o	0.082o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
8:2FTSo	0.55 Uo	2.9o	0.55o	0.18o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
PFOSAo	0.18 Uo	2.9o	0.18o	0.046o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
NMeFOSAo	1.8 Uo	2.9o	1.8o	0.90o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
NEtFOSAo	1.8 Uo	2.9o	1.8o	0.90o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
NMeFOSAAo	0.18 Uo	0.73o	0.18o	0.066o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
NEtFOSAAo	0.18 Uo	0.73o	0.18o	0.046o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
NMeFOSEo	1.1 Uo	2.9o	1.1o	0.55o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
NEtFOSEo	1.1 Uo	2.9o	1.1o	0.55o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
HFPO-DAo	0.91 Uo	1.5o	0.91o	0.45o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
ADONAo	0.55 Uo	1.5o	0.55o	0.24o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
9CL-PF3ONSo	0.55 Uo	1.5o	0.55o	0.22o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
11CL-PF3OUDSo	0.55 Uo	1.5o	0.55o	0.22o	ng/Lo	12/15/22o	1o	Table B-15o	BBL0296o
Surrogate: 13C4-PFBAo	*94.6%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C5-PFPEAo	*89.7%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C5-PFHXAo	*92.0%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C4-PFHPAo	*87.2%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C8-PFOAo	*92.3%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C9-PFNAo	*78.0%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C6-PFDAo	*86.2%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C7-PFUnAo	*93.8%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C2-PFDOAo	*88.3%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C2-PFTEDAo	*79.5%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C3-PFBSo	*97.5%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C3-PFHXSo	*92.2%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C8-PFOSo	*88.9%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*

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Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results
(Continued)a

Sample: EQP-3-113022 (Continued)a
22L0004-27 (Water)a

Per- nd Polyfluoroalkyl Substances (Continued)a

Analyteo	Result /Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*108%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C2-6:2FTSo	*98.8%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C2-8:2FTSo	*94.1%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C8-PFOSAo	*77.5%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: D3-NMEFOSAo	*66.6%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: D5-NETFOSAo	*71.0%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: D3-NMEFOSAAo	*94.8%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: D5-NETFOSAAo	*107%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: D7-NMEFOSEo	*65.3%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: D9-NETFOSEo	*64.4%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*
Surrogate: 13C3-HFPO-DAo	*95.6%o*		*50-150o*			*12/15/22o*	1o	*Table B-15o*	*BBL0296o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results

(Continued)a

Sample: FB-3-113022

22L0004-28 (Water)a

Per- nd Polyfluoroalkyl Substances

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	1.0 Uo	16o	1.0o	0.26o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFPEAo	1.0 Uo	8.2o	1.0o	0.32o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFHXAo	1.0 Uo	4.1o	1.0o	0.33o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFHPAo	1.0 Uo	4.1o	1.0o	0.26o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFOAo	1.0 Uo	4.1o	1.0o	0.42o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFNAo	1.0 Uo	4.1o	1.0o	0.26o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFDAo	1.0 Uo	4.1o	1.0o	0.26o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFUnAo	1.0 Uo	4.1o	1.0o	0.41o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFDOAo	1.0 Uo	4.1o	1.0o	0.26o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFTRDAo	1.0 Uo	4.1o	1.0o	0.30o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFTEDAo	1.0 Uo	4.1o	1.0o	0.44o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFBSo	1.0 Uo	4.1o	1.0o	0.26o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFPESo	1.0 Uo	4.1o	1.0o	0.30o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFHXSo	1.0 Uo	4.1o	1.0o	0.26o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFHPSo	1.0 Uo	4.1o	1.0o	0.29o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFOSo	1.0 Uo	4.1o	1.0o	0.26o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFNSo	2.0 Uo	4.1o	2.0o	1.3o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFDSo	1.0 Uo	4.1o	1.0o	0.33o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
4:2FTSo	2.0 Uo	16o	2.0o	0.55o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
6:2FTSo	1.0 Uo	16o	1.0o	0.46o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
8:2FTSo	3.1 Uo	16o	3.1o	1.0o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFOSAo	1.0 Uo	16o	1.0o	0.26o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
NMeFOSAo	10 Uo	16o	10o	5.0o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
NEtFOSAo	10 Uo	16o	10o	5.0o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
NMeFOSAAo	1.0 Uo	4.1o	1.0o	0.37o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
NEtFOSAAo	1.0 Uo	4.1o	1.0o	0.26o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
NMeFOSEo	6.1 Uo	16o	6.1o	3.1o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
NEtFOSEo	6.1 Uo	16o	6.1o	3.1o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
HFPO-DAo	5.1 Uo	8.2o	5.1o	2.5o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
ADONAo	3.1 Uo	8.2o	3.1o	1.3o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
9CL-PF3ONSo	3.1 Uo	8.2o	3.1o	1.2o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
11CL-PF3OUDSo	3.1 Uo	8.2o	3.1o	1.2o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
Surrogate: 13C4-PFBAo	*86.7%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C5-PFPEAo	*86.9%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C5-PFHXAo	*88.7%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C4-PFHPAo	*83.2%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C8-PFOAo	*92.1%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C9-PFNAo	*78.2%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C6-PFDAo	*108%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C7-PFUnAo	*107%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C2-PFDOAo	*122%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C2-PFTEDAo	*120%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C3-PFBSo	*83.4%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C3-PFHXSo	*85.6%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C8-PFOSo	*88.1%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Sample Results
(Continued)a

Sample: FB-3-113022 (Continued)a
22L0004-28 (Water)a

Per- nd Polyfluoroalkyl Substances (Continued)a

Analyteo	Result /Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*90.0%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C2-6:2FTSo	*93.3%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C2-8:2FTSo	*85.5%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C8-PFOSAo	*97.4%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: D3-NMEFOSAo	*43.7%o S1o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: D3-NMEFOSAo	*34.6%o S1o*		*50-150o*			*12/16/22o*	10o	*Table B-15o*	*BBL0249o*
Surrogate: D5-NETFOSAo	*39.7%o S1o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: D5-NETFOSAo	*28.9%o S1o*		*50-150o*			*12/16/22o*	10o	*Table B-15o*	*BBL0249o*
Surrogate: D3-NMEFOSAAo	*106%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: D5-NETFOSAAo	*117%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: D7-NMEFOSEo	*85.0%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: D9-NETFOSEo	*90.7%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C3-HFPO-DAo	*82.4%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:56o

Quality Controlu

Per- and Polyfluoroalkyl Substancesu

Analyteo	Result/Qual	LOQo	LODo	MDLo	Spikeo Levelo	Sourceo Resulto	%RECo	%RECo Limitso	RPDo	RPDo Limito
Batch: BBL0076 - Table B-15u										
Blank (BBL0076-BLK1)u							Prepared: 12/05/22 07:17 Analyzed: 12/10/22 00:23o			
	ng/Lo									
PFBAo	0.20 Uo	3.2o	0.20o	0.050o						
PFPEAo	0.20 Uo	1.6o	0.20o	0.062o						
PFHXAo	0.20 Uo	0.80o	0.20o	0.064o						
PFHPAo	0.20 Uo	0.80o	0.20o	0.050o						
PFOAo	0.20 Uo	0.80o	0.20o	0.082o						
PFNAo	0.20 Uo	0.80o	0.20o	0.050o						
PFDAo	0.20 Uo	0.80o	0.20o	0.050o						
PFUnAo	0.20 Uo	0.80o	0.20o	0.080o						
PFDOAo	0.20 Uo	0.80o	0.20o	0.050o						
PFTRDAo	0.20 Uo	0.80o	0.20o	0.058o						
PFTEDAo	0.20 Uo	0.80o	0.20o	0.086o						
PFBSo	0.20 Uo	0.80o	0.20o	0.050o						
PFPESo	0.20 Uo	0.80o	0.20o	0.058o						
PFHXSo	0.20 Uo	0.80o	0.20o	0.050o						
PFHPSo	0.20 Uo	0.80o	0.20o	0.056o						
PFOSo	0.20 Uo	0.80o	0.20o	0.050o						
PFNSo	0.40 Uo	0.80o	0.40o	0.25o						
PFDSo	0.20 Uo	0.80o	0.20o	0.064o						
4:2FTSo	0.40 Uo	3.2o	0.40o	0.11o						
6:2FTSo	0.20 Uo	3.2o	0.20o	0.090o						
8:2FTSo	0.60 Uo	3.2o	0.60o	0.20o						
PFOSAo	0.20 Uo	3.2o	0.20o	0.050o						
NMeFOSAo	2.0 Uo	3.2o	2.0o	0.99o						
NEtFOSAo	2.0 Uo	3.2o	2.0o	0.98o						
NMeFOSAAo	0.20 Uo	0.80o	0.20o	0.072o						
NEtFOSAAo	0.20 Uo	0.80o	0.20o	0.050o						
NMeFOSEo	1.2 Uo	3.2o	1.2o	0.60o						
NEtFOSEo	1.2 Uo	3.2o	1.2o	0.60o						
HFPO-DAo	1.0 Uo	1.6o	1.0o	0.49o						
ADONAo	0.60 Uo	1.6o	0.60o	0.26o						
9CL-PF3ONSo	0.60 Uo	1.6o	0.60o	0.24o						
11CL-PF3OUDSo	0.60 Uo	1.6o	0.60o	0.24o						
Surrogatesu										
13C4-PFBAo	*65.7o*				*64.0o*		*103o*	*50-150o*		
13C5-PFPEAo	*31.4o*				*32.0o*		*98.0o*	*50-150o*		
13C5-PFHXAo	*18.9o*				*16.0o*		*118o*	*50-150o*		
13C4-PFHPAo	*17.6o*				*16.0o*		*110o*	*50-150o*		
13C8-PFOAo	*18.0o*				*16.0o*		*113o*	*50-150o*		
13C9-PFNAo	*7.36o*				*8.00o*		*92.0o*	*50-150o*		
13C6-PFDAo	*6.50o*				*8.00o*		*81.3o*	*50-150o*		
13C7-PFUnAo	*6.89o*				*8.00o*		*86.2o*	*50-150o*		
13C2-PFDOAo	*6.01o*				*8.00o*		*75.2o*	*50-150o*		
13C2-PFTEDAo	*6.57o*				*8.00o*		*82.1o*	*50-150o*		
13C3-PFBSo	*17.8o*				*16.0o*		*111o*	*50-150o*		
13C3-PFHXSo	*16.0o*				*16.0o*		*99.7o*	*50-150o*		
13C8-PFOSo	*16.4o*				*16.0o*		*103o*	*50-150o*		

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:56o

Quality Controlu
(Continued)u

Per- and Polyfluoroalkyl Substances (Continued)u

Analyteo	Result/Qualo	LOQo	LODo	MDLo	Spikeo Levelo	Sourceo Resulto	%RECo	%RECo Limitso	RPDo	RPDo Limito
Batch: BBL0076 - Table B-15 (Continued)u										
Blank (BBL0076-BLK1)u						Prepared: 12/05/22 07:17 Analyzed: 12/10/22 00:23o				
	ng/Lo									
Surrogatesu										
13C2-4:2FTSo	*35.2o*				*32.0o*		*110o*	*50-150o*		
13C2-6:2FTSo	*35.8o*				*32.0o*		*112o*	*50-150o*		
13C2-8:2FTSo	*33.0o*				*32.0o*		*103o*	*50-150o*		
13C8-PFOSAo	*11.3o*				*16.0o*		*70.4o*	*50-150o*		
D3-NMEFOSAo	*6.60o* S1o				*16.0o*		*41.2o*	*50-150o*		
D5-NETFOSAo	*6.06o* S1o				*16.0o*		*37.9o*	*50-150o*		
D3-NMEFOSAAo	*29.1o*				*32.0o*		*91.0o*	*50-150o*		
D5-NETFOSAAo	*36.0o*				*32.0o*		*113o*	*50-150o*		
D7-NMEFOSEo	*75.2o* S1o				*160o*		*47.0o*	*50-150o*		
D9-NETFOSEo	*81.3o*				*160o*		*50.8o*	*50-150o*		
13C3-HFPO-DAo	*68.8o*				*64.0o*		*108o*	*50-150o*		
LCS (BBL0076-BS1)u						Prepared: 12/05/22 07:17 Analyzed: 12/10/22 00:35o				
	ng/Lo									
PFBAo	28.4o				32.0o		88.8o	73-129o		
PFPEAo	14.3o				16.0o		89.3o	72-129o		
PFHXAo	6.88o				8.00o		86.0o	72-129o		
PFHPAo	7.01o				8.00o		87.6o	72-130o		
PFOAo	7.52o				8.00o		94.0o	71-133o		
PFNAo	7.59o				8.00o		94.9o	69-130o		
PFDAo	8.72o				8.00o		109o	71-129o		
PFUnAo	7.55o				8.00o		94.4o	69-133o		
PFDOAo	6.13o				8.00o		76.6o	72-134o		
PFTRDAo	6.41o				8.00o		80.1o	65-144o		
PFTEDAo	7.68o				8.00o		96.0o	71-132o		
PFBSo	6.77o				7.08o		95.7o	72-130o		
PFPESo	6.34o				7.52o		84.3o	71-127o		
PFHXSo	6.65o				7.32o		90.8o	68-131o		
PFHPSo	6.13o				7.64o		80.2o	69-134o		
PFOSo	6.57o				7.44o		88.3o	65-140o		
PFNSo	6.95o				7.68o		90.5o	69-127o		
PFDSo	5.45o				7.72o		70.6o	53-142o		
4:2FTSo	29.9o				30.0o		99.8o	63-143o		
6:2FTSo	28.8o				30.4o		94.8o	64-140o		
8:2FTSo	35.6o				30.7o		116o	67-138o		
PFOSAo	7.44o				8.00o		93.0o	67-137o		
NMeFOSAo	30.9o				32.0o		96.6o	68-141o		
NEtFOSAo	27.5o				32.0o		85.9o	70-130o		
NMeFOSAAo	5.91o				8.00o		73.8o	65-136o		
NEtFOSAAo	7.04o				8.00o		87.9o	61-135o		
NMeFOSEo	25.9o				32.0o		80.9o	70-130o		
NEtFOSEo	28.2o				32.0o		88.2o	70-130o		
HFPO-DAo	15.9o				16.0o		99.5o	44-175o		
ADONAo	16.0o				15.1o		106o	61-169o		
9CL-PF3ONSo	15.1o				15.0o		101o	62-140o		

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:56o

Quality Controlu
(Continued)u

Per- and Polyfluoroalkyl Substances (Continued)u

Analyteo	Result/Qual	LOQo	LODo	MDL	Spikeo Levelo	Sourceo Resulto	%RECo	%RECo Limitso	RPDo	RPDo Limito
Batch: BBL0076 - Table B-15 (Continued)u										
LCS (BBL0076-BS1)u							Prepared: 12/05/22 07:17 Analyzed: 12/10/22 00:35o			
	ng/Lo									
11CL-PF3OUDSo	11.9o				15.1o		79.0o	54-138		
Surrogatesu										
13C4-PFBAo	*71.0o*				*64.0o*		*111o*	*50-150*		
13C5-PFPEAo	*31.9o*				*32.0o*		*99.5o*	*50-150*		
13C5-PFHXAo	*18.3o*				*16.0o*		*115o*	*50-150*		
13C4-PFHPAo	*16.7o*				*16.0o*		*104o*	*50-150*		
13C8-PFOAo	*17.8o*				*16.0o*		*111o*	*50-150*		
13C9-PFNAo	*7.18o*				*8.00o*		*89.8o*	*50-150*		
13C6-PFDAo	*7.09o*				*8.00o*		*88.7o*	*50-150*		
13C7-PFUnAo	*8.25o*				*8.00o*		*103o*	*50-150*		
13C2-PFDOAo	*8.03o*				*8.00o*		*100o*	*50-150*		
13C2-PFTEDAo	*6.65o*				*8.00o*		*83.1o*	*50-150*		
13C3-PFBSo	*17.7o*				*16.0o*		*110o*	*50-150*		
13C3-PFHXSo	*18.1o*				*16.0o*		*113o*	*50-150*		
13C8-PFOSo	*17.5o* MI1o				*16.0o*		*109o*	*50-150*		
13C2-4:2FTSo	*36.8o*				*32.0o*		*115o*	*50-150*		
13C2-6:2FTSo	*35.6o*				*32.0o*		*111o*	*50-150*		
13C2-8:2FTSo	*31.9o*				*32.0o*		*99.8o*	*50-150*		
13C8-PFOSAo	*12.8o*				*16.0o*		*79.9o*	*50-150*		
D3-NMEFOSAo	*6.12o* S1o				*16.0o*		*38.2o*	*50-150*		
D5-NETFOSAo	*5.61o* S1o				*16.0o*		*35.0o*	*50-150*		
D3-NMEFOSAAo	*33.8o*				*32.0o*		*105o*	*50-150*		
D5-NETFOSAAo	*37.5o*				*32.0o*		*117o*	*50-150*		
D7-NMEFOSEo	*76.4o* S1o				*160o*		*47.8o*	*50-150*		
D9-NETFOSEo	*86.3o*				*160o*		*54.0o*	*50-150*		
13C3-HFPO-DAo	*60.5o*				*64.0o*		*94.5o*	*50-150*		
LCS Dup (BBL0076-BSD1)u							Prepared: 12/05/22 07:17 Analyzed: 12/10/22 00:48o			
	ng/Lo									
PFBAo	26.2o				32.0o		81.9o	73-129o	8.10o	30o
PFPEAo	15.7o				16.0o		98.4o	72-129o	9.69o	30o
PFHXAo	7.84o				8.00o		98.0o	72-129o	13.1o	30o
PFHPAo	7.41o				8.00o		92.6o	72-130o	5.55o	30o
PFOAo	7.95o				8.00o		99.3o	71-133o	5.51o	30o
PFNAo	8.16o				8.00o		102o	69-130o	7.24o	30o
PFDAo	7.25o				8.00o		90.6o	71-129o	18.4o	30o
PFUnAo	7.57o				8.00o		94.6o	69-133o	0.166o	30o
PFDOAo	8.73oBS3o				8.00o		109o	72-134o	35.0o	30o
PFTRDAo	8.46o				8.00o		106o	65-144o	27.6o	30o
PFTEDAo	6.62o				8.00o		82.8o	71-132o	14.8o	30o
PFBSo	6.22o				7.08o		87.8o	72-130o	8.52o	30o
PFPESo	7.31o				7.52o		97.2o	71-127o	14.2o	30o
PFHXSo	6.83o				7.32o		93.3o	68-131o	2.64o	30o
PFHPSo	7.00o				7.64o		91.6o	69-134o	13.3o	30o
PFOSo	7.24o				7.44o		97.3o	65-140o	9.72o	30o
PFNSo	7.21o				7.68o		93.8o	69-127o	3.56o	30o
PFDSo	7.01o				7.72o		90.8o	53-142o	25.0o	30o

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Quality Controlu
(Continued)u

Per- and Polyfluoroalkyl Substances (Continued)u

Analyteo	Result/Qualo	LOQo	LODo	MDLo	Spikeo Levelo	Sourceo Resulto	%RECo	%RECo Limitso	RPDo	RPDo Limito
Batch: BBL0076 - Table B-15 (Continued)u										
LCS Dup (BBL0076-BSD1)u						Prepared: 12/05/22 07:17 Analyzed: 12/10/22 00:48o				
	ng/Lo									
4:2FTSo	27.2o				30.0o		90.7o	63-143o	9.58o	30o
6:2FTSo	29.0o				30.4o		95.4o	64-140o	0.588o	30o
8:2FTSo	30.9o				30.7o		101o	67-138o	14.2o	30o
PFOSAo	8.71o				8.00o		109o	67-137o	15.8o	30o
NMeFOSAo	28.6o				32.0o		89.4o	68-141o	7.72o	30o
NEtFOSAo	25.8o				32.0o		80.5o	70-130o	6.52o	30o
NMeFOSAAo	6.76o				8.00o		84.5o	65-136o	13.5o	30o
NEtFOSAAo	7.43o				8.00o		92.8o	61-135o	5.43o	30o
NMeFOSEo	28.6o				32.0o		89.3o	70-130o	9.98o	30o
NEtFOSEo	27.2o				32.0o		85.0o	70-130o	3.69o	30o
HFPO-DAo	15.5o				16.0o		97.0o	44-175o	2.55o	30o
ADONAo	13.6o				15.1o		89.8o	61-169o	16.5o	30o
9CL-PF3ONSo	14.2o				15.0o		95.0o	62-140o	6.09o	30o
11CL-PF3OUDSo	13.7o				15.1o		90.8o	54-138o	13.9o	30o
Surrogatesu										
13C4-PFBAo	*71.9o*				*64.0o*		*112o*	*50-150o*		
13C5-PFPEAo	*27.8o*				*32.0o*		*86.9o*	*50-150o*		
13C5-PFHXAo	*15.0o*				*16.0o*		*93.7o*	*50-150o*		
13C4-PFHPAo	*15.8o*				*16.0o*		*98.6o*	*50-150o*		
13C8-PFOAo	*16.9o*				*16.0o*		*106o*	*50-150o*		
13C9-PFNAo	*6.77o*				*8.00o*		*84.6o*	*50-150o*		
13C6-PFDAo	*7.25o*				*8.00o*		*90.7o*	*50-150o*		
13C7-PFUnAo	*8.56o*				*8.00o*		*107o*	*50-150o*		
13C2-PFDOAo	*6.23o*				*8.00o*		*77.9o*	*50-150o*		
13C2-PFTEDAo	*6.95o*				*8.00o*		*86.9o*	*50-150o*		
13C3-PFBSo	*15.7o*				*16.0o*		*97.8o*	*50-150o*		
13C3-PFHXSo	*16.2o*				*16.0o*		*101o*	*50-150o*		
13C8-PFOSo	*15.9o*				*16.0o*		*99.4o*	*50-150o*		
13C2-4:2FTSo	*38.1o*				*32.0o*		*119o*	*50-150o*		
13C2-6:2FTSo	*33.7o*				*32.0o*		*105o*	*50-150o*		
13C2-8:2FTSo	*30.4o*				*32.0o*		*94.9o*	*50-150o*		
13C8-PFOSAo	*11.6o*				*16.0o*		*72.4o*	*50-150o*		
D3-NMEFOSAo	*6.54o* S1o				*16.0o*		*40.9o*	*50-150o*		
D5-NETFOSAo	*6.65o* S1o				*16.0o*		*41.6o*	*50-150o*		
D3-NMEFOSAAo	*31.1o*				*32.0o*		*97.0o*	*50-150o*		
D5-NETFOSAAo	*35.8o*				*32.0o*		*112o*	*50-150o*		
D7-NMEFOSEo	*78.8o* S1o				*160o*		*49.2o*	*50-150o*		
D9-NETFOSEo	*81.4o*				*160o*		*50.9o*	*50-150o*		
13C3-HFPO-DAo	*62.3o*				*64.0o*		*97.3o*	*50-150o*		

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:56o

Quality Controlu
(Continued)u

Per- and Polyfluoroalkyl Substances (Continued)u

Analyteo	Result/Qualo	LOQo	LODo	MDLo	Spikeo Levelo	Sourceo Resulto	%RECo	%RECo Limitso	RPDo	RPDo Limito
Batch: BBL0076 - Table B-15 (Continued)u										
MRL Check (BBL0076-MRL1)u						Prepared: 12/05/22 07:17 Analyzed: 12/10/22 01:01o				
	ng/Lo									
PFBAo	2.71 Jo				3.20o		84.6o	73-129o		
PFPEAo	1.45 Jo				1.60o		90.9o	72-129o		
PFHXAo	0.813o				0.800o		102o	72-129o		
PFHPAo	0.743 Jo				0.800o		92.8o	72-130o		
PFOAo	0.961o				0.800o		120o	71-133o		
PFNAo	0.650 Jo				0.800o		81.2o	69-130o		
PFDAo	0.805o				0.800o		101o	71-129o		
PFUnAo	0.694 Jo				0.800o		86.7o	69-133o		
PFDOAo	0.823dR1o				0.800o		103o	72-134o		
PFTRDAo	0.731 J IR2, o				0.800o		91.4o	65-144o		
PFTEDAo	0.642 Jo				0.800o		80.2o	71-132o		
PFBSo	0.643 Jo				0.708o		90.8o	72-130o		
PFPESo	0.720 Jo				0.752o		95.7o	71-127o		
PFHXSo	0.720 Jo				0.732o		98.4o	68-131o		
PFHPSo	0.804o				0.764o		105o	69-134o		
PFOSo	0.759 Jo				0.744o		102o	65-140o		
PFNSo	0.838o				0.768o		109o	69-127o		
PFDSo	0.824o				0.772o		107o	53-142o		
4:2FTSo	2.89 Jo				3.00o		96.2o	63-143o		
6:2FTSo	3.34o				3.04o		110o	64-140o		
8:2FTSo	2.00 J BS1, o				3.07o		64.9o	67-138o		
PFOSAo	1.13 J BS2, o				0.800o		142o	67-137o		
NMeFOSAo	2.92 Jo				3.20o		91.2o	68-141o		
NEtFOSAo	2.84 Jo				3.20o		88.6o	70-130o		
NMeFOSAAo	0.614 Jo				0.800o		76.7o	65-136o		
NEtFOSAAo	0.887o				0.800o		111o	61-135o		
NMeFOSEo	2.82 Jo				3.20o		88.2o	70-130o		
NEtFOSEo	2.78 Jo				3.20o		87.0o	70-130o		
HFPO-DAo	1.23 Jo				1.60o		76.9o	44-175o		
ADONAo	1.27 Jo				1.51o		83.8o	61-169o		
9CL-PF3ONSo	1.33 Jo				1.50o		88.7o	62-140o		
11CL-PF3OUDSo	1.31 Jo				1.51o		86.4o	54-138o		
Surrogatesu										
13C4-PFBAo	*68.2o*				*64.0o*		*107o*	*50-150o*		
13C5-PFPEAo	*30.0o*				*32.0o*		*93.7o*	*50-150o*		
13C5-PFHXAo	*17.7o*				*16.0o*		*110o*	*50-150o*		
13C4-PFHPAo	*15.5o*				*16.0o*		*97.1o*	*50-150o*		
13C8-PFOAo	*14.6o*				*16.0o*		*91.3o*	*50-150o*		
13C9-PFNAo	*8.24o*				*8.00o*		*103o*	*50-150o*		
13C6-PFDAo	*6.72o*				*8.00o*		*84.0o*	*50-150o*		
13C7-PFUnAo	*7.63o*				*8.00o*		*95.4o*	*50-150o*		
13C2-PFDOAo	*6.23o*				*8.00o*		*77.8o*	*50-150o*		
13C2-PFTEDAo	*6.57o*				*8.00o*		*82.1o*	*50-150o*		
13C3-PFBSo	*19.1o*				*16.0o*		*119o*	*50-150o*		
13C3-PFHXSo	*17.0o*				*16.0o*		*106o*	*50-150o*		
13C8-PFOSo	*16.7o*				*16.0o*		*104o*	*50-150o*		

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:56o

Quality Controlu
(Continued)u

Per- and Polyfluoroalkyl Substances (Continued)u

Analyteo	Result/Qual	LOQo	LODo	MDL	Spikeo Levelo	Sourceo Resulto	%RECo	%RECo Limitso	RPDo	RPDo Limito
Batch: BBL0076 - Table B-15 (Continued)u										
MRL Check (BBL0076-MRL1)u						Prepared: 12/05/22 07:17 Analyzed: 12/10/22 01:01o				
	ng/Lo									
Surrogatesu										
13C2-4:2FTSo	*39.5o*				*32.0o*		*123o*	*50-150*		
13C2-6:2FTSo	*36.8o*				*32.0o*		*115o*	*50-150*		
13C2-8:2FTSo	*34.3o*				*32.0o*		*107o*	*50-150*		
13C8-PFOSAo	*12.9o*				*16.0o*		*80.4o*	*50-150*		
D3-NMEFOSAo	*8.01o*				*16.0o*		*50.1o*	*50-150*		
D5-NETFOSAo	*7.75o* S1o				*16.0o*		*48.4o*	*50-150*		
D3-NMEFOSAAo	*32.6o*				*32.0o*		*102o*	*50-150*		
D5-NETFOSAAo	*42.2o*				*32.0o*		*132o*	*50-150*		
D7-NMEFOSEo	*95.7o*				*160o*		*59.8o*	*50-150*		
D9-NETFOSEo	*100o*				*160o*		*62.7o*	*50-150*		
13C3-HFPO-DAo	*65.0o*				*64.0o*		*102o*	*50-150*		
Matrix Spike (BBL0076-MS1)u	**Source: 22L0004-15u**					Prepared: 12/05/22 07:17 Analyzed: 12/10/22 01:13o				
	ng/Lo									
PFBAo	27.0o				29.0o	1.97o	86.4o	73-129o		
PFPEAo	18.1o				14.5o	3.81o	98.5o	72-129o		
PFHXAo	8.69o				7.25o	2.32o	87.9o	72-129o		
PFHPAo	8.01o				7.25o	0.888o	98.3o	72-130o		
PFOAo	6.55o				7.25o	1.07o	75.7o	71-133o		
PFNAo	6.16o				7.25o	0.181 Uo	85.0o	69-130o		
PFDAo	6.07o				7.25o	0.181 Uo	83.7o	71-129o		
PFUnAo	6.59o				7.25o	0.181 Uo	90.9o	69-133o		
PFDOAo	7.00o				7.25o	0.181 Uo	96.6o	72-134o		
PFTRDAo	9.48o				7.25o	0.181 Uo	131o	65-144o		
PFTEDAo	6.12o				7.25o	0.181 Uo	84.5o	71-132o		
PFBSo	9.16o				6.42o	2.89o	97.8o	72-130o		
PFPESo	7.95o				6.82o	1.18o	99.3o	71-127o		
PFHXSo	8.25o				6.63o	2.00o	94.2o	68-131o		
PFHPSo	6.42o				6.92o	0.181 Uo	92.8o	69-134o		
PFOSo	6.71o				6.74o	0.197o	96.6o	65-140o		
PFNSo	2.94dMS1o				6.96o	0.361 Uo	42.2o	69-127o		
PFDSo	5.07o				7.00o	0.181 Uo	72.5o	53-142o		
4:2FTSo	23.3o				27.2o	0.361 Uo	85.6o	63-143o		
6:2FTSo	26.4o				27.6o	0.181 Uo	95.8o	64-140o		
8:2FTSo	27.1o				27.8o	0.542 Uo	97.4o	67-138o		
PFOSAo	6.07o				7.25o	0.181 Uo	83.8o	67-137o		
NMeFOSAo	28.1o				29.0o	1.81 Uo	96.9o	68-141o		
NEtFOSAo	23.3o				29.0o	1.81 Uo	80.4o	70-130o		
NMeFOSAAo	7.30o				7.25o	0.181 Uo	101o	65-136o		
NEtFOSAAo	6.44o				7.25o	0.181 Uo	88.8o	61-135o		
NMeFOSEo	25.7o				29.0o	1.08 Uo	88.6o	70-130o		
NEtFOSEo	31.0o				29.0o	1.08 Uo	107o	70-130o		
HFPO-DAo	12.1o				14.5o	0.903 Uo	83.4o	44-175o		
ADONAo	12.2o				13.7o	0.542 Uo	89.4o	61-169o		
9CL-PF3ONSo	8.76o				13.6o	0.542 Uo	64.6o	62-140o		

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:56o

Quality Controlu
(Continued)u

Per- and Polyfluoroalkyl Substances (Continued)u

Analyteo	Result/Qualo	LOQo	LODo	MDLo	Spikeo Levelo	Sourceo Resulto	%RECo	%RECo Limitso	RPDo	RPDo Limito
Batch: BBL0076 - Table B-15 (Continued)u										
Matrix Spike (BBL0076-MS1)u	**Source: 22L0004-15u**					Prepared: 12/05/22 07:17		Analyzed: 12/10/22 01:13o		
	ng/Lo									
11CL-PF3OUDSo	11.7o				13.7o	0.542 Uo	85.3o	54-138o		
Surrogatesu										
13C4-PFBAo	*54.3o*				*58.0o*		*93.7o*	*50-150o*		
13C5-PFPEAo	*28.9o*				*29.0o*		*99.5o*	*50-150o*		
13C5-PFHXAo	*16.0o*				*14.5o*		*110o*	*50-150o*		
13C4-PFHPAo	*14.9o*				*14.5o*		*103o*	*50-150o*		
13C8-PFOAo	*14.7o*				*14.5o*		*101o*	*50-150o*		
13C9-PFNAo	*7.69o*				*7.25o*		*106o*	*50-150o*		
13C6-PFDAo	*6.74o*				*7.25o*		*92.9o*	*50-150o*		
13C7-PFUnAo	*5.86o*				*7.25o*		*80.8o*	*50-150o*		
13C2-PFDOAo	*5.28o*				*7.25o*		*72.8o*	*50-150o*		
13C2-PFTEDAo	*5.53o*				*7.25o*		*76.3o*	*50-150o*		
13C3-PFBSo	*14.8o*				*14.5o*		*102o*	*50-150o*		
13C3-PFHXSo	*14.9o*				*14.5o*		*102o*	*50-150o*		
13C8-PFOSo	*14.8o*				*14.5o*		*102o*	*50-150o*		
13C2-4:2FTSo	*40.1o*				*29.0o*		*138o*	*50-150o*		
13C2-6:2FTSo	*32.6o*				*29.0o*		*112o*	*50-150o*		
13C2-8:2FTSo	*31.6o*				*29.0o*		*109o*	*50-150o*		
13C8-PFOSAo	*10.2o*				*14.5o*		*70.2o*	*50-150o*		
D3-NMEFOSAo	*5.48o* S1o				*14.5o*		*37.8o*	*50-150o*		
D5-NETFOSAo	*7.31o*				*14.5o*		*50.4o*	*50-150o*		
D3-NMEFOSAAo	*34.6o*				*29.0o*		*119o*	*50-150o*		
D5-NETFOSAAo	*32.9o*				*29.0o*		*114o*	*50-150o*		
D7-NMEFOSEo	*70.4o* S1o				*145o*		*48.5o*	*50-150o*		
D9-NETFOSEo	*73.2o*				*145o*		*50.5o*	*50-150o*		
13C3-HFPO-DAo	*63.2o*				*58.0o*		*109o*	*50-150o*		
Matrix Spike Dup (BBL0076-MSD1)u	**Source: 22L0004-15u**					Prepared: 12/05/22 07:17		Analyzed: 12/10/22 01:26o		
	ng/Lo									
PFBAo	28.4o				28.7o	1.97o	92.0o	73-129o	4.89o	30o
PFPEAo	16.8o				14.3o	3.81o	90.5o	72-129o	7.41o	30o
PFHXAo	7.92o				7.17o	2.32o	78.1o	72-129o	9.27o	30o
PFHPAo	7.55o				7.17o	0.888o	92.9o	72-130o	5.93o	30o
PFOAo	7.35o				7.17o	1.07o	87.6o	71-133o	11.5o	30o
PFNAo	6.75o				7.17o	0.181 Uo	94.1o	69-130o	9.06o	30o
PFDAo	6.11o				7.17o	0.181 Uo	85.2o	71-129o	0.716o	30o
PFUnAo	7.17o				7.17o	0.181 Uo	99.9o	69-133o	8.40o	30o
PFDOAo	6.54o				7.17o	0.181 Uo	91.2o	72-134o	6.73o	30o
PFTRDAo	6.72o	MS3o			7.17o	0.181 Uo	93.7o	65-144o	34.1o	30o
PFTEDAo	5.50o				7.17o	0.181 Uo	76.6o	71-132o	10.8o	30o
PFBSo	8.63o				6.35o	2.89o	90.4o	72-130o	6.00o	30o
PFPESo	7.33o				6.74o	1.18o	91.3o	71-127o	8.02o	30o
PFHXSo	8.29o				6.56o	2.00o	95.9o	68-131o	0.550o	30o
PFHPSo	6.09o				6.85o	0.181 Uo	88.9o	69-134o	5.35o	30o
PFOSo	6.07o				6.67o	0.197o	88.0o	65-140o	10.1o	30o
PFNSo	4.60o	MS1, MS3o			6.89o	0.361 Uo	66.8o	69-127o	44.1o	30o
PFDSo	5.97o				6.92o	0.181 Uo	86.2o	53-142o	16.2o	30o

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:56o

Quality Controlu
(Continued)u

Per- and Polyfluoroalkyl Substances (Continued)u

Analyteo	Result/Qualo	LOQo	LODo	MDL	Spikeo Levelo	Sourceo Resulto	%RECo	%RECo Limitso	RPDo	RPDo Limit
Batch: BBL0076 - Table B-15 (Continued)u										
Matrix Spike Dup (BBL0076-MSD1)u	**Source: 22L0004-15**					Prepared: 12/05/22 07:17	Analyzed: 12/10/22 01:26			
	ng/Lo									
4:2FTSo	23.1o				26.9o	0.361 Uo	86.0o	63-143	0.493	30
6:2FTSo	26.5o				27.3o	0.181 Uo	97.1o	64-140	0.359	30
8:2FTSo	28.4o				27.5o	0.542 Uo	103o	67-138	4.56	30
PFOSAo	7.44o				7.17o	0.181 Uo	104o	67-137	20.2	30
NMeFOSAo	23.9o				28.7o	1.81 Uo	83.5o	68-141	16.0	30
NEtFOSAo	25.8o				28.7o	1.81 Uo	90.0o	70-130	10.2	30
NMeFOSAAo	6.84o				7.17o	0.181 Uo	95.4o	65-136	6.48	30
NEtFOSAAo	6.06o				7.17o	0.181 Uo	84.5o	61-135	6.02	30
NMeFOSEo	23.5o				28.7o	1.08 Uo	81.8o	70-130	9.06	30
NEtFOSEo	24.3o				28.7o	1.08 Uo	84.7o	70-130	24.2	30
HFPO-DAo	12.6o				14.3o	0.903 Uo	87.7o	44-175	3.89	30
ADONAo	11.3o				13.6o	0.542 Uo	83.7o	61-169	7.63	30
9CL-PF3ONSo	8.40o				13.4o	0.542 Uo	62.6o	62-140	4.19	30
11CL-PF3OUDSo	9.43o				13.6o	0.542 Uo	69.6o	54-138	21.3	30
Surrogatesu										
13C4-PFBAo	*60.6o*				*57.4o*		*106*	*50-150*		
13C5-PFPEAo	*28.2o*				*28.7o*		*98.2*	*50-150*		
13C5-PFHXAo	*17.3o*				*14.3o*		*120*	*50-150*		
13C4-PFHPAo	*15.1o*				*14.3o*		*105*	*50-150*		
13C8-PFOAo	*15.5o*				*14.3o*		*108*	*50-150*		
13C9-PFNAo	*7.10o*				*7.17o*		*99.0*	*50-150*		
13C6-PFDAo	*6.86o*				*7.17o*		*95.6*	*50-150*		
13C7-PFUnAo	*6.81o*				*7.17o*		*94.9*	*50-150*		
13C2-PFDOAo	*6.19o*				*7.17o*		*86.3*	*50-150*		
13C2-PFTEDAo	*6.41o*				*7.17o*		*89.4*	*50-150*		
13C3-PFBSo	*14.3o*				*14.3o*		*99.6*	*50-150*		
13C3-PFHXSo	*13.6o*				*14.3o*		*95.0*	*50-150*		
13C8-PFOSo	*14.2o*				*14.3o*		*99.0*	*50-150*		
13C2-4:2FTSo	*37.4o*				*28.7o*		*130*	*50-150*		
13C2-6:2FTSo	*30.8o*				*28.7o*		*107*	*50-150*		
13C2-8:2FTSo	*25.2o*				*28.7o*		*87.7*	*50-150*		
13C8-PFOSAo	*8.45o*				*14.3o*		*58.9*	*50-150*		
D3-NMEFOSAo	*5.09o* S1o				*14.3o*		*35.5*	*50-150*		
D5-NETFOSAo	*6.24o* S1o				*14.3o*		*43.5*	*50-150*		
D3-NMEFOSAAo	*27.0o*				*28.7o*		*94.0*	*50-150*		
D5-NETFOSAAo	*27.5o*				*28.7o*		*95.8*	*50-150*		
D7-NMEFOSEo	*66.2o* S1o				*143o*		*46.1*	*50-150*		
D9-NETFOSEo	*72.2o*				*143o*		*50.3*	*50-150*		
13C3-HFPO-DAo	*63.7o*				*57.4o*		*111*	*50-150*		

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:56o

Quality Controlu
(Continued)u

Per- and Polyfluoroalkyl Substances (Continued)u

Analyteo	Result/Qualo	LOQo	LODo	MDLo	Spikeo Levelo	Sourceo Resulto	%RECo	%RECo Limitso	RPDo	RPDo Limito
Batch: BBL0249 - Table B-15u										
Blank (BBL0249-BLK1)u							Prepared: 12/13/22 09:44 Analyzed: 12/16/22 00:51o			
	ng/Lo									
PFBAo	1.0 Uo	16o	1.0o	0.25o						
PFPEAo	1.0 Uo	8.0o	1.0o	0.31o						
PFHXAo	1.0 Uo	4.0o	1.0o	0.32o						
PFHPAo	1.0 Uo	4.0o	1.0o	0.25o						
PFOAo	1.0 Uo	4.0o	1.0o	0.41o						
PFNAo	1.0 Uo	4.0o	1.0o	0.25o						
PFDAo	1.0 Uo	4.0o	1.0o	0.25o						
PFUnAo	1.0 Uo	4.0o	1.0o	0.40o						
PFDOAo	1.0 Uo	4.0o	1.0o	0.25o						
PFTRDAo	1.0 Uo	4.0o	1.0o	0.29o						
PFTEDAo	1.0 Uo	4.0o	1.0o	0.43o						
PFBSo	1.0 Uo	4.0o	1.0o	0.25o						
PFPESo	1.0 Uo	4.0o	1.0o	0.29o						
PFHXSo	1.0 Uo	4.0o	1.0o	0.25o						
PFHPSo	1.0 Uo	4.0o	1.0o	0.28o						
PFOSo	1.0 Uo	4.0o	1.0o	0.25o						
PFNSo	2.0 Uo	4.0o	2.0o	1.2o						
PFDSo	1.0 Uo	4.0o	1.0o	0.32o						
4:2FTSo	2.0 Uo	16o	2.0o	0.54o						
6:2FTSo	1.0 Uo	16o	1.0o	0.45o						
8:2FTSo	3.0 Uo	16o	3.0o	1.0o						
PFOSAo	1.0 Uo	16o	1.0o	0.25o						
NMeFOSAo	10 Uo	16o	10o	4.9o						
NEtFOSAo	10 Uo	16o	10o	4.9o						
NMeFOSAAo	1.0 Uo	4.0o	1.0o	0.36o						
NEtFOSAAo	1.0 Uo	4.0o	1.0o	0.25o						
NMeFOSEo	6.0 Uo	16o	6.0o	3.0o						
NEtFOSEo	6.0 Uo	16o	6.0o	3.0o						
HFPO-DAo	5.0 Uo	8.0o	5.0o	2.4o						
ADONAo	3.0 Uo	8.0o	3.0o	1.3o						
9CL-PF3ONSo	3.0 Uo	8.0o	3.0o	1.2o						
11CL-PF3OUDSo	3.0 Uo	8.0o	3.0o	1.2o						
Surrogatesu										
13C4-PFBAo	*257o*				*320o*		*80.3o*	*50-150o*		
13C5-PFPEAo	*131o*				*160o*		*81.6o*	*50-150o*		
13C5-PFHXAo	*62.8o*				*80.0o*		*78.5o*	*50-150o*		
13C4-PFHPAo	*61.5o*				*80.0o*		*76.9o*	*50-150o*		
13C8-PFOAo	*60.5o*				*80.0o*		*75.6o*	*50-150o*		
13C9-PFNAo	*36.4o*				*40.0o*		*90.9o*	*50-150o*		
13C6-PFDAo	*30.5o*				*40.0o*		*76.3o*	*50-150o*		
13C7-PFUnAo	*36.6o*				*40.0o*		*91.6o*	*50-150o*		
13C2-PFDOAo	*27.9o*				*40.0o*		*69.7o*	*50-150o*		
13C2-PFTEDAo	*30.1o*				*40.0o*		*75.1o*	*50-150o*		
13C3-PFBSo	*66.8o*				*80.0o*		*83.5o*	*50-150o*		
13C3-PFHXSo	*67.2o*				*80.0o*		*84.0o*	*50-150o*		
13C8-PFOSo	*65.7o*				*80.0o*		*82.2o*	*50-150o*		

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:56o

Quality Controlu
(Continued)u

Per- and Polyfluoroalkyl Substances (Continued)u

Analyteo	Result/Qual	LOQo	LODo	MDL	Spikeo Levelo	Sourceo Resulto	%RECo	%RECo Limitso	RPDo	RPDo Limito
Batch: BBL0249 - Table B-15 (Continued)u										
Blank (BBL0249-BLK1)u							Prepared: 12/13/22 09:44 Analyzed: 12/16/22 00:51o			
	ng/Lo									
Surrogatesu										
13C2-4:2FTSo	*152o*				*160o*		*95.3o*	*50-150*		
13C2-6:2FTSo	*142o*				*160o*		*88.7o*	*50-150*		
13C2-8:2FTSo	*136o*				*160o*		*84.9o*	*50-150*		
13C8-PFOSAo	*75.2o*				*80.0o*		*94.0o*	*50-150*		
D3-NMEFOSAo	*51.0o*				*80.0o*		*63.8o*	*50-150*		
D5-NETFOSAo	*43.7o*				*80.0o*		*54.6o*	*50-150*		
D3-NMEFOSAAo	*150o*				*160o*		*93.9o*	*50-150*		
D5-NETFOSAAo	*189o*				*160o*		*118o*	*50-150*		
D7-NMEFOSEo	*706o*				*800o*		*88.2o*	*50-150*		
D9-NETFOSEo	*650o*				*800o*		*81.2o*	*50-150*		
13C3-HFPO-DAo	*279o*				*320o*		*87.2o*	*50-150*		
LCS (BBL0249-BS1)u							Prepared: 12/13/22 09:44 Analyzed: 12/16/22 01:03o			
	ng/Lo									
PFBAo	190o				160o		119o	73-129o		
PFPEAo	91.9o				80.0o		115o	72-129o		
PFHXAo	40.8o				40.0o		102o	72-129o		
PFHPAo	44.6o				40.0o		112o	72-130o		
PFOAo	46.8o				40.0o		117o	71-133o		
PFNAo	55.8dBS2o				40.0o		140o	69-130o		
PFDAo	50.8o				40.0o		127o	71-129o		
PFUnAo	53.5dBS2o				40.0o		134o	69-133o		
PFDOAo	42.5o				40.0o		106o	72-134o		
PFTRDAo	46.2o				40.0o		116o	65-144o		
PFTEDAo	43.6o				40.0o		109o	71-132o		
PFBSo	43.8o				35.4o		124o	72-130o		
PFPESo	39.8o				37.6o		106o	71-127o		
PFHXSo	38.6o				36.6o		105o	68-131o		
PFHPSo	42.7o				38.2o		112o	69-134o		
PFOSo	44.7o				37.2o		120o	65-140o		
PFNSo	47.0o				38.4o		122o	69-127o		
PFDSo	46.2o				38.6o		120o	53-142o		
4:2FTSo	182o				150o		121o	63-143o		
6:2FTSo	179o				152o		118o	64-140o		
8:2FTSo	216dBS2o				154o		140o	67-138o		
PFOSAo	43.7o				40.0o		109o	67-137o		
NMeFOSAo	195o				160o		122o	68-141o		
NEtFOSAo	208o				160o		130o	70-130o		
NMeFOSAAo	61.4dBS2o				40.0o		153o	65-136o		
NEtFOSAAo	46.0o				40.0o		115o	61-135o		
NMeFOSEo	182o				160o		114o	70-130o		
NEtFOSEo	201o				160o		126o	70-130o		
HFPO-DAo	85.2o				80.0o		106o	44-175o		
ADONAo	84.8o				75.6o		112o	61-169o		
9CL-PF3ONSo	89.1o				74.8o		119o	62-140o		

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:56o

Quality Controlu
(Continued)u

Per- and Polyfluoroalkyl Substances (Continued)u

Analyteo	Result/Qualo	LOQo	LODo	MDLo	Spikeo Levelo	Sourceo Resulto	%RECo	%RECo Limitso	RPDo	RPDo Limito
Batch: BBL0249 - Table B-15 (Continued)u										
LCS (BBL0249-BS1)u							Prepared: 12/13/22 09:44 Analyzed: 12/16/22 01:03o			
	ng/Lo									
11CL-PF3OUDSo	73.3o				75.6o		97.0o	54-138o		
Surrogatesu										
13C4-PFBAo	*294o*				*320o*		*92.0o*	*50-150o*		
13C5-PFPEAo	*129o*				*160o*		*80.9o*	*50-150o*		
13C5-PFHXAo	*68.1o*				*80.0o*		*85.1o*	*50-150o*		
13C4-PFHPAo	*63.4o*				*80.0o*		*79.3o*	*50-150o*		
13C8-PFOAo	*70.6o*				*80.0o*		*88.3o*	*50-150o*		
13C9-PFNAo	*31.3o*				*40.0o*		*78.4o*	*50-150o*		
13C6-PFDAo	*36.3o*				*40.0o*		*90.7o*	*50-150o*		
13C7-PFUnAo	*34.8o*				*40.0o*		*87.0o*	*50-150o*		
13C2-PFDOAo	*38.8o*				*40.0o*		*97.1o*	*50-150o*		
13C2-PFTEDAo	*38.8o*				*40.0o*		*97.1o*	*50-150o*		
13C3-PFBSo	*73.3o*				*80.0o*		*91.6o*	*50-150o*		
13C3-PFHXSo	*79.7o*				*80.0o*		*99.7o*	*50-150o*		
13C8-PFOSo	*74.4o*				*80.0o*		*93.0o*	*50-150o*		
13C2-4:2FTSo	*154o*				*160o*		*96.5o*	*50-150o*		
13C2-6:2FTSo	*144o*				*160o*		*89.8o*	*50-150o*		
13C2-8:2FTSo	*126o*				*160o*		*78.6o*	*50-150o*		
13C8-PFOSAo	*79.3o*				*80.0o*		*99.2o*	*50-150o*		
D3-NMEFOSAo	*52.0o*				*80.0o*		*65.0o*	*50-150o*		
D5-NETFOSAo	*44.9o*				*80.0o*		*56.2o*	*50-150o*		
D3-NMEFOSAAo	*142o*				*160o*		*88.7o*	*50-150o*		
D5-NETFOSAAo	*170o*				*160o*		*106o*	*50-150o*		
D7-NMEFOSEo	*711o*				*800o*		*88.9o*	*50-150o*		
D9-NETFOSEo	*661o*				*800o*		*82.6o*	*50-150o*		
13C3-HFPO-DAo	*265o*				*320o*		*82.8o*	*50-150o*		
LCS Dup (BBL0249-BSD1)u							Prepared: 12/13/22 09:44 Analyzed: 12/16/22 01:16o			
	ng/Lo									
PFBAo	180o				160o		113o	73-129o	5.38o	30o
PFPEAo	91.0o				80.0o		114o	72-129o	0.987o	30o
PFHXAo	46.6o				40.0o		116o	72-129o	13.3o	30o
PFHPAo	47.4o				40.0o		119o	72-130o	5.99o	30o
PFOAo	47.9o				40.0o		120o	71-133o	2.41o	30o
PFNAo	49.1o				40.0o		123o	69-130o	12.8o	30o
PFDAo	40.3o				40.0o		101o	71-129o	23.0o	30o
PFUnAo	51.9o				40.0o		130o	69-133o	3.12o	30o
PFDOAo	44.2o				40.0o		110o	72-134o	3.92o	30o
PFTRDAo	56.1o				40.0o		140o	65-144o	19.2o	30o
PFTEDAo	35.3o				40.0o		88.4o	71-132o	20.9o	30o
PFBSo	40.4o				35.4o		114o	72-130o	8.07o	30o
PFPESo	42.5o				37.6o		113o	71-127o	6.57o	30o
PFHXSo	41.4o				36.6o		113o	68-131o	7.14o	30o
PFHPSo	40.0o				38.2o		105o	69-134o	6.55o	30o
PFOSo	41.9o				37.2o		113o	65-140o	6.33o	30o
PFNSo	45.6o				38.4o		119o	69-127o	2.98o	30o
PFDSo	41.0o				38.6o		106o	53-142o	12.0o	30o

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Quality Controlu
(Continued)u

Per- and Polyfluoroalkyl Substances (Continued)u

Analyteo	Result/oQual	LOQo	LODo	MDL	Spikeo Levelo	Sourceo Resulto	%RECo	%RECo Limitso	RPDo	RPDo Limito
Batch: BBL0249 - Table B-15 (Continued)u										
LCS Dup (BBL0249-BSD1)u						Prepared: 12/13/22 09:44 Analyzed: 12/16/22 01:16o				
	ng/Lo									
4:2FTSo	178o				150o		119o	63-143	1.99o	30
6:2FTSo	185o				152o		121o	64-140	3.27o	30
8:2FTSo	205o				154o		133o	67-138	5.16o	30
PFOSAo	45.4o				40.0o		114o	67-137	3.86o	30
NMeFOSAo	203o				160o		127o	68-141	3.90o	30
NEtFOSAo	175o				160o		109o	70-130	17.0o	30
NMeFOSAAo	48.5o				40.0o		121o	65-136	23.3o	30
NEtFOSAAo	44.9o				40.0o		112o	61-135	2.51o	30
NMeFOSEo	185o				160o		116o	70-130	1.54o	30
NEtFOSEo	204o				160o		128o	70-130	1.61o	30
HFPO-DAo	89.0o				80.0o		111o	44-175	4.40o	30
ADONAo	86.7o				75.6o		115o	61-169	2.20o	30
9CL-PF3ONSo	83.8o				74.8o		112o	62-140	6.12o	30
11CL-PF3OUDSo	81.4o				75.6o		108o	54-138	10.5o	30
Surrogatesu										
13C4-PFBAo	*288o*				*320o*		*89.9o*	*50-150*		
13C5-PFPEAo	*145o*				*160o*		*90.4o*	*50-150*		
13C5-PFHXAo	*74.3o*				*80.0o*		*92.9o*	*50-150*		
13C4-PFHPAo	*73.8o*				*80.0o*		*92.3o*	*50-150*		
13C8-PFOAo	*67.5o*				*80.0o*		*84.4o*	*50-150*		
13C9-PFNAo	*34.7o*				*40.0o*		*86.7o*	*50-150*		
13C6-PFDAo	*40.0o*				*40.0o*		*100o*	*50-150*		
13C7-PFUnAo	*36.8o*				*40.0o*		*92.0o*	*50-150*		
13C2-PFDOAo	*38.3o*				*40.0o*		*95.8o*	*50-150*		
13C2-PFTEDAo	*44.5o*				*40.0o*		*111o*	*50-150*		
13C3-PFBSo	*70.0o*				*80.0o*		*87.5o*	*50-150*		
13C3-PFHXSo	*73.7o*				*80.0o*		*92.1o*	*50-150*		
13C8-PFOSo	*72.5o*				*80.0o*		*90.7o*	*50-150*		
13C2-4:2FTSo	*158o*				*160o*		*98.5o*	*50-150*		
13C2-6:2FTSo	*150o*				*160o*		*94.1o*	*50-150*		
13C2-8:2FTSo	*137o*				*160o*		*85.6o*	*50-150*		
13C8-PFOSAo	*70.3o*				*80.0o*		*87.9o*	*50-150*		
D3-NMEFOSAo	*34.9o* S1o				*80.0o*		*43.7o*	*50-150*		
D5-NETFOSAo	*33.0o* S1o				*80.0o*		*41.3o*	*50-150*		
D3-NMEFOSAAo	*140o*				*160o*		*87.6o*	*50-150*		
D5-NETFOSAAo	*164o*				*160o*		*103o*	*50-150*		
D7-NMEFOSEo	*602o*				*800o*		*75.3o*	*50-150*		
D9-NETFOSEo	*552o*				*800o*		*69.0o*	*50-150*		
13C3-HFPO-DAo	*294o*				*320o*		*92.0o*	*50-150*		

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:56o

Quality Controlu
(Continued)u

Per- and Polyfluoroalkyl Substances (Continued)u

Analyteo	Result/Qualo	LOQo	LODo	MDLo	Spikeo Levelo	Sourceo Resulto	%RECo	%RECo Limitso	RPDo	RPDo Limito
Batch: BBL0249 - Table B-15 (Continued)u										
MRL Check (BBL0249-MRL1)u						Prepared: 12/13/22 09:44 Analyzed: 12/16/22 01:29o				
	ng/Lo									
PFBAo	18.3o				16.0o		114o	73-129o		
PFPEAo	8.72o				8.00o		109o	72-129o		
PFHXAo	4.29dR2o				4.00o		107o	72-129o		
PFHPAo	4.93o				4.00o		123o	72-130o		
PFOAo	5.03o				4.00o		126o	71-133o		
PFNAo	4.58dR2o				4.00o		115o	69-130o		
PFDAo	4.35o				4.00o		109o	71-129o		
PFUnAo	4.67o				4.00o		117o	69-133o		
PFDOAo	5.50dBS2o				4.00o		137o	72-134o		
PFTRDAo	5.29o				4.00o		132o	65-144o		
PFTEDAo	3.32 Jo				4.00o		83.1o	71-132o		
PFBSo	3.97 Jo				3.54o		112o	72-130o		
PFPESo	3.89 Jo				3.76o		103o	71-127o		
PFHXSo	4.31o				3.66o		118o	68-131o		
PFHPSo	3.66 Jo				3.82o		95.8o	69-134o		
PFOSo	3.00 Jo				3.72o		80.6o	65-140o		
PFNSo	4.87o				3.84o		127o	69-127o		
PFDSo	3.89 Jo				3.86o		101o	53-142o		
4:2FTSo	16.5o				15.0o		110o	63-143o		
6:2FTSo	16.7o				15.2o		110o	64-140o		
8:2FTSo	13.7 Jo				15.4o		89.2o	67-138o		
PFOSAo	8.00 J BS2, o				4.00o		200o	67-137o		
NMeFOSAo	14.0 Jo				16.0o		87.5o	68-141o		
NEtFOSAo	15.0 Jo				16.0o		94.0o	70-130o		
NMeFOSAAo	5.01dR1o				4.00o		125o	65-136o		
NEtFOSAAo	2.46 Jo				4.00o		61.4o	61-135o		
NMeFOSEo	17.6o				16.0o		110o	70-130o		
NEtFOSEo	16.8o				16.0o		105o	70-130o		
HFPO-DAo	10.3o				8.00o		129o	44-175o		
ADONAo	6.74 Jo				7.56o		89.1o	61-169o		
9CL-PF3ONSo	7.83 Jo				7.48o		105o	62-140o		
11CL-PF3OUDSo	6.67 Jo				7.56o		88.2o	54-138o		
Surrogatesu										
13C4-PFBAo	*280o*				*320o*		*87.6o*	*50-150o*		
13C5-PFPEAo	*136o*				*160o*		*85.0o*	*50-150o*		
13C5-PFHXAo	*62.4o*				*80.0o*		*78.0o*	*50-150o*		
13C4-PFHPAo	*66.3o*				*80.0o*		*82.8o*	*50-150o*		
13C8-PFOAo	*75.6o*				*80.0o*		*94.5o*	*50-150o*		
13C9-PFNAo	*32.0o*				*40.0o*		*79.9o*	*50-150o*		
13C6-PFDAo	*33.4o*				*40.0o*		*83.4o*	*50-150o*		
13C7-PFUnAo	*36.0o*				*40.0o*		*90.0o*	*50-150o*		
13C2-PFDOAo	*36.9o*				*40.0o*		*92.2o*	*50-150o*		
13C2-PFTEDAo	*42.1o*				*40.0o*		*105o*	*50-150o*		
13C3-PFBSo	*78.2o*				*80.0o*		*97.7o*	*50-150o*		
13C3-PFHXSo	*80.2o*				*80.0o*		*100o*	*50-150o*		
13C8-PFOSo	*69.1o*				*80.0o*		*86.4o*	*50-150o*		

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:56o

Quality Controlu
(Continued)u

Per- and Polyfluoroalkyl Substances (Continued)u

Analyteo	Result/Qualo	LOQo	LODo	MDLo	Spikeo Levelo	Sourceo Resulto	%RECo	%RECo Limitso	RPDo	RPDo Limito
Batch: BBL0249 - Table B-15 (Continued)u										
MRL Check (BBL0249-MRL1)u						Prepared: 12/13/22 09:44 Analyzed: 12/16/22 01:29o				
	ng/Lo									
Surrogatesu										
13C2-4:2FTSo	*173o*				*160o*		*108o*	*50-150o*		
13C2-6:2FTSo	*161o*				*160o*		*101o*	*50-150o*		
13C2-8:2FTSo	*153o*				*160o*		*95.6o*	*50-150o*		
13C8-PFOSAo	*71.8o*				*80.0o*		*89.7o*	*50-150o*		
D3-NMEFOSAo	*48.7o*				*80.0o*		*60.9o*	*50-150o*		
D5-NETFOSAo	*43.6o*				*80.0o*		*54.4o*	*50-150o*		
D3-NMEFOSAAo	*129o*				*160o*		*80.5o*	*50-150o*		
D5-NETFOSAAo	*145o*				*160o*		*90.7o*	*50-150o*		
D7-NMEFOSEo	*603o*				*800o*		*75.3o*	*50-150o*		
D9-NETFOSEo	*615o*				*800o*		*76.9o*	*50-150o*		
13C3-HFPO-DAo	*289o*				*320o*		*90.3o*	*50-150o*		
Batch: BBL0296 - Table B-15u										
Blank (BBL0296-BLK1)u						Prepared: 12/14/22 08:57 Analyzed: 12/15/22 16:10o				
	ng/Lo									
PFBAo	0.20 Uo	3.2o	0.20o	0.050o						
PFPEAo	0.20 Uo	1.6o	0.20o	0.062o						
PFHXAo	0.20 Uo	0.80o	0.20o	0.064o						
PFHPAo	0.20 Uo	0.80o	0.20o	0.050o						
PFOAo	0.194 Jo	0.80o	0.20o	0.082o						
PFNAo	0.20 Uo	0.80o	0.20o	0.050o						
PFDAo	0.20 Uo	0.80o	0.20o	0.050o						
PFUnAo	0.20 Uo	0.80o	0.20o	0.080o						
PFDOAo	0.20 Uo	0.80o	0.20o	0.050o						
PFTRDAo	0.20 Uo	0.80o	0.20o	0.058o						
PFTEDAo	0.20 Uo	0.80o	0.20o	0.086o						
PFBSo	0.20 Uo	0.80o	0.20o	0.050o						
PFPESo	0.20 Uo	0.80o	0.20o	0.058o						
PFHXSo	0.20 Uo	0.80o	0.20o	0.050o						
PFHPSo	0.20 Uo	0.80o	0.20o	0.056o						
PFOSo	0.276 J MI5, o	0.80o	0.20o	0.050o						
PFNSo	0.40 Uo	0.80o	0.40o	0.25o						
PFDSo	0.20 Uo	0.80o	0.20o	0.064o						
4:2FTSo	0.40 Uo	3.2o	0.40o	0.11o						
6:2FTSo	0.20 Uo	3.2o	0.20o	0.090o						
8:2FTSo	0.60 Uo	3.2o	0.60o	0.20o						
PFOSAo	0.20 Uo	3.2o	0.20o	0.050o						
NMeFOSAo	2.0 Uo	3.2o	2.0o	0.99o						
NEtFOSAo	2.0 Uo	3.2o	2.0o	0.98o						
NMeFOSAAo	0.20 Uo	0.80o	0.20o	0.072o						
NEtFOSAAo	0.20 Uo	0.80o	0.20o	0.050o						
NMeFOSEo	1.2 Uo	3.2o	1.2o	0.60o						
NEtFOSEo	1.2 Uo	3.2o	1.2o	0.60o						
HFPO-DAo	1.0 Uo	1.6o	1.0o	0.49o						

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

Tidewater, Inc.	Project: NASA JPL	
5835 Avenida Encinas, Suite 118	Project Number: NASA JPL SI	
Carlsbad, CA 92208	Project Manager: David Connero	Reported: 01/06/2023 15:56

Quality Control
(Continued)

Per- and Polyfluoroalkyl Substances (Continued)

Analyte	Result/Qual	LOQ	LOD	MDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BBL0296 - Table B-15 (Continued)										
Blank (BBL0296-BLK1)							Prepared: 12/14/22 08:57 Analyzed: 12/15/22 16:10			
	ng/L									
ADONA	0.60 U	1.6	0.60	0.26						
9CL-PF3ONS	0.60 U	1.6	0.60	0.24						
11CL-PF3OUDS	0.60 U	1.6	0.60	0.24						
Surrogates										
13C4-PFBA	*62.5*				*64.0*		*97.7*	*50-150*		
13C5-PFPEA	*30.1*				*32.0*		*94.2*	*50-150*		
13C5-PFHXA	*15.1*				*16.0*		*94.3*	*50-150*		
13C4-PFHPA	*14.3*				*16.0*		*89.1*	*50-150*		
13C8-PFOA	*15.1*				*16.0*		*94.5*	*50-150*		
13C9-PFNA	*7.63*				*8.00*		*95.4*	*50-150*		
13C6-PFDA	*7.06*				*8.00*		*88.3*	*50-150*		
13C7-PFUnA	*8.73*				*8.00*		*109*	*50-150*		
13C2-PFDOA	*7.54*				*8.00*		*94.3*	*50-150*		
13C2-PFTEDA	*7.69*				*8.00*		*96.1*	*50-150*		
13C3-PFBS	*15.8*				*16.0*		*98.9*	*50-150*		
13C3-PFHXS	*16.6*				*16.0*		*104*	*50-150*		
13C8-PFOS	*13.8*				*16.0*		*86.5*	*50-150*		
13C2-4:2FTS	*35.6*				*32.0*		*111*	*50-150*		
13C2-6:2FTS	*30.8*				*32.0*		*96.2*	*50-150*		
13C2-8:2FTS	*30.5*				*32.0*		*95.4*	*50-150*		
13C8-PFOSA	*14.1*				*16.0*		*88.0*	*50-150*		
D3-NMEFOSA	*8.58*				*16.0*		*53.6*	*50-150*		
D5-NETFOSA	*8.38*				*16.0*		*52.4*	*50-150*		
D3-NMEFOSAA	*27.3*				*32.0*		*85.2*	*50-150*		
D5-NETFOSAA	*32.7*				*32.0*		*102*	*50-150*		
D7-NMEFOSE	*92.5*				*160*		*57.8*	*50-150*		
D9-NETFOSE	*91.5*				*160*		*57.2*	*50-150*		
13C3-HFPO-DA	*64.9*				*64.0*		*101*	*50-150*		

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:56o

Quality Controlu
(Continued)u

Per- and Polyfluoroalkyl Substances (Continued)u

Analyteo	Result/Qualo	LOQo	LODo	MDLo	Spikeo Levelo	Sourceo Resulto	%RECo	%RECo Limitso	RPDo	RPDo Limito
Batch: BBL0296 - Table B-15 (Continued)u										
LCS (BBL0296-BS1)u						Prepared: 12/14/22 08:57 Analyzed: 12/15/22 16:22o				
	ng/Lo									
PFBAo	32.9o				32.0o		103o	73-129o		
PFPEAo	14.8o				16.0o		92.4o	72-129o		
PFHXAo	7.32o				8.00o		91.5o	72-129o		
PFHPAo	7.64o				8.00o		95.5o	72-130o		
PFOAo	8.21o				8.00o		103o	71-133o		
PFNAo	7.83o				8.00o		97.8o	69-130o		
PFDAo	8.38o				8.00o		105o	71-129o		
PFUnAo	9.85o				8.00o		123o	69-133o		
PFDOAo	9.08o				8.00o		114o	72-134o		
PFTRDAo	7.73o				8.00o		96.6o	65-144o		
PFTEDAo	7.36dR2o				8.00o		92.0o	71-132o		
PFBSo	7.13o				7.08o		101o	72-130o		
PFPESo	6.62o				7.52o		88.0o	71-127o		
PFHXSo	7.04o				7.32o		96.2o	68-131o		
PFHPSo	8.17o				7.64o		107o	69-134o		
PFOSo	7.45o				7.44o		100o	65-140o		
PFNSo	9.12o				7.68o		119o	69-127o		
PFDSo	9.08o				7.72o		118o	53-142o		
4:2FTSo	31.5o				30.0o		105o	63-143o		
6:2FTSo	30.5o				30.4o		100o	64-140o		
8:2FTSo	32.0o				30.7o		104o	67-138o		
PFOSAo	8.19o				8.00o		102o	67-137o		
NMeFOSAo	35.2o				32.0o		110o	68-141o		
NEtFOSAo	31.7o				32.0o		99.0o	70-130o		
NMeFOSAAo	7.87o				8.00o		98.4o	65-136o		
NEtFOSAAo	8.25o				8.00o		103o	61-135o		
NMeFOSEo	33.8o				32.0o		105o	70-130o		
NEtFOSEo	31.7o				32.0o		99.0o	70-130o		
HFPO-DAo	15.6o				16.0o		97.7o	44-175o		
ADONAo	13.6o				15.1o		89.8o	61-169o		
9CL-PF3ONSo	14.4o				15.0o		96.3o	62-140o		
11CL-PF3OUDSo	14.2o				15.1o		93.7o	54-138o		
Surrogatesu										
13C4-PFBAo	*64.1o*				*64.0o*		*100o*	*50-150o*		
13C5-PFPEAo	*32.8o*				*32.0o*		*102o*	*50-150o*		
13C5-PFHXAo	*16.3o*				*16.0o*		*102o*	*50-150o*		
13C4-PFHPAo	*15.4o*				*16.0o*		*96.5o*	*50-150o*		
13C8-PFOAo	*14.6o*				*16.0o*		*91.5o*	*50-150o*		
13C9-PFNAo	*8.33o*				*8.00o*		*104o*	*50-150o*		
13C6-PFDAo	*8.25o*				*8.00o*		*103o*	*50-150o*		
13C7-PFUnAo	*8.32o*				*8.00o*		*104o*	*50-150o*		
13C2-PFDOAo	*9.46o*				*8.00o*		*118o*	*50-150o*		
13C2-PFTEDAo	*9.64o*				*8.00o*		*121o*	*50-150o*		
13C3-PFBSo	*16.6o*				*16.0o*		*104o*	*50-150o*		
13C3-PFHXSo	*17.3o*				*16.0o*		*108o*	*50-150o*		
13C8-PFOSo	*17.2o*				*16.0o*		*108o*	*50-150o*		

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:56o

Quality Controlu
(Continued)u

Per- and Polyfluoroalkyl Substances (Continued)u

Analyteo	Result/Qualo	LOQo	LODo	MDLo	Spikeo Levelo	Sourceo Resulto	%RECo	%RECo Limitso	RPDo	RPDo Limito
Batch: BBL0296 - Table B-15 (Continued)u										
LCS (BBL0296-BS1)u						Prepared: 12/14/22 08:57 Analyzed: 12/15/22 16:22o				
	ng/Lo									
Surrogatesu										
13C2-4:2FTSo	*32.7o*				*32.0o*		*102o*	*50-150o*		
13C2-6:2FTSo	*31.8o*				*32.0o*		*99.5o*	*50-150o*		
13C2-8:2FTSo	*30.3o*				*32.0o*		*94.8o*	*50-150o*		
13C8-PFOSAo	*16.3o*				*16.0o*		*102o*	*50-150o*		
D3-NMEFOSAo	*9.38o*				*16.0o*		*58.7o*	*50-150o*		
D5-NETFOSAo	*9.65o*				*16.0o*		*60.3o*	*50-150o*		
D3-NMEFOSAAo	*35.8o*				*32.0o*		*112o*	*50-150o*		
D5-NETFOSAAo	*37.6o*				*32.0o*		*118o*	*50-150o*		
D7-NMEFOSEo	*117o*				*160o*		*73.0o*	*50-150o*		
D9-NETFOSEo	*120o*				*160o*		*75.2o*	*50-150o*		
13C3-HFPO-DAo	*66.3o*				*64.0o*		*104o*	*50-150o*		
LCS Dup (BBL0296-BSD1)u						Prepared: 12/14/22 08:57 Analyzed: 12/15/22 16:35o				
	ng/Lo									
PFBAo	32.9o				32.0o		103o	73-129o	0.0834o	30o
PFPEAo	15.3o				16.0o		95.9o	72-129o	3.65o	30o
PFHXAo	7.36o				8.00o		92.0o	72-129o	0.532o	30o
PFHPAo	7.75o				8.00o		96.8o	72-130o	1.40o	30o
PFOAo	8.63o				8.00o		108o	71-133o	4.90o	30o
PFNAo	9.09o				8.00o		114o	69-130o	14.9o	30o
PFDAo	7.02o				8.00o		87.7o	71-129o	17.8o	30o
PFUnAo	6.75oBS3o				8.00o		84.4o	69-133o	37.3o	30o
PFDOAo	7.47o				8.00o		93.4o	72-134o	19.5o	30o
PFTRDAo	7.36o				8.00o		92.0o	65-144o	4.91o	30o
PFTEDAo	6.21o				8.00o		77.7o	71-132o	16.9o	30o
PFBSo	6.93o				7.08o		97.9o	72-130o	2.94o	30o
PFPESo	6.57o				7.52o		87.3o	71-127o	0.735o	30o
PFHXSo	7.21o				7.32o		98.5o	68-131o	2.36o	30o
PFHPSo	7.73o				7.64o		101o	69-134o	5.53o	30o
PFOSo	7.87o				7.44o		106o	65-140o	5.53o	30o
PFNSo	8.13o				7.68o		106o	69-127o	11.4o	30o
PFDSo	8.15o				7.72o		106o	53-142o	10.8o	30o
4:2FTSo	31.7o				30.0o		106o	63-143o	0.669o	30o
6:2FTSo	27.8o				30.4o		91.4o	64-140o	9.33o	30o
8:2FTSo	34.9o				30.7o		114o	67-138o	8.62o	30o
PFOSAo	7.10o				8.00o		88.7o	67-137o	14.3o	30o
NMeFOSAo	30.2o				32.0o		94.2o	68-141o	15.5o	30o
NEtFOSAo	33.3o				32.0o		104o	70-130o	4.90o	30o
NMeFOSAAo	8.70o				8.00o		109o	65-136o	10.1o	30o
NEtFOSAAo	6.60o				8.00o		82.5o	61-135o	22.3o	30o
NMeFOSEo	32.3o				32.0o		101o	70-130o	4.53o	30o
NEtFOSEo	33.2o				32.0o		104o	70-130o	4.63o	30o
HFPO-DAo	14.9o				16.0o		93.4o	44-175o	4.59o	30o
ADONAo	14.5o				15.1o		96.0o	61-169o	6.65o	30o
9CL-PF3ONSo	14.6o				15.0o		97.6o	62-140o	1.37o	30o

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:56o

Quality Controlu
(Continued)u

Per- and Polyfluoroalkyl Substances (Continued)u

Analyteo	Result/Qual	LOQo	LODo	MDL	Spikeo Levelo	Sourceo Resulto	%RECo	%RECo Limitso	RPDo	RPDo Limito
Batch: BBL0296 - Table B-15 (Continued)u										
LCS Dup (BBL0296-BSD1)u						Prepared: 12/14/22 08:57 Analyzed: 12/15/22 16:35o				
	ng/Lo									
11CL-PF3OUDSo	14.6o				15.1o		96.8o	54-138	3.21o	30
Surrogatesu										
13C4-PFBAo	*56.4o*				*64.0o*		*88.2o*	*50-150*		
13C5-PFPEAo	*28.0o*				*32.0o*		*87.6o*	*50-150*		
13C5-PFHXAo	*14.4o*				*16.0o*		*90.1o*	*50-150*		
13C4-PFHPAo	*13.3o*				*16.0o*		*83.3o*	*50-150*		
13C8-PFOAo	*13.5o*				*16.0o*		*84.4o*	*50-150*		
13C9-PFNAo	*6.34o*				*8.00o*		*79.2o*	*50-150*		
13C6-PFDAo	*8.09o*				*8.00o*		*101o*	*50-150*		
13C7-PFUnAo	*7.78o*				*8.00o*		*97.3o*	*50-150*		
13C2-PFDOAo	*7.02o*				*8.00o*		*87.8o*	*50-150*		
13C2-PFTEDAo	*6.76o*				*8.00o*		*84.5o*	*50-150*		
13C3-PFBSo	*13.2o*				*16.0o*		*82.3o*	*50-150*		
13C3-PFHXSo	*14.7o*				*16.0o*		*91.9o*	*50-150*		
13C8-PFOSo	*11.6o*				*16.0o*		*72.7o*	*50-150*		
13C2-4:2FTSo	*29.3o*				*32.0o*		*91.5o*	*50-150*		
13C2-6:2FTSo	*29.0o*				*32.0o*		*90.7o*	*50-150*		
13C2-8:2FTSo	*22.6o*				*32.0o*		*70.8o*	*50-150*		
13C8-PFOSAo	*11.7o*				*16.0o*		*72.9o*	*50-150*		
D3-NMEFOSAo	*7.20o* S1o				*16.0o*		*45.0o*	*50-150*		
D5-NETFOSAo	*6.27o* S1o				*16.0o*		*39.2o*	*50-150*		
D3-NMEFOSAAo	*23.0o*				*32.0o*		*71.9o*	*50-150*		
D5-NETFOSAAo	*28.4o*				*32.0o*		*88.9o*	*50-150*		
D7-NMEFOSEo	*78.7o* S1o				*160o*		*49.2o*	*50-150*		
D9-NETFOSEo	*81.2o*				*160o*		*50.8o*	*50-150*		
13C3-HFPO-DAo	*54.8o*				*64.0o*		*85.6o*	*50-150*		
MRL Check (BBL0296-MRL1)u						Prepared: 12/14/22 08:57 Analyzed: 12/15/22 16:48o				
	ng/Lo									
PFBAo	2.89 Jo				3.20o		90.2o	73-129o		
PFPEAo	1.76o				1.60o		110o	72-129o		
PFHXAo	0.606 Jo				0.800o		75.8o	72-129o		
PFHPAo	0.802o				0.800o		100o	72-130o		
PFOAo	0.909o				0.800o		114o	71-133o		
PFNAo	0.644 J IR2, o				0.800o		80.5o	69-130o		
PFDAo	0.976o				0.800o		122o	71-129o		
PFUnAo	1.08dBS2o				0.800o		135o	69-133o		
PFDOAo	1.19dBS2o				0.800o		148o	72-134o		
PFTRDAo	1.04dIR2o				0.800o		130o	65-144o		
PFTEDAo	1.40dBS2o				0.800o		175o	71-132o		
PFBSo	0.815o				0.708o		115o	72-130o		
PFPESo	0.687 Jo				0.752o		91.4o	71-127o		
PFHXSo	0.790 Jo				0.732o		108o	68-131o		
PFHPSo	0.703 Jo				0.764o		92.1o	69-134o		
PFOSo	0.776 J IR2, o				0.744o		104o	65-140o		
PFNSo	1.02dBS2o				0.768o		133o	69-127o		
PFDSo	1.15dBS2o				0.772o		150o	53-142o		

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Quality Controlu
(Continued)u

Per- and Polyfluoroalkyl Substances (Continued)u

Analyteo	Result/Qualo	LOQo	LODo	MDLo	Spikeo Levelo	Sourceo Resulto	%RECo	%RECo Limitso	RPDo	RPDo Limito
Batch: BBL0296 - Table B-15 (Continued)u										
MRL Check (BBL0296-MRL1)u						Prepared: 12/14/22 08:57 Analyzed: 12/15/22 16:48o				
	ng/Lo									
4:2FTSo	2.51 Jo				3.00o		83.8o	63-143o		
6:2FTSo	3.21o				3.04o		105o	64-140o		
8:2FTSo	4.24o				3.07o		138o	67-138o		
PFOSAo	0.849 Jo				0.800o		106o	67-137o		
NMeFOSAo	4.04o				3.20o		126o	68-141o		
NEtFOSAo	3.72o				3.20o		116o	70-130o		
NMeFOSAAo	1.69dBS2o				0.800o		211o	65-136o		
NEtFOSAAo	0.908o				0.800o		113o	61-135o		
NMeFOSEo	5.27dBS2o				3.20o		165o	70-130o		
NEtFOSEo	4.17o				3.20o		130o	70-130o		
HFPO-DAo	1.69o				1.60o		106o	44-175o		
ADONAo	1.48 Jo				1.51o		97.9o	61-169o		
9CL-PF3ONSo	1.78o				1.50o		119o	62-140o		
11CL-PF3OUDSo	2.10dBS2o				1.51o		139o	54-138o		
Surrogatesu										
13C4-PFBAo	*62.8o*				*64.0o*		*98.2o*	*50-150o*		
13C5-PFPEAo	*29.7o*				*32.0o*		*92.8o*	*50-150o*		
13C5-PFHXAo	*16.5o*				*16.0o*		*103o*	*50-150o*		
13C4-PFHPAo	*14.9o*				*16.0o*		*92.8o*	*50-150o*		
13C8-PFOAo	*17.8o*				*16.0o*		*111o*	*50-150o*		
13C9-PFNAo	*6.99o*				*8.00o*		*87.4o*	*50-150o*		
13C6-PFDAo	*8.61o*				*8.00o*		*108o*	*50-150o*		
13C7-PFUnAo	*8.87o*				*8.00o*		*111o*	*50-150o*		
13C2-PFDOAo	*10.1o*				*8.00o*		*126o*	*50-150o*		
13C2-PFTEDAo	*10.7o*				*8.00o*		*134o*	*50-150o*		
13C3-PFBSo	*16.6o*				*16.0o*		*104o*	*50-150o*		
13C3-PFHXSo	*16.6o*				*16.0o*		*103o*	*50-150o*		
13C8-PFOSo	*16.7o*				*16.0o*		*104o*	*50-150o*		
13C2-4:2FTSo	*37.2o*				*32.0o*		*116o*	*50-150o*		
13C2-6:2FTSo	*32.0o*				*32.0o*		*100o*	*50-150o*		
13C2-8:2FTSo	*26.1o*				*32.0o*		*81.5o*	*50-150o*		
13C8-PFOSAo	*13.4o*				*16.0o*		*83.9o*	*50-150o*		
D3-NMEFOSAo	*8.16o*				*16.0o*		*51.0o*	*50-150o*		
D5-NETFOSAo	*9.07o*				*16.0o*		*56.7o*	*50-150o*		
D3-NMEFOSAAo	*30.0o*				*32.0o*		*93.6o*	*50-150o*		
D5-NETFOSAAo	*39.3o*				*32.0o*		*123o*	*50-150o*		
D7-NMEFOSEo	*104o*				*160o*		*65.2o*	*50-150o*		
D9-NETFOSEo	*107o*				*160o*		*67.1o*	*50-150o*		
13C3-HFPO-DAo	*61.3o*				*64.0o*		*95.8o*	*50-150o*		

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:56o

Quality Controlu
(Continued)u

Per- and Polyfluoroalkyl Substances (Continued)u

Analyteo	Result/Qualo	LOQo	LODo	MDLo	Spikeo Levelo	Sourceo Resulto	%RECo	%RECo Limitso	RPDo	RPDo Limito
Batch: BBL0371 - Table B-15u										
Blank (BBL0371-BLK1)u							Prepared: 12/19/22 12:17 Analyzed: 12/30/22 05:19o			
	ng/Lo									
PFBAo	0.20 Uo	3.2o	0.20o	0.050o						
PFPEAo	0.20 Uo	1.6o	0.20o	0.062o						
PFHXAo	0.20 Uo	0.80o	0.20o	0.064o						
PFHPAo	0.20 Uo	0.80o	0.20o	0.050o						
PFOAo	0.20 Uo	0.80o	0.20o	0.082o						
PFNAo	0.20 Uo	0.80o	0.20o	0.050o						
PFDAo	0.20 Uo	0.80o	0.20o	0.050o						
PFUnAo	0.20 Uo	0.80o	0.20o	0.080o						
PFDOAo	0.20 Uo	0.80o	0.20o	0.050o						
PFTRDAo	0.20 Uo	0.80o	0.20o	0.058o						
PFTEDAo	0.20 Uo	0.80o	0.20o	0.086o						
PFBSo	0.20 Uo	0.80o	0.20o	0.050o						
PFPESo	0.20 Uo	0.80o	0.20o	0.058o						
PFHXSo	0.20 Uo	0.80o	0.20o	0.050o						
PFHPSo	0.20 Uo	0.80o	0.20o	0.056o						
PFOSo	0.20 Uo	0.80o	0.20o	0.050o						
PFNSo	0.40 Uo	0.80o	0.40o	0.25o						
PFDSo	0.20 Uo	0.80o	0.20o	0.064o						
4:2FTSo	0.40 Uo	3.2o	0.40o	0.11o						
6:2FTSo	0.20 Uo	3.2o	0.20o	0.090o						
8:2FTSo	0.60 Uo	3.2o	0.60o	0.20o						
PFOSAo	0.20 Uo	3.2o	0.20o	0.050o						
NMeFOSAo	2.0 Uo	3.2o	2.0o	0.99o						
NEtFOSAo	2.0 Uo	3.2o	2.0o	0.98o						
NMeFOSAAo	0.20 Uo	0.80o	0.20o	0.072o						
NEtFOSAAo	0.20 Uo	0.80o	0.20o	0.050o						
NMeFOSEo	1.2 Uo	3.2o	1.2o	0.60o						
NEtFOSEo	1.2 Uo	3.2o	1.2o	0.60o						
HFPO-DAo	1.0 Uo	1.6o	1.0o	0.49o						
ADONAo	0.60 Uo	1.6o	0.60o	0.26o						
9CL-PF3ONSo	0.60 Uo	1.6o	0.60o	0.24o						
11CL-PF3OUDSo	0.60 Uo	1.6o	0.60o	0.24o						
Surrogatesu										
13C4-PFBAo	*58.0o*				*64.0o*		*90.6o*	*50-150o*		
13C5-PFPEAo	*29.6o*				*32.0o*		*92.6o*	*50-150o*		
13C5-PFHXAo	*13.8o*				*16.0o*		*86.0o*	*50-150o*		
13C4-PFHPAo	*15.1o*				*16.0o*		*94.4o*	*50-150o*		
13C8-PFOAo	*13.2o*				*16.0o*		*82.5o*	*50-150o*		
13C9-PFNAo	*7.00o*				*8.00o*		*87.5o*	*50-150o*		
13C6-PFDAo	*6.82o*				*8.00o*		*85.2o*	*50-150o*		
13C7-PFUnAo	*7.03o*				*8.00o*		*87.8o*	*50-150o*		
13C2-PFDOAo	*7.04o*				*8.00o*		*87.9o*	*50-150o*		
13C2-PFTEDAo	*6.73o*				*8.00o*		*84.1o*	*50-150o*		
13C3-PFBSo	*15.5o*				*16.0o*		*97.1o*	*50-150o*		
13C3-PFHXSo	*14.1o*				*16.0o*		*88.2o*	*50-150o*		
13C8-PFOSo	*14.0o*				*16.0o*		*87.4o*	*50-150o*		

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:56o

Quality Controlu
(Continued)u

Per- and Polyfluoroalkyl Substances (Continued)u

Analyteo	Result/Qualo	LOQo	LODo	MDLo	Spikeo Levelo	Sourceo Resulto	%RECo	%RECo Limitso	RPDo	RPDo Limito
Batch: BBL0371 - Table B-15 (Continued)u										
Blank (BBL0371-BLK1)u							Prepared: 12/19/22 12:17 Analyzed: 12/30/22 05:19o			
	ng/Lo									
Surrogatesu										
13C2-4:2FTSo	*41.5o*				*32.0o*		*130o*	*50-150o*		
13C2-6:2FTSo	*35.8o*				*32.0o*		*112o*	*50-150o*		
13C2-8:2FTSo	*27.8o*				*32.0o*		*86.8o*	*50-150o*		
13C8-PFOSAo	*14.3o*				*16.0o*		*89.1o*	*50-150o*		
D3-NMEFOSAo	*5.08o* S1o				*16.0o*		*31.8o*	*50-150o*		
D5-NETFOSAo	*4.26o* S1o				*16.0o*		*26.6o*	*50-150o*		
D3-NMEFOSAAo	*23.4o*				*32.0o*		*73.0o*	*50-150o*		
D5-NETFOSAAo	*23.6o*				*32.0o*		*73.6o*	*50-150o*		
D7-NMEFOSEo	*105o*				*160o*		*65.7o*	*50-150o*		
D9-NETFOSEo	*103o*				*160o*		*64.7o*	*50-150o*		
13C3-HFPO-DAo	*57.6o*				*64.0o*		*89.9o*	*50-150o*		
LCS (BBL0371-BS1)u							Prepared: 12/19/22 12:17 Analyzed: 12/30/22 05:32o			
	ng/Lo									
PFBAo	27.3o				32.0o		85.4o	73-129o		
PFPEAo	13.4o				16.0o		83.9o	72-129o		
PFHXAo	6.42o				8.00o		80.3o	72-129o		
PFHPAo	6.63o				8.00o		82.8o	72-130o		
PFOAo	6.88o				8.00o		86.0o	71-133o		
PFNAo	7.58o				8.00o		94.8o	69-130o		
PFDAo	7.54o				8.00o		94.3o	71-129o		
PFUnAo	5.73o				8.00o		71.7o	69-133o		
PFDOAo	6.76o				8.00o		84.5o	72-134o		
PFTRDAo	5.48o				8.00o		68.5o	65-144o		
PFTEDAo	6.16o				8.00o		77.0o	71-132o		
PFBSo	5.96o				7.08o		84.1o	72-130o		
PFPESo	6.52o				7.52o		86.7o	71-127o		
PFHXSo	6.16o				7.32o		84.2o	68-131o		
PFHPSo	6.08o				7.64o		79.6o	69-134o		
PFOSo	6.89o				7.44o		92.6o	65-140o		
PFNSo	6.66o				7.68o		86.8o	69-127o		
PFDSo	6.45o				7.72o		83.6o	53-142o		
4:2FTSo	26.7o				30.0o		89.0o	63-143o		
6:2FTSo	27.9o				30.4o		91.9o	64-140o		
8:2FTSo	25.0o				30.7o		81.4o	67-138o		
PFOSAo	6.50o				8.00o		81.3o	67-137o		
NMeFOSAo	31.1o				32.0o		97.3o	68-141o		
NEtFOSAo	28.6o				32.0o		89.3o	70-130o		
NMeFOSAAo	6.87o				8.00o		85.9o	65-136o		
NEtFOSAAo	5.34o				8.00o		66.7o	61-135o		
NMeFOSEo	28.6o				32.0o		89.3o	70-130o		
NEtFOSEo	30.0o				32.0o		93.7o	70-130o		
HFPO-DAo	14.0o				16.0o		87.6o	44-175o		
ADONAo	13.3o				15.1o		88.3o	61-169o		
9CL-PF3ONSo	13.2o				15.0o		88.1o	62-140o		

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:56o

Quality Controlu
(Continued)u

Per- and Polyfluoroalkyl Substances (Continued)u

Analyteo	Result/Qualo	LOQo	LODo	MDLo	Spikeo Levelo	Sourceo Resulto	%RECo	%RECo Limitso	RPDo	RPDo Limito
Batch: BBL0371 - Table B-15 (Continued)u										
LCS (BBL0371-BS1)u						Prepared: 12/19/22 12:17 Analyzed: 12/30/22 05:32o				
	ng/Lo									
11CL-PF3OUDSo	14.3o				15.1o		94.7o	54-138o		
Surrogatesu										
13C4-PFBAo	*59.8o*				*64.0o*		*93.4o*	*50-150o*		
13C5-PFPEAo	*28.9o*				*32.0o*		*90.4o*	*50-150o*		
13C5-PFHXAo	*14.2o*				*16.0o*		*88.9o*	*50-150o*		
13C4-PFHPAo	*13.8o*				*16.0o*		*86.0o*	*50-150o*		
13C8-PFOAo	*13.5o*				*16.0o*		*84.1o*	*50-150o*		
13C9-PFNAo	*6.48o*				*8.00o*		*81.0o*	*50-150o*		
13C6-PFDAo	*7.32o*				*8.00o*		*91.5o*	*50-150o*		
13C7-PFUnAo	*7.95o*				*8.00o*		*99.3o*	*50-150o*		
13C2-PFDOAo	*7.90o*				*8.00o*		*98.7o*	*50-150o*		
13C2-PFTEDAo	*7.49o*				*8.00o*		*93.6o*	*50-150o*		
13C3-PFBSo	*15.7o*				*16.0o*		*98.4o*	*50-150o*		
13C3-PFHXSo	*13.8o*				*16.0o*		*86.4o*	*50-150o*		
13C8-PFOSo	*14.7o*				*16.0o*		*92.1o*	*50-150o*		
13C2-4:2FTSo	*38.0o*				*32.0o*		*119o*	*50-150o*		
13C2-6:2FTSo	*32.2o*				*32.0o*		*100o*	*50-150o*		
13C2-8:2FTSo	*27.1o*				*32.0o*		*84.7o*	*50-150o*		
13C8-PFOSAo	*15.8o*				*16.0o*		*98.7o*	*50-150o*		
D3-NMEFOSAo	*5.67o* S1o				*16.0o*		*35.4o*	*50-150o*		
D5-NETFOSAo	*5.20o* S1o				*16.0o*		*32.5o*	*50-150o*		
D3-NMEFOSAAo	*27.3o*				*32.0o*		*85.4o*	*50-150o*		
D5-NETFOSAAo	*34.8o*				*32.0o*		*109o*	*50-150o*		
D7-NMEFOSEo	*144o*				*160o*		*89.8o*	*50-150o*		
D9-NETFOSEo	*147o*				*160o*		*91.7o*	*50-150o*		
13C3-HFPO-DAo	*52.1o*				*64.0o*		*81.4o*	*50-150o*		
LCS Dup (BBL0371-BSD1)u						Prepared: 12/19/22 12:17 Analyzed: 12/30/22 05:45o				
	ng/Lo									
PFBAo	29.4o				32.0o		91.8o	73-129o	7.21o	30o
PFPEAo	14.4o				16.0o		90.2o	72-129o	7.20o	30o
PFHXAo	6.75o				8.00o		84.4o	72-129o	5.03o	30o
PFHPAo	6.93o				8.00o		86.6o	72-130o	4.45o	30o
PFOAo	6.94o				8.00o		86.7o	71-133o	0.807o	30o
PFNAo	7.74o				8.00o		96.8o	69-130o	2.13o	30o
PFDAo	7.03o				8.00o		87.8o	71-129o	7.06o	30o
PFUnAo	7.10o				8.00o		88.7o	69-133o	21.3o	30o
PFDOAo	7.00o				8.00o		87.5o	72-134o	3.51o	30o
PFTRDAo	5.74o				8.00o		71.8o	65-144o	4.72o	30o
PFTEDAo	8.88oBS3o				8.00o		111o	71-132o	36.2o	30o
PFBSo	6.25o				7.08o		88.3o	72-130o	4.89o	30o
PFPESo	7.19o				7.52o		95.7o	71-127o	9.81o	30o
PFHXSo	6.43o				7.32o		87.9o	68-131o	4.24o	30o
PFHPSo	6.71o				7.64o		87.8o	69-134o	9.84o	30o
PFOSo	6.59o				7.44o		88.5o	65-140o	4.45o	30o
PFNSo	7.14o				7.68o		92.9o	69-127o	6.88o	30o
PFDSo	7.12o				7.72o		92.2o	53-142o	9.76o	30o

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:56o

Quality Controlu
(Continued)u

Per- and Polyfluoroalkyl Substances (Continued)u

Analyteo	Result/Qualo	LOQo	LODo	MDLo	Spikeo Levelo	Sourceo Resulto	%RECo	%RECo Limitso	RPDo	RPDo Limito
Batch: BBL0371 - Table B-15 (Continued)u										
LCS Dup (BBL0371-BSD1)u						Prepared: 12/19/22 12:17 Analyzed: 12/30/22 05:45o				
	ng/Lo									
4:2FTSo	26.0o				30.0o		86.6o	63-143o	2.74o	30o
6:2FTSo	26.0o				30.4o		85.4o	64-140o	7.32o	30o
8:2FTSo	26.8o				30.7o		87.1o	67-138o	6.72o	30o
PFOSAo	7.21o				8.00o		90.2o	67-137o	10.4o	30o
NMeFOSAo	27.2o				32.0o		85.0o	68-141o	13.5o	30o
NEtFOSAo	29.2o				32.0o		91.2o	70-130o	2.10o	30o
NMeFOSAAo	6.77o				8.00o		84.6o	65-136o	1.53o	30o
NEtFOSAAo	6.60o				8.00o		82.5o	61-135o	21.2o	30o
NMeFOSEo	27.8o				32.0o		86.9o	70-130o	2.68o	30o
NEtFOSEo	32.6o				32.0o		102o	70-130o	8.34o	30o
HFPO-DAo	13.2o				16.0o		82.4o	44-175o	6.18o	30o
ADONAo	14.1o				15.1o		93.1o	61-169o	5.29o	30o
9CL-PF3ONSo	13.0o				15.0o		87.0o	62-140o	1.19o	30o
11CL-PF3OUDSo	15.9o				15.1o		105o	54-138o	10.7o	30o
Surrogatesu										
13C4-PFBAo	*55.3o*				*64.0o*		*86.4o*	*50-150o*		
13C5-PFPEAo	*30.5o*				*32.0o*		*95.2o*	*50-150o*		
13C5-PFHXAo	*14.2o*				*16.0o*		*88.6o*	*50-150o*		
13C4-PFHPAo	*15.1o*				*16.0o*		*94.5o*	*50-150o*		
13C8-PFOAo	*14.8o*				*16.0o*		*92.4o*	*50-150o*		
13C9-PFNAo	*6.54o*				*8.00o*		*81.7o*	*50-150o*		
13C6-PFDAo	*7.16o*				*8.00o*		*89.5o*	*50-150o*		
13C7-PFUnAo	*7.83o*				*8.00o*		*97.9o*	*50-150o*		
13C2-PFDOAo	*9.35o*				*8.00o*		*117o*	*50-150o*		
13C2-PFTEDAo	*6.28o*				*8.00o*		*78.4o*	*50-150o*		
13C3-PFBSo	*14.1o*				*16.0o*		*88.2o*	*50-150o*		
13C3-PFHXSo	*13.9o*				*16.0o*		*87.1o*	*50-150o*		
13C8-PFOSo	*14.1o*				*16.0o*		*88.3o*	*50-150o*		
13C2-4:2FTSo	*39.1o*				*32.0o*		*122o*	*50-150o*		
13C2-6:2FTSo	*34.0o*				*32.0o*		*106o*	*50-150o*		
13C2-8:2FTSo	*26.9o*				*32.0o*		*84.0o*	*50-150o*		
13C8-PFOSAo	*15.3o*				*16.0o*		*95.4o*	*50-150o*		
D3-NMEFOSAo	*7.48o* S1o				*16.0o*		*46.8o*	*50-150o*		
D5-NETFOSAo	*6.27o* S1o				*16.0o*		*39.2o*	*50-150o*		
D3-NMEFOSAAo	*26.5o*				*32.0o*		*82.8o*	*50-150o*		
D5-NETFOSAAo	*29.5o*				*32.0o*		*92.2o*	*50-150o*		
D7-NMEFOSEo	*110o*				*160o*		*69.0o*	*50-150o*		
D9-NETFOSEo	*106o*				*160o*		*66.4o*	*50-150o*		
13C3-HFPO-DAo	*56.8o*				*64.0o*		*88.8o*	*50-150o*		

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:56o

Quality Controlu
(Continued)u

Per- and Polyfluoroalkyl Substances (Continued)u

Analyteo	Result/Qualo	LOQo	LODo	MDLo	Spikeo Levelo	Sourceo Resulto	%RECo	%RECo Limitso	RPDo	RPDo Limito
Batch: BBL0371 - Table B-15 (Continued)u										
MRL Check (BBL0371-MRL1)u						Prepared: 12/19/22 12:17 Analyzed: 12/30/22 05:58o				
	ng/Lo									
PFBAo	2.63 Jo				3.20o		82.3o	73-129o		
PFPEAo	1.31 Jo				1.60o		81.8o	72-129o		
PFHXAo	0.651 Jo				0.800o		81.3o	72-129o		
PFHPAo	0.725 Jo				0.800o		90.7o	72-130o		
PFOAo	0.743 Jo				0.800o		92.9o	71-133o		
PFNAo	0.651 Jo				0.800o		81.4o	69-130o		
PFDAo	0.713 Jo				0.800o		89.1o	71-129o		
PFUnAo	0.805o				0.800o		101o	69-133o		
PFDOAo	0.622 Jo				0.800o		77.8o	72-134o		
PFTRDAo	0.676 Jo				0.800o		84.4o	65-144o		
PFTEDAo	0.497 J BS1, o				0.800o		62.1o	71-132o		
PFBSo	0.573 Jo				0.708o		81.0o	72-130o		
PFPESo	0.598 Jo				0.752o		79.5o	71-127o		
PFHXSo	0.607 Jo				0.732o		82.9o	68-131o		
PFHPSo	0.577 Jo				0.764o		75.5o	69-134o		
PFOSo	0.526 J IR2, o				0.744o		70.6o	65-140o		
PFNSo	0.552 Jo				0.768o		71.8o	69-127o		
PFDSo	0.538 Jo				0.772o		69.7o	53-142o		
4:2FTSo	2.61 Jo				3.00o		87.0o	63-143o		
6:2FTSo	2.55 Jo				3.04o		83.8o	64-140o		
8:2FTSo	2.37 Jo				3.07o		77.1o	67-138o		
PFOSAo	0.655 Jo				0.800o		81.9o	67-137o		
NMeFOSAo	2.69 Jo				3.20o		84.0o	68-141o		
NEtFOSAo	2.93 Jo				3.20o		91.7o	70-130o		
NMeFOSAAo	0.642 Jo				0.800o		80.3o	65-136o		
NEtFOSAAo	0.596 Jo				0.800o		74.6o	61-135o		
NMeFOSEo	2.05 J BS1, o				3.20o		64.0o	70-130o		
NEtFOSEo	4.21oBS2o				3.20o		131o	70-130o		
HFPO-DAo	1.25 Jo				1.60o		78.1o	44-175o		
ADONAo	1.20 Jo				1.51o		79.6o	61-169o		
9CL-PF3ONSo	1.16 Jo				1.50o		77.3o	62-140o		
11CL-PF3OUDSo	1.30 Jo				1.51o		86.2o	54-138o		
Surrogatesu										
13C4-PFBAo	*54.7o*				*64.0o*		*85.5o*	*50-150o*		
13C5-PFPEAo	*29.6o*				*32.0o*		*92.4o*	*50-150o*		
13C5-PFHXAo	*14.4o*				*16.0o*		*89.7o*	*50-150o*		
13C4-PFHPAo	*12.8o*				*16.0o*		*80.2o*	*50-150o*		
13C8-PFOAo	*13.3o*				*16.0o*		*83.4o*	*50-150o*		
13C9-PFNAo	*7.37o*				*8.00o*		*92.2o*	*50-150o*		
13C6-PFDAo	*6.20o*				*8.00o*		*77.5o*	*50-150o*		
13C7-PFUnAo	*7.76o*				*8.00o*		*97.0o*	*50-150o*		
13C2-PFDOAo	*8.26o*				*8.00o*		*103o*	*50-150o*		
13C2-PFTEDAo	*6.95o*				*8.00o*		*86.8o*	*50-150o*		
13C3-PFBSo	*15.9o*				*16.0o*		*99.5o*	*50-150o*		
13C3-PFHXSo	*14.4o*				*16.0o*		*89.8o*	*50-150o*		
13C8-PFOSo	*16.1o*				*16.0o*		*101o*	*50-150o*		

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:56o

Quality Controlu
(Continued)u

Per- and Polyfluoroalkyl Substances (Continued)u

Analyteo	Result/Qualo	LOQo	LODo	MDLo	Spikeo Levelo	Sourceo Resulto	%RECo	%RECo Limitso	RPDo	RPDo Limito
Batch: BBL0371 - Table B-15 (Continued)u										
MRL Check (BBL0371-MRL1)u						Prepared: 12/19/22 12:17 Analyzed: 12/30/22 05:58o				
	ng/Lo									
Surrogatesu										
13C2-4:2FTSo	*39.2o*				*32.0o*		*123o*	*50-150o*		
13C2-6:2FTSo	*34.6o*				*32.0o*		*108o*	*50-150o*		
13C2-8:2FTSo	*27.5o*				*32.0o*		*86.0o*	*50-150o*		
13C8-PFOSAo	*17.1o*				*16.0o*		*107o*	*50-150o*		
D3-NMEFOSAo	*7.55o* S1o				*16.0o*		*47.2o*	*50-150o*		
D5-NETFOSAo	*8.04o*				*16.0o*		*50.3o*	*50-150o*		
D3-NMEFOSAAo	*31.0o*				*32.0o*		*96.8o*	*50-150o*		
D5-NETFOSAAo	*35.4o*				*32.0o*		*111o*	*50-150o*		
D7-NMEFOSEo	*131o*				*160o*		*82.1o*	*50-150o*		
D9-NETFOSEo	*123o*				*160o*		*76.8o*	*50-150o*		
13C3-HFPO-DAo	*53.6o*				*64.0o*		*83.7o*	*50-150o*		
Batch: SB04003 - BBL0371u										
Resolution Check (SB04003-RES1)u						Prepared: 12/29/22 14:51 Analyzed: 12/30/22 04:41o				
	ng/mLo									
PFBAo	0.00o							0-200o		
PFPEAo	0.00o							0-200o		
PFHXAo	0.00o							0-200o		
PFHPAo	0.00o							0-200o		
PFOAo	0.00o							0-200o		
PFNAo	0.00o							0-200o		
PFDAo	0.00o							0-200o		
PFUnAo	0.00o							0-200o		
PFDOAo	0.00o							0-200o		
PFTRDAo	0.00o							0-200o		
PFTEDAo	0.00o							0-200o		
PFBSo	0.00o							0-200o		
PFPESo	0.00o							0-200o		
PFHXSo	0.00o							0-200o		
PFHPSo	0.00o							0-200o		
PFOSo	0.00o							0-200o		
PFNSo	0.00o							0-200o		
PFDSo	0.00o							0-200o		
4:2FTSo	0.00o							0-200o		
6:2FTSo	0.00o							0-200o		
8:2FTSo	0.00o							0-200o		
PFOSAo	0.00o							0-200o		
NMeFOSAo	0.00o							0-200o		
NEtFOSAo	0.00o							0-200o		
NMeFOSAAo	0.00o							0-200o		
NEtFOSAAo	0.00o							0-200o		
NMeFOSEo	0.00o							0-200o		
NEtFOSEo	0.00o							0-200o		
HFPO-DAo	0.00o							0-200o		

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:56o

Quality Controlu
(Continued)u

Per- and Polyfluoroalkyl Substances (Continued)u

Analyteo	Result/Qualo	LOQo	LODo	MDLo	Spikeo Levelo	Sourceo Resulto	%RECo	%RECo Limitso	RPDo	RPDo Limito
Batch: SB04003 - BBL0371 (Continued)u										
Resolution Check (SB04003-RES1)u						Prepared: 12/29/22 14:51 Analyzed: 12/30/22 04:41o				
	ng/mLo									
ADONAo	0.00o							0-200o		
9CL-PF3ONSo	0.00o							0-200o		
11CL-PF3OUDSo	0.00o							0-200o		

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611o

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPL SIo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:56o

Notes and Definitions

Itemo	Definitiono
BS1o	Blank spike recovered below the lower control limito
BS2o	Blank spike recovered above the upper control limito
BS3o	BS/BSD recovered with high RPDo
CV1o	Calibration verification recovered below the lower control limito
CV2o	Calibration verification recovered above the upper control limito
IR1o	Ion ratio below the lower control limito
IR2o	Ion ratio above the upper control limito
Jo	Estimated valueo
MI1o	Manual integration, integration does not follow baselineo
MI4o	Manual integration, peak unsplito
MI5o	Manual integration, whole peak was not integratedo
MS1o	Matrix spike recovered below the lower control limito
MS3o	MS/MSD recovered with high RPDo
S1o	Surrogate recovered below the lower control limito
S2o	Surrogate recovered above the upper control limito
Uo	Not detectedo
Dryo	Sample results reported on a dry weight basis.o
DLo	Dilution Factoro
LODo	Limit of Detection
LOQo	Limit of Quantitation
DLo	Detection Limito
*o	Value outside control limitso
RPDo	Relative Percent Differenceo
%RECo	Percent Recoveryo
Sourceo	Sample that was matrix spiked or duplicated.o

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

WORK ORDER

22L0004 R

Printed: 01/06/2023 3:59 pmi

Project: R NASA JPL
Project Number: R NASA JPL SIR
Project Manager:R Gregory SalataR
PO Number:R 1001335-002-11R

Report To: R

Tidewater, Inc.i
David Conneri
5835 Avenida Encinas, Suite 118i
Carlsbad, CA 92208i
Phone: (626) 298-5715

Invoice To: R

Tidewater, Inc.i
David Conneri
5835 Avenida Encinas, Suite 118i
Carlsbad, CA 92208i
Phone: (626) 298-5715

Date Received:i 12/01/2022 09:50 AMi
Date Due:i 12/15/2022 (10.00 day TAT)i

Logged In By:i Megan Salatai
Received By:i Megan Salatai

Analysisa	Commentsa
22L0004-01 MW-24-S5-112922 [Water] Sampled 11/29/2022 8:45:00AMR	
B-15 DODi	NONEi
22L0004-02 MW-24-S4-112922 [Water] Sampled 11/29/2022 9:10:00AMR	
B-15 DODi	NONEi
22L0004-03 MW-24-S3-112922 [Water] Sampled 11/29/2022 9:35:00AMR	
B-15 DODi	NONEi
22L0004-04 MW-24-S2-112922 [Water] Sampled 11/29/2022 10:00:00AMR	
B-15 DODi	NONEi
22L0004-05 DUP-2-112922 [Water] Sampled 11/29/2022 10:10:00AMR	
B-15 DODi	NONEi
22L0004-06 MW-17-S5-112922 [Water] Sampled 11/29/2022 12:10:00PMR	
B-15 DODi	NONEi
22L0004-07 MW-17-S4-112922 [Water] Sampled 11/29/2022 12:25:00PMR	
B-15 DODi	NONEi
22L0004-08 MW-17-S3-112922 [Water] Sampled 11/29/2022 12:50:00PMR	
B-15 DODi	NONEi
22L0004-09 DUP-3-112922 [Water] Sampled 11/29/2022 1:00:00PMR	
B-15 DODi	NONEi
22L0004-10 MW-17-S2-112922 [Water] Sampled 11/29/2022 1:30:00PMR	
B-15 DODi	NONEi
22L0004-11 SB-2-112922 [Water] Sampled 11/29/2022 1:50:00PMR	
B-15 DODi	NONEi

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

WORK ORDER

22L0004 R

Printed: 01/06/2023 3:59 pmi

(Continued)R

Project: R **NASA JPLR**
Project Number: R **NASA JPL SIR**
Project Manager:R **Gregory SalataR**
PO Number:R **1001335-002-11R**

Analysisa	Commentsa

22L0004-12 MW-4-S5-112822 [Water] Sampled 11/28/2022 9:35:00AMR
B-15 DODi NONEi

22L0004-13 DUP-1-112822 [Water] Sampled 11/28/2022 9:45:00AMR
B-15 DODi NONEi

22L0004-14 MW-4-S4-112822 [Water] Sampled 11/28/2022 10:30:00AMR
B-15 DODi NONEi

22L0004-15 MW-4-S2-112822 [Water] Sampled 11/28/2022 10:55:00AMR
Sample Comments: MS/MSDR
B-15 DODi NONEi

22L0004-16 MW-12-S5-112822 [Water] Sampled 11/28/2022 1:15:00PMR
B-15 DODi NONEi

22L0004-17 MW-12-S4-112822 [Water] Sampled 11/28/2022 1:50:00PMR
B-15 DODi NONEi

22L0004-18 MW-12-S3-112822 [Water] Sampled 11/28/2022 2:20:00PMR
B-15 DODi NONEi

22L0004-19 MW-12-S2-112822 [Water] Sampled 11/28/2022 2:45:00PMR
B-15 DODi NONEi

22L0004-20 SB-1-112822 [Water] Sampled 11/28/2022 2:55:00PMR
B-15 DODi NONEi

22L0004-21 FB-1-112822 [Water] Sampled 11/28/2022 3:15:00PMR
B-15 DODi NONEi

22L0004-22 EQP-1-112822 [Water] Sampled 11/28/2022 3:00:00PMR
B-15 DODi NONEi

22L0004-23 EQP-2-112922 [Water] Sampled 11/29/2022 2:00:00PMR
B-15 DODi NONEi

22L0004-24 FB-2-112922 [Water] Sampled 11/29/2022 2:15:00PMR
B-15 DODi NONEi

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

WORK ORDER

22L0004 R

Printed: 01/06/2023 3:59 pmi

(Continued)R

Project: R **NASA JPLR**
Project Number: R **NASA JPL SIR**
Project Manager:R **Gregory SalataR**
PO Number:R **1001335-002-11R**

Analysisa	Commentsa

22L0004-25 MW-15-113022 [Water] Sampled 11/30/2022 9:40:00AMR
B-15 DODi NONEi

22L0004-27 EQP-3-113022 [Water] Sampled 11/30/2022 9:55:00AMR
B-15 DODi NONEi

22L0004-28 FB-3-113022 [Water] Sampled 11/30/2022 10:00:00AMR
B-15 DODi NONEi

22L0 40 **Sample Receipt LogR**

Default Coolerf

Samples Received at:i **-0.6°C**

Custody Sealsi	Yesi	Were all containers sealed in separate bags?i	Yesi
Containers Intacti	Yesi	Did all containers arrive in good condition?i	Yesi
COC/Labels Agreei	Yesi	Correct containers/preserv. for tests indicated?i	Yesi
Preservation Confirmedi	Noi	Sufficient volume sent for tests requested?i	Yesi
Received On Icei	Yesi	Were bubbles absent in volatile samples?i	Noi
Was a chain of custody received?i	Yesi	Sufficient remaining holding time for analyses?i	Yesi
COCs complete/signed in the appropriate places?i	Yesi	pH of non-VOA preserved containers documented?i	Noi
Sample labels complete? Sample ID, date/time, etc.i	Yesi	Unpreserved vials received for VOA analysis?i	Noi
Did all container labels agree with COCs?i	Yesi	If "yes", are unpreserved VOA vials noted on ARF?i	Noi

New Coolerf

Samples Received at:i **-0.5°C**

Custody Sealsi	Yesi	Were all containers sealed in separate bags?i	Yesi
Containers Intacti	Yesi	Did all containers arrive in good condition?i	Yesi
COC/Labels Agreei	Yesi	Correct containers/preserv. for tests indicated?i	Yesi
Preservation Confirmedi	Noi	Sufficient volume sent for tests requested?i	Yesi
Received On Icei	Yesi	Were bubbles absent in volatile samples?i	Noi
Was a chain of custody received?i	Yesi	Sufficient remaining holding time for analyses?i	Yesi
COCs complete/signed in the appropriate places?i	Yesi	pH of non-VOA preserved containers documented?i	Noi
Sample labels complete? Sample ID, date/time, etc.i	Yesi	Unpreserved vials received for VOA analysis?i	Noi
Did all container labels agree with COCs?i	Yesi	If "yes", are unpreserved VOA vials noted on ARF?i	Noi

22L0004

APPL LABS

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com

Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 54798

Report to: PLEASE PRINT

Company Name: G2S LLC
Phone: 626-298-5715
Address: 3761 Attucks Drive
Powell, OH 43065
Fax: 614-792-2898
Attn: David Conner
Email: david.conner@tiltech20.net

Invoice to: PLEASE PRINT

Company Name: G2S LLC
Phone: 210-240-9188
Address: 3401 Carlins Park Dr, Suite B Suite 200
Baltimore, MD 21215
Fax:
Attn: Nadika Aluwihare
Email: na@sdc-ae.com

Project Name/Number: JPL PFAS S1
Purchase Order Number: 1001335-002-11
Sampler (Print): Thanh Hoang
Sampler (Signature):

Date Shipped: 11/30/22
Carrier: FedEx
Waybill No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	Analysis Requested/Method Number: PFAS
MW-24-S5-112922		11/29/22	0845	P	2	X			X
MW-24-S4-112922			0910	P	2	X			X
MW-24-S3-112922			0935	P	2	X			X
MW-24-S2-112922			1000	P	2	X			X
DUP-2-112922			1010	P	2	X			X
MW-17-S5-112922			1210	P	2	X			X
MW-17-S4-112922			1225	P	2	X			X
MW-17-S3-112922			1250	P	2	X			X
DUP-3-112922			1300	P	2	X			X
MW-17-S2-112922			1330	P	2	X			X
FB-2-112922			1350	P	2	X			X

Shuttle Temperature: 2.5/-0.6 RB 2.6/-0.5 °C

Turnaround Requested: Check one
☒ Standard 2-3 wk ☐ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other:

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
	11/30/22	1245					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					12-1-22	950	

White: Return to client with report Yellow: Laboratory Copy See reverse side for Container Preservative and Sampling Information

Table of Contents

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com
Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

2 of 3

C.O.C. 54797

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: G2S LLC	Phone: 626-298-5715	Company Name: G2S LLC	Phone: 210-240-9188
Address: 3761 Attucks Drive, Powell, OH 43065	Fax: 614-792-2898	Address: 3401 Carlins Park Dr. Suite B Ste 200, Baltimore, MD 21215	Fax:
Attn: David Conner		Attn: Nadika Aluwihare	
Email: david.conner@tidehzo.net		Email: na@sdc-ae.com	

Project Name/Number: JPL PFAS SI
Purchase Order Number: 1001335-002-11
Sampler (Print): Thinh Hoang
Sampler (Signature):

Date Shipped: 11/30/22
Carrier: FedEx
Waybill No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	Analysis Requested/Method Number: PFAS	Comments
MW-4-55-112822		11/28/22	0935	P	2	X			X	
DUP-1-112822			0945	P	2	X			X	
MW-4-54-112822			1030	P	2	X			X	
MW-4-52-112822			1055	P	4	X			X	MS/MSD
MW-12-55-112822			1315	P	2	X			X	
MW-12-54-112822			1350	P	2	X			X	
MW-12-53-112822			1420	P	2	X			X	
MW-12-52-112822			1445	P	2	X			X	
FB-1-112822			1455	P	2	X			X	
EB-1-112822			1515	P	4	X			X	
DUP-1-112822			1500	P	2	X			X	

Shuttle Temperature:

Turnaround Requested: Check one
☒ Standard 2-3 wk ☐ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other:

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
	11/30/22	1245					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					12-1-22	950	

White: Return to client with report Yellow: Laboratory Copy See reverse side for Container Preservative and Sampling Information

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com
Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 54788

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: G2S LLC	Phone: 626-298-5715	Company Name: G2S LLC	Phone: 210-240-9188
Address: 3761 Attucks Drive, Powell, OH 43065	Fax: 614-792-2898	Address: 3401 Collins Park Dr. Suite B Suite 200, Baltimore, MD 21215	Fax:
Attn: David Conner		Attn: Nadika Alawihare	
Email: david.conner@tidech20.net		Email: na@s2c-ae.com	

Project Name/Number	Sampler (Print)	Purchase Order Number	Sampler (Signature)
JPL PFAS SI	Thinh Hoang	1001335-002-11	

Date Shipped: 11/30/22
Carrier: FedEx
Waybill No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	Analysis Requested/Method Number: PFAS
EQP-2-112922		11/29/22	1400	P	2	X			X
FB-2-112922		↓	1415	P	1	X			X
MW-15-113022		11/30/22	0940	P	2	X			X
[illegible]-3-113022			0950	P	2	X			X
[illegible]P-3-113022			0955	P	2	X			X
[illegible]B-3-113022		↓	1000	P	1	X			X

Bottle Temperature:

Turnaround Requested: Check one
☒ Standard 2-3 wk ☐ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other:

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
	11/30/22	1245					
Relinquished by:	**Date**	**Time**	**Received by:**	**Relinquished by:**	**Date**	**Time**	**Received at lab by:**
					12-1-22	950	

White: Return to client with report Yellow: Laboratory Copy See reverse side for Container Preservative and Sampling Information

CUSTODY SEAL
APPL, Inc.
(559) 275-2175
Initials
Date 11/30/22

PFASA

SAMPLE DATAM

FORM IR
ANALYSIS DATA SHEETR

MW-24-S5-112922-

Laboratory:-	APPL, LLC-			Work Order:-	22L0004-
Client:-	Tidewater, Inc.-			Project:	NASA JPL SI-
Matrix:-	Water-	Laboratory ID:-	22L0004-01-	File ID:	S2022-12-09B (16)-
Sampled:-	11/29/22 08:45-	Prepared:-	12/05/22 07:17	Analyzed:-	12/10/22 02:04
Solids:-		Preparation:-	Table B-15-	Dilution:-	1-
Initial/Final:-	282.67 mL / 2 mL-			Instrument:-	Saphira
Batch:-	BBL0076-	Sequence:-	SB03769	Calibration:-	2250016

COMPOUNDR	CONC. (ng/L)	LOQ	LODR	DL	Q
PFBA-	0.18 U-	2.8	0.18	0.044	
PFPEA-	0.18 U-	1.4	0.18	0.055	
PFHXA-	0.18 U-	0.71	0.18	0.057	
PFHPA-	0.18 U-	0.71	0.18	0.044	
PFOA-	0.21 J-	0.71	0.18	0.073	
PFNA-	0.18 U-	0.71	0.18	0.044	
PFDA-	0.18 U-	0.71	0.18	0.044	
PFUnA-	0.18 U-	0.71	0.18	0.071	
PFDOA-	0.18 U-	0.71	0.18	0.044	
PFTRDA-	0.18 U-	0.71	0.18	0.051	
PFTEDA-	0.18 U-	0.71	0.18	0.076	
PFBS-	0.18 U-	0.71	0.18	0.044	
PFPES-	0.18 U-	0.71	0.18	0.051	
PFHXS-	0.18 U-	0.71	0.18	0.044	
PFHPS-	0.18 U-	0.71	0.18	0.050	
PFOS-	0.18 U-	0.71	0.18	0.044	
PFNS-	0.35 U-	0.71	0.35	0.22	
PFDS-	0.18 U-	0.71	0.18	0.057	
4:2FTS-	0.35 U-	2.8	0.35	0.096	
6:2FTS-	0.18 U-	2.8	0.18	0.080	
8:2FTS-	0.53 U-	2.8	0.53	0.18	
PFOSA-	0.18 J-	2.8	0.18	0.044	
NMeFOSA-	1.8 U-	2.8	1.8	0.87	
NEtFOSA-	1.8 U-	2.8	1.8	0.87	
NMeFOSAA-	0.18 U-	0.71	0.18	0.064	
NEtFOSAA-	0.18 U-	0.71	0.18	0.044	
NMeFOSE-	1.1 U-	2.8	1.1	0.53	
NEtFOSE-	1.1 U-	2.8	1.1	0.53	
HFPO-DA-	0.88 U-	1.4	0.88	0.43	
ADONA-	0.53 U-	1.4	0.53	0.23	

FORM IR
ANALYSIS DATA SHEETR

MW-24-S5-112922-

Laboratory:-	APPL, LLC-			Work Order:-	22L0004-
Client:-	Tidewater, Inc.-			Project:-	NASA JPL SI-
Matrix:-	Water-	Laboratory ID:-	22L0004-01-	File ID:-	S2022-12-09B (16)-
Sampled:-	11/29/22 08:45-	Prepared:-	12/05/22 07:17-	Analyzed:-	12/10/22 02:04-
Solids:-		Preparation:-	Table B-15-	Dilution:-	1-
Initial/Final:-	282.67 mL / 2 mL-			Instrument:-	Saphira-
Batch:-	BBL0076-	Sequence:-	SB03769-	Calibration:-	2250016-

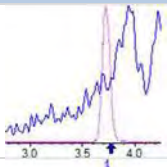
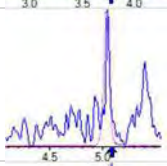
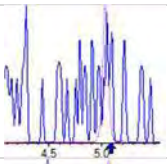
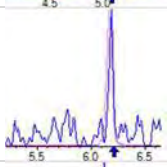
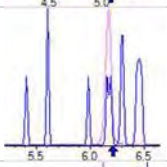
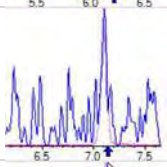
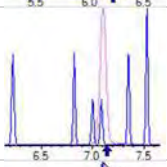
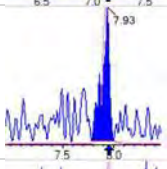
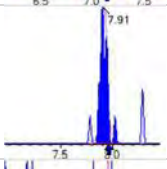
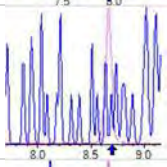
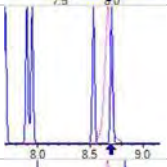
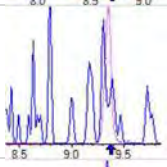
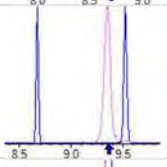
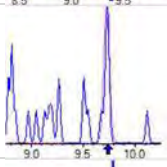
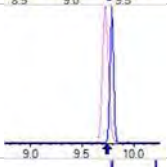
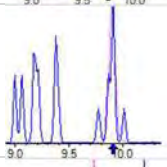
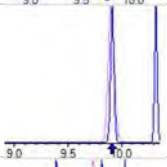
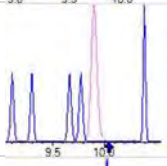
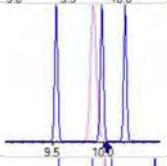
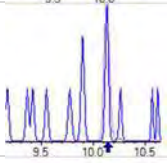
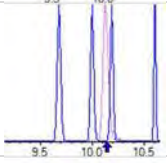
COMPOUNDR	CONC. (ng/L)R	LOQ	LODR	DLR	Q
9CL-PF3ONS-	0.53 U-	1.4-	0.53-	0.21-	
11CL-PF3OUDS-	0.53 U-	1.4-	0.53-	0.21-	

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-01
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (16)
Acquired: 2022/12/10 - 02:04

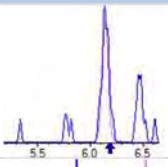
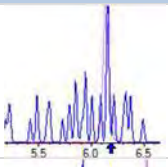
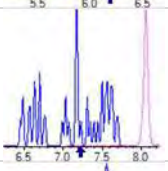
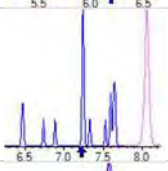
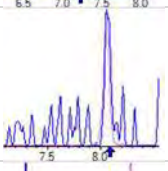
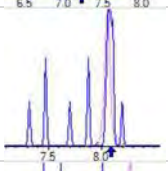
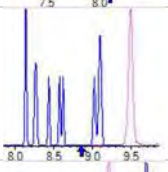
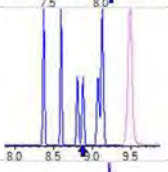
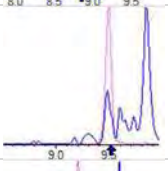
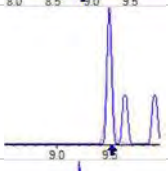
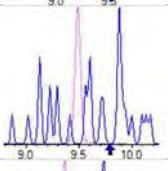
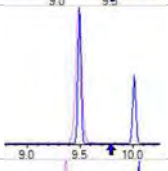
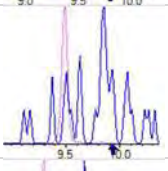
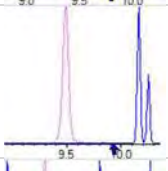
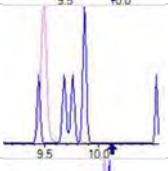
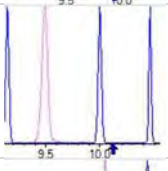
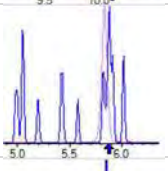
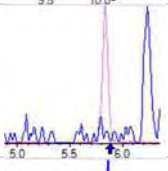
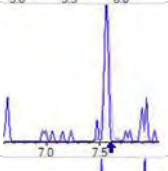
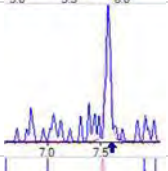
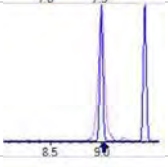
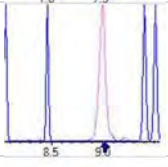
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(212.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFPeA	(262.9 / 219.0) N/A (262.9 / 69.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHxA	(313.0 / 269.0) N/A (313.0 / 119.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHpA	(363.0 / 319.0) N/A (363.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFOA	(413.0 / 369.0) 4057 (413.0 / 169.0) 1292	(7.93 , 1.00) (0.01 , N/A , 1.1)	19.3 127.5	0.3185 98.4 98.4	0.0296	N/A			
PFNA	(463.0 / 419.0) N/A (463.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDA	(513.0 / 469.0) N/A (513.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFUnA	(563.0 / 519.0) N/A (563.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoA	(613.0 / 569.0) N/A (613.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTrDA	(663.0 / 619.0) N/A (663.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTeDA	(713.0 / 669.0) N/A (713.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-01
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (16)
Acquired: 2022/12/10 - 02:04

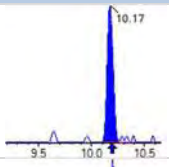
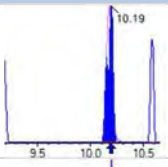
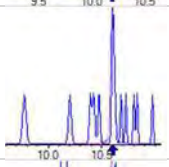
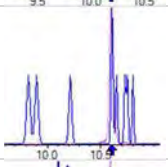
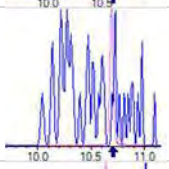
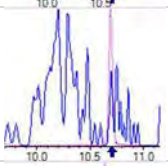
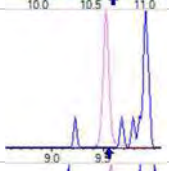
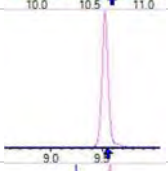
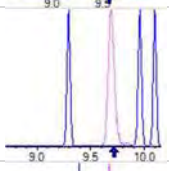
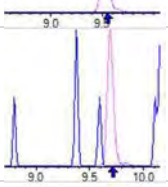
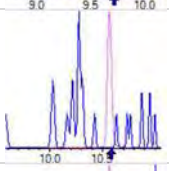
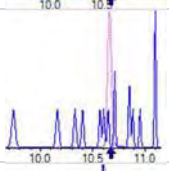
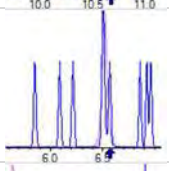
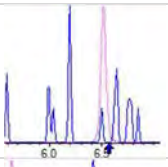
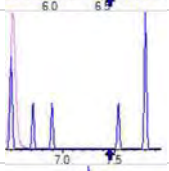
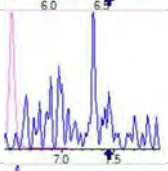
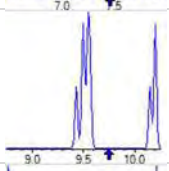
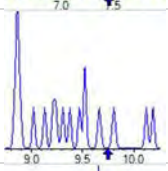
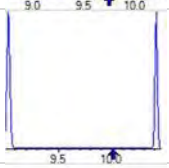
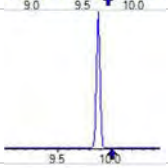
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) N/A (298.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFPeS	(349.0 / 80.0) N/A (349.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHxS	(399.0 / 80.0) N/A (399.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHpS	(449.0 / 80.0) N/A (449.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFOS	(499.0 / 80.0) N/A (499.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFNS	(549.0 / 80.0) N/A (549.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDS	(599.0 / 80.0) N/A (599.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoS	(698.9 / 80.0) N/A (698.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
4:2FTS	(327.0 / 307.0) N/A (327.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
6:2FTS	(427.0 / 407.0) N/A (427.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
8:2FTS	(527.0 / 507.0) N/A (527.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

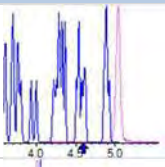
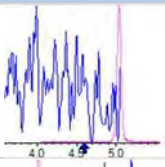
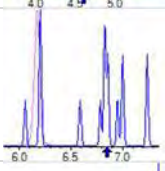
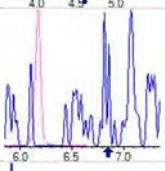
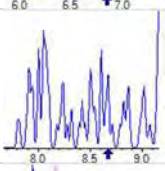
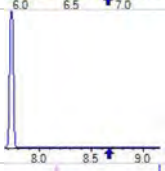
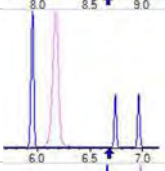
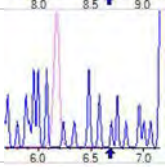
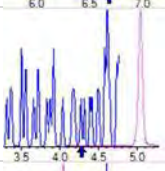
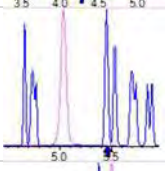
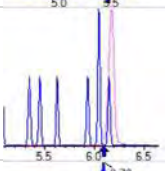
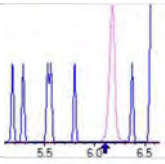
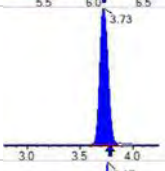
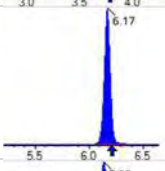
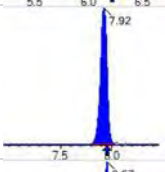
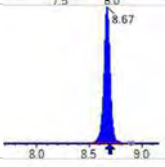
Sample I.D.: 22L0004-01
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (16)
Acquired: 2022/12/10 - 02:04

Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) 10345 (498.0 / 478.0) 776	(10.17 , 1.00) (0.00 , N/A , -1.0)	71.0 94.8	0.0750 314.2 297.1	0.0257	N/A			
NMeFOSA	(511.9 / 219.0) N/A (511.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSA	(526.0 / 219.0) N/A (526.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSAA	(570.0 / 419.0) N/A (570.0 / 483.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSAA	(584.0 / 419.0) N/A (584.0 / 526.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSE	(616.1 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSE	(630.0 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
HFPO-DA	(285.0 / 169.0) N/A (285.0 / 185.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
ADONA	(377.0 / 85.0) N/A (377.0 / 251.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
9Cl-Pf3ONS	(531.0 / 351.0) N/A (533.0 / 353.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
11Cl-PF3OUDS	(631.0 / 451.0) N/A (633.0 / 453.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0004-01 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09B (16)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/10 - 02:04

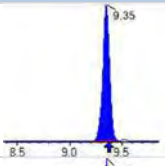
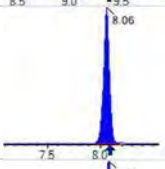
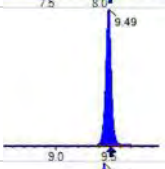
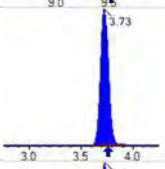
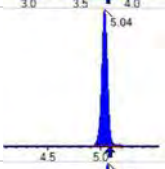
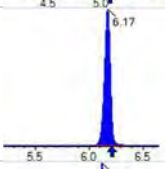
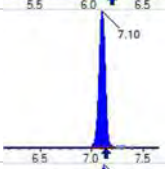
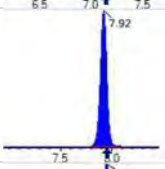
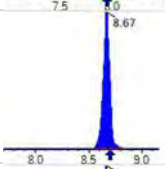
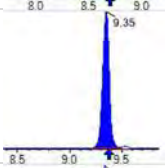
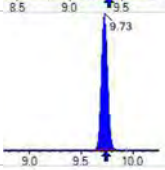
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
3:3FTCA	(241.0 / 177.0) N/A (241.0 / 117.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
5:3FTCA	(341.0 / 236.7) N/A (341.0 / 217.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
7:3FTCA	(441.0 / 317.0) N/A (441.0 / 337.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFEESA	(315.0 / 135.0) N/A (315.0 / 83.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFMPA	(229.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFMBA	(279.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NFDHA	(201.0 / 85.0) N/A (295.0 / 201.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
13C3_PFBA_IIS	(216.0 / 172.0) 93644	(3.73 , N/A) (N/A , -0.04 , N/A)	635.0	N/A	0.9742 [1.0000]	97.4% { 107.0% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 153259	(6.17 , N/A) (N/A , -0.04 , N/A)	789.8	N/A	1.2411 [1.0000]	124.1% { 118.2% }			
13C4_PFOA_IIS	(417.0 / 372.0) 125624	(7.92 , N/A) (N/A , -0.03 , N/A)	419.2	N/A	1.0597 [1.0000]	106.0% { 103.4% }			
13C5_PFNA_IIS	(468.0 / 423.0) 109203	(8.67 , N/A) (N/A , -0.03 , N/A)	541.2	N/A	1.1466 [1.0000]	114.7% { 111.2% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-01
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (16)
Acquired: 2022/12/10 - 02:04

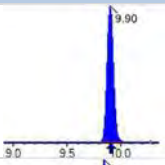
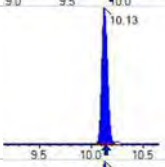
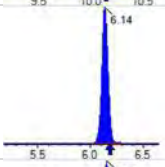
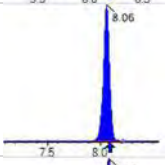
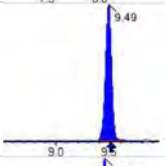
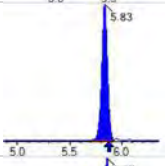
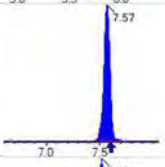
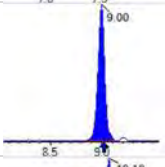
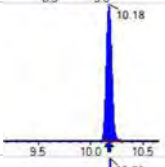
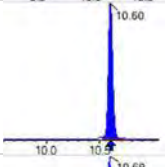
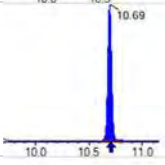
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDA_IIS	(515.1 / 470.1) 103317	(9.35 , N/A) (N/A , -0.02 , N/A)	413.9	N/A	1.2541 [1.0000]	125.4% { 114.6% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 231294	(8.06 , N/A) (N/A , -0.03 , N/A)	479.2	N/A	1.0776 [1.0000]	107.8% { 110.4% }			
13C4_PFOS_IIS	(502.8 / 79.9) 235260	(9.49 , N/A) (N/A , -0.02 , N/A)	528.2	N/A	1.2640 [1.0000]	126.4% { 123.1% }			
13C4_PFBA_EIS	(217.0 / 172.0) 711906	(3.73 , N/A) (N/A , -0.04 , N/A)	1053.8	N/A	8.1088 [8.0000]	101.4% { 108.7% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 396384	(5.04 , N/A) (N/A , -0.05 , N/A)	888.9	N/A	3.5456 [4.0000]	88.6% { 114.0% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 324725	(6.17 , N/A) (N/A , -0.04 , N/A)	1078.5	N/A	2.0773 [2.0000]	103.9% { 123.8% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 262731	(7.10 , N/A) (N/A , -0.03 , N/A)	623.0	N/A	1.8620 [2.0000]	93.1% { 105.9% }			
13C8_PFOA_EIS	(421.0 / 376.0) 265564	(7.92 , N/A) (N/A , -0.03 , N/A)	624.2	N/A	2.0784 [2.0000]	103.9% { 101.8% }			
13C9_PFNA_EIS	(472.0 / 427.0) 102888	(8.67 , N/A) (N/A , -0.03 , N/A)	516.1	N/A	0.9547 [1.0000]	95.5% { 123.5% }			
13C6_PFDA_EIS	(519.0 / 474.0) 134083	(9.35 , N/A) (N/A , -0.02 , N/A)	288.9	N/A	0.8935 [1.0000]	89.3% { 115.3% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 197051	(9.73 , N/A) (N/A , -0.01 , N/A)	1826.9	N/A	0.9782 [1.0000]	97.8% { 97.9% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-01
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (16)
Acquired: 2022/12/10 - 02:04

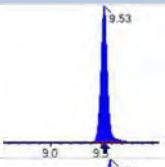
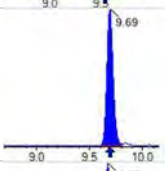
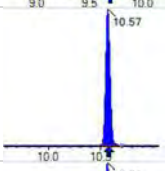
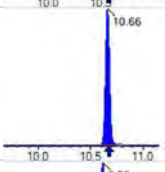
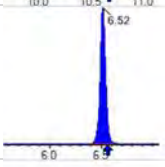
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDoA_EIS	(615.0 / 570.0) 223375	(9.90 , N/A) (N/A , -0.01 , N/A)	330.5	N/A	0.9137 [1.0000]	91.4% { 115.6% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 165775	(10.13 , N/A) (N/A , -0.01 , N/A)	377.0	N/A	0.9237 [1.0000]	92.4% { 127.7% }			
13C3_PFBS_EIS	(302.0 / 80.0) 745275	(6.14 , N/A) (N/A , -0.04 , N/A)	1059.2	N/A	2.1925 [2.0000]	109.6% { 112.6% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 398541	(8.06 , N/A) (N/A , -0.03 , N/A)	540.2	N/A	2.0597 [2.0000]	103.0% { 112.9% }			
13C8_PFOS_EIS	(507.0 / 80.0) 688420	(9.49 , N/A) (N/A , -0.02 , N/A)	469.8	N/A	1.9195 [2.0000]	96.0% { 114.8% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 103195	(5.83 , N/A) (N/A , -0.04 , N/A)	734.9	N/A	5.3827 [4.0000]	134.6% { 144.2% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 107756	(7.57 , N/A) (N/A , -0.03 , N/A)	578.7	N/A	4.1895 [4.0000]	104.7% { 119.8% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 93240	(9.00 , N/A) (N/A , -0.03 , N/A)	443.9	N/A	4.1765 [4.0000]	104.4% { 107.6% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 724192	(10.18 , N/A) (N/A , -0.01 , N/A)	635.2	N/A	1.3227 [2.0000]	66.1% { 82.5% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 114347	(10.60 , N/A) (N/A , -0.01 , N/A)	673.0	N/A	0.7058 [2.0000]	35.3% { 48.0% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 111083	(10.69 , N/A) (N/A , -0.01 , N/A)	650.2	N/A	0.7562 [2.0000]	37.8% { 48.8% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-01
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (16)
Acquired: 2022/12/10 - 02:04

Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
D3_MeFOSAA_EIS	(573.0 / 419.0) 340217	(9.53 , N/A) (N/A , -0.01 , N/A)	321.5	N/A	4.2639 [4.0000]	106.6% { 125.6% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 304868	(9.69 , N/A) (N/A , -0.01 , N/A)	502.2	N/A	4.4455 [4.0000]	111.1% { 138.4% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 256298	(10.57 , N/A) (N/A , -0.01 , N/A)	879.5	N/A	9.2618 [20.0000]	46.3% { 53.9% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 145656	(10.66 , N/A) (N/A , -0.01 , N/A)	1145.2	N/A	10.3302 [20.0000]	51.7% { 61.4% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 809399	(6.52 , N/A) (N/A , -0.04 , N/A)	1058.0	N/A	7.8616 [8.0000]	98.3% { 120.6% }			

FORM IR
ANALYSIS DATA SHEETR

MW-24-S5-112922-

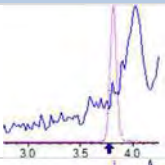
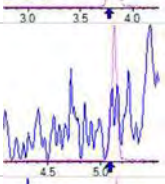
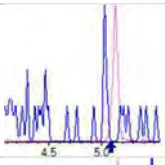
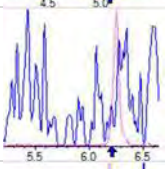
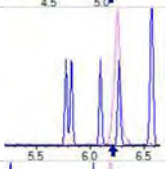
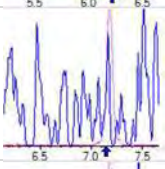
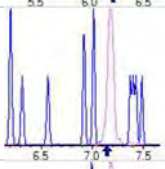
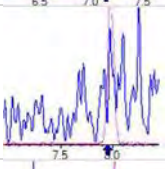
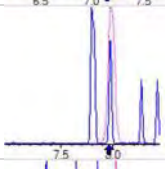
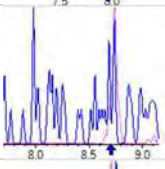
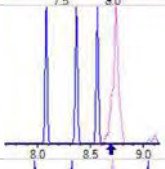
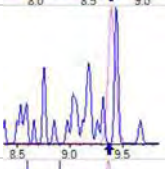
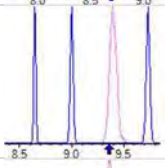
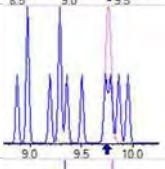
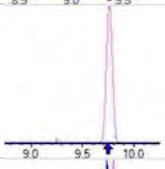
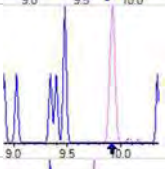
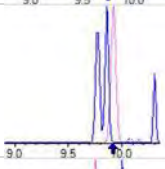
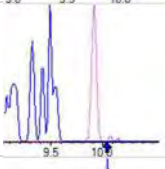
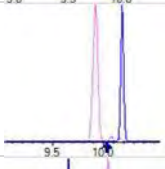
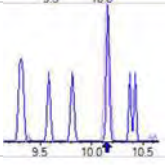
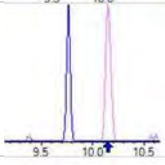
Laboratory:-	APPL, LLC-			Work Order:-	22L0004-
Client:-	Tidewater, Inc.-			Project:-	NASA JPL SI-
Matrix:-	Water-	Laboratory ID:-	22L0004-01RE1-	File ID:-	S2022-12-09B (17)-
Sampled:-	11/29/22 08:45-	Prepared:-	12/05/22 07:17-	Analyzed:-	12/10/22 02:17-
Solids:-		Preparation:-	Table B-15-	Dilution:-	10-
Initial/Final:-	282.67 mL / 2 mL-			Instrument:-	Saphira-
Batch:-	BBL0076-	Sequence:-	SB03769-	Calibration:-	2250016-

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-01RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (17)
Acquired: 2022/12/10 - 02:17

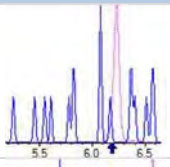
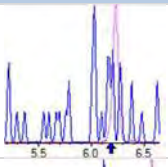
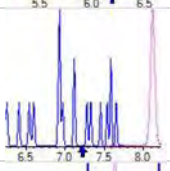
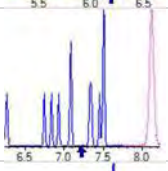
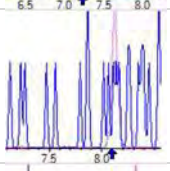
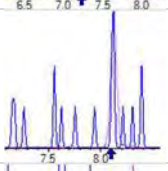
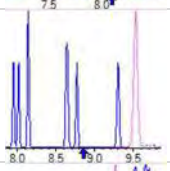
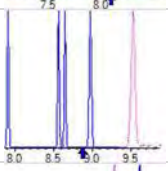
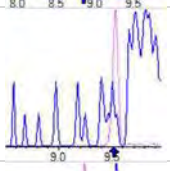
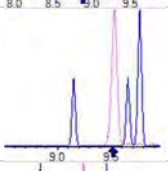
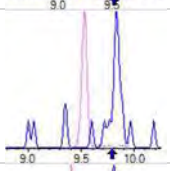
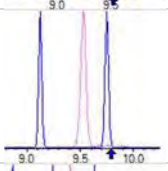
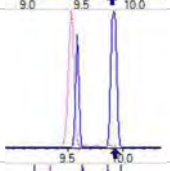
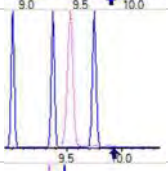
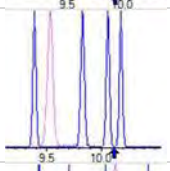
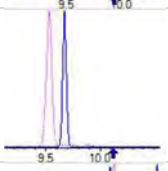
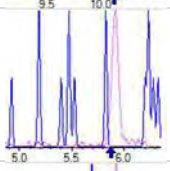
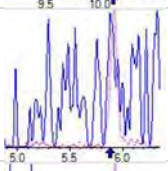
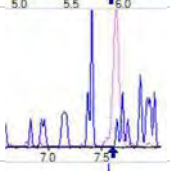
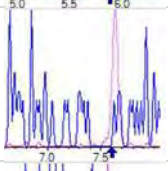
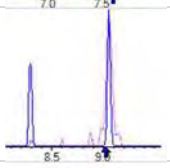
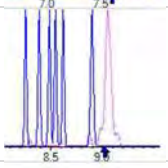
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(212.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFPeA	(262.9 / 219.0) N/A (262.9 / 69.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHxA	(313.0 / 269.0) N/A (313.0 / 119.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHpA	(363.0 / 319.0) N/A (363.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFOA	(413.0 / 369.0) N/A (413.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFNA	(463.0 / 419.0) N/A (463.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDA	(513.0 / 469.0) N/A (513.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFUnA	(563.0 / 519.0) N/A (563.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoA	(613.0 / 569.0) N/A (613.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTrDA	(663.0 / 619.0) N/A (663.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTeDA	(713.0 / 669.0) N/A (713.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-01RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (17)
Acquired: 2022/12/10 - 02:17

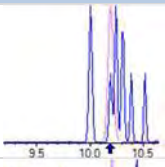
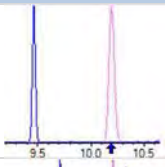
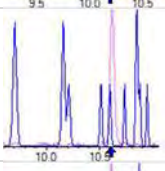
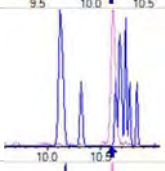
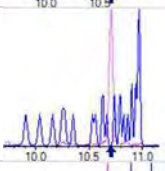
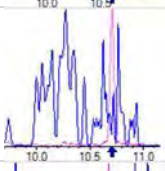
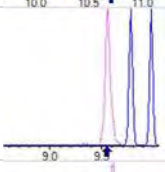
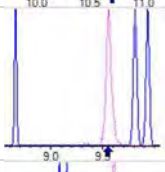
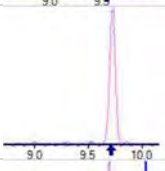
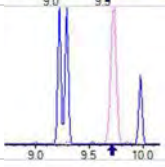
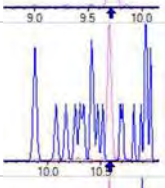
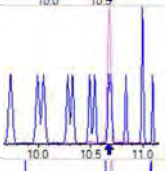
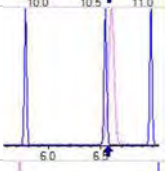
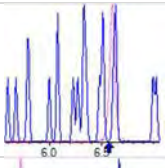
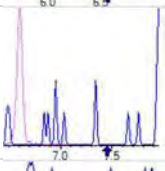
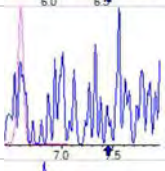
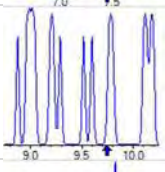
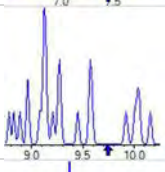
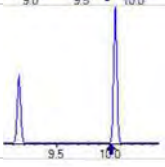
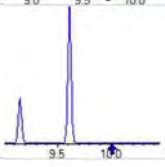
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) N/A (298.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFPeS	(349.0 / 80.0) N/A (349.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHxS	(399.0 / 80.0) N/A (399.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHpS	(449.0 / 80.0) N/A (449.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFOS	(499.0 / 80.0) N/A (499.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFNS	(549.0 / 80.0) N/A (549.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDS	(599.0 / 80.0) N/A (599.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoS	(698.9 / 80.0) N/A (698.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
4:2FTS	(327.0 / 307.0) N/A (327.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
6:2FTS	(427.0 / 407.0) N/A (427.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
8:2FTS	(527.0 / 507.0) N/A (527.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-01RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (17)
Acquired: 2022/12/10 - 02:17

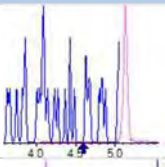
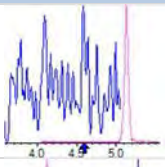
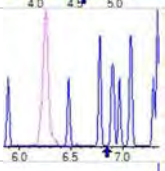
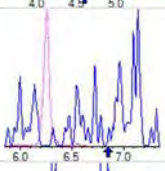
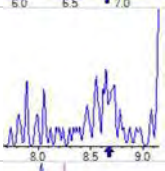
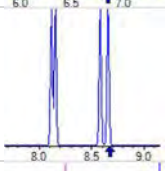
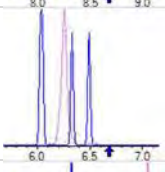
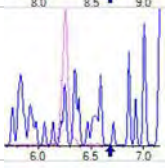
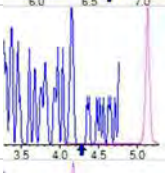
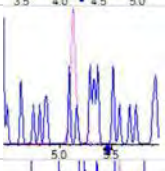
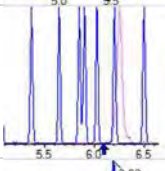
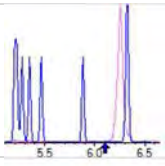
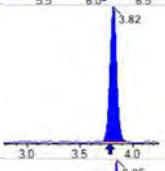
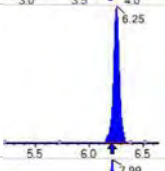
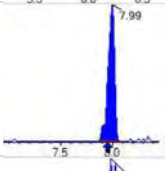
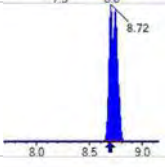
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) N/A (498.0 / 478.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSA	(511.9 / 219.0) N/A (511.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSA	(526.0 / 219.0) N/A (526.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSAA	(570.0 / 419.0) N/A (570.0 / 483.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSAA	(584.0 / 419.0) N/A (584.0 / 526.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSE	(616.1 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSE	(630.0 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
HFPO-DA	(285.0 / 169.0) N/A (285.0 / 185.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
ADONA	(377.0 / 85.0) N/A (377.0 / 251.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
9Cl-Pf3ONS	(531.0 / 351.0) N/A (533.0 / 353.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
11Cl-PF3OUDS	(631.0 / 451.0) N/A (633.0 / 453.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-01RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (17)
Acquired: 2022/12/10 - 02:17

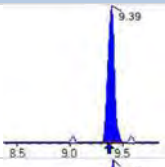
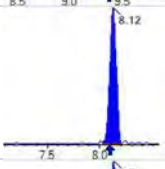
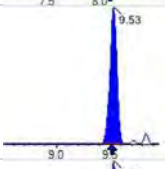
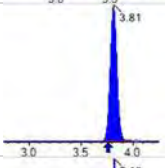
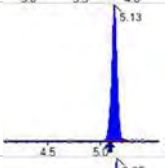
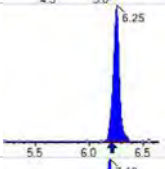
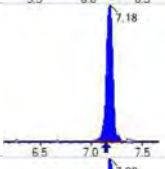
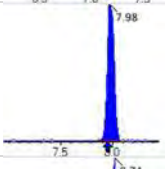
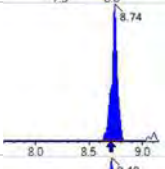
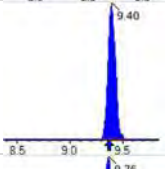
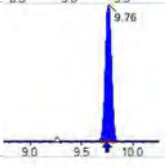
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
3:3FTCA	(241.0 / 177.0) N/A (241.0 / 117.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
5:3FTCA	(341.0 / 236.7) N/A (341.0 / 217.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
7:3FTCA	(441.0 / 317.0) N/A (441.0 / 337.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFEESA	(315.0 / 135.0) N/A (315.0 / 83.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFMPA	(229.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFMBA	(279.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NFDHA	(201.0 / 85.0) N/A (295.0 / 201.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
13C3_PFBA_IIS	(216.0 / 172.0) 9508	(3.82 , N/A) (N/A , 0.05 , N/A)	305.5	N/A	0.9891 [1.0000]	98.9% { 10.9% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 13280	(6.25 , N/A) (N/A , 0.04 , N/A)	273.6	N/A	1.0754 [1.0000]	107.5% { 10.2% }			
13C4_PFOA_IIS	(417.0 / 372.0) 14136	(7.99 , N/A) (N/A , 0.04 , N/A)	201.3	N/A	1.1924 [1.0000]	119.2% { 11.6% }			
13C5_PFNA_IIS	(468.0 / 423.0) 13417	(8.72 , N/A) (N/A , 0.03 , N/A)	57.5	N/A	1.4087 [1.0000]	140.9% { 13.7% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-01RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (17)
Acquired: 2022/12/10 - 02:17

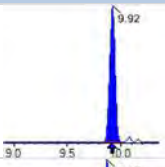
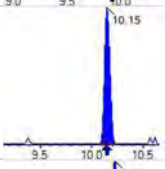
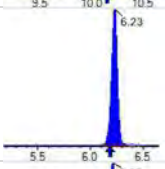
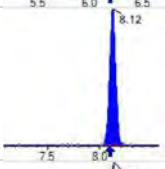
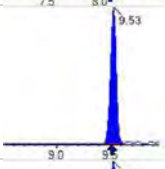
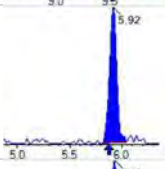
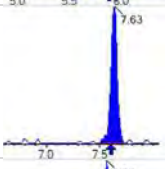
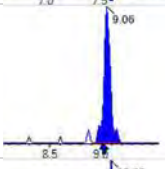
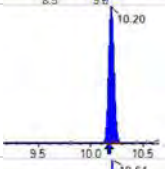
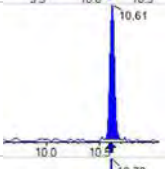
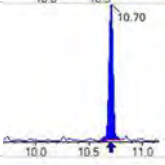
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDA_IIS	(515.1 / 470.1) 11732	(9.39 , N/A) (N/A , 0.02 , N/A)	445.6	N/A	1.4240 [1.0000]	142.4% { 13.0% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 21753	(8.12 , N/A) (N/A , 0.03 , N/A)	263.1	N/A	1.0135 [1.0000]	101.4% { 10.4% }			
13C4_PFOS_IIS	(502.8 / 79.9) 21465	(9.53 , N/A) (N/A , 0.02 , N/A)	178.9	N/A	1.1532 [1.0000]	115.3% { 11.2% }			
13C4_PFBA_EIS	(217.0 / 172.0) 70951	(3.81 , N/A) (N/A , 0.04 , N/A)	975.7	N/A	0.7960 [0.8000]	99.5% { 10.8% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 39376	(5.13 , N/A) (N/A , 0.05 , N/A)	502.3	N/A	0.4065 [0.4000]	101.6% { 11.3% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 28560	(6.25 , N/A) (N/A , 0.04 , N/A)	320.2	N/A	0.2108 [0.2000]	105.4% { 10.9% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 22641	(7.18 , N/A) (N/A , 0.04 , N/A)	308.5	N/A	0.1852 [0.2000]	92.6% { 9.1% }			
13C8_PFOA_EIS	(421.0 / 376.0) 25706	(7.98 , N/A) (N/A , 0.03 , N/A)	370.8	N/A	0.1788 [0.2000]	89.4% { 9.9% }			
13C9_PFNA_EIS	(472.0 / 427.0) 11850	(8.74 , N/A) (N/A , 0.04 , N/A)	637.6	N/A	0.0895 [0.1000]	89.5% { 14.2% }			
13C6_PFDA_EIS	(519.0 / 474.0) 15453	(9.40 , N/A) (N/A , 0.02 , N/A)	630377.9	N/A	0.0907 [0.1000]	90.7% { 13.3% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 18951	(9.76 , N/A) (N/A , 0.02 , N/A)	5829.6	N/A	0.0829 [0.1000]	82.9% { 9.4% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-01RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (17)
Acquired: 2022/12/10 - 02:17

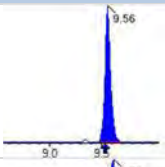
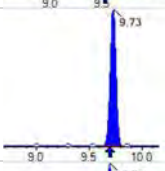
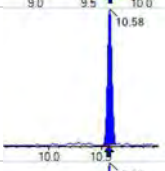
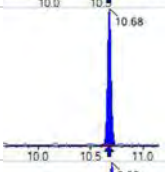
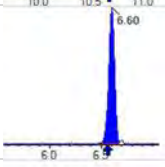
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDoA_EIS	(615.0 / 570.0) 21468	(9.92 , N/A) (N/A , 0.01 , N/A)	502.2	N/A	0.0773 [0.1000]	77.3% { 11.1% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 10252	(10.15 , N/A) (N/A , 0.01 , N/A)	216.3	N/A	0.0503 [0.1000]	50.3% { 7.9% }			
13C3_PFBS_EIS	(302.0 / 80.0) 79692	(6.23 , N/A) (N/A , 0.05 , N/A)	517.3	N/A	0.2493 [0.2000]	124.6% { 12.0% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 39020	(8.12 , N/A) (N/A , 0.03 , N/A)	624.1	N/A	0.2144 [0.2000]	107.2% { 11.1% }			
13C8_PFOS_EIS	(507.0 / 80.0) 54314	(9.53 , N/A) (N/A , 0.02 , N/A)	130.0	N/A	0.1660 [0.2000]	83.0% { 9.1% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 8067	(5.92 , N/A) (N/A , 0.04 , N/A)	92.9	N/A	0.4474 [0.4000]	111.8% { 11.3% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 12670	(7.63 , N/A) (N/A , 0.04 , N/A)	149.7	N/A	0.5238 [0.4000]	130.9% { 14.1% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 12090	(9.06 , N/A) (N/A , 0.03 , N/A)	169.9	N/A	0.5758 [0.4000]	144.0% { 13.9% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 75592	(10.20 , N/A) (N/A , 0.01 , N/A)	330.0	N/A	0.1513 [0.2000]	75.7% { 8.6% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 10682	(10.61 , N/A) (N/A , 0.01 , N/A)	140.2	N/A	0.0723 [0.2000]	36.1% { 4.5% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 11154	(10.70 , N/A) (N/A , 0.01 , N/A)	182.7	N/A	0.0832 [0.2000]	41.6% { 4.9% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-01RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (17)
Acquired: 2022/12/10 - 02:17

Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
D3_MeFOSAA_EIS	(573.0 / 419.0) 23013	(9.56 , N/A) (N/A , 0.02 , N/A)	949.4	N/A	0.3161 [0.4000]	79.0% { 8.5% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 27417	(9.73 , N/A) (N/A , 0.02 , N/A)	309.3	N/A	0.4382 [0.4000]	109.5% { 12.4% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 26360	(10.58 , N/A) (N/A , 0.01 , N/A)	258.2	N/A	1.0440 [2.0000]	52.2% { 5.5% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 14684	(10.68 , N/A) (N/A , 0.01 , N/A)	351.8	N/A	1.1414 [2.0000]	57.1% { 6.2% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 74714	(6.60 , N/A) (N/A , 0.04 , N/A)	597.0	N/A	0.8375 [0.8000]	104.7% { 11.1% }			

FORM IR
ANALYSIS DATA SHEETR

MW-24-S4-112922-

Laboratory:	APPL, LLC-			Work Order:	22L0004-
Client:	Tidewater, Inc.-			Project:	NASA JPL SI-
Matrix:	Water-	Laboratory ID:	22L0004-02-	File ID:	S2022-12-09B (18)-
Sampled:	11/29/22 09:10-	Prepared:	12/05/22 07:17	Analyzed:	12/10/22 02:30
Solids:		Preparation:	Table B-15-	Dilution:	1-
Initial/Final:	290.48 mL / 2 mL-			Instrument:	Saphira
Batch:	BBL0076-	Sequence:	SB03769	Calibration:	2250016

COMPOUNDR	CONC. (ng/L)	LOQ	LODR	DL	Q
PFBA-	0.17 U-	2.8	0.17	0.043	
PFPEA-	0.17 U-	1.4	0.17	0.053	
PFHXA-	0.17 U-	0.69	0.17	0.055	
PFHPA-	0.17 U-	0.69	0.17	0.043	
PFOA-	0.26 J-	0.69-	0.17	0.071	IR1,
PFNA-	0.17 U-	0.69	0.17	0.043	
PFDA-	0.17 U-	0.69	0.17	0.043	
PFUnA-	0.17 U-	0.69	0.17	0.069	
PFDOA-	0.17 U-	0.69	0.17	0.043	
PFTRDA-	0.17 U-	0.69	0.17	0.050	
PFTEDA-	0.17 U-	0.69	0.17	0.074	
PFBS-	0.17 U-	0.69	0.17	0.043	
PFPES-	0.17 U-	0.69	0.17	0.050	
PFHXS-	0.17 U-	0.69	0.17	0.043	
PFHPS-	0.17 U-	0.69	0.17	0.048	
PFOS-	0.17 U-	0.69	0.17	0.043	
PFNS-	0.34 U-	0.69	0.34	0.21	
PFDS-	0.17 U-	0.69	0.17	0.055	
4:2FTS-	0.34 U-	2.8	0.34	0.093	
6:2FTS-	0.17 U-	2.8	0.17	0.077	
8:2FTS-	0.52 U-	2.8	0.52	0.17	
PFOSA-	0.14 J-	2.8	0.17	0.043	
NMeFOSA-	1.7 U-	2.8	1.7	0.85	
NEtFOSA-	1.7 U-	2.8	1.7	0.85	
NMeFOSAA-	0.17 U-	0.69	0.17	0.062	
NEtFOSAA-	0.17 U-	0.69	0.17	0.043	
NMeFOSE-	1.0 U-	2.8	1.0	0.52	
NEtFOSE-	1.0 U-	2.8	1.0	0.52	
HFPO-DA-	0.86 U-	1.4	0.86	0.42	
ADONA-	0.52 U-	1.4	0.52	0.22	

FORM IR
ANALYSIS DATA SHEETR

MW-24-S4-112922-

Laboratory:	APPL, LLC-			Work Order:	22L0004-
Client:	Tidewater, Inc.-			Project:	NASA JPL SI-
Matrix:	Water-	Laboratory ID:	22L0004-02-	File ID:	S2022-12-09B (18)-
Sampled:	11/29/22 09:10-	Prepared:	12/05/22 07:17-	Analyzed:	12/10/22 02:30-
Solids:		Preparation:	Table B-15-	Dilution:	1-
Initial/Final:	290.48 mL / 2 mL-			Instrument:	Saphira-
Batch:	BBL0076-	Sequence:	SB03769-	Calibration:	2250016-

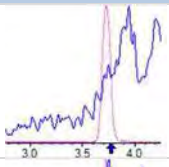
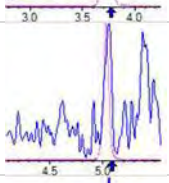
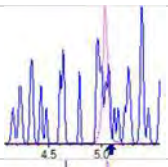
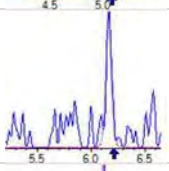
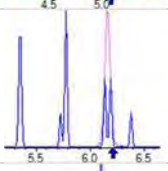
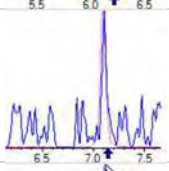
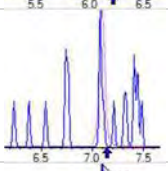
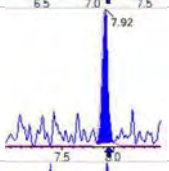
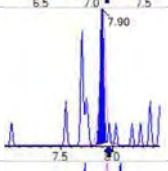
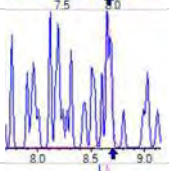
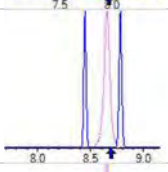
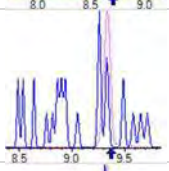
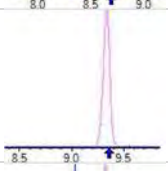
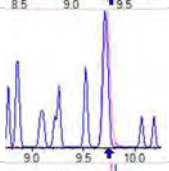
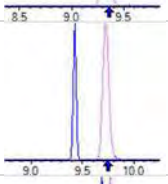
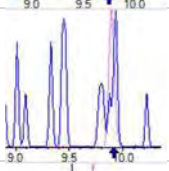
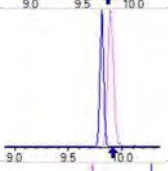
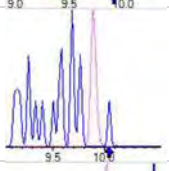
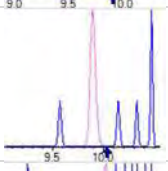
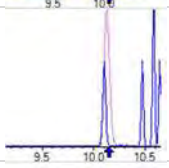
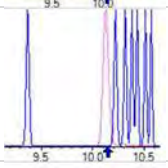
COMPOUNDR	CONC. (ng/L)R	LOQ	LODR	DLR	Q
9CL-PF3ONS-	0.52 U-	1.4-	0.52-	0.20-	
11CL-PF3OUDS-	0.52 U-	1.4-	0.52-	0.21-	

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-02
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (18)
Acquired: 2022/12/10 - 02:30

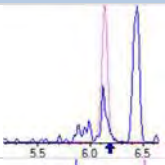
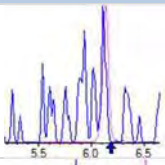
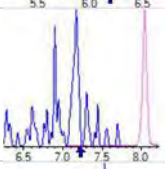
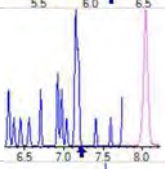
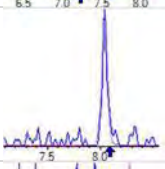
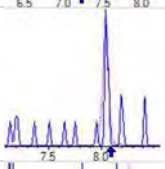
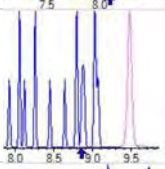
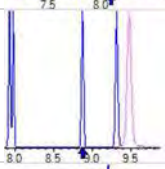
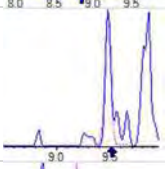
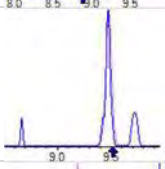
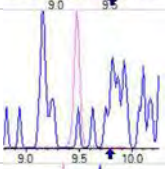
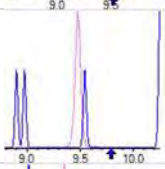
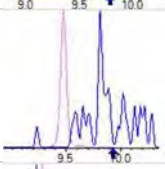
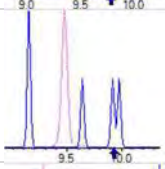
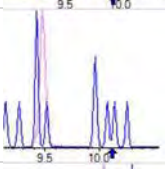
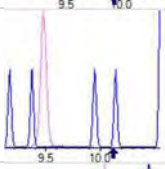
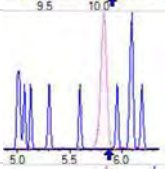
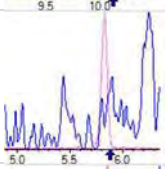
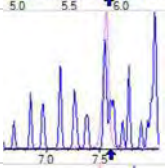
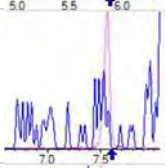
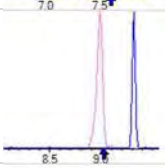
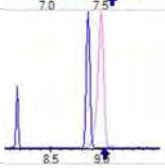
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(212.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFPeA	(262.9 / 219.0) N/A (262.9 / 69.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHxA	(313.0 / 269.0) N/A (313.0 / 119.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHpA	(363.0 / 319.0) N/A (363.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFOA	(413.0 / 369.0) 5387 (413.0 / 169.0) 839	(7.92 , 1.00) (0.01 , N/A , 1.1)	24.8 21.6	0.1558 48.2 48.1	0.0377	N/A			IR1,
PFNA	(463.0 / 419.0) N/A (463.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDA	(513.0 / 469.0) N/A (513.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFUnA	(563.0 / 519.0) N/A (563.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoA	(613.0 / 569.0) N/A (613.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTrDA	(663.0 / 619.0) N/A (663.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTeDA	(713.0 / 669.0) N/A (713.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-02
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (18)
Acquired: 2022/12/10 - 02:30

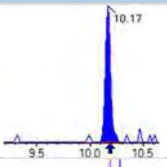
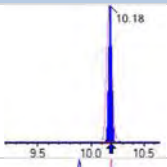
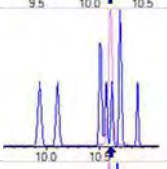
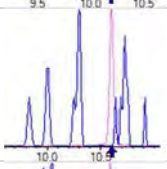
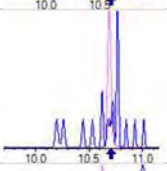
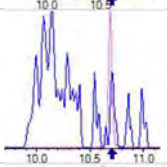
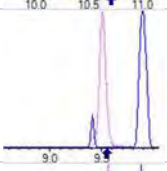
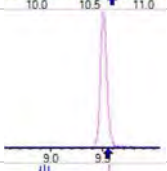
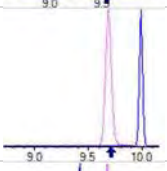
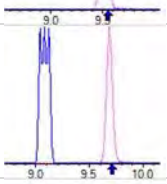
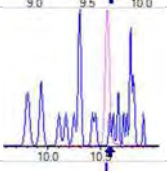
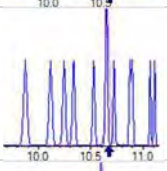
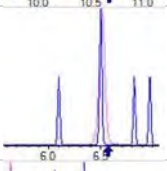
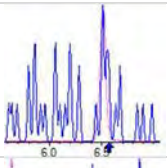
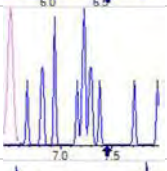
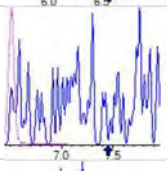
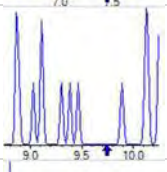
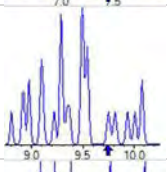
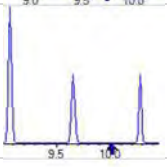
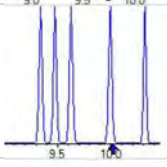
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) N/A (298.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFPeS	(349.0 / 80.0) N/A (349.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHxS	(399.0 / 80.0) N/A (399.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHpS	(449.0 / 80.0) N/A (449.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFOS	(499.0 / 80.0) N/A (499.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFNS	(549.0 / 80.0) N/A (549.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDS	(599.0 / 80.0) N/A (599.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoS	(698.9 / 80.0) N/A (698.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
4:2FTS	(327.0 / 307.0) N/A (327.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
6:2FTS	(427.0 / 407.0) N/A (427.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
8:2FTS	(527.0 / 507.0) N/A (527.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-02
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (18)
Acquired: 2022/12/10 - 02:30

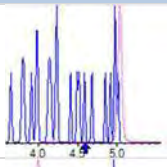
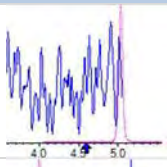
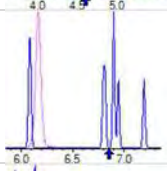
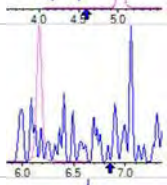
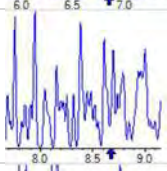
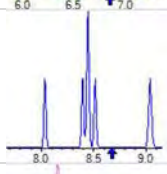
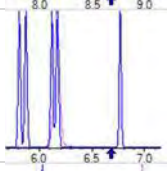
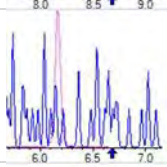
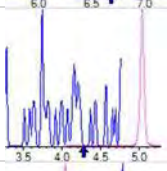
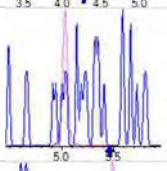
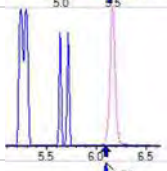
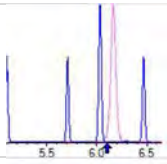
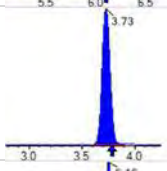
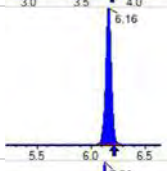
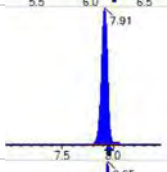
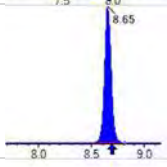
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) 8529 (498.0 / 478.0) 255	(10.17 , 1.00) (0.00 , N/A , -0.8)	73.4 55462.2	0.0299 125.4 118.6	0.0198	N/A			
NMeFOSA	(511.9 / 219.0) N/A (511.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSA	(526.0 / 219.0) N/A (526.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSAA	(570.0 / 419.0) N/A (570.0 / 483.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSAA	(584.0 / 419.0) N/A (584.0 / 526.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSE	(616.1 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSE	(630.0 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
HFPO-DA	(285.0 / 169.0) N/A (285.0 / 185.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
ADONA	(377.0 / 85.0) N/A (377.0 / 251.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
9Cl-Pf3ONS	(531.0 / 351.0) N/A (533.0 / 353.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
11Cl-PF3OUDS	(631.0 / 451.0) N/A (633.0 / 453.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-02
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (18)
Acquired: 2022/12/10 - 02:30

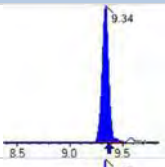
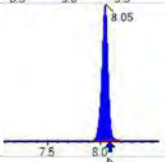
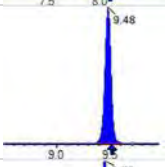
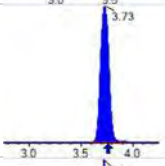
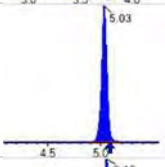
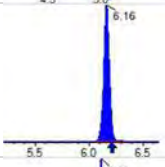
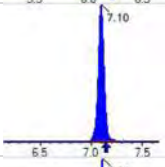
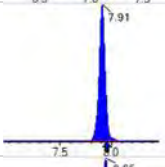
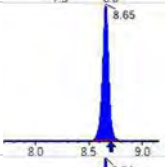
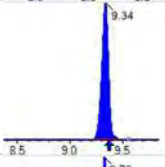
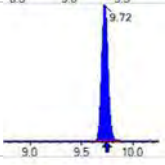
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
3:3FTCA	(241.0 / 177.0) N/A (241.0 / 117.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
5:3FTCA	(341.0 / 236.7) N/A (341.0 / 217.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
7:3FTCA	(441.0 / 317.0) N/A (441.0 / 337.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFEESA	(315.0 / 135.0) N/A (315.0 / 83.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFMPA	(229.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFMBA	(279.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NFDHA	(201.0 / 85.0) N/A (295.0 / 201.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
13C3_PFBA_IIS	(216.0 / 172.0) 91583	(3.73 , N/A) (N/A , -0.04 , N/A)	726.8	N/A	0.9527 [1.0000]	95.3% { 104.7% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 163328	(6.16 , N/A) (N/A , -0.05 , N/A)	991.9	N/A	1.3227 [1.0000]	132.3% { 125.9% }			
13C4_PFOA_IIS	(417.0 / 372.0) 128086	(7.91 , N/A) (N/A , -0.04 , N/A)	586.9	N/A	1.0804 [1.0000]	108.0% { 105.5% }			
13C5_PFNA_IIS	(468.0 / 423.0) 115279	(8.65 , N/A) (N/A , -0.04 , N/A)	505.2	N/A	1.2104 [1.0000]	121.0% { 117.4% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-02
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (18)
Acquired: 2022/12/10 - 02:30

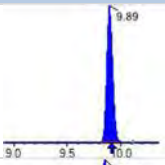
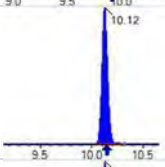
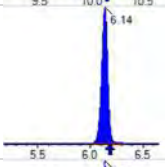
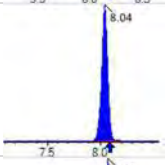
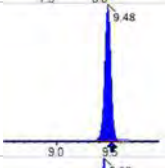
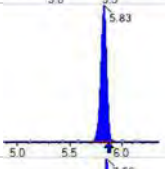
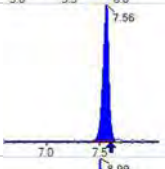
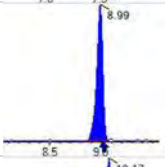
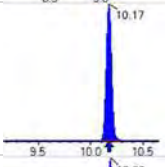
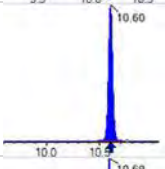
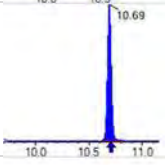
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDA_IIS	(515.1 / 470.1) 110063	(9.34 , N/A) (N/A , -0.03 , N/A)	135.3	N/A	1.3360 [1.0000]	133.6% { 122.1% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 267366	(8.05 , N/A) (N/A , -0.04 , N/A)	869.3	N/A	1.2457 [1.0000]	124.6% { 127.6% }			
13C4_PFOS_IIS	(502.8 / 79.9) 251553	(9.48 , N/A) (N/A , -0.03 , N/A)	499.1	N/A	1.3515 [1.0000]	135.2% { 131.7% }			
13C4_PFBA_EIS	(217.0 / 172.0) 713727	(3.73 , N/A) (N/A , -0.04 , N/A)	899.8	N/A	8.3125 [8.0000]	103.9% { 109.0% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 394731	(5.03 , N/A) (N/A , -0.05 , N/A)	1001.2	N/A	3.3131 [4.0000]	82.8% { 113.5% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 362275	(6.16 , N/A) (N/A , -0.05 , N/A)	815.2	N/A	2.1746 [2.0000]	108.7% { 138.1% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 273619	(7.10 , N/A) (N/A , -0.04 , N/A)	763.9	N/A	1.8196 [2.0000]	91.0% { 110.3% }			
13C8_PFOA_EIS	(421.0 / 376.0) 277484	(7.91 , N/A) (N/A , -0.05 , N/A)	839.8	N/A	2.1299 [2.0000]	106.5% { 106.4% }			
13C9_PFNA_EIS	(472.0 / 427.0) 118713	(8.65 , N/A) (N/A , -0.04 , N/A)	14054.5	N/A	1.0435 [1.0000]	104.4% { 142.5% }			
13C6_PFDA_EIS	(519.0 / 474.0) 160326	(9.34 , N/A) (N/A , -0.04 , N/A)	515.7	N/A	1.0028 [1.0000]	100.3% { 137.9% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 222305	(9.72 , N/A) (N/A , -0.02 , N/A)	463.8	N/A	1.0359 [1.0000]	103.6% { 110.5% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

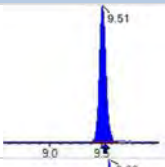
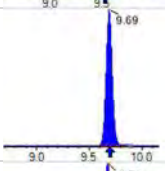
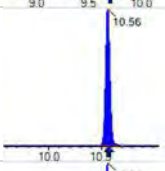
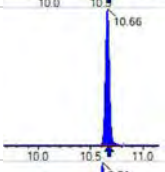
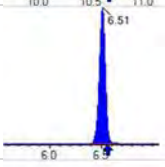
Sample I.D.: 22L0004-02
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (18)
Acquired: 2022/12/10 - 02:30

Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDoA_EIS	(615.0 / 570.0) 255006	(9.89 , N/A) (N/A , -0.02 , N/A)	685.6	N/A	0.9791 [1.0000]	97.9% { 132.0% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 129971	(10.12 , N/A) (N/A , -0.02 , N/A)	341.1	N/A	0.6798 [1.0000]	68.0% { 100.1% }			
13C3_PFBS_EIS	(302.0 / 80.0) 741733	(6.14 , N/A) (N/A , -0.04 , N/A)	838.4	N/A	1.8876 [2.0000]	94.4% { 112.0% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 455857	(8.04 , N/A) (N/A , -0.04 , N/A)	884.7	N/A	2.0381 [2.0000]	101.9% { 129.2% }			
13C8_PFOS_EIS	(507.0 / 80.0) 802621	(9.48 , N/A) (N/A , -0.03 , N/A)	606.1	N/A	2.0930 [2.0000]	104.7% { 133.9% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 91128	(5.83 , N/A) (N/A , -0.04 , N/A)	489.3	N/A	4.1120 [4.0000]	102.8% { 127.4% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 111382	(7.56 , N/A) (N/A , -0.04 , N/A)	430.8	N/A	3.7462 [4.0000]	93.7% { 123.8% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 105696	(8.99 , N/A) (N/A , -0.04 , N/A)	331.2	N/A	4.0957 [4.0000]	102.4% { 121.9% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 774653	(10.17 , N/A) (N/A , -0.01 , N/A)	630.4	N/A	1.3232 [2.0000]	66.2% { 88.3% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 147064	(10.60 , N/A) (N/A , -0.01 , N/A)	562.6	N/A	0.8489 [2.0000]	42.4% { 61.7% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 137724	(10.69 , N/A) (N/A , -0.01 , N/A)	660.1	N/A	0.8768 [2.0000]	43.8% { 60.6% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0004-02 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09B (18)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/10 - 02:30

Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
D3_MeFOSAA_EIS	(573.0 / 419.0) 346462	(9.51 , N/A) (N/A , -0.03 , N/A)	457.8	N/A	4.0609 [4.0000]	101.5% { 127.9% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 280048	(9.69 , N/A) (N/A , -0.02 , N/A)	468.1	N/A	3.8191 [4.0000]	95.5% { 127.1% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 312762	(10.56 , N/A) (N/A , -0.01 , N/A)	907.5	N/A	10.5701 [20.0000]	52.9% { 65.8% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 162636	(10.66 , N/A) (N/A , -0.01 , N/A)	900.3	N/A	10.7874 [20.0000]	53.9% { 68.6% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 795049	(6.51 , N/A) (N/A , -0.05 , N/A)	961.9	N/A	7.2462 [8.0000]	90.6% { 118.5% }			

FORM IR
ANALYSIS DATA SHEETR

MW-24-S4-112922-

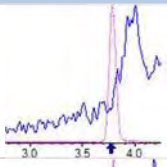
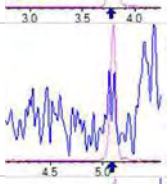
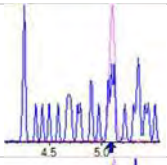
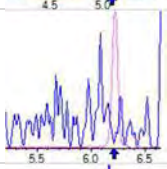
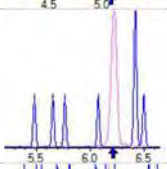
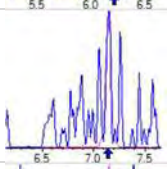
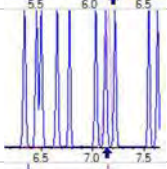
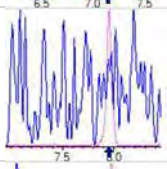
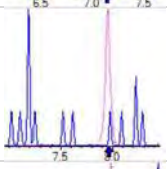
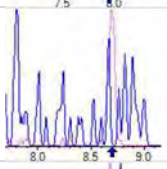
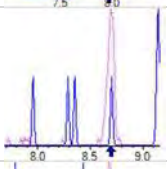
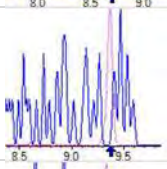
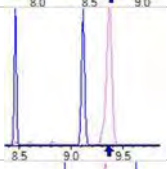
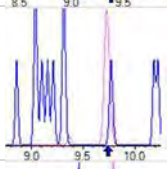
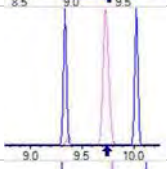
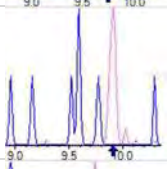
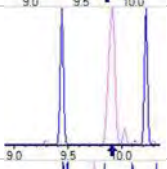
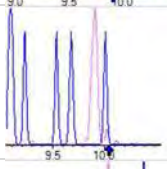
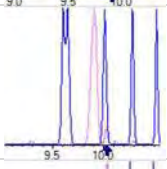
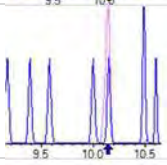
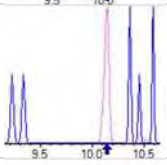
Laboratory:	APPL, LLC-			Work Order:	22L0004-
Client:	Tidewater, Inc.-			Project:	NASA JPL SI-
Matrix:	Water-	Laboratory ID:	22L0004-02RE1-	File ID:	S2022-12-09B (19)-
Sampled:	11/29/22 09:10-	Prepared:	12/05/22 07:17-	Analyzed:	12/10/22 02:42-
Solids:		Preparation:	Table B-15-	Dilution:	10-
Initial/Final:	290.48 mL / 2 mL-			Instrument:	Saphira-
Batch:	BBL0076-	Sequence:	SB03769-	Calibration:	2250016-

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-02RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (19)
Acquired: 2022/12/10 - 02:42

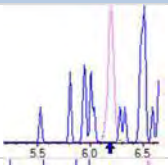
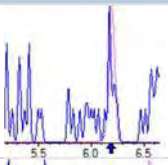
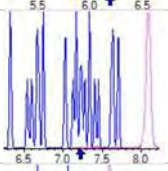
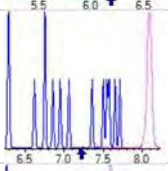
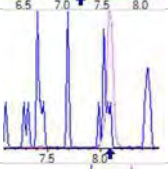
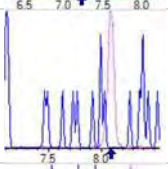
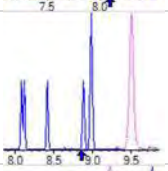
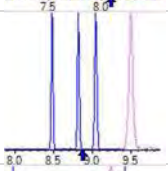
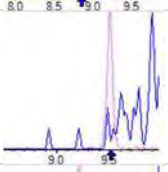
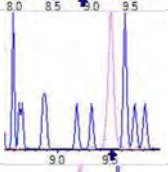
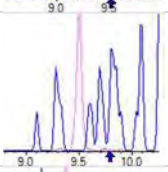
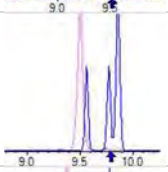
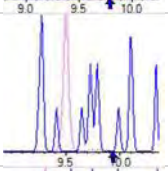
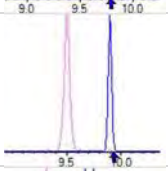
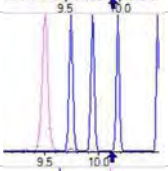
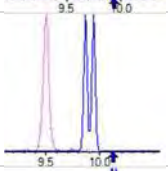
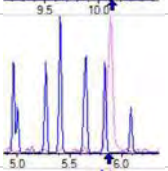
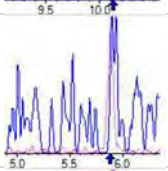
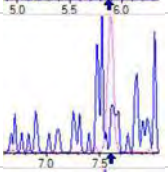
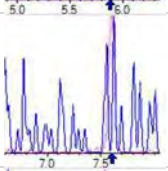
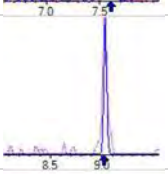
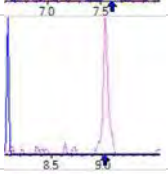
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(212.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFPeA	(262.9 / 219.0) N/A (262.9 / 69.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHxA	(313.0 / 269.0) N/A (313.0 / 119.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHpA	(363.0 / 319.0) N/A (363.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFOA	(413.0 / 369.0) N/A (413.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFNA	(463.0 / 419.0) N/A (463.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDA	(513.0 / 469.0) N/A (513.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFUnA	(563.0 / 519.0) N/A (563.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoA	(613.0 / 569.0) N/A (613.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTrDA	(663.0 / 619.0) N/A (663.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTeDA	(713.0 / 669.0) N/A (713.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-02RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (19)
Acquired: 2022/12/10 - 02:42

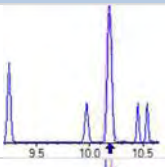
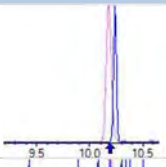
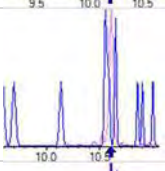
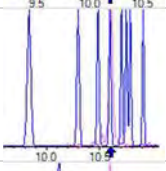
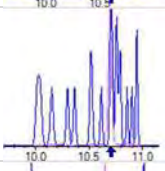
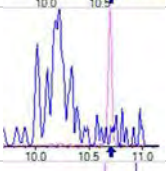
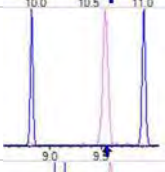
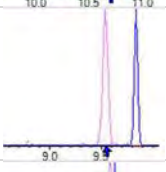
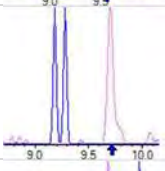
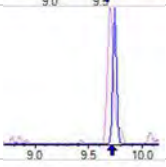
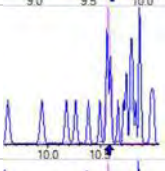
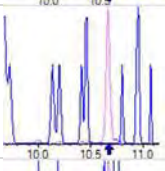
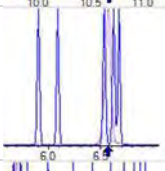
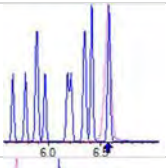
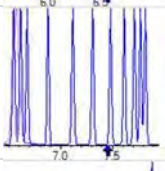
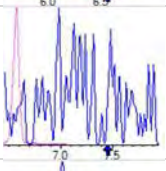
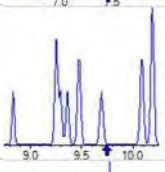
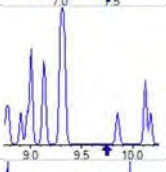
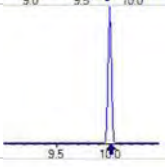
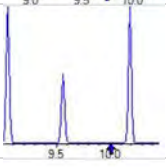
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) N/A (298.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFPeS	(349.0 / 80.0) N/A (349.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHxS	(399.0 / 80.0) N/A (399.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHpS	(449.0 / 80.0) N/A (449.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFOS	(499.0 / 80.0) N/A (499.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFNS	(549.0 / 80.0) N/A (549.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDS	(599.0 / 80.0) N/A (599.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoS	(698.9 / 80.0) N/A (698.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
4:2FTS	(327.0 / 307.0) N/A (327.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
6:2FTS	(427.0 / 407.0) N/A (427.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
8:2FTS	(527.0 / 507.0) N/A (527.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-02RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (19)
Acquired: 2022/12/10 - 02:42

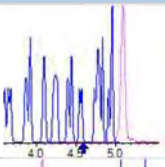
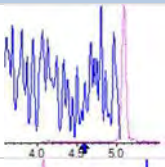
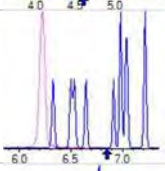
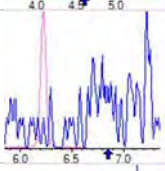
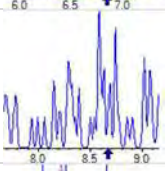
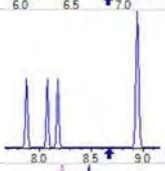
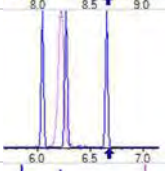
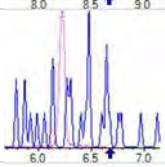
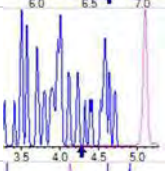
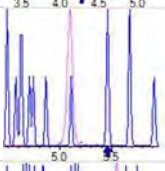
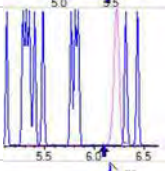
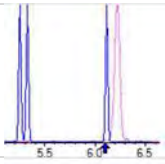
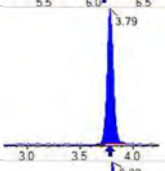
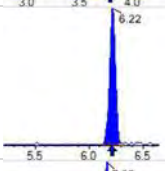
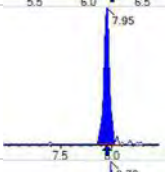
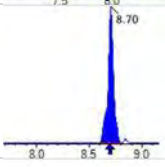
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) N/A (498.0 / 478.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSA	(511.9 / 219.0) N/A (511.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSA	(526.0 / 219.0) N/A (526.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSAA	(570.0 / 419.0) N/A (570.0 / 483.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSAA	(584.0 / 419.0) N/A (584.0 / 526.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSE	(616.1 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSE	(630.0 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
HFPO-DA	(285.0 / 169.0) N/A (285.0 / 185.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
ADONA	(377.0 / 85.0) N/A (377.0 / 251.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
9Cl-Pf3ONS	(531.0 / 351.0) N/A (533.0 / 353.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
11Cl-PF3OUDS	(631.0 / 451.0) N/A (633.0 / 453.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-02RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (19)
Acquired: 2022/12/10 - 02:42

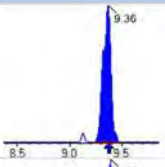
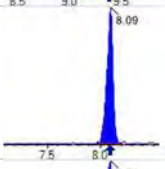
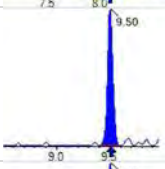
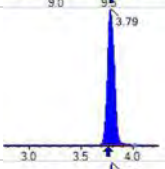
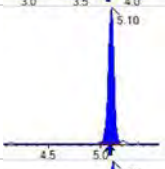
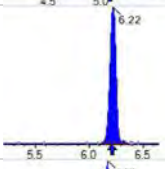
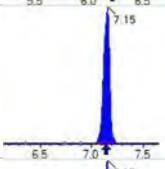
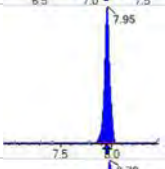
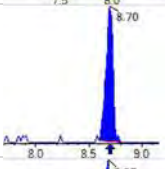
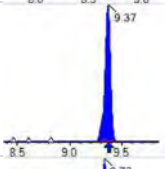
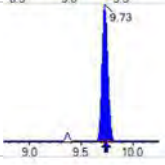
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
3:3FTCA	(241.0 / 177.0) N/A (241.0 / 117.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
5:3FTCA	(341.0 / 236.7) N/A (341.0 / 217.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
7:3FTCA	(441.0 / 317.0) N/A (441.0 / 337.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFEESA	(315.0 / 135.0) N/A (315.0 / 83.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFMPA	(229.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFMBA	(279.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NFDHA	(201.0 / 85.0) N/A (295.0 / 201.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
13C3_PFBA_IIS	(216.0 / 172.0) 10049	(3.79 , N/A) (N/A , 0.02 , N/A)	383.5	N/A	1.0454 [1.0000]	104.5% { 11.5% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 10570	(6.22 , N/A) (N/A , 0.01 , N/A)	186.4	N/A	0.8560 [1.0000]	85.6% { 8.2% }			
13C4_PFOA_IIS	(417.0 / 372.0) 13702	(7.95 , N/A) (N/A , 0.00 , N/A)	199.1	N/A	1.1558 [1.0000]	115.6% { 11.3% }			
13C5_PFNA_IIS	(468.0 / 423.0) 10589	(8.70 , N/A) (N/A , 0.01 , N/A)	4879.8	N/A	1.1118 [1.0000]	111.2% { 10.8% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-02RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (19)
Acquired: 2022/12/10 - 02:42

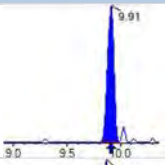
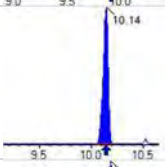
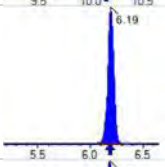
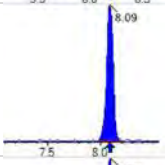
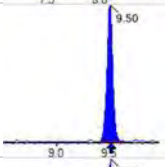
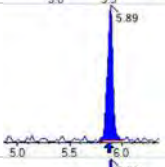
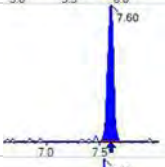
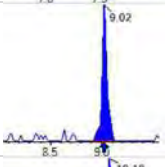
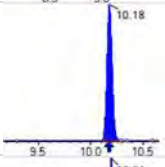
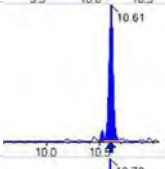
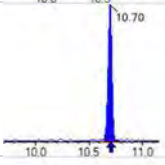
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDA_IIS	(515.1 / 470.1) 10536	(9.36 , N/A) (N/A , -0.01 , N/A)	507.8	N/A	1.2789 [1.0000]	127.9% { 11.7% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 26320	(8.09 , N/A) (N/A , 0.00 , N/A)	324.1	N/A	1.2263 [1.0000]	122.6% { 12.6% }			
13C4_PFOS_IIS	(502.8 / 79.9) 17834	(9.50 , N/A) (N/A , 0.00 , N/A)	103.5	N/A	0.9582 [1.0000]	95.8% { 9.3% }			
13C4_PFBA_EIS	(217.0 / 172.0) 73319	(3.79 , N/A) (N/A , 0.02 , N/A)	773.4	N/A	0.7782 [0.8000]	97.3% { 11.2% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 35532	(5.10 , N/A) (N/A , 0.02 , N/A)	563.3	N/A	0.4608 [0.4000]	115.2% { 10.2% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 30787	(6.22 , N/A) (N/A , 0.01 , N/A)	336.6	N/A	0.2856 [0.2000]	142.8% { 11.7% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 27081	(7.15 , N/A) (N/A , 0.01 , N/A)	722.4	N/A	0.2783 [0.2000]	139.1% { 10.9% }			
13C8_PFOA_EIS	(421.0 / 376.0) 24749	(7.95 , N/A) (N/A , 0.00 , N/A)	435.6	N/A	0.1776 [0.2000]	88.8% { 9.5% }			
13C9_PFNA_EIS	(472.0 / 427.0) 8749	(8.70 , N/A) (N/A , 0.00 , N/A)	126.2	N/A	0.0837 [0.1000]	83.7% { 10.5% }			
13C6_PFDA_EIS	(519.0 / 474.0) 17512	(9.37 , N/A) (N/A , -0.01 , N/A)	276.0	N/A	0.1144 [0.1000]	114.4% { 15.1% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 13901	(9.73 , N/A) (N/A , -0.01 , N/A)	3931.2	N/A	0.0677 [0.1000]	67.7% { 6.9% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-02RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (19)
Acquired: 2022/12/10 - 02:42

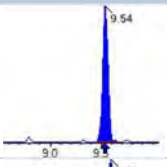
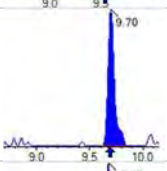
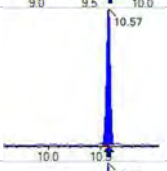
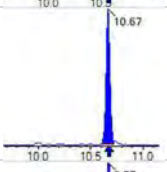
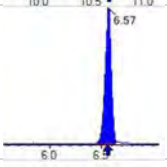
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDoA_EIS	(615.0 / 570.0) 19640	(9.91 , N/A) (N/A , 0.00 , N/A)	131.5	N/A	0.0788 [0.1000]	78.8% { 10.2% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 12000	(10.14 , N/A) (N/A , 0.00 , N/A)	19487.9	N/A	0.0656 [0.1000]	65.6% { 9.2% }			
13C3_PFBS_EIS	(302.0 / 80.0) 76388	(6.19 , N/A) (N/A , 0.01 , N/A)	427.6	N/A	0.1975 [0.2000]	98.7% { 11.5% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 40673	(8.09 , N/A) (N/A , 0.00 , N/A)	337.0	N/A	0.1847 [0.2000]	92.4% { 11.5% }			
13C8_PFOS_EIS	(507.0 / 80.0) 69055	(9.50 , N/A) (N/A , -0.01 , N/A)	245.6	N/A	0.2540 [0.2000]	127.0% { 11.5% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 9105	(5.89 , N/A) (N/A , 0.02 , N/A)	106.2	N/A	0.4173 [0.4000]	104.3% { 12.7% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 10713	(7.60 , N/A) (N/A , 0.01 , N/A)	176.9	N/A	0.3660 [0.4000]	91.5% { 11.9% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 11032	(9.02 , N/A) (N/A , 0.00 , N/A)	74.6	N/A	0.4343 [0.4000]	108.6% { 12.7% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 82219	(10.18 , N/A) (N/A , 0.00 , N/A)	319.9	N/A	0.1981 [0.2000]	99.1% { 9.4% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 14527	(10.61 , N/A) (N/A , 0.00 , N/A)	142.4	N/A	0.1183 [0.2000]	59.1% { 6.1% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 16255	(10.70 , N/A) (N/A , 0.00 , N/A)	303.6	N/A	0.1460 [0.2000]	73.0% { 7.1% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-02RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (19)
Acquired: 2022/12/10 - 02:42

Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
D3_MeFOSAA_EIS	(573.0 / 419.0) 30567	(9.54 , N/A) (N/A , 0.00 , N/A)	232.4	N/A	0.5054 [0.4000]	126.3% { 11.3% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 19248	(9.70 , N/A) (N/A , 0.00 , N/A)	82.2	N/A	0.3703 [0.4000]	92.6% { 8.7% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 27326	(10.57 , N/A) (N/A , 0.00 , N/A)	358.2	N/A	1.3027 [2.0000]	65.1% { 5.7% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 13757	(10.67 , N/A) (N/A , 0.00 , N/A)	286.0	N/A	1.2871 [2.0000]	64.4% { 5.8% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 80289	(6.57 , N/A) (N/A , 0.01 , N/A)	567.9	N/A	1.1307 [0.8000]	141.3% { 12.0% }			

FORM IR
ANALYSIS DATA SHEETR

MW-24-S3-112922-

Laboratory:-	APPL, LLC-			Work Order:-	22L0004-
Client:-	Tidewater, Inc.-			Project:	NASA JPL SI-
Matrix:-	Water-	Laboratory ID:-	22L0004-03-	File ID:	S2022-12-09B (20)-
Sampled:-	11/29/22 09:35-	Prepared:-	12/05/22 07:17	Analyzed:-	12/10/22 02:55
Solids:-		Preparation:-	Table B-15-	Dilution:-	1-
Initial/Final:-	293.05 mL / 2 mL-			Instrument:-	Saphira
Batch:-	BBL0076-	Sequence:-	SB03769	Calibration:-	2250016

COMPOUNDR	CONC. (ng/L)	LOQ	LODR	DL	Q
PFBA-	0.68 J-	2.7	0.17	0.043	
PFPEA-	1.6-	1.4	0.17	0.053	
PFHXA-	1.3-	0.68-	0.17	0.055	IR2
PFHPA-	0.60 J-	0.68	0.17	0.043	
PFOA-	2.3-	0.68-	0.17	0.070	MI4
PFNA-	0.31 J-	0.68	0.17	0.043	
PFDA-	0.37 J-	0.68-	0.17	0.043	IR2,
PFUnA-	0.17 U-	0.68	0.17	0.068	
PFDOA-	0.17 U-	0.68	0.17	0.043	
PFTRDA-	0.17 U-	0.68	0.17	0.049	
PFTEDA-	0.17 U-	0.68	0.17	0.073	
PFBS-	0.36 J-	0.68	0.17	0.043	
PFPES-	0.23 J-	0.68-	0.17	0.049	IR2,
PFHXS-	0.82-	0.68	0.17	0.043	
PFHPS-	0.17 U-	0.68	0.17	0.048	
PFOS-	0.70-	0.68-	0.17	0.043	MI4
PFNS-	0.34 U-	0.68	0.34	0.21	
PFDS-	0.17 U-	0.68	0.17	0.055	
4:2FTS-	0.34 U-	2.7	0.34	0.092	
6:2FTS-	0.17 U-	2.7	0.17	0.077	
8:2FTS-	0.51 U-	2.7	0.51	0.17	
PFOSA-	0.20 J-	2.7	0.17	0.043	
NMeFOSA-	1.7 U-	2.7	1.7	0.84	
NEtFOSA-	1.7 U-	2.7	1.7	0.84	
NMeFOSAA-	0.17 U-	0.68	0.17	0.061	
NEtFOSAA-	0.17 U-	0.68	0.17	0.043	
NMeFOSE-	1.0 U-	2.7	1.0	0.51	
NEtFOSE-	1.0 U-	2.7	1.0	0.51	
HFPO-DA-	0.85 U-	1.4	0.85	0.42	
ADONA-	0.51 U-	1.4	0.51	0.22	

FORM IR
ANALYSIS DATA SHEETR

MW-24-S3-112922-

Laboratory:-	APPL, LLC-			Work Order:-	22L0004-
Client:-	Tidewater, Inc.-			Project:-	NASA JPL SI-
Matrix:-	Water-	Laboratory ID:-	22L0004-03-	File ID:-	S2022-12-09B (20)-
Sampled:-	11/29/22 09:35-	Prepared:-	12/05/22 07:17-	Analyzed:-	12/10/22 02:55-
Solids:-		Preparation:-	Table B-15-	Dilution:-	1-
Initial/Final:-	293.05 mL / 2 mL-			Instrument:-	Saphira-
Batch:-	BBL0076-	Sequence:-	SB03769-	Calibration:-	2250016-

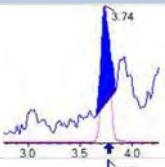
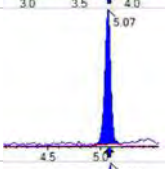
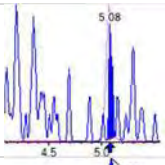
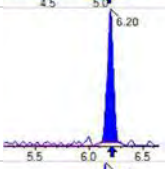
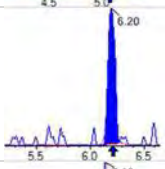
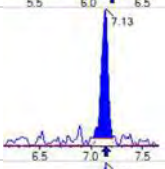
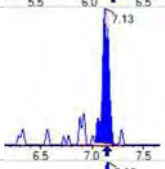
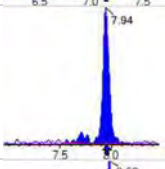
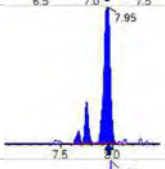
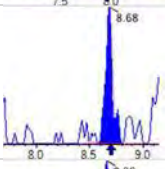
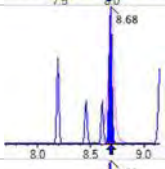
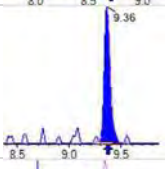
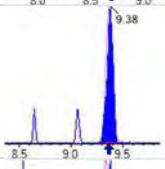
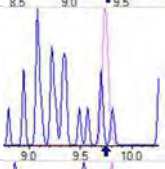
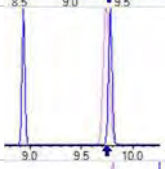
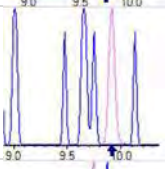
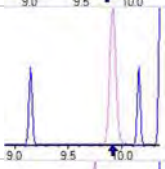
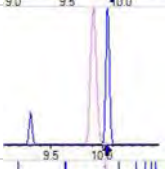
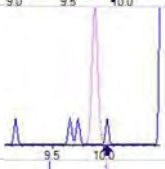
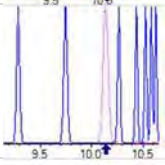
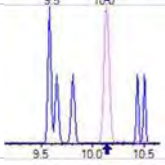
COMPOUNDR	CONC. (ng/L)R	LOQ	LODR	DLR	Q
9CL-PF3ONS-	0.51 U-	1.4-	0.51-	0.20-	
11CL-PF3OUDS-	0.51 U-	1.4-	0.51-	0.20-	

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

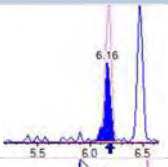
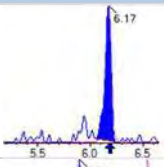
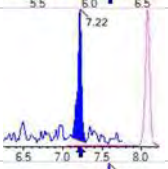
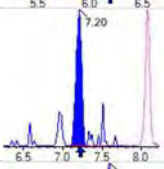
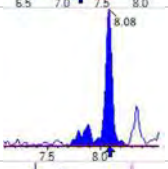
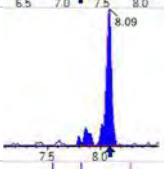
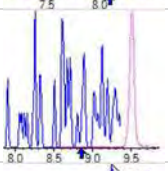
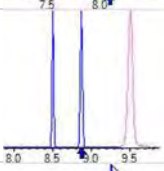
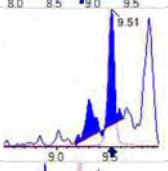
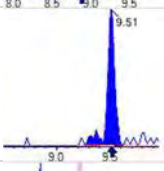
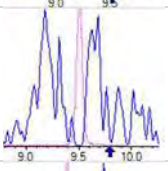
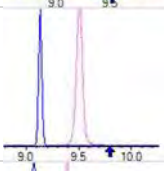
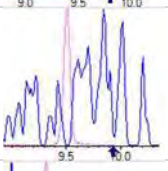
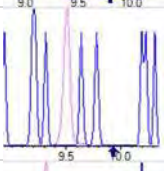
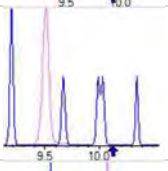
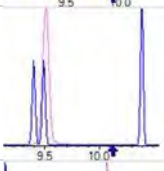
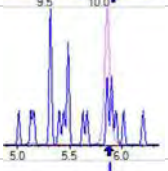
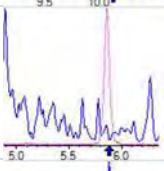
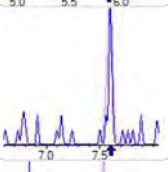
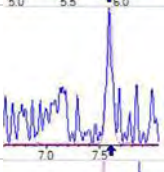
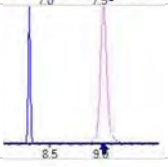
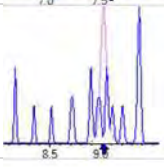
Sample I.D.: 22L0004-03
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (20)
Acquired: 2022/12/10 - 02:55

Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(212.9 / 169.0) 5936	(3.74 , 1.00) (-0.01 , N/A , 0.0)	18.4	N/A 0.0 0.0	0.0990	N/A			
PFPeA	(262.9 / 219.0) 19962 (262.9 / 69.0) 121	(5.07 , 1.00) (0.00 , N/A , -0.9)	149.7 8.0	0.0061 52.2 55.0	0.2271	N/A			
PFHxA	(313.0 / 269.0) 26755 (313.0 / 119.0) 3651	(6.20 , 1.00) (0.00 , N/A , 0.0)	104.9 41.7	0.1364 151.8 139.3	0.1942	N/A			IR2,
PFHpA	(363.0 / 319.0) 11839 (363.0 / 169.0) 3717	(7.13 , 1.00) (0.00 , N/A , 0.1)	52.7 43.1	0.3140 109.4 111.1	0.0880	N/A			
PFOA	(413.0 / 369.0) 49628 (413.0 / 169.0) 15724	(7.94 , 1.00) (0.00 , N/A , -0.4)	357.1 96.1	0.3168 97.9 97.9	0.3428	N/A			MI4 ABK 12/29/22
PFNA	(463.0 / 419.0) 5374 (463.0 / 169.0) 577	(8.68 , 1.00) (-0.01 , N/A , 0.0)	20.7 15.7	0.1074 53.4 51.0	0.0459	N/A			
PFDA	(513.0 / 469.0) 8746 (513.0 / 169.0) 2139	(9.36 , 1.00) (-0.01 , N/A , -1.4)	54.4 225.6	0.2445 275.4 246.1	0.0536	N/A			IR2,
PFUnA	(563.0 / 519.0) N/A (563.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoA	(613.0 / 569.0) N/A (613.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTrDA	(663.0 / 619.0) N/A (663.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTeDA	(713.0 / 669.0) N/A (713.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0004-03 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09B (20)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/10 - 02:55

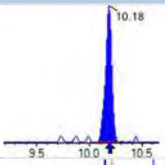
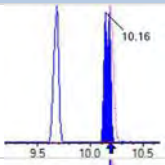
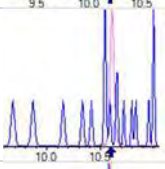
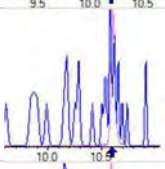
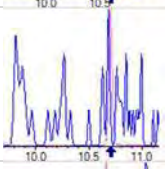
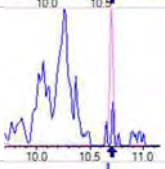
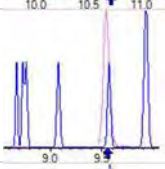
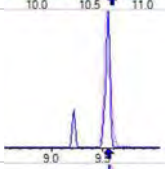
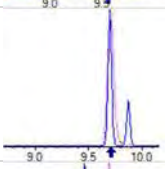
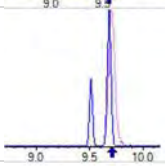
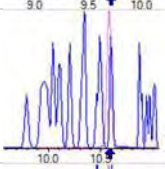
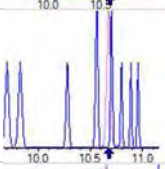
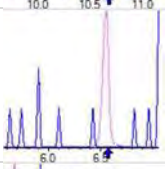
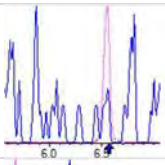
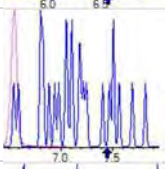
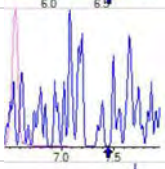
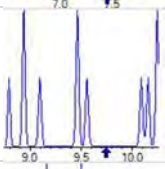
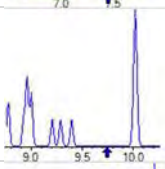
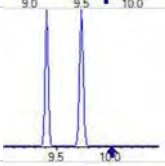
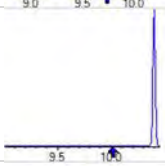
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) 10881 (298.9 / 99.0) 6881	(6.16 , 1.00) (-0.01 , N/A , -0.4)	36.4 53.0	0.6324 93.3 93.4	0.0530	N/A			
PFPeS	(349.0 / 80.0) 12765 (349.0 / 99.0) 7114	(7.22 , 0.89) (N/A , 0.00 , 0.7)	45.2 41.3	0.5573 152.8 165.9	0.0338	N/A			IR2,
PFHxS	(399.0 / 80.0) 40320 (399.0 / 99.0) 11830	(8.08 , 1.00) (0.00 , N/A , -0.2)	186.8 1164.7	0.2934 85.1 88.9	0.1203	N/A			
PFHpS	(449.0 / 80.0) N/A (449.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFOS	(499.0 / 80.0) 36938 (499.0 / 99.0) 10440	(9.51 , 1.00) (0.00 , N/A , 0.2)	22.5 69.2	0.2826 109.8 119.4	0.1020	N/A			MI4 ABK 12/29/22
PFNS	(549.0 / 80.0) N/A (549.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDS	(599.0 / 80.0) N/A (599.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoS	(698.9 / 80.0) N/A (698.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
4:2FTS	(327.0 / 307.0) N/A (327.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
6:2FTS	(427.0 / 407.0) N/A (427.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
8:2FTS	(527.0 / 507.0) N/A (527.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-03
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (20)
Acquired: 2022/12/10 - 02:55

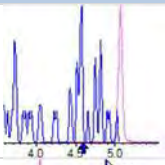
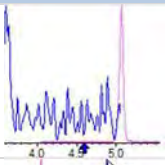
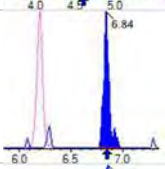
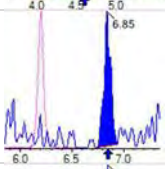
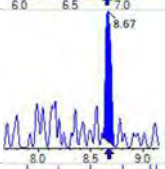
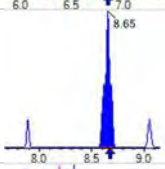
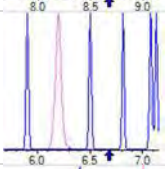
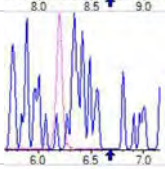
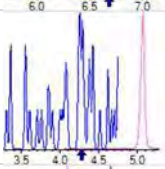
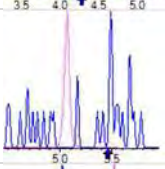
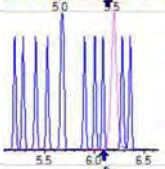
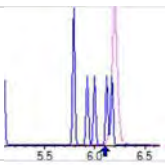
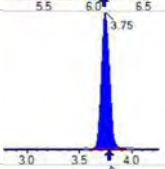
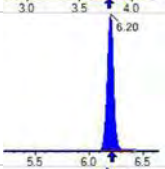
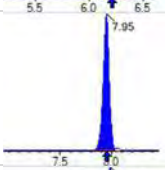
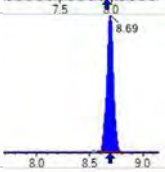
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) 10823 (498.0 / 478.0) 1043	(10.18 , 1.00) (0.00 , N/A , 1.4)	90.9 4294.4	0.0964 403.8 381.8	0.0300	N/A			
NMeFOSA	(511.9 / 219.0) N/A (511.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSA	(526.0 / 219.0) N/A (526.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSAA	(570.0 / 419.0) N/A (570.0 / 483.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSAA	(584.0 / 419.0) N/A (584.0 / 526.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSE	(616.1 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSE	(630.0 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
HFPO-DA	(285.0 / 169.0) N/A (285.0 / 185.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
ADONA	(377.0 / 85.0) N/A (377.0 / 251.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
9Cl-Pf3ONS	(531.0 / 351.0) N/A (533.0 / 353.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
11Cl-PF3OUDS	(631.0 / 451.0) N/A (633.0 / 453.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-03
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (20)
Acquired: 2022/12/10 - 02:55

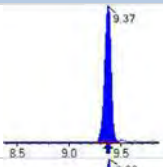
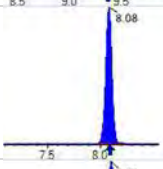
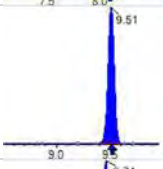
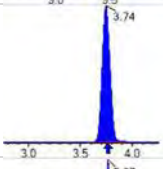
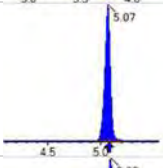
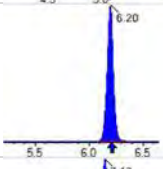
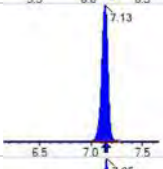
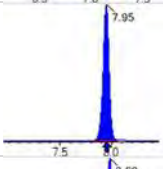
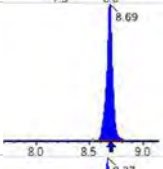
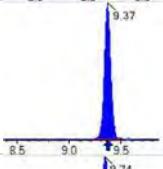
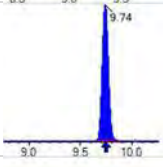
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
3:3FTCA	(241.0 / 177.0) N/A (241.0 / 117.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
5:3FTCA	(341.0 / 236.7) 2980 (341.0 / 217.0) 4355	(6.84 , 1.10) (N/A , -0.01 , -0.1)	92.5 20.2	1.4615 85.6 89.3	0.1018	N/A			
7:3FTCA	(441.0 / 317.0) 3090 (441.0 / 337.0) 1693	(8.67 , 1.40) (N/A , 0.00 , 0.8)	13.3 284.4	0.5480 66.4 68.9	0.0820	N/A			
PFEESA	(315.0 / 135.0) N/A (315.0 / 83.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFMPA	(229.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFMBA	(279.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NFDHA	(201.0 / 85.0) N/A (295.0 / 201.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
13C3_PFBA_IIS	(216.0 / 172.0) 82076	(3.75 , N/A) (N/A , -0.02 , N/A)	816.1	N/A	0.8538 [1.0000]	85.4% { 93.8% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 137643	(6.20 , N/A) (N/A , -0.01 , N/A)	674.0	N/A	1.1147 [1.0000]	111.5% { 106.1% }			
13C4_PFOA_IIS	(417.0 / 372.0) 138182	(7.95 , N/A) (N/A , 0.00 , N/A)	689.0	N/A	1.1656 [1.0000]	116.6% { 113.8% }			
13C5_PFNA_IIS	(468.0 / 423.0) 108999	(8.69 , N/A) (N/A , 0.00 , N/A)	774.4	N/A	1.1445 [1.0000]	114.4% { 111.0% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-03
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (20)
Acquired: 2022/12/10 - 02:55

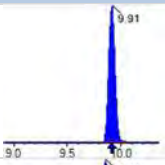
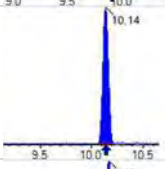
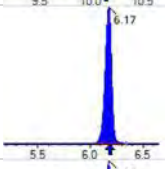
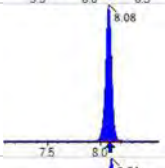
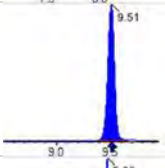
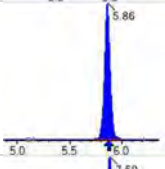
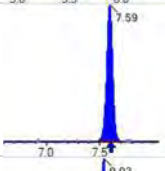
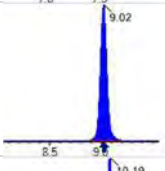
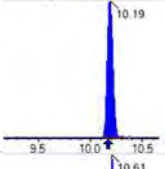
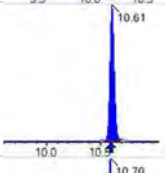
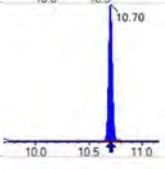
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDA_IIS	(515.1 / 470.1) 113707	(9.37 , N/A) (N/A , 0.00 , N/A)	256.3	N/A	1.3802 [1.0000]	138.0% { 126.2% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 242208	(8.08 , N/A) (N/A , -0.01 , N/A)	1078.8	N/A	1.1285 [1.0000]	112.8% { 115.6% }			
13C4_PFOS_IIS	(502.8 / 79.9) 250892	(9.51 , N/A) (N/A , 0.00 , N/A)	619.3	N/A	1.3480 [1.0000]	134.8% { 131.3% }			
13C4_PFBA_EIS	(217.0 / 172.0) 630159	(3.74 , N/A) (N/A , -0.02 , N/A)	1107.7	N/A	8.1893 [8.0000]	102.4% { 96.2% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 365717	(5.07 , N/A) (N/A , -0.02 , N/A)	894.2	N/A	3.6424 [4.0000]	91.1% { 105.2% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 273328	(6.20 , N/A) (N/A , -0.01 , N/A)	654.9	N/A	1.9468 [2.0000]	97.3% { 104.2% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 265552	(7.13 , N/A) (N/A , 0.00 , N/A)	614.1	N/A	2.0955 [2.0000]	104.8% { 107.1% }			
13C8_PFOA_EIS	(421.0 / 376.0) 280867	(7.95 , N/A) (N/A , -0.01 , N/A)	480.4	N/A	1.9984 [2.0000]	99.9% { 107.7% }			
13C9_PFNA_EIS	(472.0 / 427.0) 121480	(8.69 , N/A) (N/A , -0.01 , N/A)	466.5	N/A	1.1294 [1.0000]	112.9% { 145.8% }			
13C6_PFDA_EIS	(519.0 / 474.0) 160930	(9.37 , N/A) (N/A , -0.01 , N/A)	291.3	N/A	0.9744 [1.0000]	97.4% { 138.4% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 204379	(9.74 , N/A) (N/A , 0.00 , N/A)	315.8	N/A	0.9219 [1.0000]	92.2% { 101.6% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

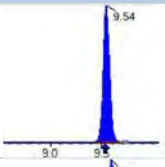
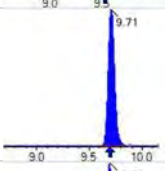
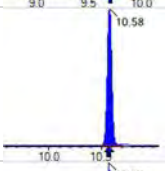
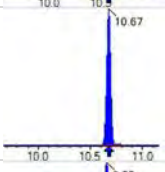
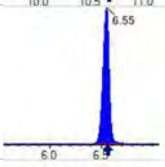
Sample I.D.: 22L0004-03
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (20)
Acquired: 2022/12/10 - 02:55

Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDoA_EIS	(615.0 / 570.0) 176656	(9.91 , N/A) (N/A , 0.00 , N/A)	342.1	N/A	0.6566 [1.0000]	65.7% { 91.4% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 115458	(10.14 , N/A) (N/A , 0.00 , N/A)	358.6	N/A	0.5845 [1.0000]	58.5% { 88.9% }			
13C3_PFBS_EIS	(302.0 / 80.0) 672901	(6.17 , N/A) (N/A , -0.01 , N/A)	692.8	N/A	1.8904 [2.0000]	94.5% { 101.6% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 399852	(8.08 , N/A) (N/A , -0.01 , N/A)	837.9	N/A	1.9734 [2.0000]	98.7% { 113.3% }			
13C8_PFOS_EIS	(507.0 / 80.0) 645094	(9.51 , N/A) (N/A , 0.00 , N/A)	438.3	N/A	1.6867 [2.0000]	84.3% { 107.6% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 94607	(5.86 , N/A) (N/A , -0.01 , N/A)	594.5	N/A	4.7124 [4.0000]	117.8% { 132.2% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 112997	(7.59 , N/A) (N/A , 0.00 , N/A)	506.0	N/A	4.1953 [4.0000]	104.9% { 125.6% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 99509	(9.02 , N/A) (N/A , 0.00 , N/A)	976.7	N/A	4.2565 [4.0000]	106.4% { 114.8% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 649114	(10.19 , N/A) (N/A , 0.01 , N/A)	622.8	N/A	1.1117 [2.0000]	55.6% { 74.0% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 129021	(10.61 , N/A) (N/A , 0.00 , N/A)	569.4	N/A	0.7467 [2.0000]	37.3% { 54.1% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 121007	(10.70 , N/A) (N/A , 0.00 , N/A)	851.3	N/A	0.7724 [2.0000]	38.6% { 53.2% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0004-03 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09B (20)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/10 - 02:55

Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
D3_MeFOSAA_EIS	(573.0 / 419.0) 355909	(9.54 , N/A) (N/A , 0.00 , N/A)	645.0	N/A	4.1826 [4.0000]	104.6% { 131.3% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 288892	(9.71 , N/A) (N/A , 0.00 , N/A)	249.7	N/A	3.9501 [4.0000]	98.8% { 131.1% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 248347	(10.58 , N/A) (N/A , 0.01 , N/A)	723.0	N/A	8.4153 [20.0000]	42.1% { 52.2% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 140375	(10.67 , N/A) (N/A , 0.01 , N/A)	1154.7	N/A	9.3353 [20.0000]	46.7% { 59.2% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 671572	(6.55 , N/A) (N/A , -0.01 , N/A)	920.0	N/A	7.2630 [8.0000]	90.8% { 100.1% }			

FORM IR
ANALYSIS DATA SHEETR

MW-24-S3-112922-

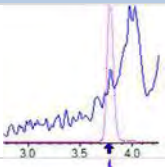
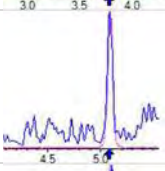
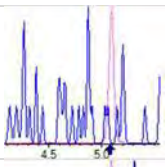
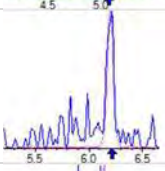
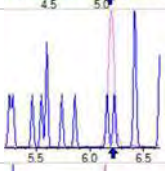
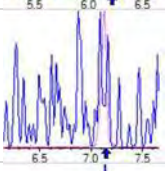
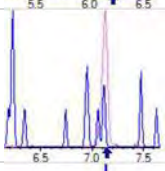
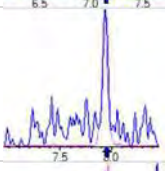
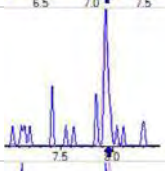
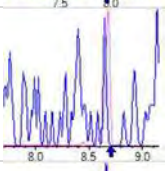
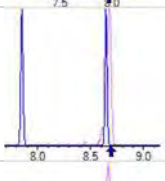
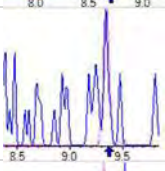
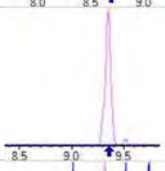
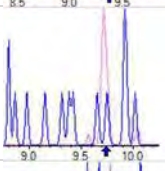
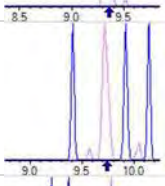
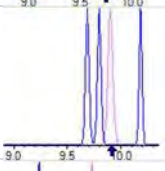
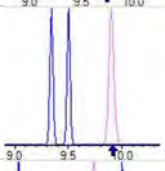
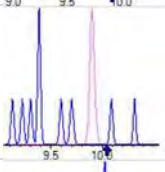
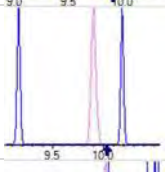
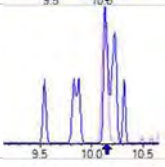
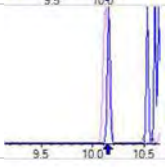
Laboratory:-	APPL, LLC-			Work Order:-	22L0004-
Client:-	Tidewater, Inc.-			Project:-	NASA JPL SI-
Matrix:-	Water-	Laboratory ID:-	22L0004-03RE1-	File ID:-	S2022-12-09B (21)-
Sampled:-	11/29/22 09:35-	Prepared:-	12/05/22 07:17-	Analyzed:-	12/10/22 03:08-
Solids:-		Preparation:-	Table B-15-	Dilution:-	10-
Initial/Final:-	293.05 mL / 2 mL-			Instrument:-	Saphira-
Batch:-	BBL0076-	Sequence:-	SB03769-	Calibration:-	2250016-

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-03RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (21)
Acquired: 2022/12/10 - 03:08

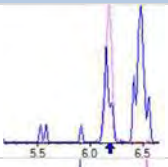
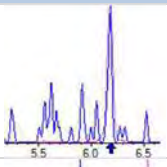
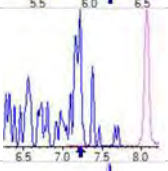
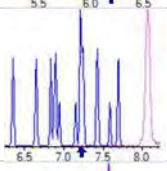
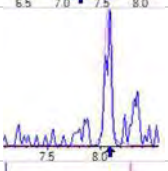
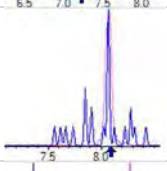
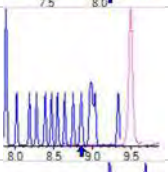
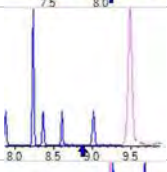
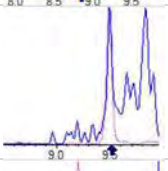
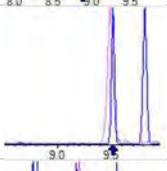
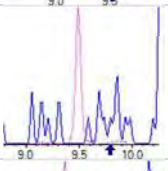
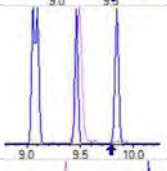
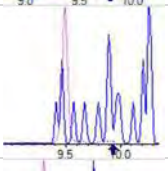
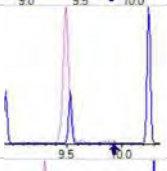
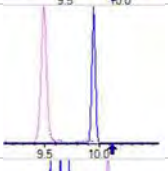
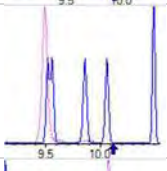
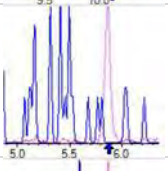
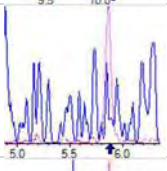
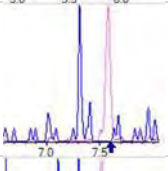
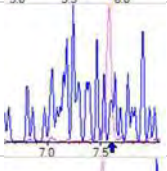
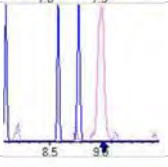
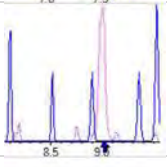
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(212.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFPeA	(262.9 / 219.0) N/A (262.9 / 69.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHxA	(313.0 / 269.0) N/A (313.0 / 119.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHpA	(363.0 / 319.0) N/A (363.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFOA	(413.0 / 369.0) N/A (413.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFNA	(463.0 / 419.0) N/A (463.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDA	(513.0 / 469.0) N/A (513.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFUnA	(563.0 / 519.0) N/A (563.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoA	(613.0 / 569.0) N/A (613.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTrDA	(663.0 / 619.0) N/A (663.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTeDA	(713.0 / 669.0) N/A (713.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-03RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (21)
Acquired: 2022/12/10 - 03:08

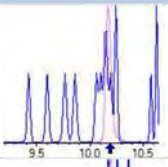
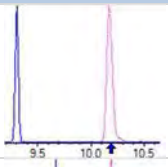
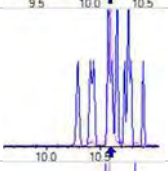
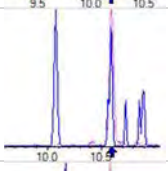
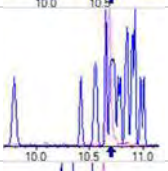
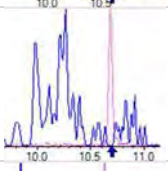
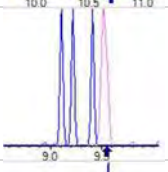
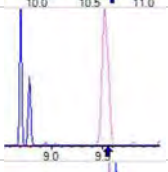
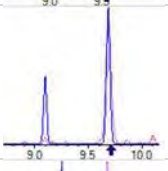
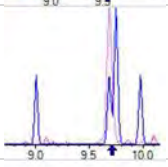
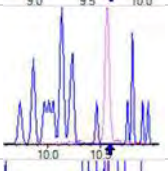
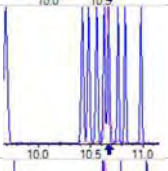
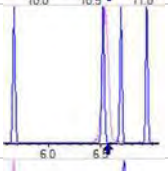
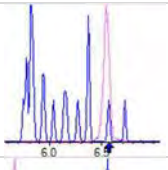
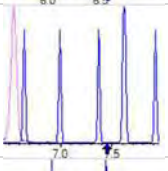
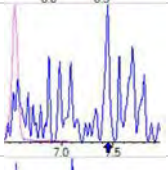
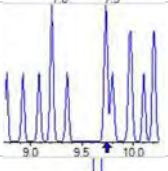
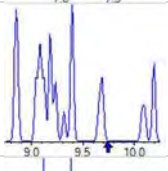
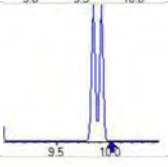
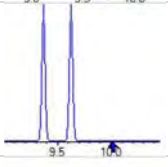
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) N/A (298.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFPeS	(349.0 / 80.0) N/A (349.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHxS	(399.0 / 80.0) N/A (399.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHpS	(449.0 / 80.0) N/A (449.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFOS	(499.0 / 80.0) N/A (499.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFNS	(549.0 / 80.0) N/A (549.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDS	(599.0 / 80.0) N/A (599.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoS	(698.9 / 80.0) N/A (698.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
4:2FTS	(327.0 / 307.0) N/A (327.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
6:2FTS	(427.0 / 407.0) N/A (427.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
8:2FTS	(527.0 / 507.0) N/A (527.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-03RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (21)
Acquired: 2022/12/10 - 03:08

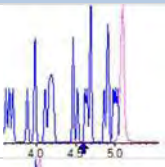
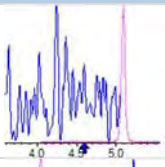
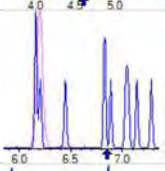
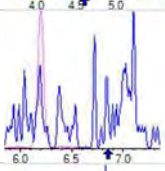
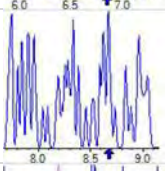
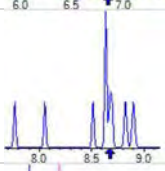
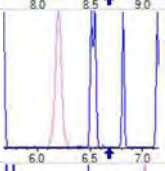
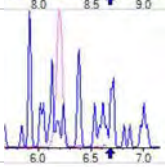
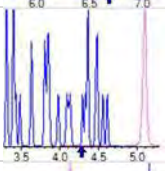
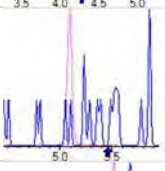
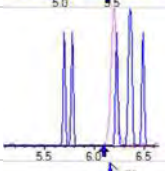
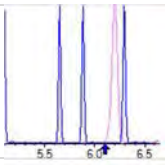
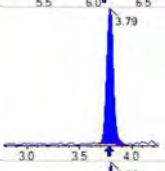
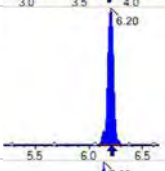
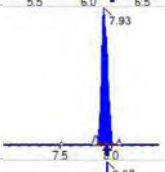
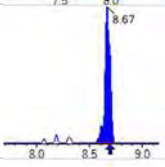
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) N/A (498.0 / 478.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSA	(511.9 / 219.0) N/A (511.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSA	(526.0 / 219.0) N/A (526.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSAA	(570.0 / 419.0) N/A (570.0 / 483.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSAA	(584.0 / 419.0) N/A (584.0 / 526.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSE	(616.1 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSE	(630.0 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
HFPO-DA	(285.0 / 169.0) N/A (285.0 / 185.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
ADONA	(377.0 / 85.0) N/A (377.0 / 251.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
9Cl-Pf3ONS	(531.0 / 351.0) N/A (533.0 / 353.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
11Cl-PF3OUDS	(631.0 / 451.0) N/A (633.0 / 453.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-03RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (21)
Acquired: 2022/12/10 - 03:08

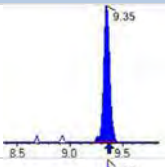
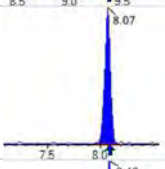
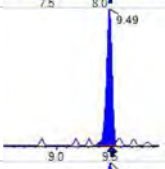
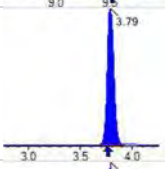
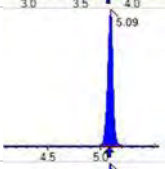
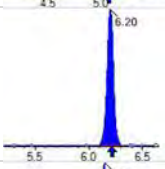
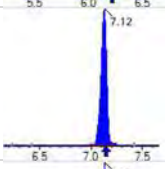
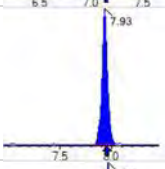
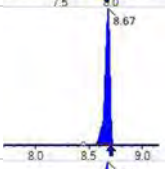
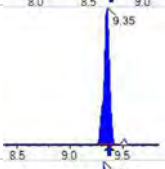
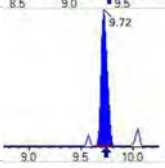
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
3:3FTCA	(241.0 / 177.0) N/A (241.0 / 117.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
5:3FTCA	(341.0 / 236.7) N/A (341.0 / 217.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
7:3FTCA	(441.0 / 317.0) N/A (441.0 / 337.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFEESA	(315.0 / 135.0) N/A (315.0 / 83.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFMPA	(229.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFMBA	(279.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NFDHA	(201.0 / 85.0) N/A (295.0 / 201.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
13C3_PFBA_IIS	(216.0 / 172.0) 8421	(3.79 , N/A) (N/A , 0.02 , N/A)	265.9	N/A	0.8760 [1.0000]	87.6% { 9.6% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 12948	(6.20 , N/A) (N/A , -0.01 , N/A)	261.3	N/A	1.0486 [1.0000]	104.9% { 10.0% }			
13C4_PFOA_IIS	(417.0 / 372.0) 13099	(7.93 , N/A) (N/A , -0.02 , N/A)	479.7	N/A	1.1049 [1.0000]	110.5% { 10.8% }			
13C5_PFNA_IIS	(468.0 / 423.0) 9468	(8.67 , N/A) (N/A , -0.02 , N/A)	234.9	N/A	0.9942 [1.0000]	99.4% { 9.6% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-03RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (21)
Acquired: 2022/12/10 - 03:08

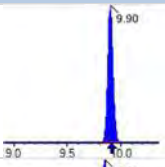
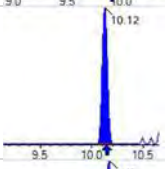
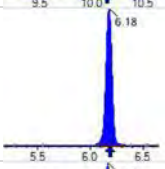
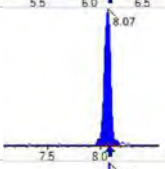
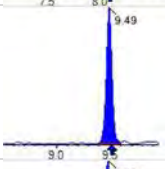
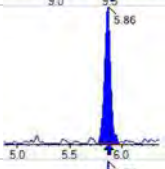
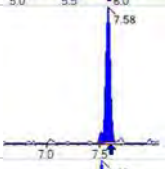
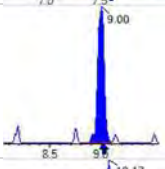
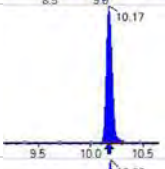
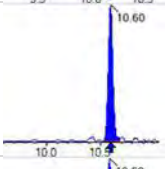
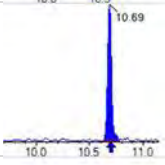
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDA_IIS	(515.1 / 470.1) 11365	(9.35 , N/A) (N/A , -0.02 , N/A)	239.2	N/A	1.3795 [1.0000]	137.9% { 12.6% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 22251	(8.07 , N/A) (N/A , -0.02 , N/A)	303.4	N/A	1.0367 [1.0000]	103.7% { 10.6% }			
13C4_PFOS_IIS	(502.8 / 79.9) 18351	(9.49 , N/A) (N/A , -0.02 , N/A)	70.7	N/A	0.9859 [1.0000]	98.6% { 9.6% }			
13C4_PFBA_EIS	(217.0 / 172.0) 64576	(3.79 , N/A) (N/A , 0.02 , N/A)	822.8	N/A	0.8180 [0.8000]	102.2% { 9.9% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 35467	(5.09 , N/A) (N/A , 0.01 , N/A)	498.6	N/A	0.3755 [0.4000]	93.9% { 10.2% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 29874	(6.20 , N/A) (N/A , -0.01 , N/A)	314.3	N/A	0.2262 [0.2000]	113.1% { 11.4% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 26631	(7.12 , N/A) (N/A , -0.01 , N/A)	378.1	N/A	0.2234 [0.2000]	111.7% { 10.7% }			
13C8_PFOA_EIS	(421.0 / 376.0) 27341	(7.93 , N/A) (N/A , -0.02 , N/A)	447.7	N/A	0.2052 [0.2000]	102.6% { 10.5% }			
13C9_PFNA_EIS	(472.0 / 427.0) 12034	(8.67 , N/A) (N/A , -0.02 , N/A)	5038.6	N/A	0.1288 [0.1000]	128.8% { 14.4% }			
13C6_PFDA_EIS	(519.0 / 474.0) 11911	(9.35 , N/A) (N/A , -0.02 , N/A)	3195.9	N/A	0.0722 [0.1000]	72.2% { 10.2% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 13259	(9.72 , N/A) (N/A , -0.02 , N/A)	151.8	N/A	0.0598 [0.1000]	59.8% { 6.6% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-03RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (21)
Acquired: 2022/12/10 - 03:08

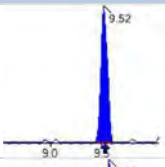
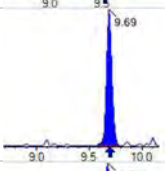
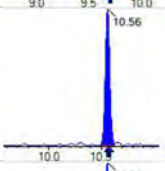
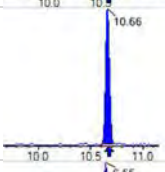
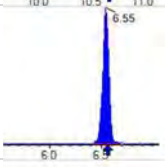
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDoA_EIS	(615.0 / 570.0) 19430	(9.90 , N/A) (N/A , -0.01 , N/A)	588.1	N/A	0.0723 [0.1000]	72.3% { 10.1% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 10136	(10.12 , N/A) (N/A , -0.01 , N/A)	193.5	N/A	0.0513 [0.1000]	51.3% { 7.8% }			
13C3_PFBS_EIS	(302.0 / 80.0) 65103	(6.18 , N/A) (N/A , 0.00 , N/A)	368.8	N/A	0.1991 [0.2000]	99.5% { 9.8% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 39575	(8.07 , N/A) (N/A , -0.02 , N/A)	423.0	N/A	0.2126 [0.2000]	106.3% { 11.2% }			
13C8_PFOS_EIS	(507.0 / 80.0) 59034	(9.49 , N/A) (N/A , -0.02 , N/A)	225.2	N/A	0.2110 [0.2000]	105.5% { 9.8% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 8393	(5.86 , N/A) (N/A , -0.01 , N/A)	105.9	N/A	0.4551 [0.4000]	113.8% { 11.7% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 10250	(7.58 , N/A) (N/A , -0.02 , N/A)	164.7	N/A	0.4142 [0.4000]	103.6% { 11.4% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 9040	(9.00 , N/A) (N/A , -0.03 , N/A)	92.4	N/A	0.4209 [0.4000]	105.2% { 10.4% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 65279	(10.17 , N/A) (N/A , -0.01 , N/A)	369.6	N/A	0.1529 [0.2000]	76.4% { 7.4% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 13365	(10.60 , N/A) (N/A , -0.01 , N/A)	151.6	N/A	0.1058 [0.2000]	52.9% { 5.6% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 11753	(10.69 , N/A) (N/A , -0.01 , N/A)	188.7	N/A	0.1026 [0.2000]	51.3% { 5.2% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-03RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (21)
Acquired: 2022/12/10 - 03:08

Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
D3_MeFOSAA_EIS	(573.0 / 419.0) 26220	(9.52 , N/A) (N/A , -0.02 , N/A)	322.2	N/A	0.4213 [0.4000]	105.3% { 9.7% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 30918	(9.69 , N/A) (N/A , -0.02 , N/A)	125.5	N/A	0.5780 [0.4000]	144.5% { 14.0% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 27278	(10.56 , N/A) (N/A , -0.01 , N/A)	222.8	N/A	1.2637 [2.0000]	63.2% { 5.7% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 15131	(10.66 , N/A) (N/A , -0.01 , N/A)	288.4	N/A	1.3758 [2.0000]	68.8% { 6.4% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 67188	(6.55 , N/A) (N/A , -0.01 , N/A)	577.1	N/A	0.7724 [0.8000]	96.6% { 10.0% }			

FORM IR
ANALYSIS DATA SHEETR

MW-24-S2-112922-

Laboratory:	APPL, LLC-			Work Order:	22L0004-
Client:	Tidewater, Inc.-			Project:	NASA JPL SI-
Matrix:	Water-	Laboratory ID:	22L0004-04-	File ID:	S2022-12-09B (22)-
Sampled:	11/29/22 10:00-	Prepared:	12/05/22 07:17	Analyzed:	12/10/22 03:21
Solids:		Preparation:	Table B-15-	Dilution:	1-
Initial/Final:	294.04 mL / 2 mL-			Instrument:	Saphira
Batch:	BBL0076-	Sequence:	SB03769	Calibration:	2250016

COMPOUNDR	CONC. (ng/L)	LOQ	LODR	DL	Q
PFBA-	1.4 J-	2.7	0.17	0.043	
PFPEA-	2.3-	1.4	0.17	0.053	
PFHXA-	1.5-	0.68	0.17	0.054	
PFHPA-	0.70-	0.68	0.17	0.043	
PFOA-	0.68 J-	0.68	0.17	0.070	
PFNA-	0.17 U-	0.68	0.17	0.043	
PFDA-	0.17 U-	0.68	0.17	0.043	
PFUnA-	0.17 U-	0.68	0.17	0.068	
PFDOA-	0.17 U-	0.68	0.17	0.043	
PFTRDA-	0.17 U-	0.68	0.17	0.049	
PFTEDA-	0.17 U-	0.68	0.17	0.073	
PFBS-	0.84-	0.68	0.17	0.043	
PFPES-	0.62 J-	0.68	0.17	0.049	
PFHXS-	2.3-	0.68	0.17	0.043	
PFHPS-	0.17 U-	0.68	0.17	0.048	
PFOS-	0.33 J-	0.68-	0.17	0.043	MI4,
PFNS-	0.34 U-	0.68	0.34	0.21	
PFDS-	0.17 U-	0.68	0.17	0.054	
4:2FTS-	0.34 U-	2.7	0.34	0.092	
6:2FTS-	0.17 U-	2.7	0.17	0.077	
8:2FTS-	0.51 U-	2.7	0.51	0.17	
PFOSA-	0.17 U-	2.7	0.17	0.043	
NMeFOSA-	1.7 U-	2.7	1.7	0.84	
NEtFOSA-	1.7 U-	2.7	1.7	0.84	
NMeFOSAA-	0.17 U-	0.68	0.17	0.061	
NEtFOSAA-	0.17 U-	0.68	0.17	0.043	
NMeFOSE-	1.0 U-	2.7	1.0	0.51	
NEtFOSE-	1.0 U-	2.7	1.0	0.51	
HFPO-DA-	0.85 U-	1.4	0.85	0.42	
ADONA-	0.51 U-	1.4	0.51	0.22	

FORM IR
ANALYSIS DATA SHEETR

MW-24-S2-112922-

Laboratory:	APPL, LLC-			Work Order:	22L0004-
Client:	Tidewater, Inc.-			Project:	NASA JPL SI-
Matrix:	Water-	Laboratory ID:	22L0004-04-	File ID:	S2022-12-09B (22)-
Sampled:	11/29/22 10:00-	Prepared:	12/05/22 07:17-	Analyzed:	12/10/22 03:21-
Solids:		Preparation:	Table B-15-	Dilution:	1-
Initial/Final:	294.04 mL / 2 mL-			Instrument:	Saphira-
Batch:	BBL0076-	Sequence:	SB03769-	Calibration:	2250016-

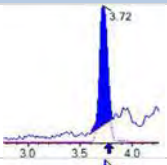
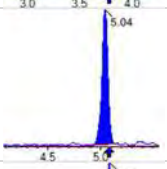
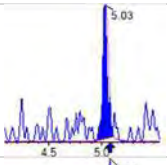
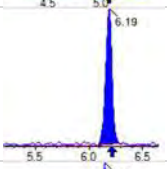
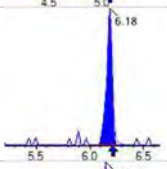
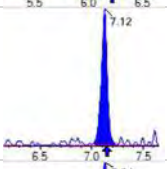
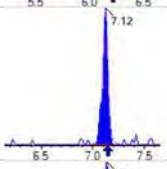
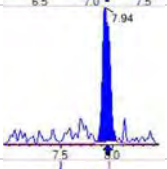
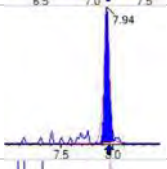
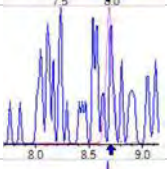
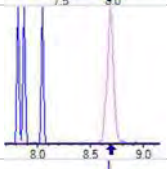
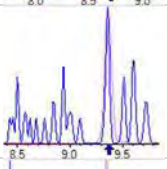
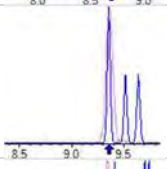
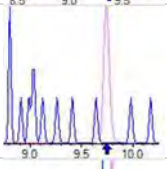
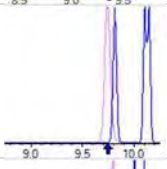
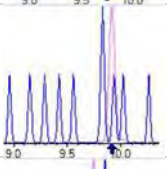
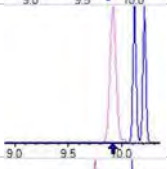
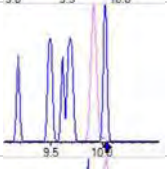
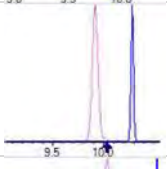
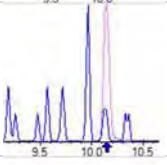
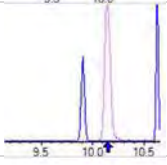
COMPOUNDR	CONC. (ng/L)R	LOQ	LODR	DLR	Q
9CL-PF3ONS-	0.51 U-	1.4-	0.51-	0.20-	
11CL-PF3OUDS-	0.51 U-	1.4-	0.51-	0.20-	

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-04
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (22)
Acquired: 2022/12/10 - 03:21

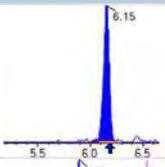
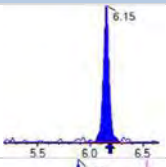
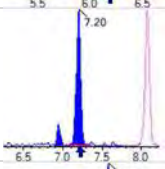
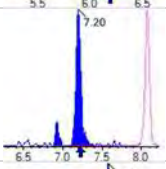
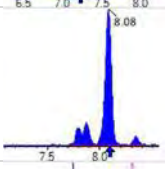
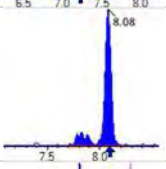
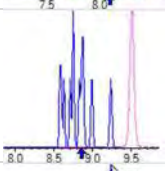
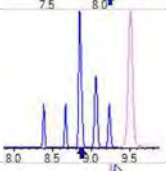
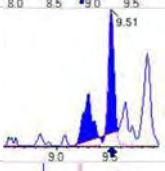
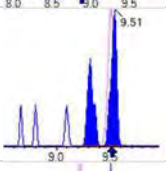
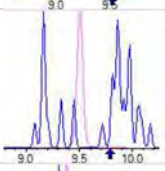
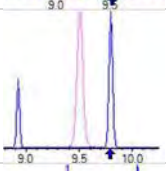
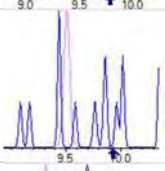
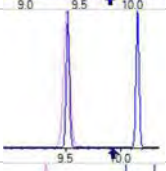
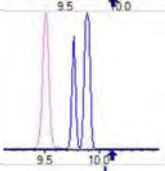
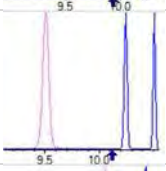
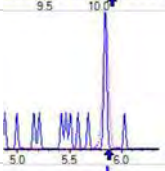
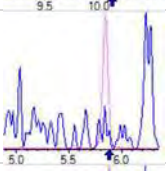
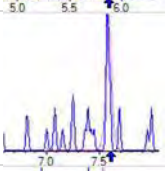
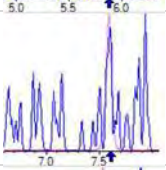
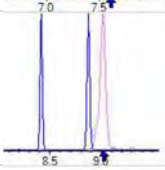
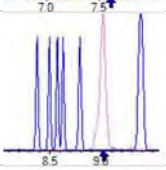
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(212.9 / 169.0) 14500	(3.72 , 1.00) (0.00 , N/A , 0.0)	32.0	N/A 0.0 0.0	0.2037	N/A			
PFPeA	(262.9 / 219.0) 30633 (262.9 / 69.0) 415	(5.04 , 1.00) (0.00 , N/A , 0.8)	192.1 17.3	0.0135 116.2 122.3	0.3346	N/A			
PFHxA	(313.0 / 269.0) 35470 (313.0 / 119.0) 3561	(6.19 , 1.00) (0.00 , N/A , 0.1)	175.1 95.3	0.1004 111.7 102.5	0.2141	N/A			
PFHpA	(363.0 / 319.0) 14523 (363.0 / 169.0) 5265	(7.12 , 1.00) (0.00 , N/A , 0.0)	72.3 108.4	0.3625 126.4 128.3	0.1033	N/A			
PFOA	(413.0 / 369.0) 14842 (413.0 / 169.0) 3753	(7.94 , 1.00) (0.00 , N/A , 0.1)	39.1 62.8	0.2529 78.2 78.1	0.0996	N/A			
PFNA	(463.0 / 419.0) N/A (463.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDA	(513.0 / 469.0) N/A (513.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFUnA	(563.0 / 519.0) N/A (563.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoA	(613.0 / 569.0) N/A (613.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTrDA	(663.0 / 619.0) N/A (663.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTeDA	(713.0 / 669.0) N/A (713.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-04
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (22)
Acquired: 2022/12/10 - 03:21

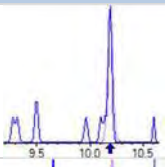
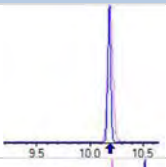
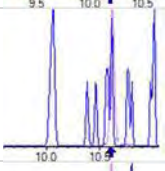
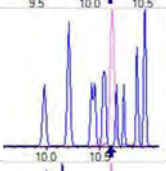
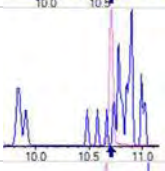
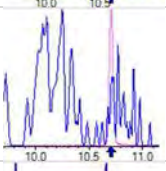
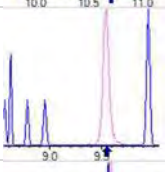
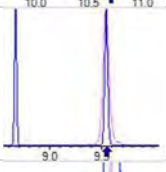
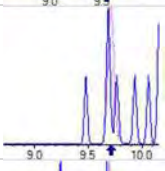
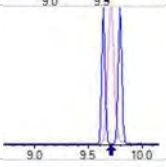
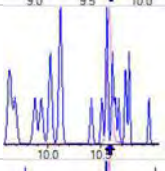
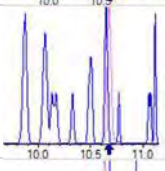
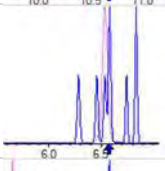
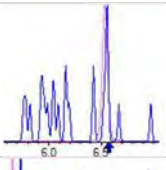
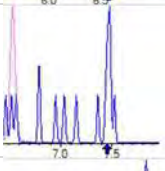
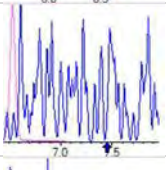
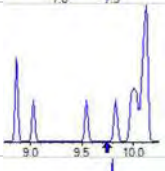
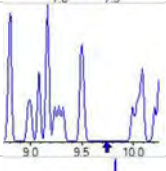
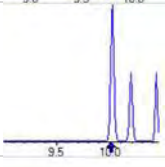
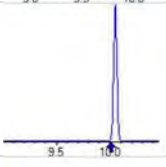
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) 27361 (298.9 / 99.0) 18038	(6.15 , 1.00) (0.00 , N/A , 0.3)	194.7 131.6	0.6593 97.3 97.4	0.1232	N/A			
PFPeS	(349.0 / 80.0) 34987 (349.0 / 99.0) 14481	(7.20 , 0.89) (N/A , -0.02 , 0.3)	118.2 77.7	0.4139 113.5 123.2	0.0913	N/A			MI4 ABK 12/29/22
PFHxS	(399.0 / 80.0) 114771 (399.0 / 99.0) 39439	(8.08 , 1.00) (0.00 , N/A , 0.2)	2518.4 1940.3	0.3436 99.7 104.1	0.3378	N/A			
PFHpS	(449.0 / 80.0) N/A (449.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFOS	(499.0 / 80.0) 19623 (499.0 / 99.0) 2690	(9.51 , 1.00) (0.00 , N/A , 0.0)	21.2 20.2	0.1371 53.2 57.9	0.0480	N/A			MI4 ABK 12/29/22
PFNS	(549.0 / 80.0) N/A (549.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDS	(599.0 / 80.0) N/A (599.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoS	(698.9 / 80.0) N/A (698.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
4:2FTS	(327.0 / 307.0) N/A (327.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
6:2FTS	(427.0 / 407.0) N/A (427.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
8:2FTS	(527.0 / 507.0) N/A (527.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-04
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (22)
Acquired: 2022/12/10 - 03:21

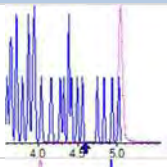
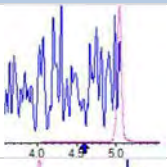
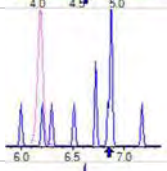
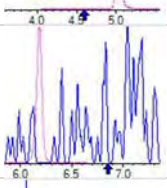
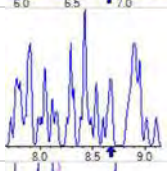
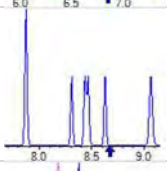
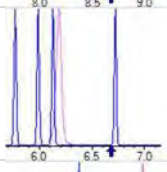
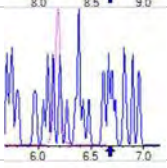
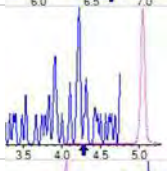
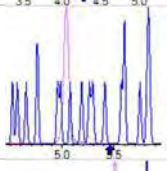
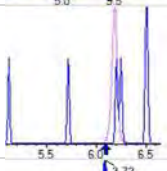
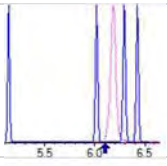
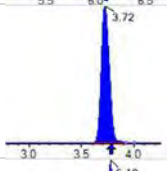
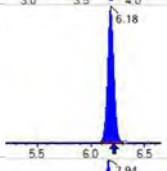
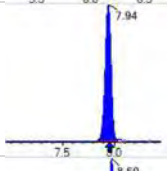
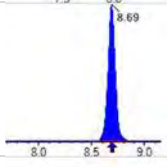
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) N/A (498.0 / 478.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSA	(511.9 / 219.0) N/A (511.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSA	(526.0 / 219.0) N/A (526.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSAA	(570.0 / 419.0) N/A (570.0 / 483.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSAA	(584.0 / 419.0) N/A (584.0 / 526.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSE	(616.1 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSE	(630.0 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
HFPO-DA	(285.0 / 169.0) N/A (285.0 / 185.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
ADONA	(377.0 / 85.0) N/A (377.0 / 251.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
9Cl-Pf3ONS	(531.0 / 351.0) N/A (533.0 / 353.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
11Cl-PF3OUDS	(631.0 / 451.0) N/A (633.0 / 453.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-04
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (22)
Acquired: 2022/12/10 - 03:21

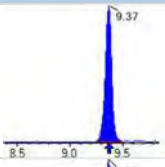
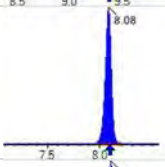
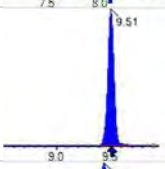
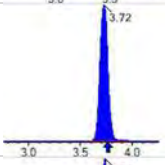
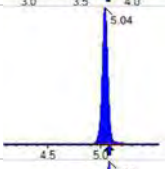
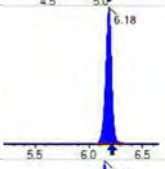
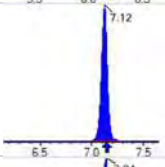
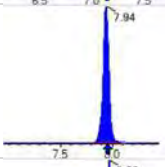
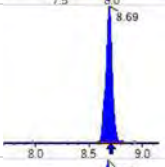
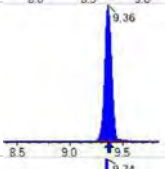
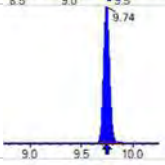
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
3:3FTCA	(241.0 / 177.0) N/A (241.0 / 117.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
5:3FTCA	(341.0 / 236.7) N/A (341.0 / 217.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
7:3FTCA	(441.0 / 317.0) N/A (441.0 / 337.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFEESA	(315.0 / 135.0) N/A (315.0 / 83.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFMPA	(229.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFMBA	(279.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NFDHA	(201.0 / 85.0) N/A (295.0 / 201.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
13C3_PFBA_IIS	(216.0 / 172.0) 103811	(3.72 , N/A) (N/A , -0.05 , N/A)	823.5	N/A	1.0799 [1.0000]	108.0% { 118.6% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 144958	(6.18 , N/A) (N/A , -0.03 , N/A)	763.9	N/A	1.1739 [1.0000]	117.4% { 111.8% }			
13C4_PFOA_IIS	(417.0 / 372.0) 135540	(7.94 , N/A) (N/A , -0.01 , N/A)	662.7	N/A	1.1433 [1.0000]	114.3% { 111.6% }			
13C5_PFNA_IIS	(468.0 / 423.0) 99888	(8.69 , N/A) (N/A , -0.01 , N/A)	427.4	N/A	1.0488 [1.0000]	104.9% { 101.7% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-04
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (22)
Acquired: 2022/12/10 - 03:21

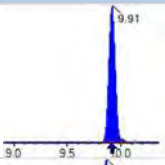
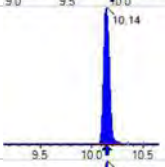
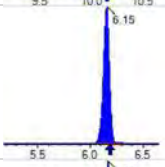
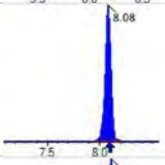
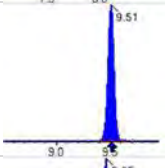
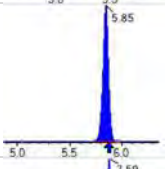
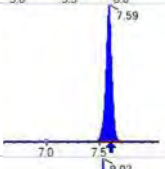
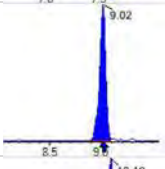
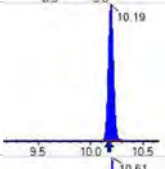
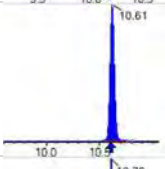
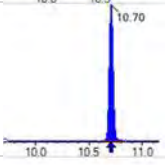
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDA_IIS	(515.1 / 470.1) 109281	(9.37 , N/A) (N/A , 0.00 , N/A)	306.5	N/A	1.3265 [1.0000]	132.6% { 121.2% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 240787	(8.08 , N/A) (N/A , -0.01 , N/A)	595.3	N/A	1.1219 [1.0000]	112.2% { 114.9% }			
13C4_PFOS_IIS	(502.8 / 79.9) 251347	(9.51 , N/A) (N/A , 0.00 , N/A)	399.3	N/A	1.3504 [1.0000]	135.0% { 131.6% }			
13C4_PFBA_EIS	(217.0 / 172.0) 747899	(3.72 , N/A) (N/A , -0.04 , N/A)	893.1	N/A	7.6844 [8.0000]	96.1% { 114.2% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 380978	(5.04 , N/A) (N/A , -0.04 , N/A)	763.8	N/A	3.6029 [4.0000]	90.1% { 109.6% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 328810	(6.18 , N/A) (N/A , -0.03 , N/A)	680.0	N/A	2.2238 [2.0000]	111.2% { 125.3% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 277584	(7.12 , N/A) (N/A , -0.02 , N/A)	759.9	N/A	2.0799 [2.0000]	104.0% { 111.9% }			
13C8_PFOA_EIS	(421.0 / 376.0) 289200	(7.94 , N/A) (N/A , -0.01 , N/A)	650.2	N/A	2.0978 [2.0000]	104.9% { 110.9% }			
13C9_PFNA_EIS	(472.0 / 427.0) 115870	(8.69 , N/A) (N/A , -0.01 , N/A)	443.9	N/A	1.1755 [1.0000]	117.5% { 139.1% }			
13C6_PFDA_EIS	(519.0 / 474.0) 144464	(9.36 , N/A) (N/A , -0.01 , N/A)	264.0	N/A	0.9101 [1.0000]	91.0% { 124.2% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 234843	(9.74 , N/A) (N/A , 0.00 , N/A)	495.8	N/A	1.1022 [1.0000]	110.2% { 116.7% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-04
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (22)
Acquired: 2022/12/10 - 03:21

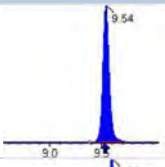
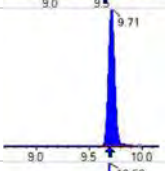
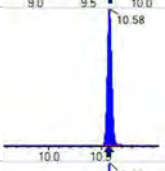
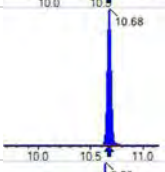
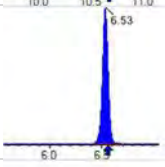
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDoA_EIS	(615.0 / 570.0) 211397	(9.91 , N/A) (N/A , 0.01 , N/A)	343.4	N/A	0.8175 [1.0000]	81.7% { 109.4% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 157931	(10.14 , N/A) (N/A , 0.00 , N/A)	370.4	N/A	0.8320 [1.0000]	83.2% { 121.7% }			
13C3_PFBS_EIS	(302.0 / 80.0) 727666	(6.15 , N/A) (N/A , -0.03 , N/A)	927.4	N/A	2.0563 [2.0000]	102.8% { 109.9% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 405314	(8.08 , N/A) (N/A , -0.01 , N/A)	925.6	N/A	2.0121 [2.0000]	100.6% { 114.8% }			
13C8_PFOS_EIS	(507.0 / 80.0) 727864	(9.51 , N/A) (N/A , 0.00 , N/A)	623.6	N/A	1.8996 [2.0000]	95.0% { 121.4% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 95553	(5.85 , N/A) (N/A , -0.03 , N/A)	606.9	N/A	4.7877 [4.0000]	119.7% { 133.5% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 108243	(7.59 , N/A) (N/A , -0.01 , N/A)	554.6	N/A	4.0425 [4.0000]	101.1% { 120.4% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 85995	(9.02 , N/A) (N/A , -0.01 , N/A)	398.9	N/A	3.7001 [4.0000]	92.5% { 99.2% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 811135	(10.19 , N/A) (N/A , 0.01 , N/A)	729.4	N/A	1.3867 [2.0000]	69.3% { 92.4% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 143932	(10.61 , N/A) (N/A , 0.01 , N/A)	621.6	N/A	0.8315 [2.0000]	41.6% { 60.4% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 123340	(10.70 , N/A) (N/A , 0.01 , N/A)	696.6	N/A	0.7859 [2.0000]	39.3% { 54.2% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-04
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (22)
Acquired: 2022/12/10 - 03:21

Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
D3_MeFOSAA_EIS	(573.0 / 419.0) 342290	(9.54 , N/A) (N/A , 0.00 , N/A)	381.3	N/A	4.0153 [4.0000]	100.4% { 126.3% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 306941	(9.71 , N/A) (N/A , 0.01 , N/A)	415.6	N/A	4.1893 [4.0000]	104.7% { 139.3% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 279556	(10.58 , N/A) (N/A , 0.01 , N/A)	980.5	N/A	9.4556 [20.0000]	47.3% { 58.8% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 156287	(10.68 , N/A) (N/A , 0.01 , N/A)	1058.5	N/A	10.3748 [20.0000]	51.9% { 65.9% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 796787	(6.53 , N/A) (N/A , -0.03 , N/A)	779.5	N/A	8.1823 [8.0000]	102.3% { 118.7% }			

FORM IR
ANALYSIS DATA SHEETR

MW-24-S2-112922-

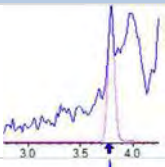
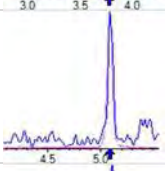
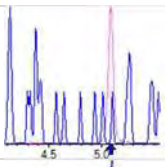
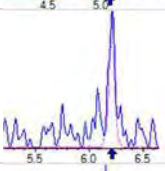
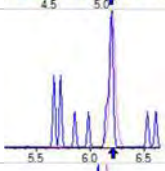
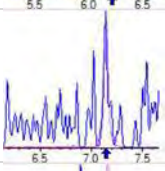
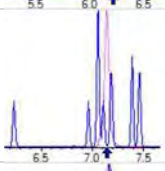
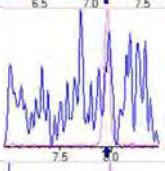
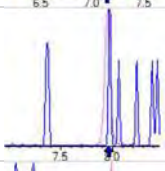
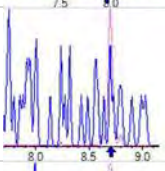
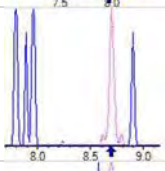
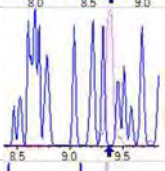
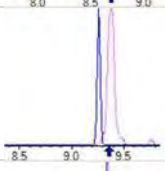
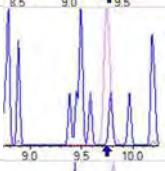
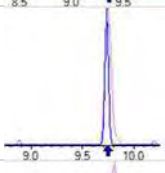
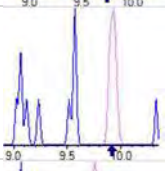
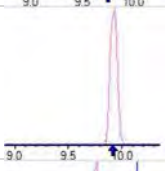
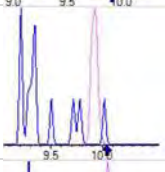
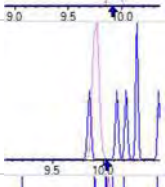
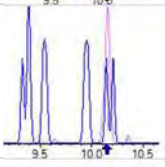
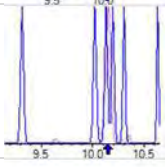
Laboratory:	APPL, LLC-			Work Order:	22L0004-
Client:	Tidewater, Inc.-			Project:	NASA JPL SI-
Matrix:	Water-	Laboratory ID:	22L0004-04RE1-	File ID:	S2022-12-09B (23)-
Sampled:	11/29/22 10:00-	Prepared:	12/05/22 07:17-	Analyzed:	12/10/22 03:33-
Solids:		Preparation:	Table B-15-	Dilution:	10-
Initial/Final:	294.04 mL / 2 mL-			Instrument:	Saphira-
Batch:	BBL0076-	Sequence:	SB03769-	Calibration:	2250016-

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-04RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (23)
Acquired: 2022/12/10 - 03:33

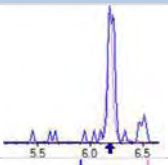
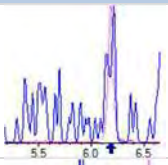
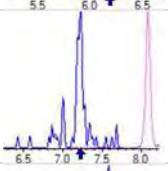
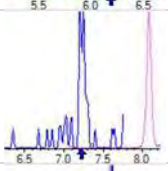
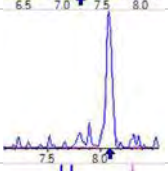
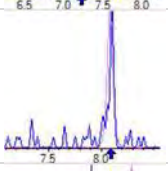
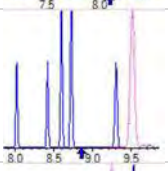
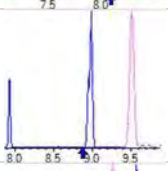
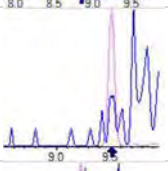
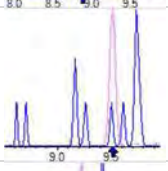
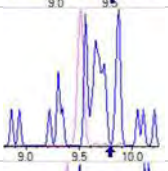
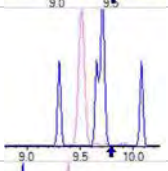
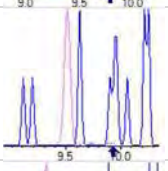
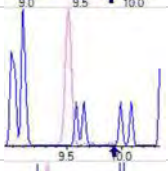
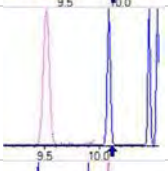
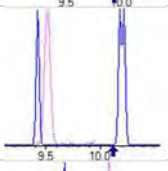
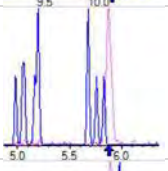
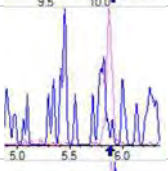
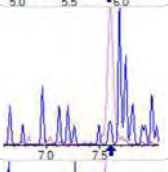
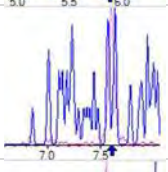
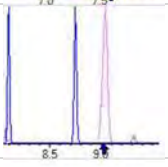
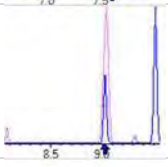
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(212.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFPeA	(262.9 / 219.0) N/A (262.9 / 69.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHxA	(313.0 / 269.0) N/A (313.0 / 119.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHpA	(363.0 / 319.0) N/A (363.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFOA	(413.0 / 369.0) N/A (413.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFNA	(463.0 / 419.0) N/A (463.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDA	(513.0 / 469.0) N/A (513.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFUnA	(563.0 / 519.0) N/A (563.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoA	(613.0 / 569.0) N/A (613.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTrDA	(663.0 / 619.0) N/A (663.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTeDA	(713.0 / 669.0) N/A (713.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-04RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (23)
Acquired: 2022/12/10 - 03:33

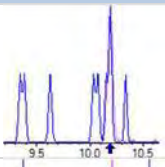
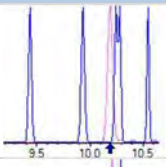
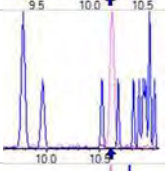
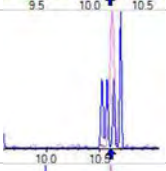
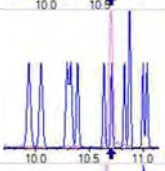
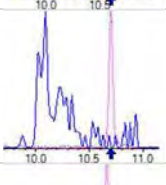
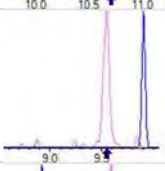
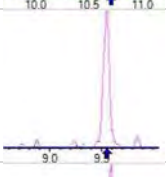
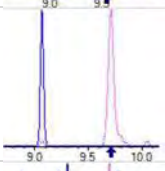
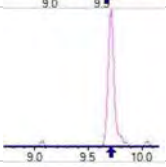
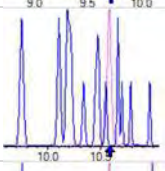
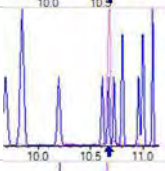
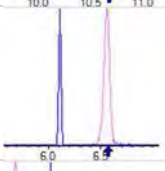
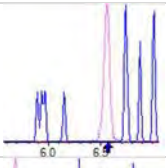
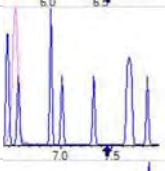
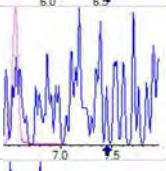
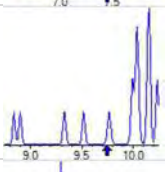
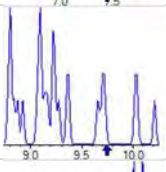
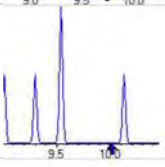
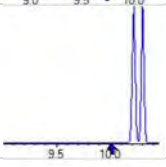
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) N/A (298.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFPeS	(349.0 / 80.0) N/A (349.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHxS	(399.0 / 80.0) N/A (399.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHpS	(449.0 / 80.0) N/A (449.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFOS	(499.0 / 80.0) N/A (499.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFNS	(549.0 / 80.0) N/A (549.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDS	(599.0 / 80.0) N/A (599.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoS	(698.9 / 80.0) N/A (698.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
4:2FTS	(327.0 / 307.0) N/A (327.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
6:2FTS	(427.0 / 407.0) N/A (427.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
8:2FTS	(527.0 / 507.0) N/A (527.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-04RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (23)
Acquired: 2022/12/10 - 03:33

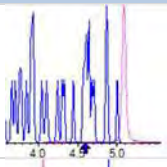
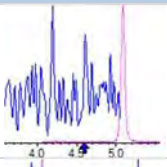
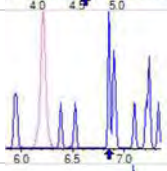
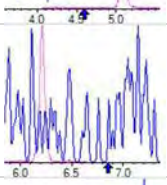
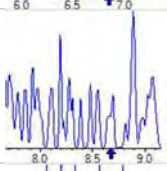
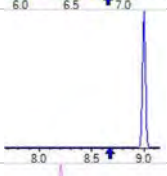
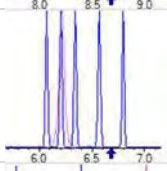
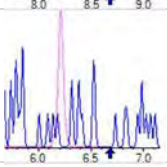
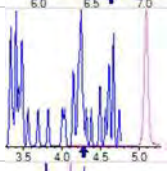
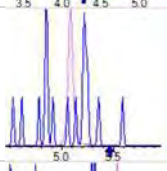
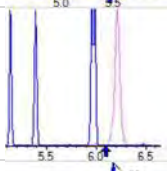
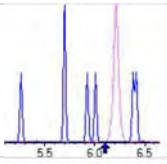
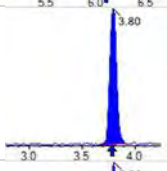
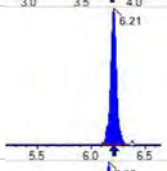
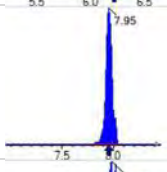
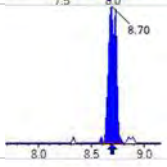
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) N/A (498.0 / 478.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSA	(511.9 / 219.0) N/A (511.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSA	(526.0 / 219.0) N/A (526.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSAA	(570.0 / 419.0) N/A (570.0 / 483.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSAA	(584.0 / 419.0) N/A (584.0 / 526.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSE	(616.1 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSE	(630.0 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
HFPO-DA	(285.0 / 169.0) N/A (285.0 / 185.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
ADONA	(377.0 / 85.0) N/A (377.0 / 251.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
9Cl-Pf3ONS	(531.0 / 351.0) N/A (533.0 / 353.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
11Cl-PF3OUDS	(631.0 / 451.0) N/A (633.0 / 453.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-04RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (23)
Acquired: 2022/12/10 - 03:33

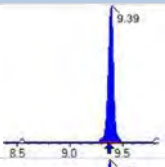
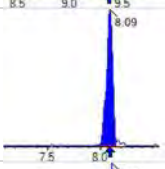
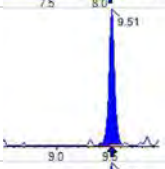
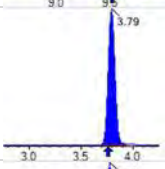
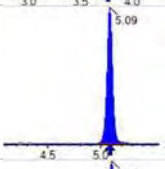
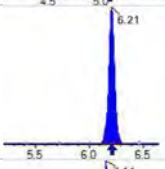
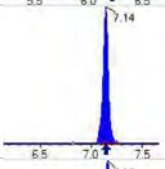
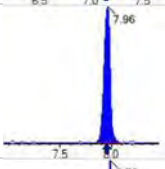
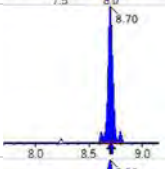
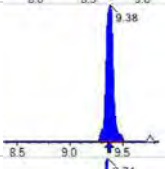
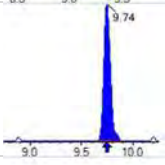
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
3:3FTCA	(241.0 / 177.0) N/A (241.0 / 117.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
5:3FTCA	(341.0 / 236.7) N/A (341.0 / 217.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
7:3FTCA	(441.0 / 317.0) N/A (441.0 / 337.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFEESA	(315.0 / 135.0) N/A (315.0 / 83.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFMPA	(229.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFMBA	(279.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NFDHA	(201.0 / 85.0) N/A (295.0 / 201.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
13C3_PFBA_IIS	(216.0 / 172.0) 9025	(3.80 , N/A) (N/A , 0.03 , N/A)	298.9	N/A	0.9389 [1.0000]	93.9% { 10.3% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 14220	(6.21 , N/A) (N/A , 0.00 , N/A)	975.7	N/A	1.1516 [1.0000]	115.2% { 11.0% }			
13C4_PFOA_IIS	(417.0 / 372.0) 14521	(7.95 , N/A) (N/A , 0.00 , N/A)	1126.9	N/A	1.2249 [1.0000]	122.5% { 12.0% }			
13C5_PFNA_IIS	(468.0 / 423.0) 11304	(8.70 , N/A) (N/A , 0.00 , N/A)	194.0	N/A	1.1869 [1.0000]	118.7% { 11.5% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-04RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (23)
Acquired: 2022/12/10 - 03:33

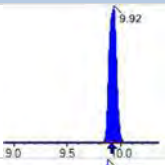
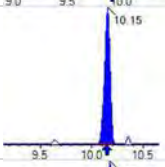
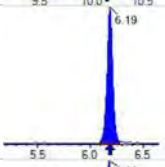
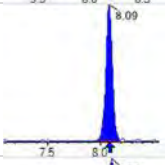
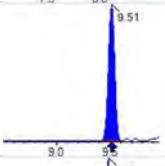
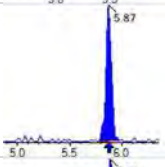
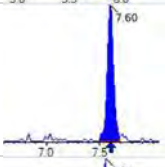
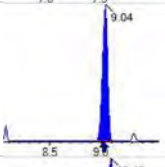
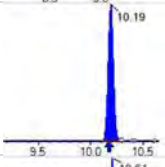
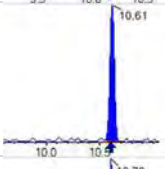
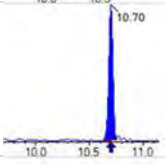
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDA_IIS	(515.1 / 470.1) 14123	(9.39 , N/A) (N/A , 0.02 , N/A)	280.9	N/A	1.7143 [1.0000]	171.4% { 15.7% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 24570	(8.09 , N/A) (N/A , 0.00 , N/A)	334.5	N/A	1.1447 [1.0000]	114.5% { 11.7% }			
13C4_PFOS_IIS	(502.8 / 79.9) 21581	(9.51 , N/A) (N/A , 0.01 , N/A)	103.7	N/A	1.1595 [1.0000]	116.0% { 11.3% }			
13C4_PFBA_EIS	(217.0 / 172.0) 65341	(3.79 , N/A) (N/A , 0.03 , N/A)	826.8	N/A	0.7722 [0.8000]	96.5% { 10.0% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 40960	(5.09 , N/A) (N/A , 0.00 , N/A)	554.7	N/A	0.3949 [0.4000]	98.7% { 11.8% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 30366	(6.21 , N/A) (N/A , 0.00 , N/A)	419.1	N/A	0.2094 [0.2000]	104.7% { 11.6% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 29476	(7.14 , N/A) (N/A , 0.00 , N/A)	2297.9	N/A	0.2251 [0.2000]	112.6% { 11.9% }			
13C8_PFOA_EIS	(421.0 / 376.0) 29096	(7.96 , N/A) (N/A , 0.00 , N/A)	322.7	N/A	0.1970 [0.2000]	98.5% { 11.2% }			
13C9_PFNA_EIS	(472.0 / 427.0) 11070	(8.70 , N/A) (N/A , 0.00 , N/A)	773.2	N/A	0.0992 [0.1000]	99.2% { 13.3% }			
13C6_PFDA_EIS	(519.0 / 474.0) 14986	(9.38 , N/A) (N/A , 0.00 , N/A)	446.9	N/A	0.0731 [0.1000]	73.1% { 12.9% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 18313	(9.74 , N/A) (N/A , 0.00 , N/A)	265.1	N/A	0.0665 [0.1000]	66.5% { 9.1% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-04RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (23)
Acquired: 2022/12/10 - 03:33

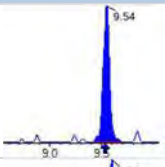
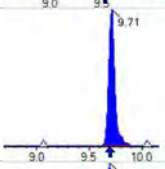
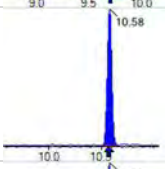
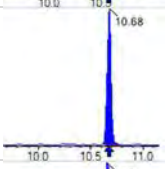
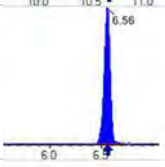
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDoA_EIS	(615.0 / 570.0) 21687	(9.92 , N/A) (N/A , 0.01 , N/A)	116.0	N/A	0.0649 [0.1000]	64.9% { 11.2% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 14719	(10.15 , N/A) (N/A , 0.01 , N/A)	526.7	N/A	0.0600 [0.1000]	60.0% { 11.3% }			
13C3_PFBS_EIS	(302.0 / 80.0) 68566	(6.19 , N/A) (N/A , 0.00 , N/A)	413.7	N/A	0.1899 [0.2000]	94.9% { 10.4% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 35927	(8.09 , N/A) (N/A , 0.00 , N/A)	375.3	N/A	0.1748 [0.2000]	87.4% { 10.2% }			
13C8_PFOS_EIS	(507.0 / 80.0) 64153	(9.51 , N/A) (N/A , 0.00 , N/A)	177.5	N/A	0.1950 [0.2000]	97.5% { 10.7% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 7415	(5.87 , N/A) (N/A , 0.00 , N/A)	134.9	N/A	0.3641 [0.4000]	91.0% { 10.4% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 12037	(7.60 , N/A) (N/A , 0.00 , N/A)	105.1	N/A	0.4405 [0.4000]	110.1% { 13.4% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 7885	(9.04 , N/A) (N/A , 0.01 , N/A)	3325.1	N/A	0.3325 [0.4000]	83.1% { 9.1% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 63375	(10.19 , N/A) (N/A , 0.01 , N/A)	213.8	N/A	0.1262 [0.2000]	63.1% { 7.2% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 13064	(10.61 , N/A) (N/A , 0.01 , N/A)	147.6	N/A	0.0879 [0.2000]	43.9% { 5.5% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 11453	(10.70 , N/A) (N/A , 0.00 , N/A)	221.3	N/A	0.0850 [0.2000]	42.5% { 5.0% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-04RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (23)
Acquired: 2022/12/10 - 03:33

Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
D3_MeFOSAA_EIS	(573.0 / 419.0) 21143	(9.54 , N/A) (N/A , 0.01 , N/A)	95.3	N/A	0.2889 [0.4000]	72.2% { 7.8% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 26172	(9.71 , N/A) (N/A , 0.01 , N/A)	225.3	N/A	0.4160 [0.4000]	104.0% { 11.9% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 31843	(10.58 , N/A) (N/A , 0.01 , N/A)	366.1	N/A	1.2544 [2.0000]	62.7% { 6.7% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 16395	(10.68 , N/A) (N/A , 0.01 , N/A)	366.3	N/A	1.2675 [2.0000]	63.4% { 6.9% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 79023	(6.56 , N/A) (N/A , 0.00 , N/A)	527.6	N/A	0.8272 [0.8000]	103.4% { 11.8% }			

FORM IR
ANALYSIS DATA SHEETR

DUP-2-112922P

Laboratory:P	AP L, LLC			Work Order:P	22L0004P
Client:P	Tidewater, Inc.P			roject:	NASA JPL SIP
Matrix:P	WaterP	Laboratory ID:P	22L0004-05P	File ID:	S2022-12-09B (24)P
Sampled:P	11/29/22 10:10P	repared:P	12/05/22 07:17	Analyzed:	12/10/22 03:46
Solids:P		reparation:P	Table B-15P	Dilution:P	1P
Initial/Final:P	297.09 mL / 2 mLP			Instrument:	Saphira
Batch:P	BBL0076P	Sequence:P	SB03769	Calibration:P	2250016

COMPOUNDR	CONC. (ng/L)	LOQ	LODR	DL	Q
FBAP	1.3 JP	2.7	0.17	0.042	
FPEAP	2.4P	1.3	0.17	0.052	
FHXAP	1.3P	0.67	0.17	0.054	
PFHPAP	0.70P	0.67	0.17	0.042	
FOAP	0.83P	0.67P	0.17	0.069	MI4
FNAP	0.17 UP	0.67	0.17	0.042	
FDAP	0.17 UP	0.67	0.17	0.042	
FUnAP	0.17 UP	0.67	0.17	0.067	
FDOAP	0.17 UP	0.67	0.17	0.042	
FTRDAP	0.17 UP	0.67	0.17	0.049	
FTEDAP	0.17 UP	0.67	0.17	0.072	
FBSP	0.65 JP	0.67	0.17	0.042	
FPESP	0.66 JP	0.67	0.17	0.049	
FHXSP	2.2P	0.67	0.17	0.042	
FHPSP	0.17 UP	0.67	0.17	0.047	
FOSP	0.55 JP	0.67P	0.17	0.042	MI4,
FNSP	0.34 UP	0.67	0.34	0.21	
FDSP	0.17 UP	0.67	0.17	0.054	
4:2FTSP	0.34 UP	2.7	0.34	0.091	
6:2FTSP	0.17 UP	2.7	0.17	0.076	
8:2FTSP	0.50 UP	2.7	0.50	0.17	
FOSAP	0.17 UP	2.7	0.17	0.042	
NMeFOSAP	1.7 UP	2.7	1.7	0.83	
NEtFOSAP	1.7 UP	2.7	1.7	0.83	
NMeFOSAAP	0.17 UP	0.67	0.17	0.061	
NEtFOSAAP	0.17 UP	0.67	0.17	0.042	
NMeFOSEP	1.0 UP	2.7	1.0	0.50	
NEtFOSEP	1.0 UP	2.7	1.0	0.50	
HFPO-DAP	0.84 UP	1.3	0.84	0.41	
ADONAP	0.50 UP	1.3	0.50	0.22	

FORM IR
ANALYSIS DATA SHEETR

DUP-2-112922P

Laboratory:P	AP L, LLC			Work Order:P	22L0004P
Client:P	Tidewater, Inc.P			roject:P	NASA JPL SIP
Matrix:P	WaterP	Laboratory ID:P	22L0004-05P	File ID:	S2022-12-09B (24)P
Sampled:P	11/29/22 10:10P	repared:P	12/05/22 07:17P	Analyzed:	12/10/22 03:46P
Solids:P		reparation:P	Table B-15P	Dilution:P	1P
Initial/Final:P	297.09 mL / 2 mLP			Instrument:	SaphiraP
Batch:P	BBL0076P	Sequence:P	SB03769P	Calibration:P	2250016P

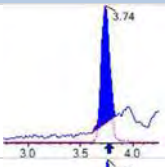
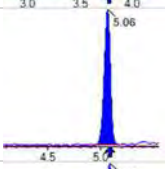
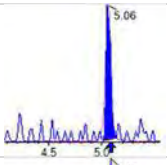
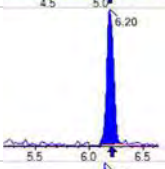
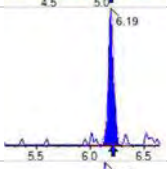
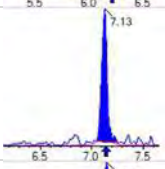
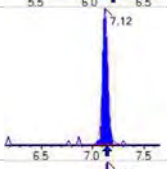
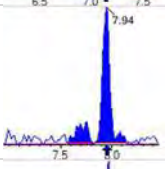
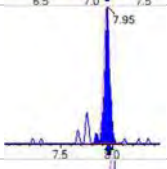
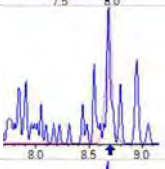
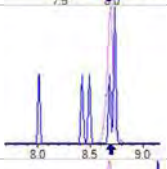
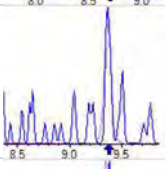
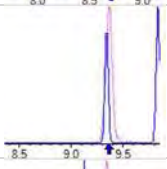
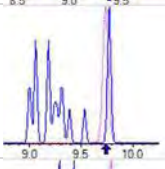
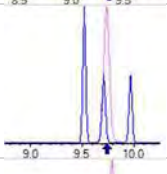
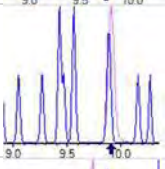
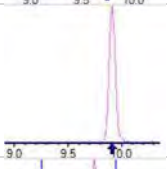
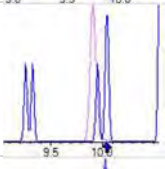
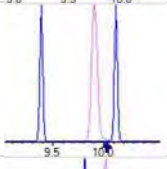
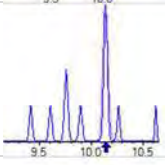
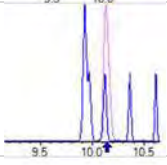
COMPOUNDR	CONC. (ng/L)R	LOQ	LODR	DLR	Q
9CL-PF3ONSP	0.50 UP	1.3P	0.50P	0.20P	
11CL-PF3OUDSP	0.50 UP	1.3P	0.50P	0.20P	

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-05
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (24)
Acquired: 2022/12/10 - 03:46

Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(212.9 / 169.0) 14713	(3.74 , 1.00) (0.00 , N/A , 0.0)	36.2	N/A 0.0 0.0	0.1986	N/A			
PFPeA	(262.9 / 219.0) 38886 (262.9 / 69.0) 541	(5.06 , 1.00) (0.00 , N/A , 0.2)	257.6 26.3	0.0139 119.4 125.7	0.3536	N/A			
PFHxA	(313.0 / 269.0) 33645 (313.0 / 119.0) 3435	(6.20 , 1.00) (0.00 , N/A , 0.3)	115.5 63.7	0.1021 113.6 104.3	0.1896	N/A			
PFHpA	(363.0 / 319.0) 15971 (363.0 / 169.0) 6384	(7.13 , 1.00) (0.00 , N/A , 0.4)	83.1 203.2	0.3997 139.3 141.4	0.1042	N/A			
PFOA	(413.0 / 369.0) 21975 (413.0 / 169.0) 5430	(7.94 , 1.00) (0.00 , N/A , -0.3)	75.2 74.8	0.2471 76.4 76.3	0.1227	N/A			MI4 ABK 12/29/22
PFNA	(463.0 / 419.0) N/A (463.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDA	(513.0 / 469.0) N/A (513.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFUnA	(563.0 / 519.0) N/A (563.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoA	(613.0 / 569.0) N/A (613.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTrDA	(663.0 / 619.0) N/A (663.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTeDA	(713.0 / 669.0) N/A (713.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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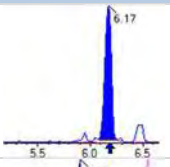
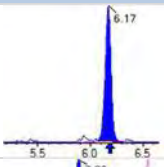
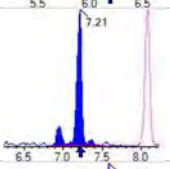
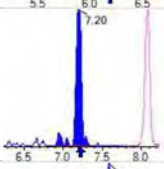
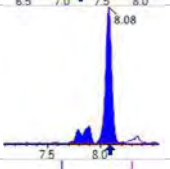
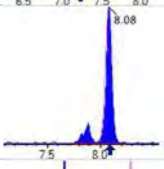
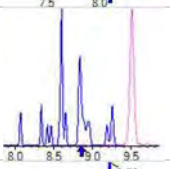
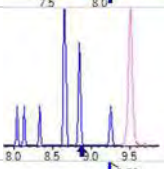
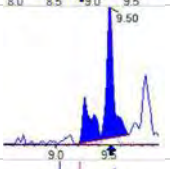
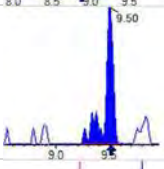
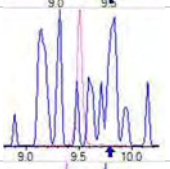
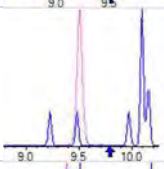
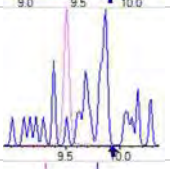
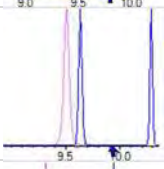
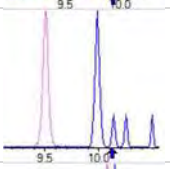
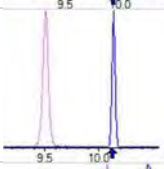
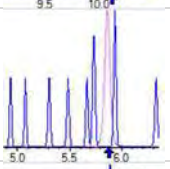
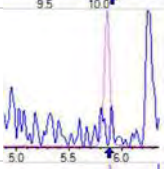
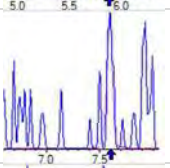
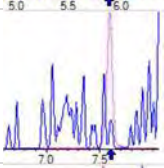
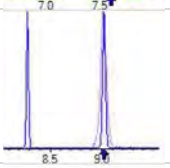
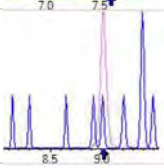
Chemist: ABK | Sample I.D.: 22L0004-05 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09B (24)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/10 - 03:46

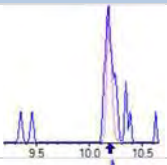
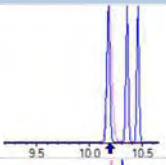
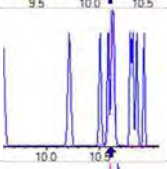
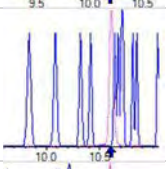
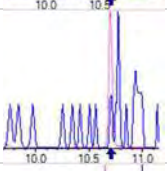
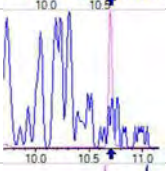
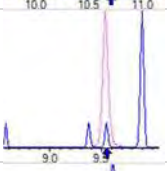
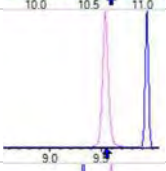
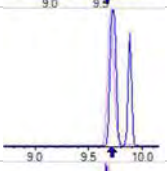
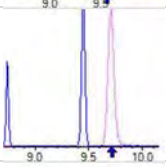
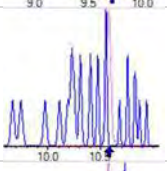
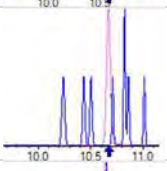
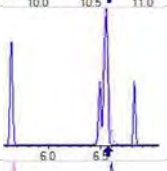
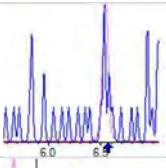
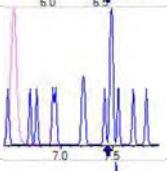
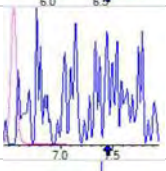
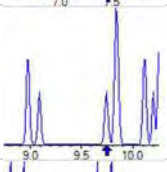
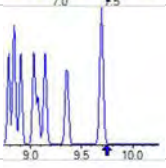
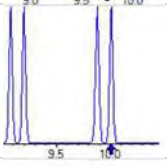
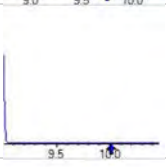
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) 24421 (298.9 / 99.0) 20337	(6.17 , 1.00) (0.00 , N/A , -0.1)	116.0 193.1	0.8328 122.9 123.0	0.0964	N/A			
PFPeS	(349.0 / 80.0) 41581 (349.0 / 99.0) 15030	(7.21 , 0.89) (N/A , -0.01 , 0.5)	330.9 58617.3	0.3615 99.1 107.6	0.0986	N/A			
PFHxS	(399.0 / 80.0) 119551 (399.0 / 99.0) 35239	(8.08 , 1.00) (0.00 , N/A , -0.2)	689.9 155108.9	0.2948 85.5 89.3	0.3197	N/A			MI4 ABK 12/29/22
PFHpS	(449.0 / 80.0) N/A (449.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFOS	(499.0 / 80.0) 39239 (499.0 / 99.0) 6155	(9.50 , 1.00) (-0.01 , N/A , -0.2)	24.9 1644.4	0.1568 60.9 66.3	0.0824	N/A			MI4 ABK 12/29/22
PFNS	(549.0 / 80.0) N/A (549.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDS	(599.0 / 80.0) N/A (599.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoS	(698.9 / 80.0) N/A (698.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
4:2FTS	(327.0 / 307.0) N/A (327.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
6:2FTS	(427.0 / 407.0) N/A (427.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
8:2FTS	(527.0 / 507.0) N/A (527.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-05
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (24)
Acquired: 2022/12/10 - 03:46

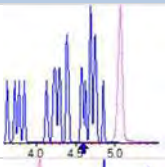
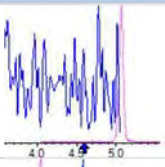
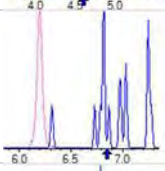
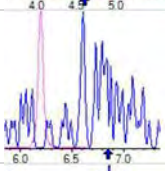
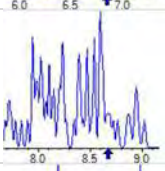
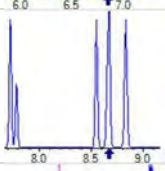
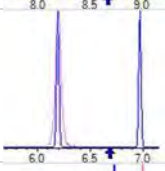
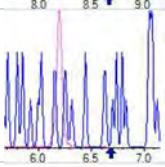
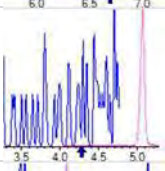
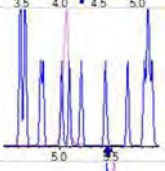
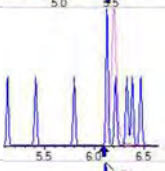
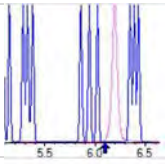
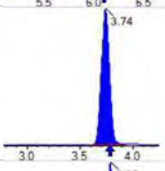
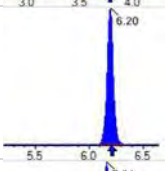
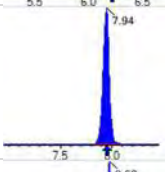
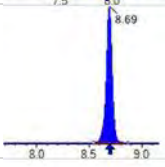
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) N/A (498.0 / 478.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSA	(511.9 / 219.0) N/A (511.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSA	(526.0 / 219.0) N/A (526.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSAA	(570.0 / 419.0) N/A (570.0 / 483.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSAA	(584.0 / 419.0) N/A (584.0 / 526.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSE	(616.1 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSE	(630.0 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
HFPO-DA	(285.0 / 169.0) N/A (285.0 / 185.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
ADONA	(377.0 / 85.0) N/A (377.0 / 251.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
9Cl-Pf3ONS	(531.0 / 351.0) N/A (533.0 / 353.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
11Cl-PF3OUDS	(631.0 / 451.0) N/A (633.0 / 453.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-05
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (24)
Acquired: 2022/12/10 - 03:46

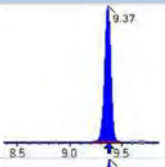
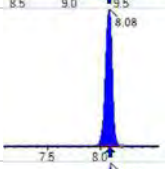
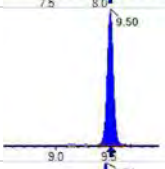
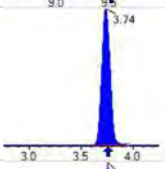
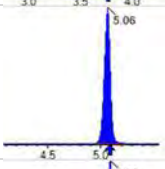
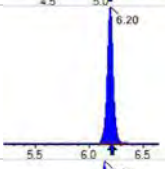
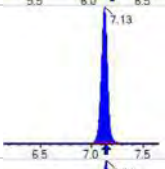
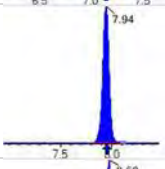
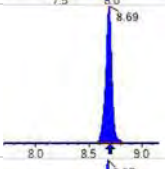
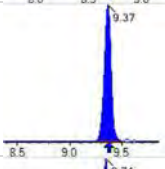
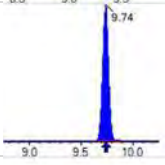
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
3:3FTCA	(241.0 / 177.0) N/A (241.0 / 117.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
5:3FTCA	(341.0 / 236.7) N/A (341.0 / 217.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
7:3FTCA	(441.0 / 317.0) N/A (441.0 / 337.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFEESA	(315.0 / 135.0) N/A (315.0 / 83.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFMPA	(229.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFMBA	(279.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NFDHA	(201.0 / 85.0) N/A (295.0 / 201.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
13C3_PFBA_IIS	(216.0 / 172.0) 96642	(3.74 , N/A) (N/A , -0.03 , N/A)	765.4	N/A	1.0054 [1.0000]	100.5% { 110.4% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 149246	(6.20 , N/A) (N/A , -0.02 , N/A)	700.2	N/A	1.2086 [1.0000]	120.9% { 115.1% }			
13C4_PFOA_IIS	(417.0 / 372.0) 143939	(7.94 , N/A) (N/A , -0.01 , N/A)	1081.7	N/A	1.2142 [1.0000]	121.4% { 118.5% }			
13C5_PFNA_IIS	(468.0 / 423.0) 130541	(8.69 , N/A) (N/A , -0.01 , N/A)	595.4	N/A	1.3707 [1.0000]	137.1% { 132.9% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-05
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (24)
Acquired: 2022/12/10 - 03:46

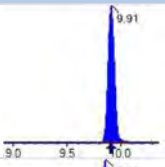
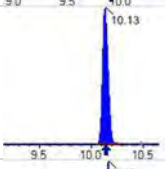
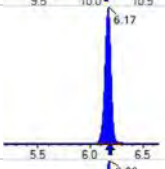
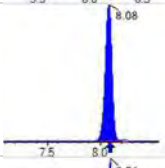
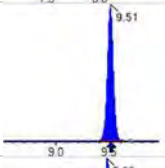
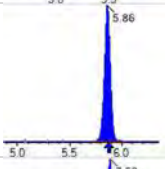
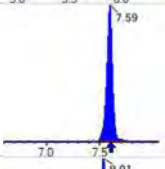
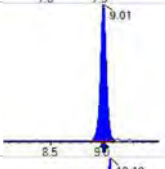
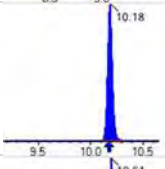
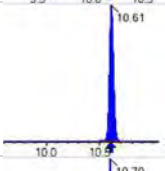
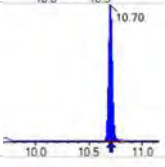
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDA_IIS	(515.1 / 470.1) 112116	(9.37 , N/A) (N/A , 0.00 , N/A)	363.0	N/A	1.3609 [1.0000]	136.1% { 124.4% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 236709	(8.08 , N/A) (N/A , -0.01 , N/A)	831.5	N/A	1.1029 [1.0000]	110.3% { 113.0% }			
13C4_PFOS_IIS	(502.8 / 79.9) 214836	(9.50 , N/A) (N/A , 0.00 , N/A)	288.4	N/A	1.1543 [1.0000]	115.4% { 112.5% }			
13C4_PFBA_EIS	(217.0 / 172.0) 778216	(3.74 , N/A) (N/A , -0.03 , N/A)	946.4	N/A	8.5891 [8.0000]	107.4% { 118.8% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 457557	(5.06 , N/A) (N/A , -0.02 , N/A)	1056.6	N/A	4.2028 [4.0000]	105.1% { 131.6% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 352129	(6.20 , N/A) (N/A , -0.02 , N/A)	1010.9	N/A	2.3131 [2.0000]	115.7% { 134.2% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 302735	(7.13 , N/A) (N/A , -0.01 , N/A)	753.5	N/A	2.2032 [2.0000]	110.2% { 122.0% }			
13C8_PFOA_EIS	(421.0 / 376.0) 347556	(7.94 , N/A) (N/A , -0.01 , N/A)	553.9	N/A	2.3739 [2.0000]	118.7% { 133.2% }			
13C9_PFNA_EIS	(472.0 / 427.0) 142461	(8.69 , N/A) (N/A , -0.01 , N/A)	623.0	N/A	1.1059 [1.0000]	110.6% { 171.0% }			
13C6_PFDA_EIS	(519.0 / 474.0) 175627	(9.37 , N/A) (N/A , -0.01 , N/A)	218.5	N/A	1.0784 [1.0000]	107.8% { 151.0% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 271208	(9.74 , N/A) (N/A , 0.00 , N/A)	585.9	N/A	1.2407 [1.0000]	124.1% { 134.8% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

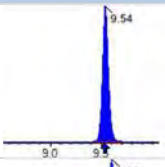
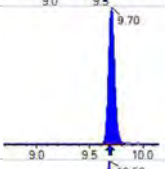
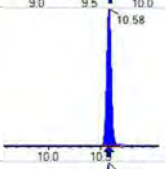
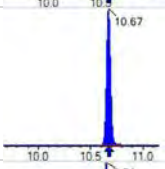
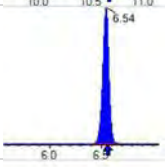
Sample I.D.: 22L0004-05
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (24)
Acquired: 2022/12/10 - 03:46

Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDoA_EIS	(615.0 / 570.0) 258248	(9.91 , N/A) (N/A , 0.00 , N/A)	383.8	N/A	0.9734 [1.0000]	97.3% { 133.6% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 183236	(10.13 , N/A) (N/A , -0.01 , N/A)	619.3	N/A	0.9409 [1.0000]	94.1% { 141.2% }			
13C3_PFBS_EIS	(302.0 / 80.0) 829796	(6.17 , N/A) (N/A , -0.01 , N/A)	790.5	N/A	2.3853 [2.0000]	119.3% { 125.3% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 446027	(8.08 , N/A) (N/A , -0.01 , N/A)	786.9	N/A	2.2524 [2.0000]	112.6% { 126.4% }			
13C8_PFOS_EIS	(507.0 / 80.0) 848782	(9.51 , N/A) (N/A , 0.00 , N/A)	613.9	N/A	2.5917 [2.0000]	129.6% { 141.6% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 106267	(5.86 , N/A) (N/A , -0.01 , N/A)	599.7	N/A	5.4162 [4.0000]	135.4% { 148.5% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 126946	(7.59 , N/A) (N/A , 0.00 , N/A)	641.1	N/A	4.8226 [4.0000]	120.6% { 141.2% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 115701	(9.01 , N/A) (N/A , -0.01 , N/A)	496.2	N/A	5.0641 [4.0000]	126.6% { 133.5% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 863163	(10.18 , N/A) (N/A , 0.00 , N/A)	593.3	N/A	1.7264 [2.0000]	86.3% { 98.4% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 139201	(10.61 , N/A) (N/A , 0.00 , N/A)	694.2	N/A	0.9409 [2.0000]	47.0% { 58.4% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 121029	(10.70 , N/A) (N/A , 0.00 , N/A)	665.5	N/A	0.9022 [2.0000]	45.1% { 53.2% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0004-05 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09B (24)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/10 - 03:46

Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
D3_MeFOSAA_EIS	(573.0 / 419.0) 383314	(9.54 , N/A) (N/A , 0.00 , N/A)	353.3	N/A	5.2607 [4.0000]	131.5% { 141.5% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 351484	(9.70 , N/A) (N/A , 0.00 , N/A)	415.3	N/A	5.6125 [4.0000]	140.3% { 159.5% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 297637	(10.58 , N/A) (N/A , 0.00 , N/A)	762.9	N/A	11.7781 [20.0000]	58.9% { 62.6% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 161167	(10.67 , N/A) (N/A , 0.00 , N/A)	1176.6	N/A	12.5169 [20.0000]	62.6% { 68.0% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 817422	(6.54 , N/A) (N/A , -0.01 , N/A)	983.3	N/A	8.1530 [8.0000]	101.9% { 121.8% }			

FORM IR
ANALYSIS DATA SHEETR

DUP-2-112922P

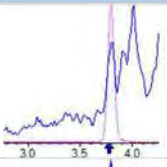
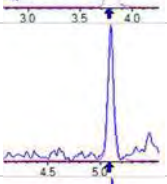
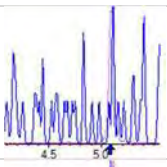
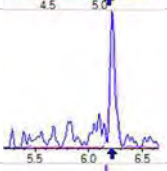
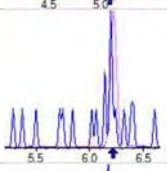
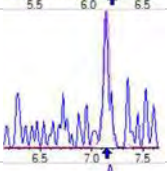
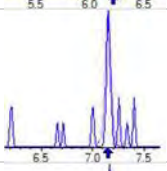
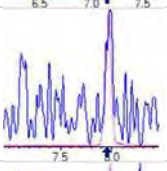
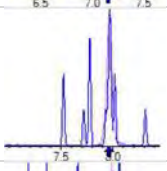
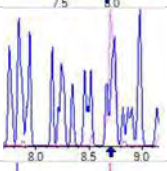
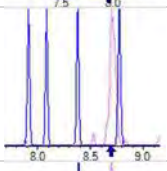
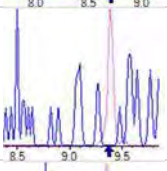
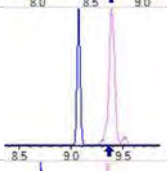
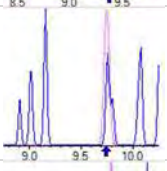
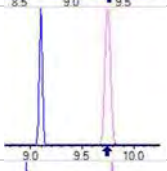
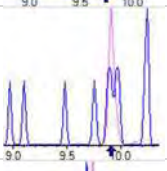
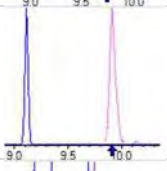
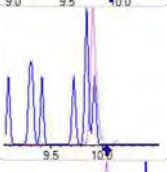
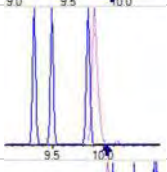
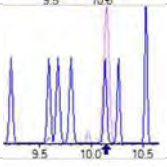
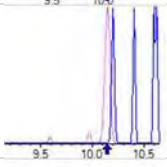
Laboratory:P	AP L, LLC			Work Order:P	22L0004P
Client:P	Tidewater, Inc.P			roject:P	NASA JPL SIP
Matrix:P	WaterP	Laboratory ID:P	22L0004-05RE1P	File ID:	S2022-12-09B (25)P
Sampled:P	11/29/22 10:10P	repared:P	12/05/22 07:17P	Analyzed:	12/10/22 03:59P
Solids:P		reparation:P	Table B-15P	Dilution:P	10P
Initial/Final:P	297.09 mL / 2 mLP			Instrument:	SaphiraP
Batch:P	BBL0076P	Sequence:P	SB03769P	Calibration:P	2250016P

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-05RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (25)
Acquired: 2022/12/10 - 03:59

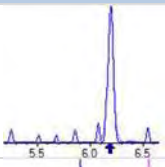
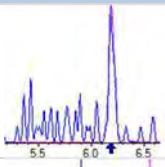
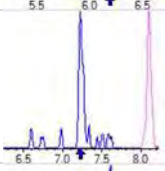
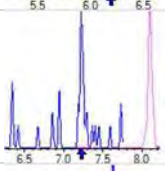
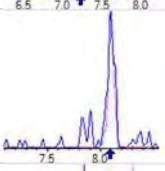
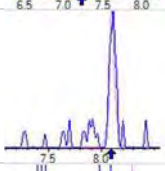
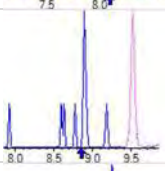
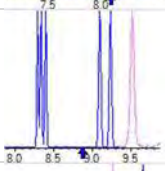
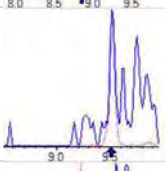
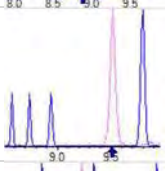
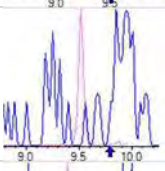
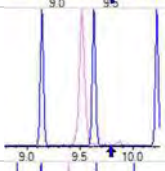
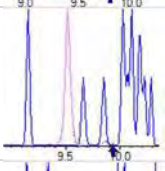
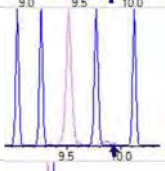
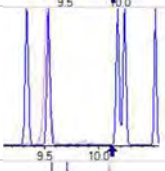
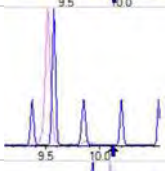
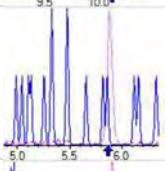
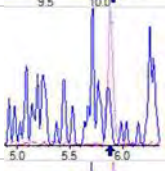
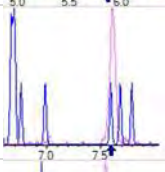
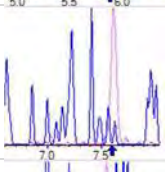
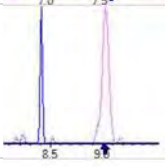
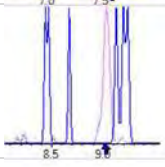
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(212.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFPeA	(262.9 / 219.0) N/A (262.9 / 69.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHxA	(313.0 / 269.0) N/A (313.0 / 119.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHpA	(363.0 / 319.0) N/A (363.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFOA	(413.0 / 369.0) N/A (413.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFNA	(463.0 / 419.0) N/A (463.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDA	(513.0 / 469.0) N/A (513.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFUnA	(563.0 / 519.0) N/A (563.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoA	(613.0 / 569.0) N/A (613.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTrDA	(663.0 / 619.0) N/A (663.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTeDA	(713.0 / 669.0) N/A (713.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-05RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (25)
Acquired: 2022/12/10 - 03:59

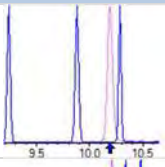
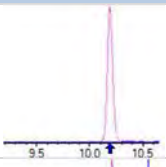
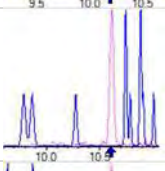
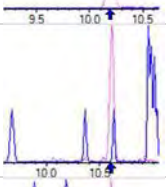
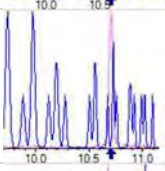
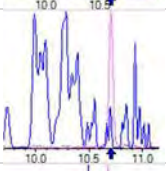
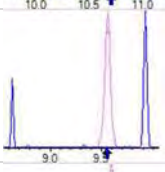
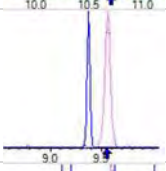
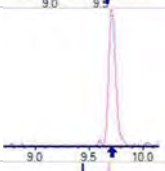
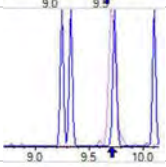
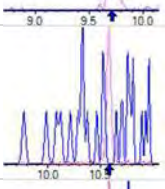
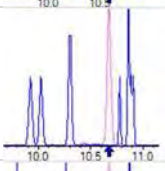
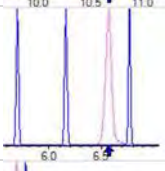
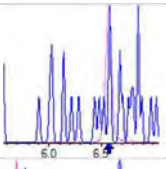
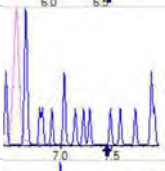
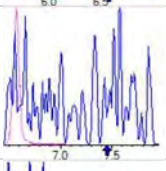
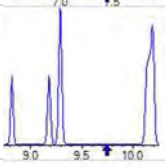
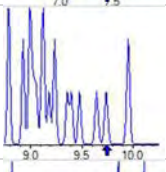
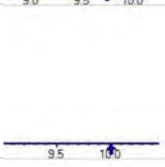
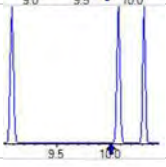
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) N/A (298.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFPeS	(349.0 / 80.0) N/A (349.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHxS	(399.0 / 80.0) N/A (399.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHpS	(449.0 / 80.0) N/A (449.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFOS	(499.0 / 80.0) N/A (499.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFNS	(549.0 / 80.0) N/A (549.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDS	(599.0 / 80.0) N/A (599.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoS	(698.9 / 80.0) N/A (698.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
4:2FTS	(327.0 / 307.0) N/A (327.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
6:2FTS	(427.0 / 407.0) N/A (427.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
8:2FTS	(527.0 / 507.0) N/A (527.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-05RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (25)
Acquired: 2022/12/10 - 03:59

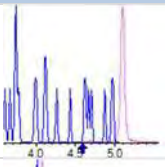
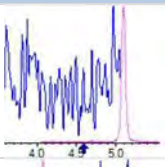
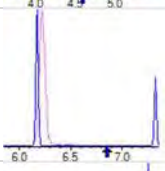
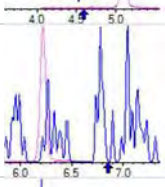
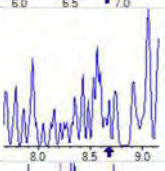
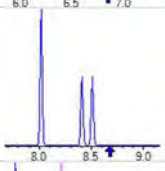
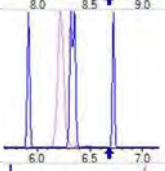
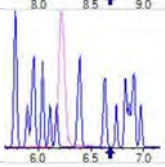
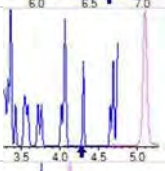
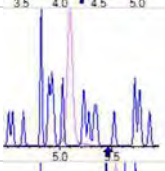
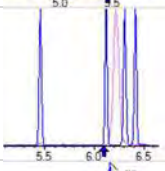
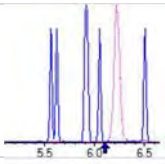
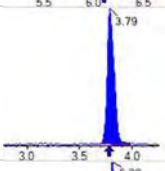
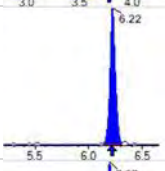
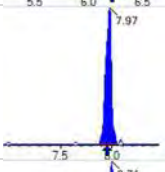
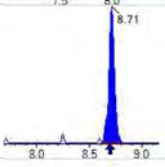
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) N/A (498.0 / 478.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSA	(511.9 / 219.0) N/A (511.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSA	(526.0 / 219.0) N/A (526.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSAA	(570.0 / 419.0) N/A (570.0 / 483.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSAA	(584.0 / 419.0) N/A (584.0 / 526.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSE	(616.1 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSE	(630.0 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
HFPO-DA	(285.0 / 169.0) N/A (285.0 / 185.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
ADONA	(377.0 / 85.0) N/A (377.0 / 251.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
9Cl-Pf3ONS	(531.0 / 351.0) N/A (533.0 / 353.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
11Cl-PF3OUDS	(631.0 / 451.0) N/A (633.0 / 453.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-05RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (25)
Acquired: 2022/12/10 - 03:59

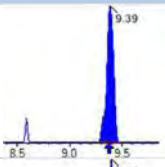
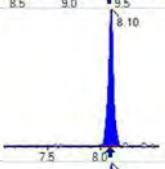
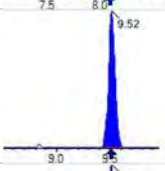
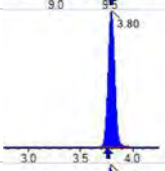
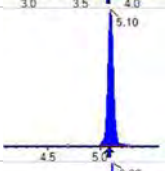
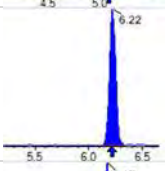
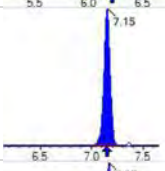
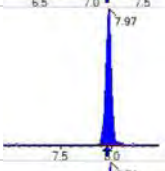
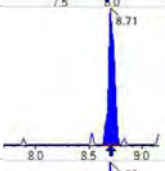
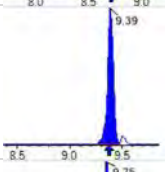
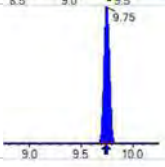
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
3:3FTCA	(241.0 / 177.0) N/A (241.0 / 117.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
5:3FTCA	(341.0 / 236.7) N/A (341.0 / 217.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
7:3FTCA	(441.0 / 317.0) N/A (441.0 / 337.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFEESA	(315.0 / 135.0) N/A (315.0 / 83.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFMPA	(229.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFMBA	(279.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NFDHA	(201.0 / 85.0) N/A (295.0 / 201.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
13C3_PFBA_IIS	(216.0 / 172.0) 8809	(3.79 , N/A) (N/A , 0.02 , N/A)	292.3	N/A	0.9164 [1.0000]	91.6% { 10.1% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 14383	(6.22 , N/A) (N/A , 0.01 , N/A)	276.9	N/A	1.1648 [1.0000]	116.5% { 11.1% }			
13C4_PFOA_IIS	(417.0 / 372.0) 12328	(7.97 , N/A) (N/A , 0.02 , N/A)	438.5	N/A	1.0399 [1.0000]	104.0% { 10.2% }			
13C5_PFNA_IIS	(468.0 / 423.0) 10242	(8.71 , N/A) (N/A , 0.02 , N/A)	311.3	N/A	1.0754 [1.0000]	107.5% { 10.4% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-05RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (25)
Acquired: 2022/12/10 - 03:59

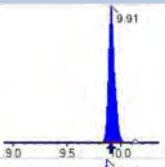
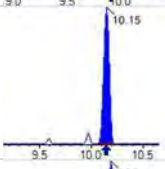
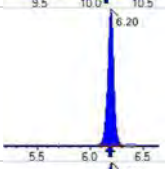
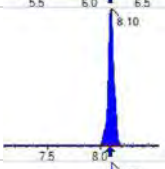
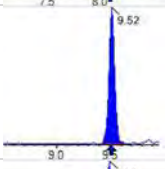
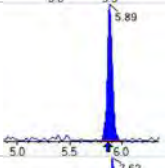
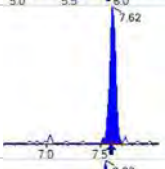
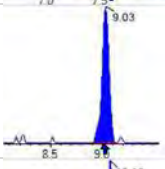
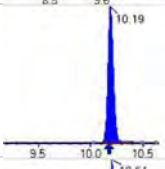
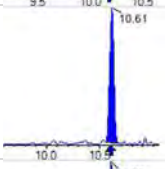
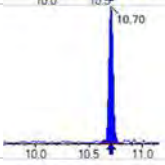
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDA_IIS	(515.1 / 470.1) 6950	(9.39 , N/A) (N/A , 0.02 , N/A)	1869.0	N/A	0.8437 [1.0000]	84.4% { 7.7% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 20732	(8.10 , N/A) (N/A , 0.01 , N/A)	303.7	N/A	0.9659 [1.0000]	96.6% { 9.9% }			
13C4_PFOS_IIS	(502.8 / 79.9) 20487	(9.52 , N/A) (N/A , 0.01 , N/A)	2967.7	N/A	1.1007 [1.0000]	110.1% { 10.7% }			
13C4_PFBA_EIS	(217.0 / 172.0) 73870	(3.80 , N/A) (N/A , 0.03 , N/A)	925.9	N/A	0.8944 [0.8000]	111.8% { 11.3% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 39827	(5.10 , N/A) (N/A , 0.01 , N/A)	601.4	N/A	0.3796 [0.4000]	94.9% { 11.5% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 31803	(6.22 , N/A) (N/A , 0.01 , N/A)	394.2	N/A	0.2168 [0.2000]	108.4% { 12.1% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 31078	(7.15 , N/A) (N/A , 0.01 , N/A)	733.0	N/A	0.2347 [0.2000]	117.3% { 12.5% }			
13C8_PFOA_EIS	(421.0 / 376.0) 29765	(7.97 , N/A) (N/A , 0.02 , N/A)	421.0	N/A	0.2374 [0.2000]	118.7% { 11.4% }			
13C9_PFNA_EIS	(472.0 / 427.0) 8627	(8.71 , N/A) (N/A , 0.01 , N/A)	203.4	N/A	0.0853 [0.1000]	85.3% { 10.4% }			
13C6_PFDA_EIS	(519.0 / 474.0) 17352	(9.39 , N/A) (N/A , 0.02 , N/A)	824.1	N/A	0.1719 [0.1000]	171.9% { 14.9% }			S2,
13C7_PFUnA_EIS	(570.0 / 525.0) 22427	(9.75 , N/A) (N/A , 0.01 , N/A)	510.9	N/A	0.1655 [0.1000]	165.5% { 11.1% }			S2,

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-05RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (25)
Acquired: 2022/12/10 - 03:59

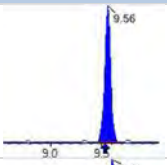
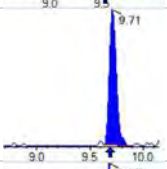
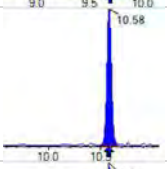
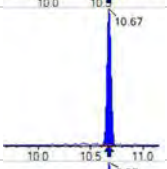
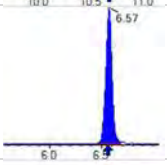
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDoA_EIS	(615.0 / 570.0) 21074	(9.91 , N/A) (N/A , 0.00 , N/A)	2064.4	N/A	0.1281 [0.1000]	128.1% { 10.9% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 11911	(10.15 , N/A) (N/A , 0.01 , N/A)	499.0	N/A	0.0987 [0.1000]	98.7% { 9.2% }			
13C3_PFBS_EIS	(302.0 / 80.0) 84204	(6.20 , N/A) (N/A , 0.02 , N/A)	483.1	N/A	0.2764 [0.2000]	138.2% { 12.7% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 45018	(8.10 , N/A) (N/A , 0.01 , N/A)	491.5	N/A	0.2596 [0.2000]	129.8% { 12.8% }			
13C8_PFOS_EIS	(507.0 / 80.0) 64796	(9.52 , N/A) (N/A , 0.01 , N/A)	256.5	N/A	0.2075 [0.2000]	103.7% { 10.8% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 10291	(5.89 , N/A) (N/A , 0.01 , N/A)	115.5	N/A	0.5989 [0.4000]	149.7% { 14.4% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 11961	(7.62 , N/A) (N/A , 0.02 , N/A)	151.9	N/A	0.5188 [0.4000]	129.7% { 13.3% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 13095	(9.03 , N/A) (N/A , 0.01 , N/A)	111.4	N/A	0.6544 [0.4000]	163.6% { 15.1% }			S2,
13C8_PFOSA_EIS	(506.0 / 78.0) 86234	(10.19 , N/A) (N/A , 0.01 , N/A)	198.2	N/A	0.1809 [0.2000]	90.4% { 9.8% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 14059	(10.61 , N/A) (N/A , 0.00 , N/A)	146.1	N/A	0.0996 [0.2000]	49.8% { 5.9% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 13925	(10.70 , N/A) (N/A , 0.01 , N/A)	208.9	N/A	0.1089 [0.2000]	54.4% { 6.1% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-05RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (25)
Acquired: 2022/12/10 - 03:59

Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
D3_MeFOSAA_EIS	(573.0 / 419.0) 32043	(9.56 , N/A) (N/A , 0.02 , N/A)	445.5	N/A	0.4612 [0.4000]	115.3% { 11.8% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 29990	(9.71 , N/A) (N/A , 0.01 , N/A)	144.9	N/A	0.5022 [0.4000]	125.5% { 13.6% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 28498	(10.58 , N/A) (N/A , 0.01 , N/A)	248.5	N/A	1.1826 [2.0000]	59.1% { 6.0% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 15883	(10.67 , N/A) (N/A , 0.01 , N/A)	336.2	N/A	1.2935 [2.0000]	64.7% { 6.7% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 75375	(6.57 , N/A) (N/A , 0.01 , N/A)	643.1	N/A	0.7801 [0.8000]	97.5% { 11.2% }			

FORM IR
ANALYSIS DATA SHEETR

MW-17-S5-112922-

Laboratory:-	APPL, LLC-			Work Order:-	22L0004-
Client:-	Tidewater, Inc.-			Project:	NASA JPL SI-
Matrix:-	Water-	Laboratory ID:-	22L0004-06-	File ID:	S2022-12-09B (26)-
Sampled:-	11/29/22 12:10-	Prepared:-	12/05/22 07:17	Analyzed:-	12/10/22 04:11-
Solids:-		Preparation:-	Table B-15-	Dilution:-	1-
Initial/Final:-	288.05 mL / 2 mL-			Instrument:-	Saphira
Batch:-	BBL0076-	Sequence:-	SB03769	Calibration:-	2250016

COMPOUNDR	CONC. (ng/L)	LOQ	LODR	DL	Q
PFBA-	0.39 J-	2.8	0.17	0.043	
PFPEA-	0.83 J-	1.4	0.17	0.054	
PFHXA-	0.59 J-	0.69	0.17	0.056	
PFHPA-	0.28 J-	0.69-	0.17	0.043	IR2,
PFOA-	1.5-	0.69	0.17	0.071	
PFNA-	0.17 U-	0.69	0.17	0.043	
PFDA-	0.17 U-	0.69	0.17	0.043	
PFUnA-	0.17 U-	0.69	0.17	0.069	
PFDOA-	0.17 U-	0.69	0.17	0.043	
PFTRDA-	0.17 U-	0.69	0.17	0.050	
PFTEDA-	0.17 U-	0.69	0.17	0.075	
PFBS-	0.47 J-	0.69	0.17	0.043	
PFPES-	0.36 J-	0.69	0.17	0.050	
PFHXS-	1.3-	0.69	0.17	0.043	
PFHPS-	0.17 U-	0.69	0.17	0.049	
PFOS-	2.0-	0.69	0.17	0.043	
PFNS-	0.35 U-	0.69	0.35	0.21	
PFDS-	0.17 U-	0.69	0.17	0.056	
4:2FTS-	0.35 U-	2.8	0.35	0.094	
6:2FTS-	0.17 U-	2.8	0.17	0.078	
8:2FTS-	0.52 U-	2.8	0.52	0.18	
PFOSA-	0.17 U-	2.8	0.17	0.043	
NMeFOSA-	1.7 U-	2.8	1.7	0.86	
NEtFOSA-	1.7 U-	2.8	1.7	0.85	
NMeFOSAA-	0.17 U-	0.69	0.17	0.062	
NEtFOSAA-	0.17 U-	0.69	0.17	0.043	
NMeFOSE-	1.0 U-	2.8	1.0	0.52	
NEtFOSE-	1.0 U-	2.8	1.0	0.52	
HFPO-DA-	0.87 U-	1.4	0.87	0.43	
ADONA-	0.52 U-	1.4	0.52	0.23	

FORM IR
ANALYSIS DATA SHEETR

MW-17-S5-112922-

Laboratory:-	APPL, LLC-			Work Order:-	22L0004-
Client:-	Tidewater, Inc.-			Project:-	NASA JPL SI-
Matrix:-	Water-	Laboratory ID:-	22L0004-06-	File ID:-	S2022-12-09B (26)-
Sampled:-	11/29/22 12:10-	Prepared:-	12/05/22 07:17-	Analyzed:-	12/10/22 04:11-
Solids:-		Preparation:-	Table B-15-	Dilution:-	1-
Initial/Final:-	288.05 mL / 2 mL-			Instrument:-	Saphira-
Batch:-	BBL0076-	Sequence:-	SB03769-	Calibration:-	2250016-

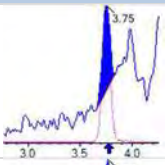
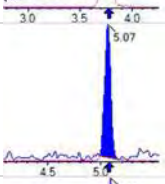
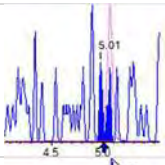
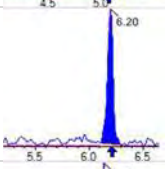
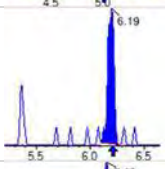
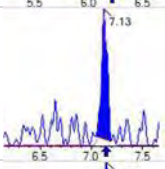
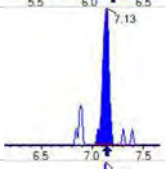
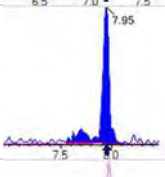
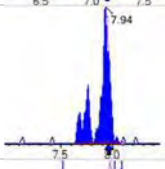
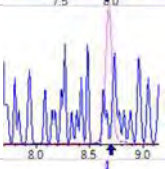
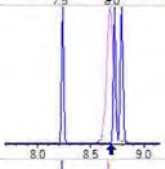
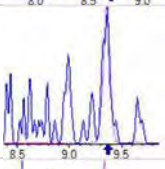
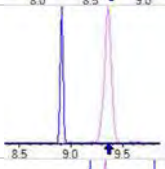
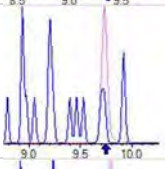
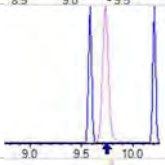
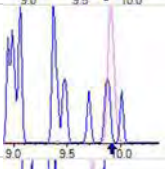
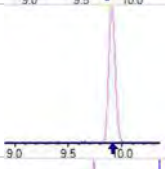
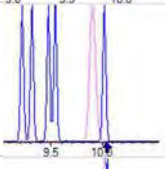
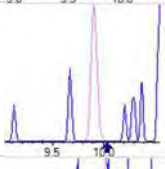
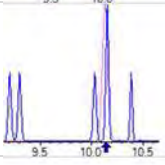
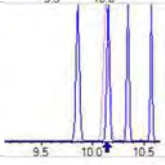
COMPOUNDR	CONC. (ng/L)R	LOQ	LODR	DLR	Q
9CL-PF3ONS-	0.52 U-	1.4-	0.52-	0.20-	
11CL-PF3OUDS-	0.52 U-	1.4-	0.52-	0.21-	

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-06
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (26)
Acquired: 2022/12/10 - 04:11

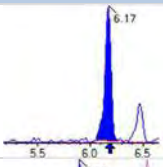
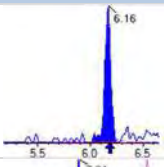
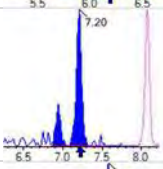
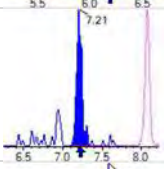
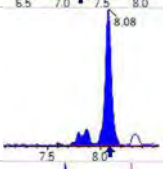
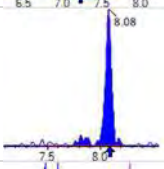
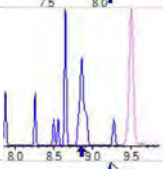
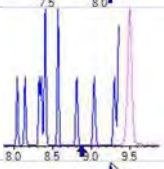
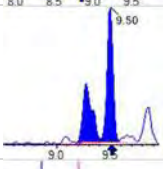
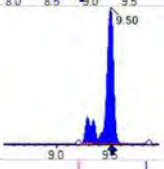
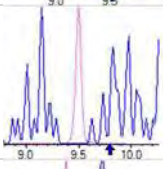
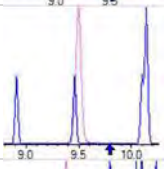
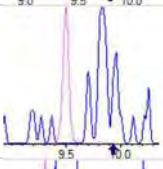
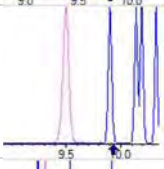
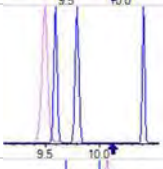
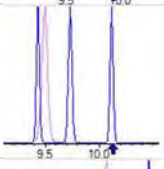
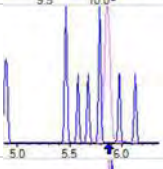
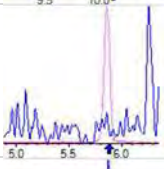
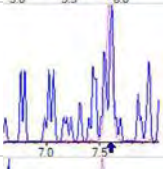
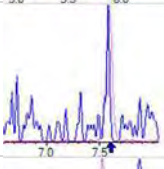
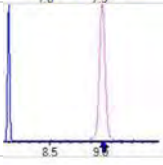
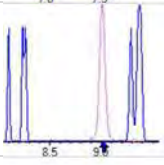
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(212.9 / 169.0) 3092	(3.75 , 1.00) (0.00 , N/A , 0.0)	13.4	N/A 0.0 0.0	0.0560	N/A			
PFPeA	(262.9 / 219.0) 9150 (262.9 / 69.0) 117	(5.07 , 1.00) (0.00 , N/A , 3.3)	82.0 34.2	0.0128 109.7 115.4	0.1200	N/A			
PFHxA	(313.0 / 269.0) 12018 (313.0 / 119.0) 1590	(6.20 , 1.00) (0.00 , N/A , 0.3)	73.8 36.1	0.1323 147.2 135.1	0.0849	N/A			
PFHpA	(363.0 / 319.0) 4591 (363.0 / 169.0) 2144	(7.13 , 1.00) (0.00 , N/A , -0.3)	19.9 50.3	0.4669 162.7 165.2	0.0409	N/A			IR2,
PFOA	(413.0 / 369.0) 25646 (413.0 / 169.0) 7333	(7.95 , 1.00) (0.01 , N/A , 0.5)	147.1 170.1	0.2859 88.4 88.3	0.2183	N/A			
PFNA	(463.0 / 419.0) N/A (463.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDA	(513.0 / 469.0) N/A (513.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFUnA	(563.0 / 519.0) N/A (563.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoA	(613.0 / 569.0) N/A (613.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTrDA	(663.0 / 619.0) N/A (663.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTeDA	(713.0 / 669.0) N/A (713.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-06
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (26)
Acquired: 2022/12/10 - 04:11

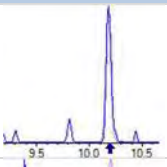
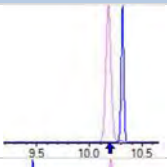
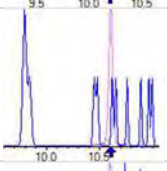
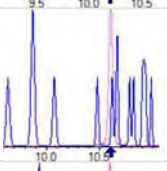
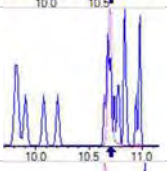
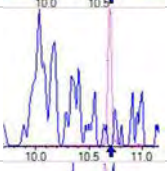
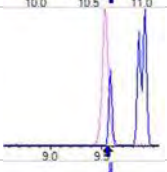
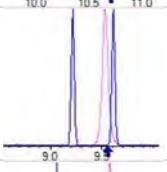
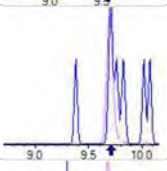
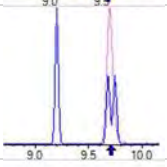
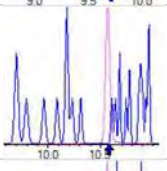
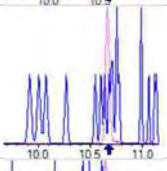
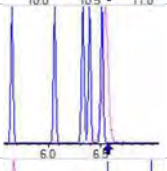
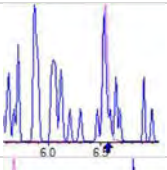
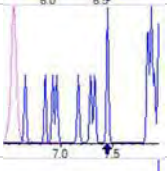
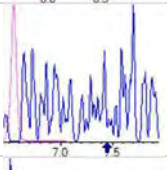
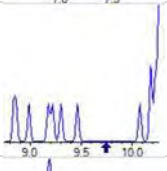
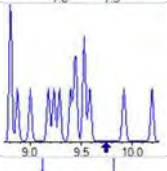
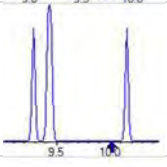
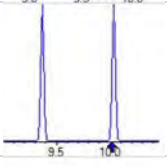
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) 13394 (298.9 / 99.0) 6210	(6.17 , 1.00) (0.00 , N/A , 0.3)	90.8 102.3	0.4636 68.4 68.5	0.0676	N/A			
PFPeS	(349.0 / 80.0) 17521 (349.0 / 99.0) 6383	(7.20 , 0.89) (N/A , -0.02 , -0.3)	51.7 41.6	0.3643 99.9 108.4	0.0514	N/A			MI4 ABK 12/29/22
PFHxS	(399.0 / 80.0) 54968 (399.0 / 99.0) 15366	(8.08 , 1.00) (0.00 , N/A , -0.2)	614.0 1323.5	0.2795 81.1 84.7	0.1819	N/A			
PFHpS	(449.0 / 80.0) N/A (449.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFOS	(499.0 / 80.0) 94450 (499.0 / 99.0) 20338	(9.50 , 1.00) (0.00 , N/A , -0.3)	65.3 64.9	0.2153 83.6 91.0	0.2858	N/A			
PFNS	(549.0 / 80.0) N/A (549.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDS	(599.0 / 80.0) N/A (599.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoS	(698.9 / 80.0) N/A (698.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
4:2FTS	(327.0 / 307.0) N/A (327.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
6:2FTS	(427.0 / 407.0) N/A (427.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
8:2FTS	(527.0 / 507.0) N/A (527.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-06
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (26)
Acquired: 2022/12/10 - 04:11

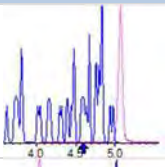
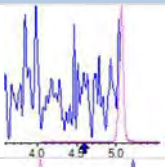
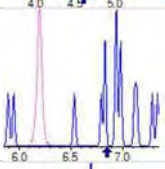
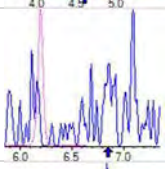
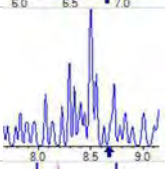
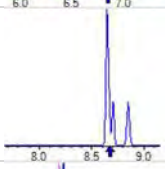
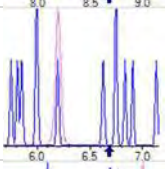
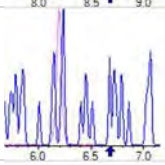
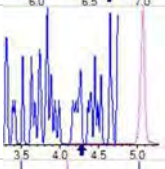
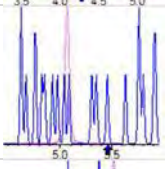
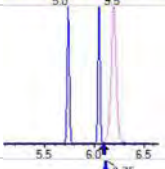
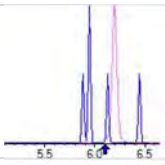
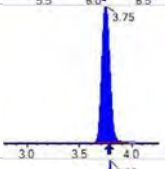
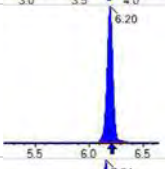
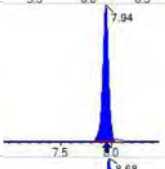
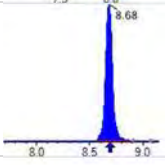
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) N/A (498.0 / 478.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSA	(511.9 / 219.0) N/A (511.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSA	(526.0 / 219.0) N/A (526.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSAA	(570.0 / 419.0) N/A (570.0 / 483.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSAA	(584.0 / 419.0) N/A (584.0 / 526.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSE	(616.1 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSE	(630.0 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
HFPO-DA	(285.0 / 169.0) N/A (285.0 / 185.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
ADONA	(377.0 / 85.0) N/A (377.0 / 251.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
9Cl-Pf3ONS	(531.0 / 351.0) N/A (533.0 / 353.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
11Cl-PF3OUDS	(631.0 / 451.0) N/A (633.0 / 453.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-06
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (26)
Acquired: 2022/12/10 - 04:11

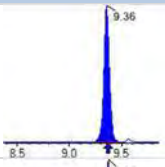
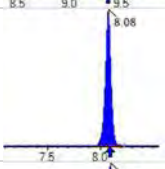
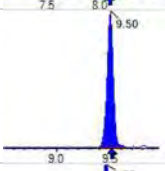
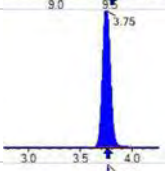
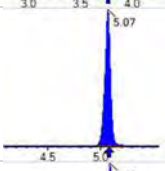
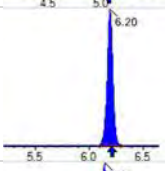
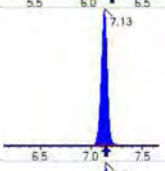
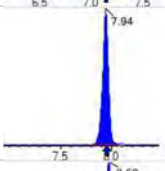
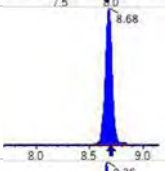
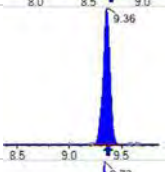
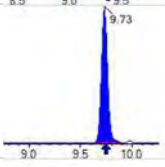
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
3:3FTCA	(241.0 / 177.0) N/A (241.0 / 117.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
5:3FTCA	(341.0 / 236.7) N/A (341.0 / 217.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
7:3FTCA	(441.0 / 317.0) N/A (441.0 / 337.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFEESA	(315.0 / 135.0) N/A (315.0 / 83.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFMPA	(229.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFMBA	(279.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NFDHA	(201.0 / 85.0) N/A (295.0 / 201.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
13C3_PFBA_IIS	(216.0 / 172.0) 87112	(3.75 , N/A) (N/A , -0.02 , N/A)	664.1	N/A	0.9062 [1.0000]	90.6% { 99.5% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 130933	(6.20 , N/A) (N/A , -0.02 , N/A)	712.8	N/A	1.0603 [1.0000]	106.0% { 101.0% }			
13C4_PFOA_IIS	(417.0 / 372.0) 145943	(7.94 , N/A) (N/A , -0.01 , N/A)	783.4	N/A	1.2311 [1.0000]	123.1% { 120.2% }			
13C5_PFNA_IIS	(468.0 / 423.0) 105789	(8.68 , N/A) (N/A , -0.01 , N/A)	255.7	N/A	1.1108 [1.0000]	111.1% { 107.7% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-06
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (26)
Acquired: 2022/12/10 - 04:11

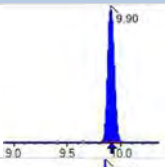
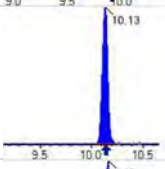
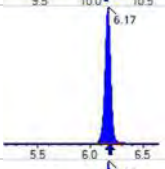
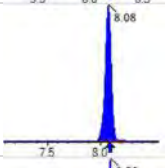
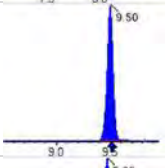
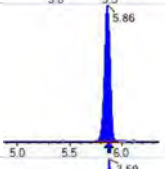
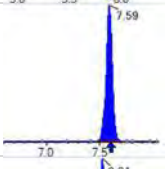
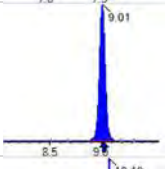
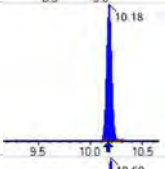
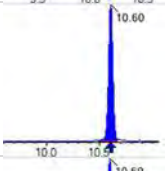
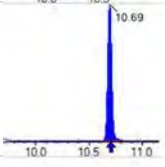
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDA_IIS	(515.1 / 470.1) 109813	(9.36 , N/A) (N/A , -0.01 , N/A)	296.8	N/A	1.3329 [1.0000]	133.3% { 121.8% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 258416	(8.08 , N/A) (N/A , -0.01 , N/A)	977.7	N/A	1.2040 [1.0000]	120.4% { 123.4% }			
13C4_PFOS_IIS	(502.8 / 79.9) 216645	(9.50 , N/A) (N/A , -0.01 , N/A)	475.3	N/A	1.1640 [1.0000]	116.4% { 113.4% }			
13C4_PFBA_EIS	(217.0 / 172.0) 580403	(3.75 , N/A) (N/A , -0.02 , N/A)	860.4	N/A	7.1066 [8.0000]	88.8% { 88.6% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 317244	(5.07 , N/A) (N/A , -0.02 , N/A)	979.4	N/A	3.3216 [4.0000]	83.0% { 91.3% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 281021	(6.20 , N/A) (N/A , -0.02 , N/A)	1175.0	N/A	2.1042 [2.0000]	105.2% { 107.1% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 221787	(7.13 , N/A) (N/A , -0.01 , N/A)	899.7	N/A	1.8398 [2.0000]	92.0% { 89.4% }			
13C8_PFOA_EIS	(421.0 / 376.0) 227949	(7.94 , N/A) (N/A , -0.01 , N/A)	478.0	N/A	1.5356 [2.0000]	76.8% { 87.4% }			
13C9_PFNA_EIS	(472.0 / 427.0) 97277	(8.68 , N/A) (N/A , -0.02 , N/A)	318.0	N/A	0.9318 [1.0000]	93.2% { 116.8% }			
13C6_PFDA_EIS	(519.0 / 474.0) 114792	(9.36 , N/A) (N/A , -0.01 , N/A)	246.4	N/A	0.7197 [1.0000]	72.0% { 98.7% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 171031	(9.73 , N/A) (N/A , -0.01 , N/A)	309.1	N/A	0.7988 [1.0000]	79.9% { 85.0% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-06
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (26)
Acquired: 2022/12/10 - 04:11

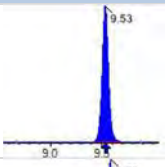
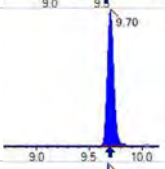
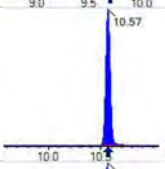
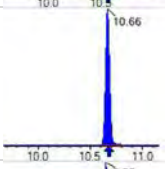
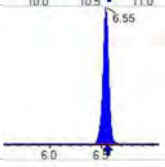
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDoA_EIS	(615.0 / 570.0) 204466	(9.90 , N/A) (N/A , 0.00 , N/A)	447.3	N/A	0.7869 [1.0000]	78.7% { 105.8% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 117413	(10.13 , N/A) (N/A , -0.01 , N/A)	312.1	N/A	0.6155 [1.0000]	61.6% { 90.5% }			
13C3_PFBS_EIS	(302.0 / 80.0) 648990	(6.17 , N/A) (N/A , -0.01 , N/A)	851.0	N/A	1.7088 [2.0000]	85.4% { 98.0% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 360387	(8.08 , N/A) (N/A , -0.01 , N/A)	1042.5	N/A	1.6670 [2.0000]	83.4% { 102.1% }			
13C8_PFOS_EIS	(507.0 / 80.0) 588792	(9.50 , N/A) (N/A , -0.01 , N/A)	589.8	N/A	1.7828 [2.0000]	89.1% { 98.2% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 76527	(5.86 , N/A) (N/A , -0.01 , N/A)	456.1	N/A	3.5728 [4.0000]	89.3% { 107.0% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 92031	(7.59 , N/A) (N/A , -0.01 , N/A)	412.6	N/A	3.2026 [4.0000]	80.1% { 102.3% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 80025	(9.01 , N/A) (N/A , -0.02 , N/A)	408.7	N/A	3.2084 [4.0000]	80.2% { 92.3% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 711165	(10.18 , N/A) (N/A , 0.00 , N/A)	508.2	N/A	1.4105 [2.0000]	70.5% { 81.0% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 124630	(10.60 , N/A) (N/A , 0.00 , N/A)	573.2	N/A	0.8353 [2.0000]	41.8% { 52.3% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 114232	(10.69 , N/A) (N/A , -0.01 , N/A)	663.1	N/A	0.8444 [2.0000]	42.2% { 50.2% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-06
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (26)
Acquired: 2022/12/10 - 04:11

Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
D3_MeFOSAA_EIS	(573.0 / 419.0) 238295	(9.53 , N/A) (N/A , -0.01 , N/A)	496.0	N/A	3.2431 [4.0000]	81.1% { 87.9% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 249029	(9.70 , N/A) (N/A , 0.00 , N/A)	644.7	N/A	3.9433 [4.0000]	98.6% { 113.0% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 257331	(10.57 , N/A) (N/A , 0.00 , N/A)	796.4	N/A	10.0981 [20.0000]	50.5% { 54.1% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 142967	(10.66 , N/A) (N/A , -0.01 , N/A)	1038.6	N/A	11.0107 [20.0000]	55.1% { 60.3% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 706990	(6.55 , N/A) (N/A , -0.01 , N/A)	792.6	N/A	8.0379 [8.0000]	100.5% { 105.3% }			

FORM IR
ANALYSIS DATA SHEETR

MW-17-S5-112922-

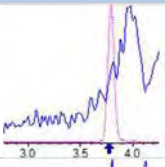
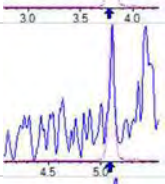
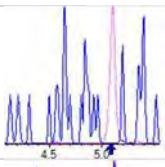
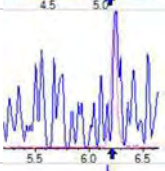
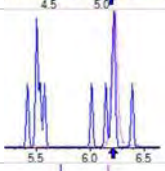
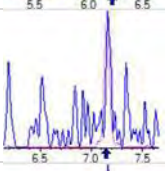
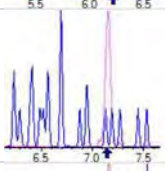
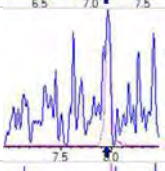
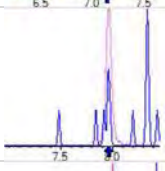
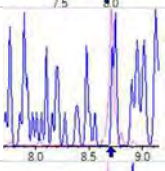
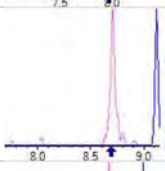
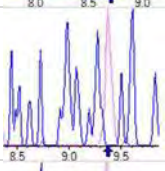
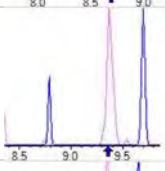
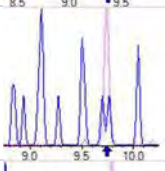
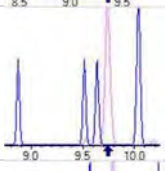
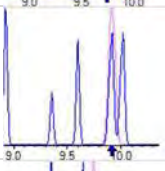
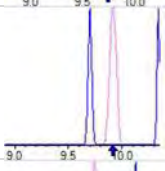
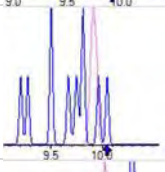
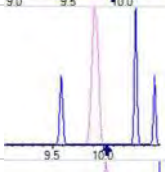
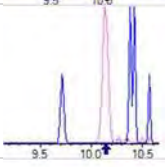
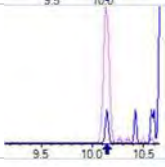
Laboratory:-	APPL, LLC-			Work Order:-	22L0004-
Client:-	Tidewater, Inc.-			Project:-	NASA JPL SI-
Matrix:-	Water-	Laboratory ID:-	22L0004-06RE1-	File ID:-	S2022-12-09B (27)-
Sampled:-	11/29/22 12:10-	Prepared:-	12/05/22 07:17-	Analyzed:-	12/10/22 04:24-
Solids:-		Preparation:-	Table B-15-	Dilution:-	10-
Initial/Final:-	288.05 mL / 2 mL-			Instrument:-	Saphira-
Batch:-	BBL0076-	Sequence:-	SB03769-	Calibration:-	2250016-

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-06RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (27)
Acquired: 2022/12/10 - 04:24

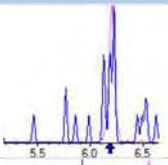
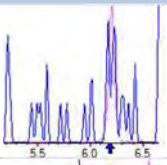
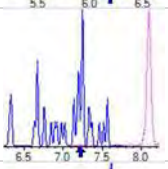
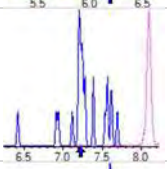
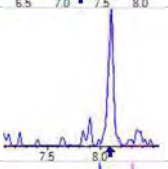
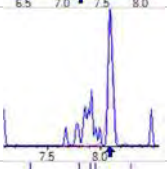
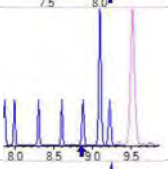
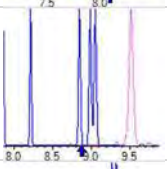
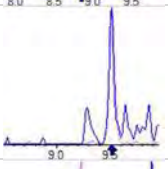
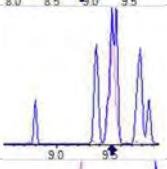
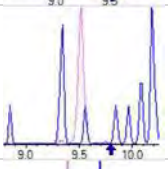
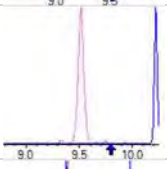
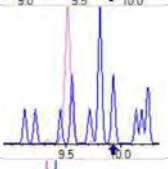
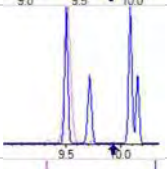
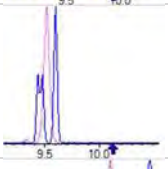
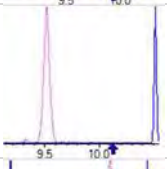
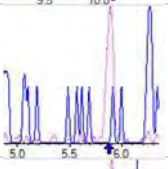
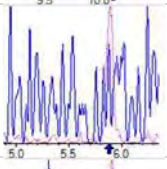
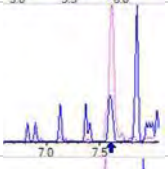
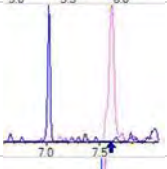
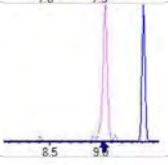
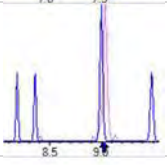
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(212.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFPeA	(262.9 / 219.0) N/A (262.9 / 69.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHxA	(313.0 / 269.0) N/A (313.0 / 119.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHpA	(363.0 / 319.0) N/A (363.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFOA	(413.0 / 369.0) N/A (413.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFNA	(463.0 / 419.0) N/A (463.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDA	(513.0 / 469.0) N/A (513.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFUnA	(563.0 / 519.0) N/A (563.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoA	(613.0 / 569.0) N/A (613.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTrDA	(663.0 / 619.0) N/A (663.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTeDA	(713.0 / 669.0) N/A (713.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-06RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (27)
Acquired: 2022/12/10 - 04:24

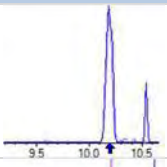
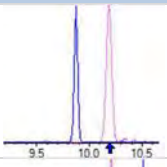
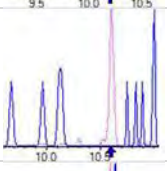
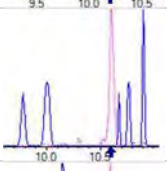
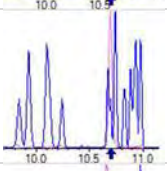
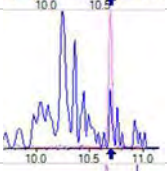
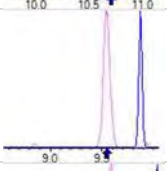
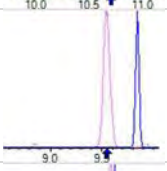
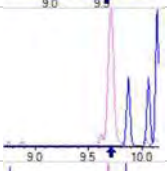
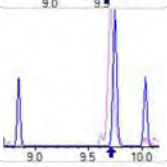
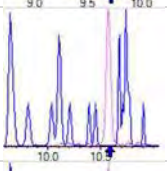
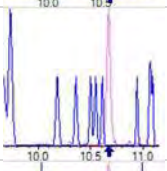
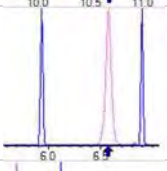
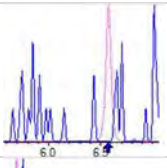
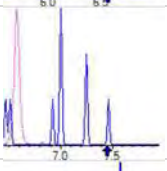
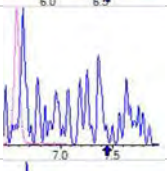
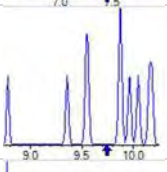
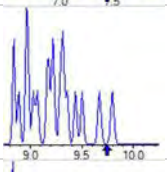
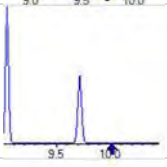
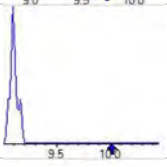
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) N/A (298.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFPeS	(349.0 / 80.0) N/A (349.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHxS	(399.0 / 80.0) N/A (399.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHpS	(449.0 / 80.0) N/A (449.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFOS	(499.0 / 80.0) N/A (499.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFNS	(549.0 / 80.0) N/A (549.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDS	(599.0 / 80.0) N/A (599.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoS	(698.9 / 80.0) N/A (698.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
4:2FTS	(327.0 / 307.0) N/A (327.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
6:2FTS	(427.0 / 407.0) N/A (427.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
8:2FTS	(527.0 / 507.0) N/A (527.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-06RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (27)
Acquired: 2022/12/10 - 04:24

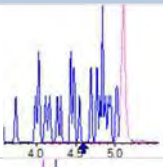
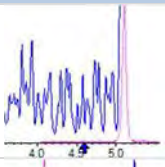
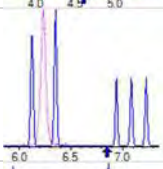
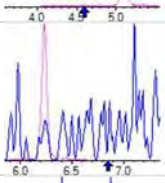
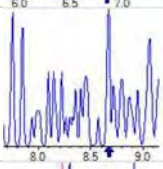
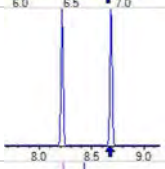
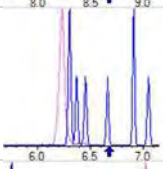
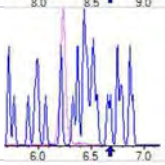
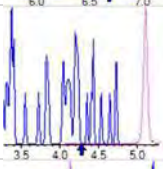
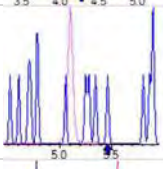
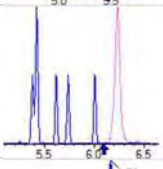
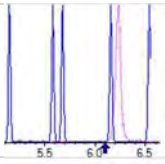
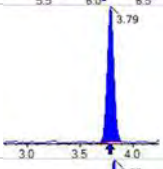
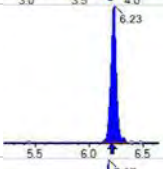
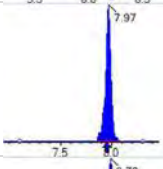
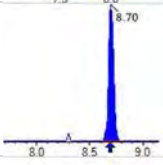
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) N/A (498.0 / 478.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSA	(511.9 / 219.0) N/A (511.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSA	(526.0 / 219.0) N/A (526.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSAA	(570.0 / 419.0) N/A (570.0 / 483.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSAA	(584.0 / 419.0) N/A (584.0 / 526.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSE	(616.1 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSE	(630.0 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
HFPO-DA	(285.0 / 169.0) N/A (285.0 / 185.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
ADONA	(377.0 / 85.0) N/A (377.0 / 251.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
9Cl-Pf3ONS	(531.0 / 351.0) N/A (533.0 / 353.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
11Cl-PF3OUDS	(631.0 / 451.0) N/A (633.0 / 453.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-06RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (27)
Acquired: 2022/12/10 - 04:24

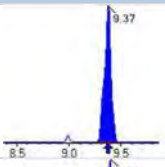
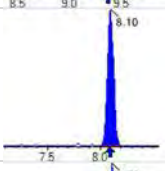
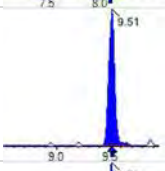
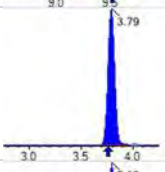
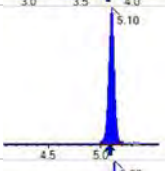
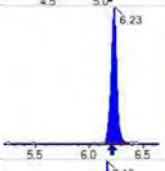
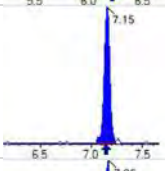
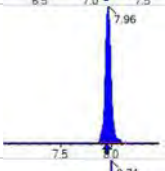
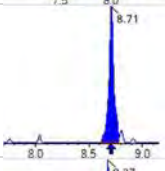
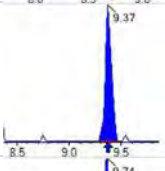
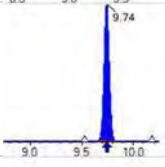
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
3:3FTCA	(241.0 / 177.0) N/A (241.0 / 117.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
5:3FTCA	(341.0 / 236.7) N/A (341.0 / 217.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
7:3FTCA	(441.0 / 317.0) N/A (441.0 / 337.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFEESA	(315.0 / 135.0) N/A (315.0 / 83.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFMPA	(229.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFMBA	(279.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NFDHA	(201.0 / 85.0) N/A (295.0 / 201.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
13C3_PFBA_IIS	(216.0 / 172.0) 8873	(3.79 , N/A) (N/A , 0.02 , N/A)	291.3	N/A	0.9231 [1.0000]	92.3% { 10.1% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 14773	(6.23 , N/A) (N/A , 0.02 , N/A)	376.9	N/A	1.1964 [1.0000]	119.6% { 11.4% }			
13C4_PFOA_IIS	(417.0 / 372.0) 12031	(7.97 , N/A) (N/A , 0.02 , N/A)	581.5	N/A	1.0148 [1.0000]	101.5% { 9.9% }			
13C5_PFNA_IIS	(468.0 / 423.0) 11052	(8.70 , N/A) (N/A , 0.01 , N/A)	42880.2	N/A	1.1604 [1.0000]	116.0% { 11.3% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-06RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (27)
Acquired: 2022/12/10 - 04:24

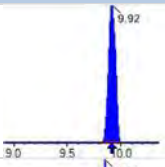
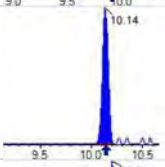
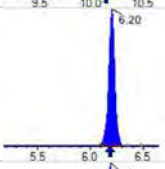
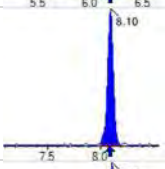
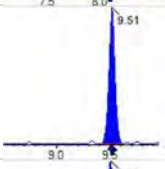
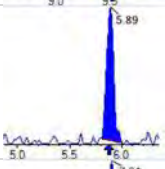
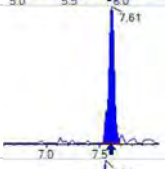
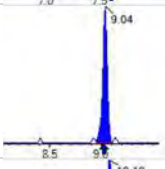
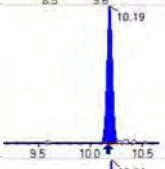
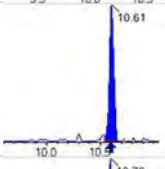
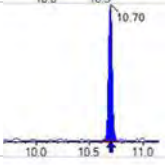
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDA_IIS	(515.1 / 470.1) 10735	(9.37 , N/A) (N/A , 0.00 , N/A)	4129.8	N/A	1.3031 [1.0000]	130.3% { 11.9% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 22954	(8.10 , N/A) (N/A , 0.01 , N/A)	325.2	N/A	1.0695 [1.0000]	106.9% { 11.0% }			
13C4_PFOS_IIS	(502.8 / 79.9) 22429	(9.51 , N/A) (N/A , 0.00 , N/A)	160.0	N/A	1.2051 [1.0000]	120.5% { 11.7% }			
13C4_PFBA_EIS	(217.0 / 172.0) 63647	(3.79 , N/A) (N/A , 0.02 , N/A)	948.8	N/A	0.7651 [0.8000]	95.6% { 9.7% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 34272	(5.10 , N/A) (N/A , 0.02 , N/A)	515.1	N/A	0.3180 [0.4000]	79.5% { 9.9% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 26841	(6.23 , N/A) (N/A , 0.02 , N/A)	286.5	N/A	0.1781 [0.2000]	89.1% { 10.2% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 19997	(7.15 , N/A) (N/A , 0.02 , N/A)	349.9	N/A	0.1470 [0.2000]	73.5% { 8.1% }			
13C8_PFOA_EIS	(421.0 / 376.0) 29419	(7.96 , N/A) (N/A , 0.01 , N/A)	1453.6	N/A	0.2404 [0.2000]	120.2% { 11.3% }			
13C9_PFNA_EIS	(472.0 / 427.0) 9959	(8.71 , N/A) (N/A , 0.01 , N/A)	179.7	N/A	0.0913 [0.1000]	91.3% { 12.0% }			
13C6_PFDA_EIS	(519.0 / 474.0) 11766	(9.37 , N/A) (N/A , 0.00 , N/A)	248.2	N/A	0.0755 [0.1000]	75.5% { 10.1% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 12323	(9.74 , N/A) (N/A , 0.00 , N/A)	633.9	N/A	0.0589 [0.1000]	58.9% { 6.1% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-06RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (27)
Acquired: 2022/12/10 - 04:24

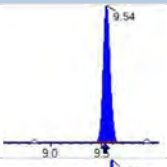
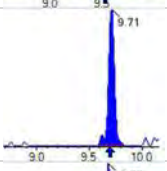
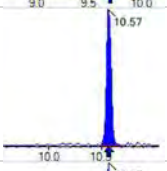
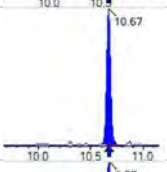
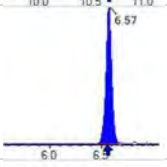
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDoA_EIS	(615.0 / 570.0) 13128	(9.92 , N/A) (N/A , 0.01 , N/A)	221.5	N/A	0.0517 [0.1000]	51.7% { 6.8% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 11118	(10.14 , N/A) (N/A , 0.00 , N/A)	87.0	N/A	0.0596 [0.1000]	59.6% { 8.6% }			
13C3_PFBS_EIS	(302.0 / 80.0) 62474	(6.20 , N/A) (N/A , 0.02 , N/A)	554.1	N/A	0.1852 [0.2000]	92.6% { 9.4% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 32018	(8.10 , N/A) (N/A , 0.01 , N/A)	346.0	N/A	0.1667 [0.2000]	83.4% { 9.1% }			
13C8_PFOS_EIS	(507.0 / 80.0) 56428	(9.51 , N/A) (N/A , 0.01 , N/A)	262.9	N/A	0.1650 [0.2000]	82.5% { 9.4% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 6082	(5.89 , N/A) (N/A , 0.02 , N/A)	61.4	N/A	0.3197 [0.4000]	79.9% { 8.5% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 9671	(7.61 , N/A) (N/A , 0.02 , N/A)	113.3	N/A	0.3789 [0.4000]	94.7% { 10.8% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 10244	(9.04 , N/A) (N/A , 0.01 , N/A)	802.0	N/A	0.4623 [0.4000]	115.6% { 11.8% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 64290	(10.19 , N/A) (N/A , 0.00 , N/A)	237.0	N/A	0.1232 [0.2000]	61.6% { 7.3% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 11803	(10.61 , N/A) (N/A , 0.00 , N/A)	173.9	N/A	0.0764 [0.2000]	38.2% { 5.0% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 12543	(10.70 , N/A) (N/A , 0.00 , N/A)	242.4	N/A	0.0896 [0.2000]	44.8% { 5.5% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-06RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (27)
Acquired: 2022/12/10 - 04:24

Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
D3_MeFOSAA_EIS	(573.0 / 419.0) 23348	(9.54 , N/A) (N/A , 0.01 , N/A)	333.5	N/A	0.3069 [0.4000]	76.7% { 8.6% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 17259	(9.71 , N/A) (N/A , 0.01 , N/A)	88.6	N/A	0.2640 [0.4000]	66.0% { 7.8% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 22832	(10.57 , N/A) (N/A , 0.00 , N/A)	187.2	N/A	0.8654 [2.0000]	43.3% { 4.8% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 13576	(10.67 , N/A) (N/A , 0.00 , N/A)	297.6	N/A	1.0099 [2.0000]	50.5% { 5.7% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 63197	(6.57 , N/A) (N/A , 0.02 , N/A)	477.7	N/A	0.6368 [0.8000]	79.6% { 9.4% }			

FORM IR
ANALYSIS DATA SHEETR

MW-17-S4-112922-

Laboratory:-	APPL, LLC-			Work Order:-	22L0004-
Client:-	Tidewater, Inc.-			Project:	NASA JPL SI-
Matrix:-	Water-	Laboratory ID:-	22L0004-07-	File ID:	S2022-12-09B (28)-
Sampled:-	11/29/22 12:25-	Prepared:-	12/05/22 07:17	Analyzed:-	12/10/22 04:37
Solids:-		Preparation:-	Table B-15-	Dilution:-	1-
Initial/Final:-	280.65 mL / 2 mL-			Instrument:-	Saphira
Batch:-	BBL0076-	Sequence:-	SB03769	Calibration:-	2250016

COMPOUNDR	CONC. (ng/L)	LOQ	LODR	DL	Q
PFBA-	0.68 J-	2.9	0.18	0.045	
PFPEA-	1.0 J-	1.4	0.18	0.055	
PFHXA-	1.0-	0.71-	0.18	0.057	IR2
PFHPA-	0.82-	0.71	0.18	0.045	
PFOA-	2.3-	0.71	0.18	0.073	
PFNA-	0.36 J-	0.71	0.18	0.045	
PFDA-	0.30 J-	0.71	0.18	0.045	
PFUnA-	0.18 U-	0.71	0.18	0.071	
PFDOA-	0.18 U-	0.71	0.18	0.045	
PFTRDA-	0.18 U-	0.71	0.18	0.052	
PFTEDA-	0.18 U-	0.71	0.18	0.077	
PFBS-	0.50 J-	0.71	0.18	0.045	
PFPES-	0.27 J-	0.71	0.18	0.052	
PFHXS-	1.2-	0.71	0.18	0.045	
PFHPS-	0.18 U-	0.71	0.18	0.050	
PFOS-	2.0-	0.71-	0.18	0.045	MI4
PFNS-	0.36 U-	0.71	0.36	0.22	
PFDS-	0.18 U-	0.71	0.18	0.057	
4:2FTS-	0.36 U-	2.9	0.36	0.096	
6:2FTS-	0.18 U-	2.9	0.18	0.080	
8:2FTS-	0.53 U-	2.9	0.53	0.18	
PFOSA-	0.15 J-	2.9	0.18	0.045	
NMeFOSA-	1.8 U-	2.9	1.8	0.88	
NEtFOSA-	1.8 U-	2.9	1.8	0.88	
NMeFOSAA-	0.18 U-	0.71	0.18	0.064	
NEtFOSAA-	0.18 U-	0.71	0.18	0.045	
NMeFOSE-	1.1 U-	2.9	1.1	0.53	
NEtFOSE-	1.1 U-	2.9	1.1	0.53	
HFPO-DA-	0.89 U-	1.4	0.89	0.44	
ADONA-	0.53 U-	1.4	0.53	0.23	

FORM IR
ANALYSIS DATA SHEETR

MW-17-S4-112922-

Laboratory:-	APPL, LLC-			Work Order:-	22L0004-
Client:-	Tidewater, Inc.-			Project:-	NASA JPL SI-
Matrix:-	Water-	Laboratory ID:-	22L0004-07-	File ID:-	S2022-12-09B (28)-
Sampled:-	11/29/22 12:25-	Prepared:-	12/05/22 07:17-	Analyzed:-	12/10/22 04:37-
Solids:-		Preparation:-	Table B-15-	Dilution:-	1-
Initial/Final:-	280.65 mL / 2 mL-			Instrument:-	Saphira-
Batch:-	BBL0076-	Sequence:-	SB03769-	Calibration:-	2250016-

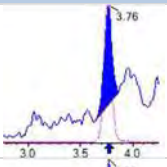
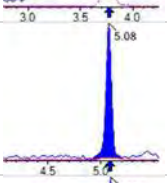
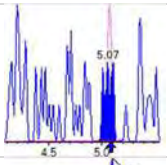
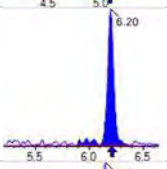
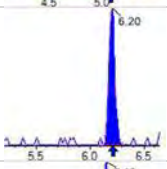
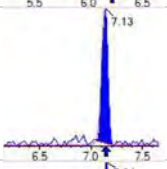
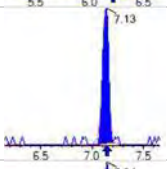
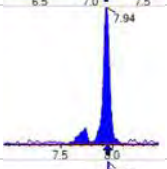
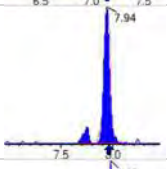
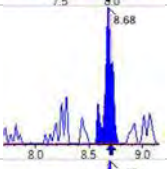
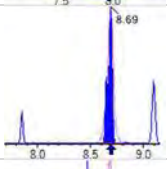
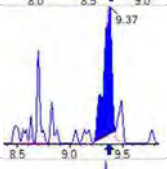
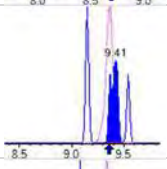
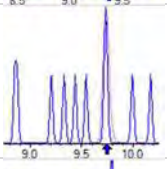
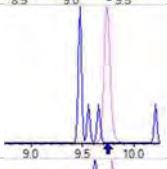
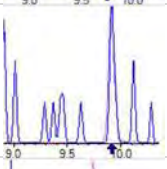
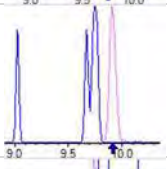
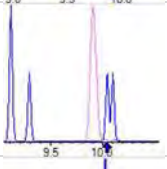
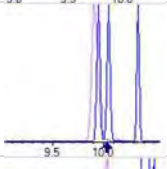
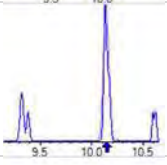
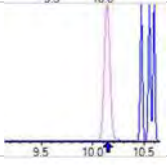
COMPOUNDR	CONC. (ng/L)R	LOQ	LODR	DLR	Q
9CL-PF3ONS-	0.53 U-	1.4-	0.53-	0.21-	
11CL-PF3OUDS-	0.53 U-	1.4-	0.53-	0.21-	

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

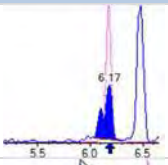
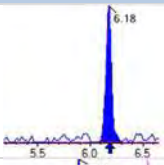
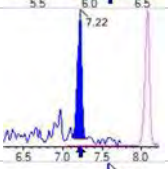
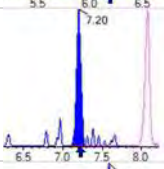
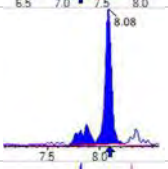
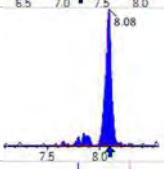
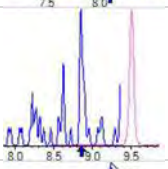
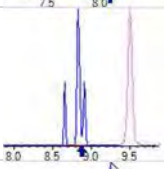
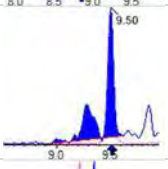
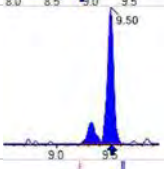
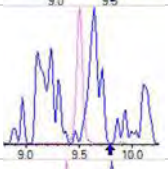
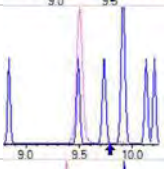
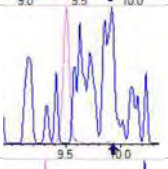
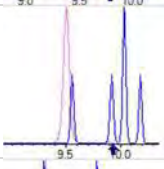
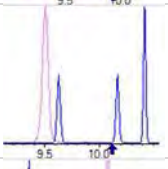
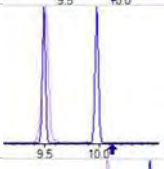
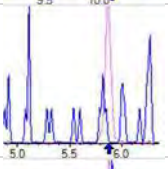
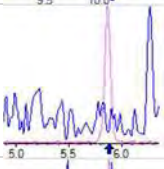
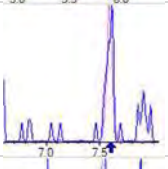
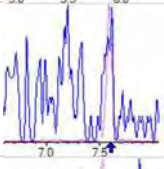
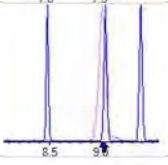
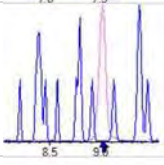
Sample I.D.: 22L0004-07
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (28)
Acquired: 2022/12/10 - 04:37

Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(212.9 / 169.0) 5912	(3.76 , 1.00) (0.01 , N/A , 0.0)	20.8	N/A 0.0 0.0	0.0953	N/A			
PFPeA	(262.9 / 219.0) 14091 (262.9 / 69.0) 173	(5.08 , 1.00) (0.00 , N/A , 0.5)	153.5 12.6	0.0123 105.3 110.9	0.1440	N/A			
PFHxA	(313.0 / 269.0) 23881 (313.0 / 119.0) 3615	(6.20 , 1.00) (0.00 , N/A , -0.2)	276.2 68.7	0.1514 168.4 154.6	0.1451	N/A			IR2,
PFHpA	(363.0 / 319.0) 15124 (363.0 / 169.0) 4117	(7.13 , 1.00) (0.00 , N/A , 0.1)	81.3 81.2	0.2722 94.9 96.3	0.1144	N/A			
PFOA	(413.0 / 369.0) 47667 (413.0 / 169.0) 14833	(7.94 , 1.00) (0.00 , N/A , 0.4)	325.6 5829.3	0.3112 96.2 96.1	0.3287	N/A			
PFNA	(463.0 / 419.0) 6169 (463.0 / 169.0) 1151	(8.68 , 1.00) (-0.01 , N/A , -0.5)	151.3 25.2	0.1865 92.7 88.6	0.0500	N/A			
PFDA	(513.0 / 469.0) 6807 (513.0 / 169.0) 797	(9.37 , 1.00) (0.00 , N/A , -2.6)	18.3 47.9	0.1171 131.9 117.8	0.0423	N/A			
PFUnA	(563.0 / 519.0) N/A (563.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoA	(613.0 / 569.0) N/A (613.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTrDA	(663.0 / 619.0) N/A (663.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTeDA	(713.0 / 669.0) N/A (713.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0004-07 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09B (28)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/10 - 04:37

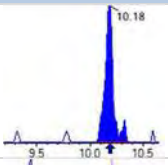
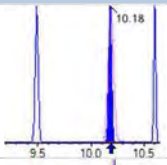
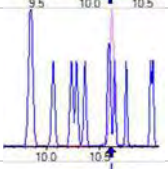
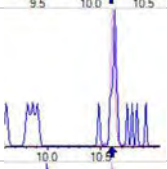
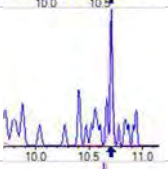
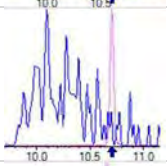
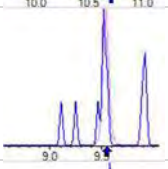
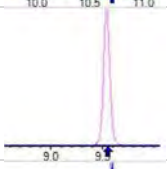
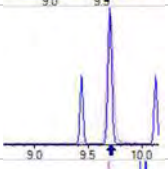
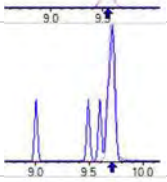
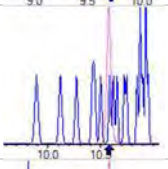
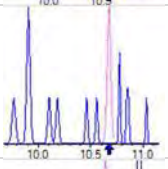
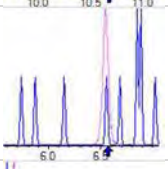
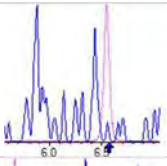
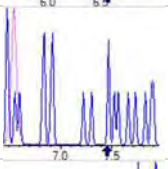
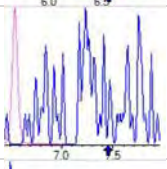
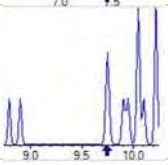
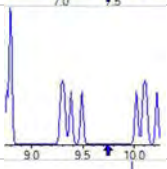
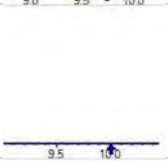
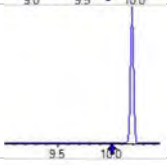
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) 16659 (298.9 / 99.0) 11588	(6.17 , 1.00) (0.00 , N/A , -0.1)	31.2 72.9	0.6956 102.7 102.7	0.0702	N/A			
PFPeS	(349.0 / 80.0) 14432 (349.0 / 99.0) 5940	(7.22 , 0.89) (N/A , 0.00 , 0.8)	42.2 50.3	0.4116 112.9 122.5	0.0374	N/A			
PFHxS	(399.0 / 80.0) 57278 (399.0 / 99.0) 19197	(8.08 , 1.00) (0.00 , N/A , -0.3)	159.9 8670.4	0.3352 97.2 101.5	0.1675	N/A			
PFHpS	(449.0 / 80.0) N/A (449.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFOS	(499.0 / 80.0) 118631 (499.0 / 99.0) 29932	(9.50 , 1.00) (0.00 , N/A , 0.1)	45.4 5923.9	0.2523 98.0 106.6	0.2843	N/A			MI4 ABK 12/29/22
PFNS	(549.0 / 80.0) N/A (549.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDS	(599.0 / 80.0) N/A (599.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoS	(698.9 / 80.0) N/A (698.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
4:2FTS	(327.0 / 307.0) N/A (327.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
6:2FTS	(427.0 / 407.0) N/A (427.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
8:2FTS	(527.0 / 507.0) N/A (527.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

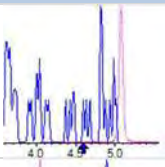
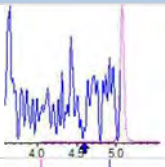
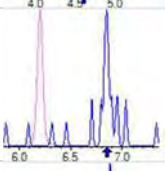
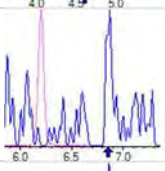
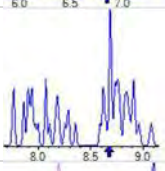
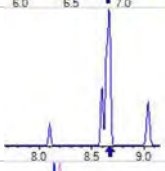
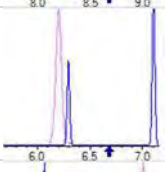
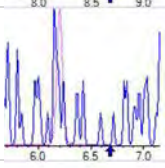
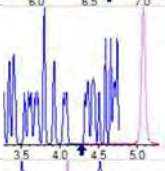
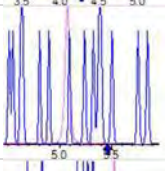
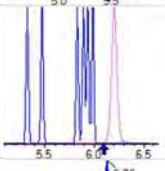
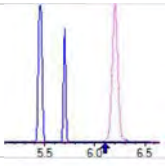
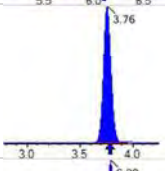
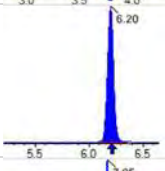
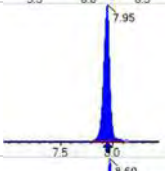
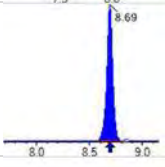
Sample I.D.: 22L0004-07
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (28)
Acquired: 2022/12/10 - 04:37

Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) 8681 (498.0 / 478.0) 255	(10.18 , 1.00) (0.00 , N/A , 0.1)	72.4 350.3	0.0294 123.2 116.5	0.0215	N/A			
NMeFOSA	(511.9 / 219.0) N/A (511.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSA	(526.0 / 219.0) N/A (526.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSAA	(570.0 / 419.0) N/A (570.0 / 483.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSAA	(584.0 / 419.0) N/A (584.0 / 526.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSE	(616.1 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSE	(630.0 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
HFPO-DA	(285.0 / 169.0) N/A (285.0 / 185.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
ADONA	(377.0 / 85.0) N/A (377.0 / 251.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
9Cl-Pf3ONS	(531.0 / 351.0) N/A (533.0 / 353.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
11Cl-PF3OUDS	(631.0 / 451.0) N/A (633.0 / 453.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0004-07 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09B (28)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/10 - 04:37

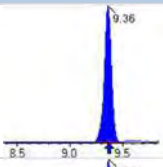
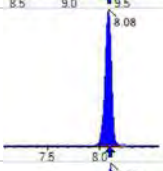
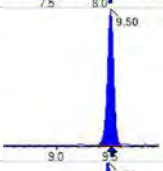
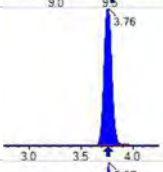
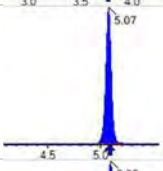
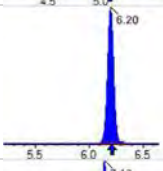
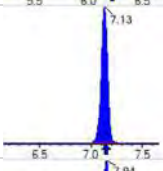
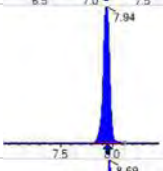
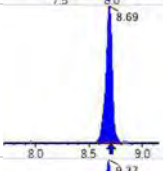
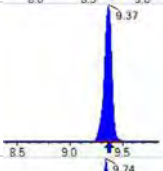
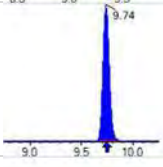
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
3:3FTCA	(241.0 / 177.0) N/A (241.0 / 117.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
5:3FTCA	(341.0 / 236.7) N/A (341.0 / 217.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
7:3FTCA	(441.0 / 317.0) N/A (441.0 / 337.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFEESA	(315.0 / 135.0) N/A (315.0 / 83.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFMPA	(229.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFMBA	(279.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NFDHA	(201.0 / 85.0) N/A (295.0 / 201.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
13C3_PFBA_IIS	(216.0 / 172.0) 91411	(3.76 , N/A) (N/A , -0.01 , N/A)	782.6	N/A	0.9509 [1.0000]	95.1% { 104.5% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 142460	(6.20 , N/A) (N/A , -0.01 , N/A)	547.6	N/A	1.1537 [1.0000]	115.4% { 109.9% }			
13C4_PFOA_IIS	(417.0 / 372.0) 143410	(7.95 , N/A) (N/A , 0.00 , N/A)	515.2	N/A	1.2097 [1.0000]	121.0% { 118.1% }			
13C5_PFNA_IIS	(468.0 / 423.0) 121078	(8.69 , N/A) (N/A , 0.00 , N/A)	374.1	N/A	1.2713 [1.0000]	127.1% { 123.3% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

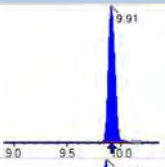
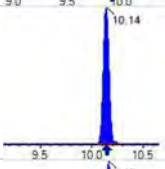
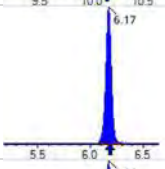
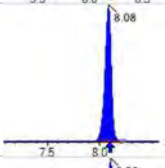
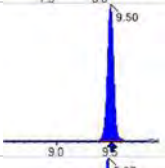
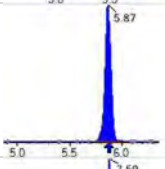
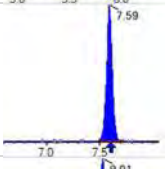
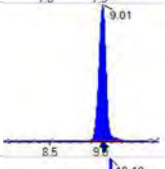
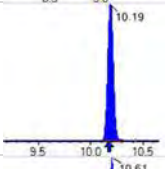
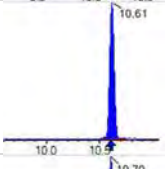
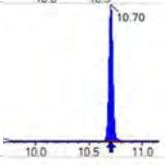
Sample I.D.: 22L0004-07
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (28)
Acquired: 2022/12/10 - 04:37

Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDA_IIS	(515.1 / 470.1) 111764	(9.36 , N/A) (N/A , -0.01 , N/A)	215.5	N/A	1.3566 [1.0000]	135.7% { 124.0% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 245342	(8.08 , N/A) (N/A , -0.01 , N/A)	606.6	N/A	1.1431 [1.0000]	114.3% { 117.1% }			
13C4_PFOS_IIS	(502.8 / 79.9) 259117	(9.50 , N/A) (N/A , 0.00 , N/A)	399.3	N/A	1.3922 [1.0000]	139.2% { 135.6% }			
13C4_PFBA_EIS	(217.0 / 172.0) 651742	(3.76 , N/A) (N/A , -0.01 , N/A)	978.0	N/A	7.6049 [8.0000]	95.1% { 99.5% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 407234	(5.07 , N/A) (N/A , -0.01 , N/A)	1150.5	N/A	3.9188 [4.0000]	98.0% { 117.1% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 326547	(6.20 , N/A) (N/A , -0.01 , N/A)	1044.9	N/A	2.2473 [2.0000]	112.4% { 124.5% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 261005	(7.13 , N/A) (N/A , -0.01 , N/A)	714.2	N/A	1.9900 [2.0000]	99.5% { 105.2% }			
13C8_PFOA_EIS	(421.0 / 376.0) 281347	(7.94 , N/A) (N/A , -0.01 , N/A)	755.6	N/A	1.9288 [2.0000]	96.4% { 107.8% }			
13C9_PFNA_EIS	(472.0 / 427.0) 127897	(8.69 , N/A) (N/A , -0.01 , N/A)	545.4	N/A	1.0704 [1.0000]	107.0% { 153.5% }			
13C6_PFDA_EIS	(519.0 / 474.0) 158599	(9.37 , N/A) (N/A , -0.01 , N/A)	506.6	N/A	0.9770 [1.0000]	97.7% { 136.4% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 223613	(9.74 , N/A) (N/A , 0.00 , N/A)	2836.1	N/A	1.0262 [1.0000]	102.6% { 111.1% }			

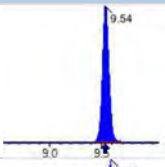
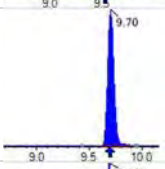
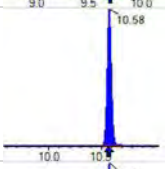
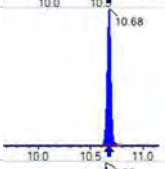
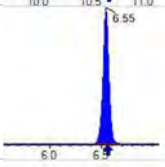
APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0004-07 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09B (28)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/10 - 04:37

Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDoA_EIS	(615.0 / 570.0) 211404	(9.91 , N/A) (N/A , 0.00 , N/A)	251.0	N/A	0.7994 [1.0000]	79.9% { 109.4% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 146986	(10.14 , N/A) (N/A , 0.00 , N/A)	486.0	N/A	0.7571 [1.0000]	75.7% { 113.2% }			
13C3_PFBS_EIS	(302.0 / 80.0) 777494	(6.17 , N/A) (N/A , -0.01 , N/A)	825.0	N/A	2.1563 [2.0000]	107.8% { 117.4% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 407930	(8.08 , N/A) (N/A , -0.01 , N/A)	644.6	N/A	1.9875 [2.0000]	99.4% { 115.6% }			
13C8_PFOS_EIS	(507.0 / 80.0) 743419	(9.50 , N/A) (N/A , -0.01 , N/A)	523.8	N/A	1.8820 [2.0000]	94.1% { 124.0% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 99024	(5.87 , N/A) (N/A , 0.00 , N/A)	477.5	N/A	4.8695 [4.0000]	121.7% { 138.4% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 127422	(7.59 , N/A) (N/A , 0.00 , N/A)	539.5	N/A	4.6704 [4.0000]	116.8% { 141.7% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 110184	(9.01 , N/A) (N/A , -0.01 , N/A)	352.7	N/A	4.6529 [4.0000]	116.3% { 127.1% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 726014	(10.19 , N/A) (N/A , 0.01 , N/A)	452.3	N/A	1.2040 [2.0000]	60.2% { 82.7% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 149742	(10.61 , N/A) (N/A , 0.00 , N/A)	478.0	N/A	0.8391 [2.0000]	42.0% { 62.8% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 122766	(10.70 , N/A) (N/A , 0.00 , N/A)	851.6	N/A	0.7588 [2.0000]	37.9% { 54.0% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0004-07 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09B (28)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/10 - 04:37

Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
D3_MeFOSAA_EIS	(573.0 / 419.0) 356385	(9.54 , N/A) (N/A , 0.00 , N/A)	457.8	N/A	4.0553 [4.0000]	101.4% { 131.5% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 321481	(9.70 , N/A) (N/A , 0.00 , N/A)	401.2	N/A	4.2562 [4.0000]	106.4% { 145.9% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 278366	(10.58 , N/A) (N/A , 0.01 , N/A)	845.6	N/A	9.1331 [20.0000]	45.7% { 58.6% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 148801	(10.68 , N/A) (N/A , 0.01 , N/A)	1305.2	N/A	9.5816 [20.0000]	47.9% { 62.7% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 796219	(6.55 , N/A) (N/A , -0.01 , N/A)	805.0	N/A	8.3199 [8.0000]	104.0% { 118.6% }			

FORM IR
ANALYSIS DATA SHEETR

MW-17-S4-112922-

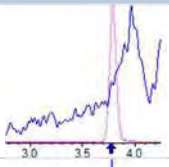
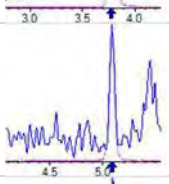
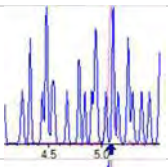
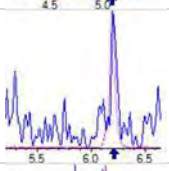
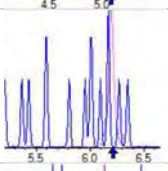
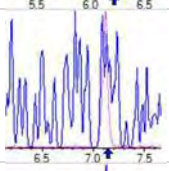
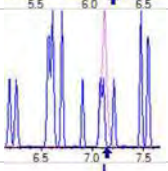
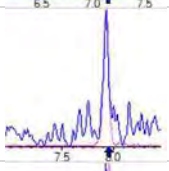
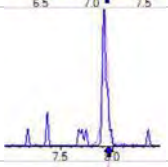
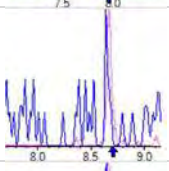
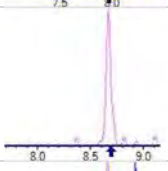
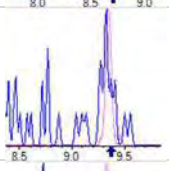
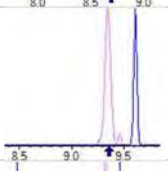
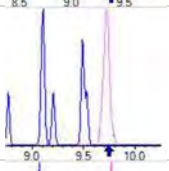
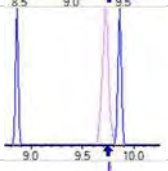
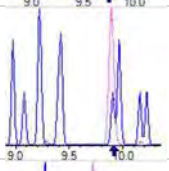
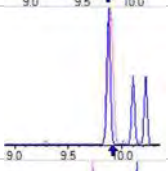
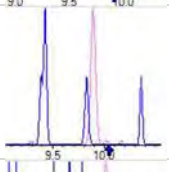
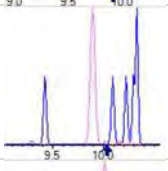
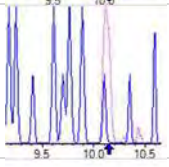
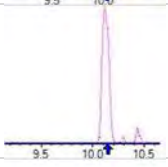
Laboratory:-	APPL, LLC-			Work Order:-	22L0004-
Client:-	Tidewater, Inc.-			Project:-	NASA JPL SI-
Matrix:-	Water-	Laboratory ID:-	22L0004-07RE1-	File ID:-	S2022-12-09B (29)-
Sampled:-	11/29/22 12:25-	Prepared:-	12/05/22 07:17-	Analyzed:-	12/10/22 04:49-
Solids:-		Preparation:-	Table B-15-	Dilution:-	10-
Initial/Final:-	280.65 mL / 2 mL-			Instrument:-	Saphira-
Batch:-	BBL0076-	Sequence:-	SB03769-	Calibration:-	2250016-

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-07RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (29)
Acquired: 2022/12/10 - 04:49

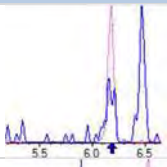
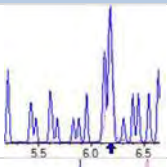
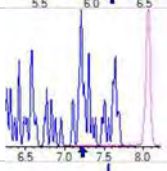
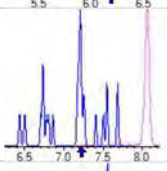
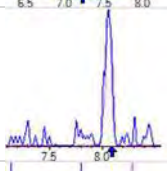
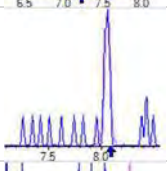
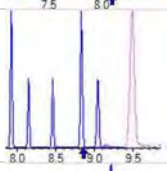
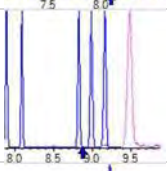
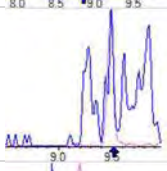
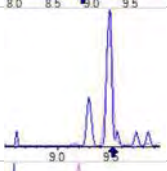
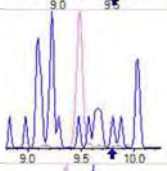
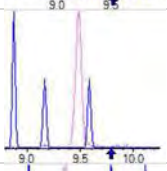
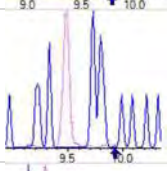
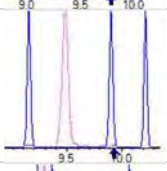
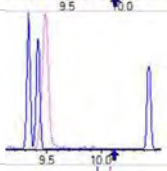
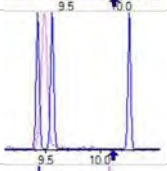
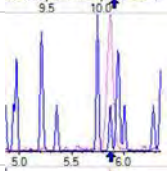
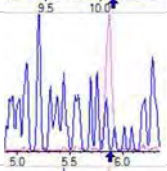
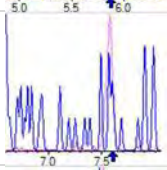
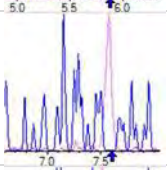
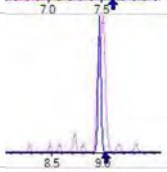
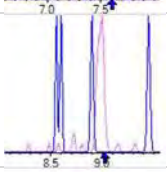
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(212.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFPeA	(262.9 / 219.0) N/A (262.9 / 69.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHxA	(313.0 / 269.0) N/A (313.0 / 119.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHpA	(363.0 / 319.0) N/A (363.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFOA	(413.0 / 369.0) N/A (413.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFNA	(463.0 / 419.0) N/A (463.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDA	(513.0 / 469.0) N/A (513.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFUnA	(563.0 / 519.0) N/A (563.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoA	(613.0 / 569.0) N/A (613.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTrDA	(663.0 / 619.0) N/A (663.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTeDA	(713.0 / 669.0) N/A (713.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-07RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (29)
Acquired: 2022/12/10 - 04:49

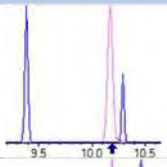
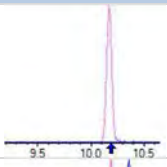
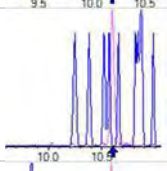
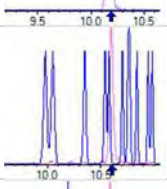
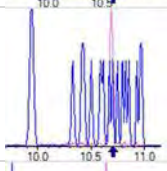
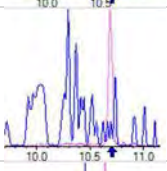
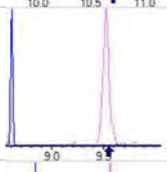
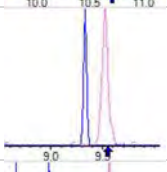
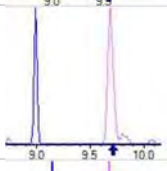
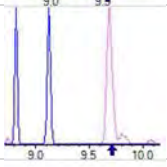
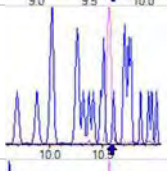
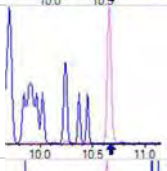
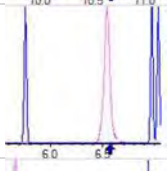
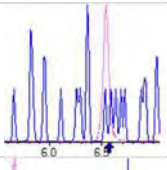
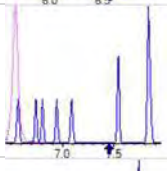
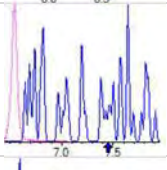
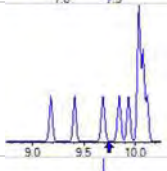
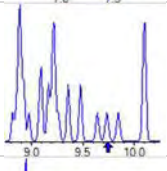
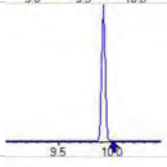
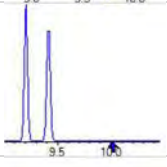
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) N/A (298.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFPeS	(349.0 / 80.0) N/A (349.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHxS	(399.0 / 80.0) N/A (399.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHpS	(449.0 / 80.0) N/A (449.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFOS	(499.0 / 80.0) N/A (499.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFNS	(549.0 / 80.0) N/A (549.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDS	(599.0 / 80.0) N/A (599.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoS	(698.9 / 80.0) N/A (698.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
4:2FTS	(327.0 / 307.0) N/A (327.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
6:2FTS	(427.0 / 407.0) N/A (427.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
8:2FTS	(527.0 / 507.0) N/A (527.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-07RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (29)
Acquired: 2022/12/10 - 04:49

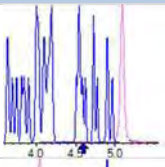
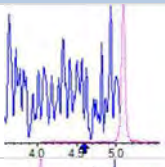
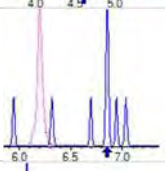
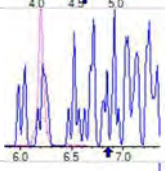
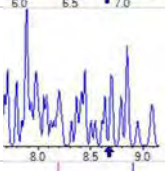
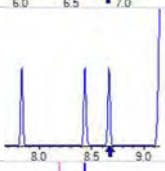
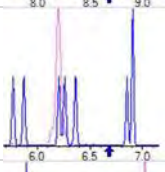
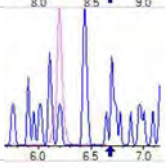
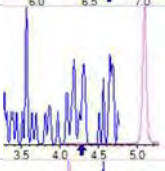
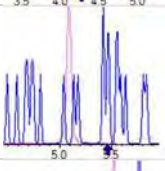
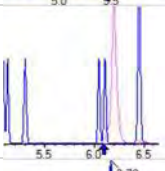
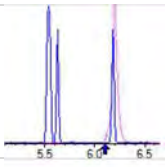
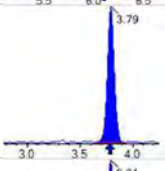
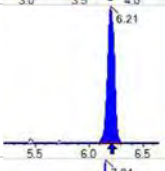
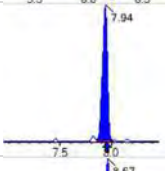
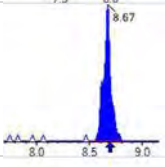
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) N/A (498.0 / 478.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSA	(511.9 / 219.0) N/A (511.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSA	(526.0 / 219.0) N/A (526.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSAA	(570.0 / 419.0) N/A (570.0 / 483.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSAA	(584.0 / 419.0) N/A (584.0 / 526.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSE	(616.1 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSE	(630.0 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
HFPO-DA	(285.0 / 169.0) N/A (285.0 / 185.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
ADONA	(377.0 / 85.0) N/A (377.0 / 251.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
9Cl-Pf3ONS	(531.0 / 351.0) N/A (533.0 / 353.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
11Cl-PF3OUDS	(631.0 / 451.0) N/A (633.0 / 453.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-07RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (29)
Acquired: 2022/12/10 - 04:49

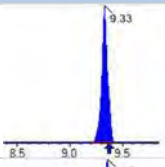
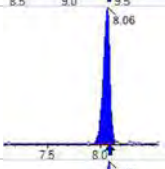
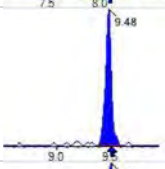
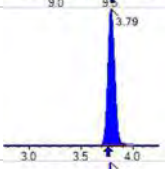
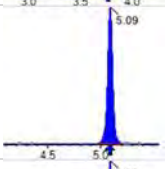
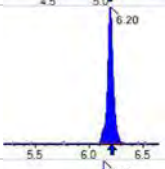
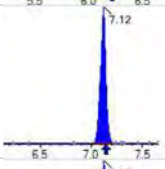
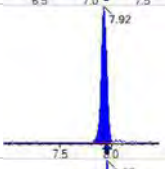
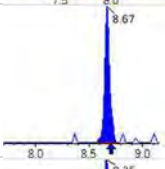
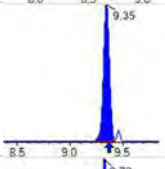
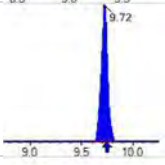
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
3:3FTCA	(241.0 / 177.0) N/A (241.0 / 117.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
5:3FTCA	(341.0 / 236.7) N/A (341.0 / 217.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
7:3FTCA	(441.0 / 317.0) N/A (441.0 / 337.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFEESA	(315.0 / 135.0) N/A (315.0 / 83.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFMPA	(229.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFMBA	(279.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NFDHA	(201.0 / 85.0) N/A (295.0 / 201.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
13C3_PFBA_IIS	(216.0 / 172.0) 8910	(3.79 , N/A) (N/A , 0.02 , N/A)	299.6	N/A	0.9269 [1.0000]	92.7% { 10.2% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 14199	(6.21 , N/A) (N/A , -0.01 , N/A)	497.3	N/A	1.1499 [1.0000]	115.0% { 10.9% }			
13C4_PFOA_IIS	(417.0 / 372.0) 14885	(7.94 , N/A) (N/A , -0.01 , N/A)	268.1	N/A	1.2556 [1.0000]	125.6% { 12.3% }			
13C5_PFNA_IIS	(468.0 / 423.0) 9849	(8.67 , N/A) (N/A , -0.03 , N/A)	117.2	N/A	1.0341 [1.0000]	103.4% { 10.0% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-07RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (29)
Acquired: 2022/12/10 - 04:49

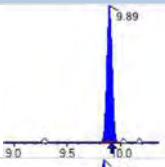
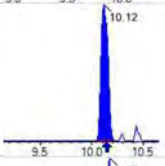
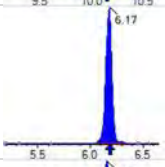
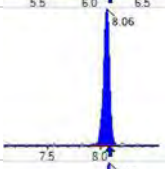
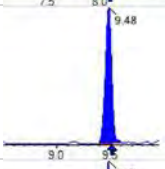
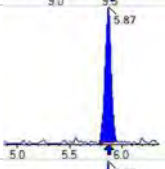
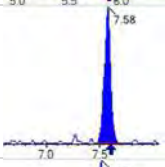
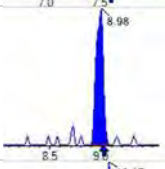
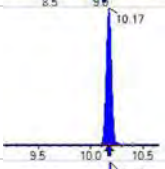
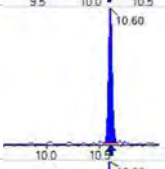
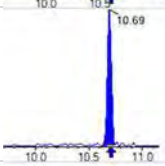
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDA_IIS	(515.1 / 470.1) 7629	(9.33 , N/A) (N/A , -0.04 , N/A)	133.3	N/A	0.9261 [1.0000]	92.6% { 8.5% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 20451	(8.06 , N/A) (N/A , -0.03 , N/A)	235.7	N/A	0.9528 [1.0000]	95.3% { 9.8% }			
13C4_PFOS_IIS	(502.8 / 79.9) 22051	(9.48 , N/A) (N/A , -0.02 , N/A)	127.7	N/A	1.1847 [1.0000]	118.5% { 11.5% }			
13C4_PFBA_EIS	(217.0 / 172.0) 61907	(3.79 , N/A) (N/A , 0.02 , N/A)	943.0	N/A	0.7411 [0.8000]	92.6% { 9.5% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 37100	(5.09 , N/A) (N/A , 0.01 , N/A)	495.3	N/A	0.3582 [0.4000]	89.5% { 10.7% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 32209	(6.20 , N/A) (N/A , -0.01 , N/A)	339.2	N/A	0.2224 [0.2000]	111.2% { 12.3% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 24864	(7.12 , N/A) (N/A , -0.02 , N/A)	400.0	N/A	0.1902 [0.2000]	95.1% { 10.0% }			
13C8_PFOA_EIS	(421.0 / 376.0) 28048	(7.92 , N/A) (N/A , -0.03 , N/A)	327.1	N/A	0.1853 [0.2000]	92.6% { 10.8% }			
13C9_PFNA_EIS	(472.0 / 427.0) 9612	(8.67 , N/A) (N/A , -0.03 , N/A)	157.2	N/A	0.0989 [0.1000]	98.9% { 11.5% }			
13C6_PFDA_EIS	(519.0 / 474.0) 12725	(9.35 , N/A) (N/A , -0.03 , N/A)	32181.8	N/A	0.1148 [0.1000]	114.8% { 10.9% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 18604	(9.72 , N/A) (N/A , -0.02 , N/A)	95.0	N/A	0.1251 [0.1000]	125.1% { 9.2% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-07RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (29)
Acquired: 2022/12/10 - 04:49

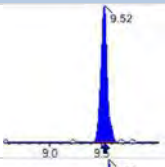
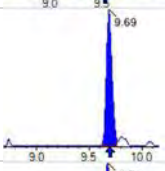
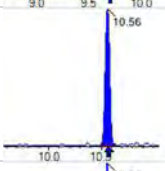
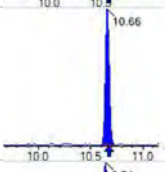
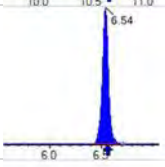
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDoA_EIS	(615.0 / 570.0) 15881	(9.89 , N/A) (N/A , -0.02 , N/A)	326.8	N/A	0.0880 [0.1000]	88.0% { 8.2% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 11186	(10.12 , N/A) (N/A , -0.02 , N/A)	132.2	N/A	0.0844 [0.1000]	84.4% { 8.6% }			
13C3_PFBS_EIS	(302.0 / 80.0) 69022	(6.17 , N/A) (N/A , -0.01 , N/A)	471.0	N/A	0.2296 [0.2000]	114.8% { 10.4% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 42425	(8.06 , N/A) (N/A , -0.03 , N/A)	369.0	N/A	0.2480 [0.2000]	124.0% { 12.0% }			
13C8_PFOS_EIS	(507.0 / 80.0) 70290	(9.48 , N/A) (N/A , -0.03 , N/A)	211.2	N/A	0.2091 [0.2000]	104.6% { 11.7% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 9237	(5.87 , N/A) (N/A , 0.00 , N/A)	139.3	N/A	0.5449 [0.4000]	136.2% { 12.9% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 11272	(7.58 , N/A) (N/A , -0.02 , N/A)	143.9	N/A	0.4956 [0.4000]	123.9% { 12.5% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 9796	(8.98 , N/A) (N/A , -0.04 , N/A)	66.8	N/A	0.4962 [0.4000]	124.1% { 11.3% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 78747	(10.17 , N/A) (N/A , -0.01 , N/A)	589.4	N/A	0.1535 [0.2000]	76.7% { 9.0% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 13226	(10.60 , N/A) (N/A , -0.01 , N/A)	181.8	N/A	0.0871 [0.2000]	43.5% { 5.5% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 12863	(10.69 , N/A) (N/A , -0.01 , N/A)	195.1	N/A	0.0934 [0.2000]	46.7% { 5.7% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-07RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (29)
Acquired: 2022/12/10 - 04:49

Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
D3_MeFOSAA_EIS	(573.0 / 419.0) 25381	(9.52 , N/A) (N/A , -0.02 , N/A)	145.6	N/A	0.3394 [0.4000]	84.8% { 9.4% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 19048	(9.69 , N/A) (N/A , -0.02 , N/A)	146.8	N/A	0.2963 [0.4000]	74.1% { 8.6% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 25054	(10.56 , N/A) (N/A , -0.01 , N/A)	238.7	N/A	0.9659 [2.0000]	48.3% { 5.3% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 13414	(10.66 , N/A) (N/A , -0.01 , N/A)	354.9	N/A	1.0150 [2.0000]	50.8% { 5.7% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 76285	(6.54 , N/A) (N/A , -0.02 , N/A)	559.5	N/A	0.7997 [0.8000]	100.0% { 11.4% }			

FORM IR
ANALYSIS DATA SHEETR

MW-17-S3-112922-

Laboratory:-	APPL, LLC-			Work Order:-	22L0004-
Client:-	Tidewater, Inc.-			Project:	NASA JPL SI-
Matrix:-	Water-	Laboratory ID:-	22L0004-08-	File ID:	S2022-12-09B (30)-
Sampled:-	11/29/22 12:50-	Prepared:-	12/05/22 07:17	Analyzed:-	12/10/22 05:02
Solids:-		Preparation:-	Table B-15-	Dilution:-	1-
Initial/Final:-	278.97 mL / 2 mL-			Instrument:-	Saphira
Batch:-	BBL0076-	Sequence:-	SB03769	Calibration:-	2250016

COMPOUNDR	CONC. (ng/L)	LOQ	LODR	DL	Q
PFBA-	1.0 J-	2.9	0.18	0.045	
PFPEA-	1.8-	1.4	0.18	0.056	
PFHXA-	1.2-	0.72	0.18	0.057	
PFHPA-	0.68 J-	0.72	0.18	0.045	
PFOA-	2.3-	0.72	0.18	0.073	
PFNA-	0.37 J-	0.72	0.18	0.045	
PFDA-	1.4-	0.72	0.18	0.045	
PFUnA-	0.18 U-	0.72	0.18	0.072	
PFDOA-	0.18 U-	0.72	0.18	0.045	
PFTRDA-	0.18 U-	0.72	0.18	0.052	
PFTEDA-	0.18 U-	0.72	0.18	0.077	
PFBS-	2.2-	0.72	0.18	0.045	
PFPES-	0.56 J-	0.72	0.18	0.052	
PFHXS-	1.4-	0.72	0.18	0.045	
PFHPS-	0.18 U-	0.72	0.18	0.050	
PFOS-	6.6-	0.72	0.18	0.045	
PFNS-	0.36 U-	0.72	0.36	0.22	
PFDS-	0.18 U-	0.72	0.18	0.057	
4:2FTS-	0.36 U-	2.9	0.36	0.097	
6:2FTS-	0.18 U-	2.9	0.18	0.081	
8:2FTS-	0.54 U-	2.9	0.54	0.18	
PFOSA-	0.13 J-	2.9	0.18	0.045	
NMeFOSA-	1.8 U-	2.9	1.8	0.88	
NEtFOSA-	1.8 U-	2.9	1.8	0.88	
NMeFOSAA-	0.18 U-	0.72	0.18	0.065	
NEtFOSAA-	0.18 U-	0.72	0.18	0.045	
NMeFOSE-	1.1 U-	2.9	1.1	0.54	
NEtFOSE-	1.1 U-	2.9	1.1	0.54	
HFPO-DA-	0.90 U-	1.4	0.90	0.44	
ADONA-	0.54 U-	1.4	0.54	0.23	

FORM IR
ANALYSIS DATA SHEETR

MW-17-S3-112922-

Laboratory:-	APPL, LLC-			Work Order:-	22L0004-
Client:-	Tidewater, Inc.-			Project:-	NASA JPL SI-
Matrix:-	Water-	Laboratory ID:-	22L0004-08-	File ID:-	S2022-12-09B (30)-
Sampled:-	11/29/22 12:50-	Prepared:-	12/05/22 07:17-	Analyzed:-	12/10/22 05:02-
Solids:-		Preparation:-	Table B-15-	Dilution:-	1-
Initial/Final:-	278.97 mL / 2 mL-			Instrument:-	Saphira-
Batch:-	BBL0076-	Sequence:-	SB03769-	Calibration:-	2250016-

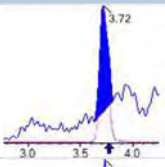
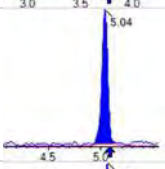
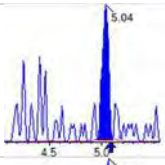
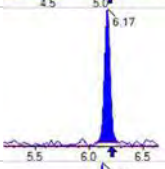
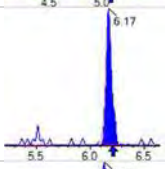
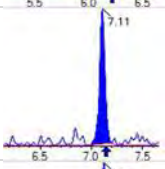
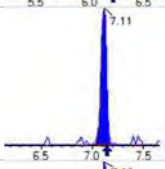
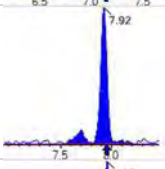
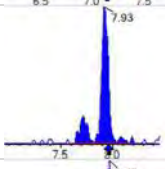
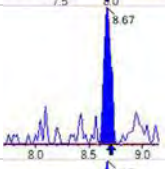
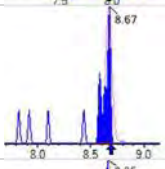
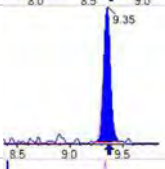
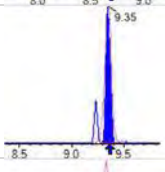
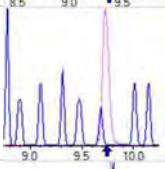
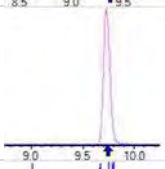
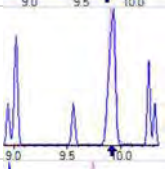
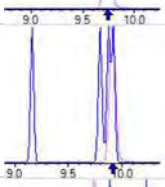
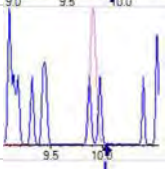
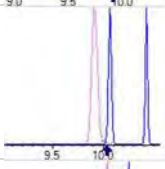
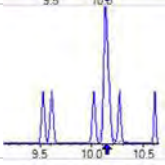
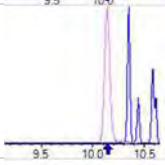
COMPOUNDR	CONC. (ng/L)R	LOQ	LODR	DLR	Q
9CL-PF3ONS-	0.54 U-	1.4-	0.54-	0.21-	
11CL-PF3OUDS-	0.54 U-	1.4-	0.54-	0.22-	

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-08
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (30)
Acquired: 2022/12/10 - 05:02

Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(212.9 / 169.0) 8395	(3.72 , 1.00) (-0.01 , N/A , 0.0)	20.4	N/A 0.0 0.0	0.1423	N/A			
PFPeA	(262.9 / 219.0) 23809 (262.9 / 69.0) 455	(5.04 , 1.00) (0.00 , N/A , 0.1)	189.9 12.2	0.0191 164.3 172.9	0.2526	N/A			
PFHxA	(313.0 / 269.0) 29023 (313.0 / 119.0) 3674	(6.17 , 1.00) (0.00 , N/A , -0.3)	118.0 93.7	0.1266 140.9 129.3	0.1743	N/A			
PFHpA	(363.0 / 319.0) 16477 (363.0 / 169.0) 6599	(7.11 , 1.00) (0.00 , N/A , -0.4)	55.4 107.5	0.4005 139.6 141.7	0.0947	N/A			
PFOA	(413.0 / 369.0) 49046 (413.0 / 169.0) 11830	(7.92 , 1.00) (0.00 , N/A , -0.4)	284.2 506.5	0.2412 74.5 74.5	0.3217	N/A			
PFNA	(463.0 / 419.0) 6560 (463.0 / 169.0) 1404	(8.67 , 1.00) (0.00 , N/A , -0.2)	24.2 18.6	0.2140 106.3 101.6	0.0514	N/A			
PFDA	(513.0 / 469.0) 31455 (513.0 / 169.0) 2435	(9.35 , 1.00) (0.00 , N/A , 0.2)	77.8 77.3	0.0774 87.2 77.9	0.1921	N/A			
PFUnA	(563.0 / 519.0) N/A (563.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoA	(613.0 / 569.0) N/A (613.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTrDA	(663.0 / 619.0) N/A (663.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTeDA	(713.0 / 669.0) N/A (713.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
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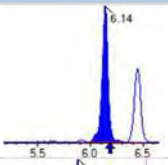
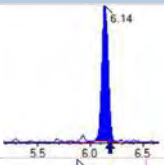
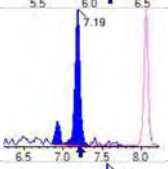
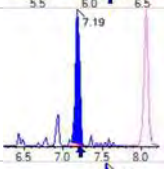
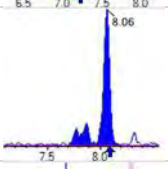
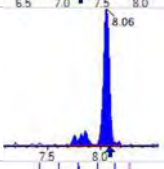
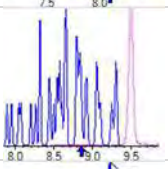
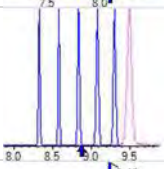
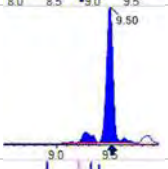
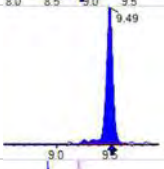
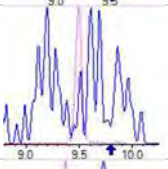
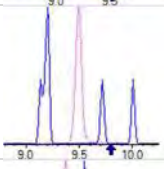
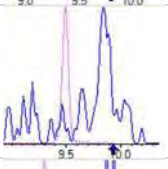
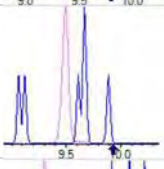
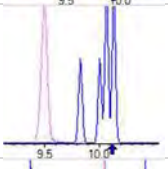
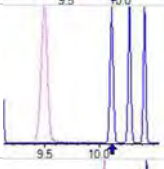
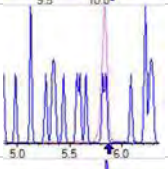
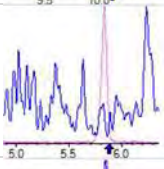
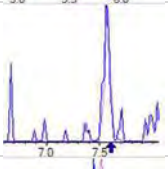
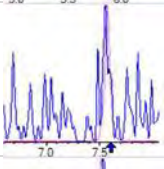
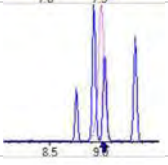
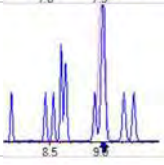
Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-08
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (30)
Acquired: 2022/12/10 - 05:02

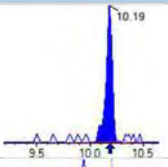
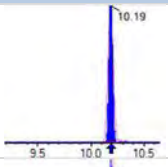
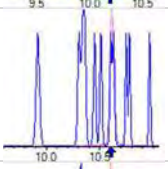
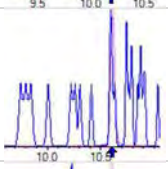
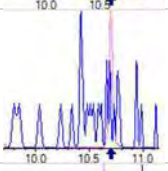
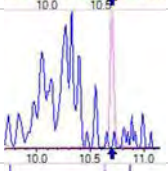
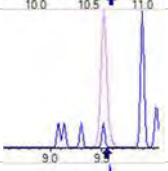
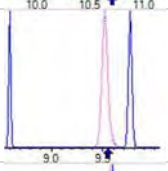
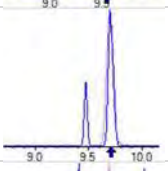
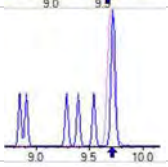
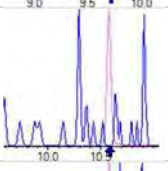
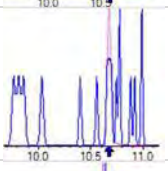
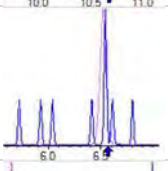
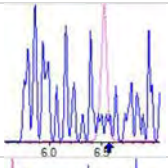
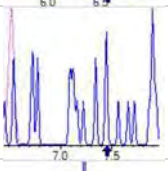
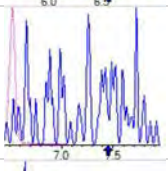
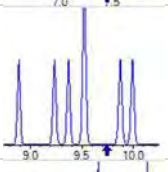
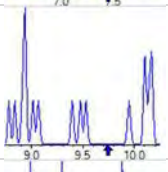
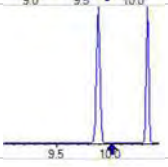
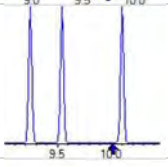
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) 68502 (298.9 / 99.0) 44042	(6.14 , 1.00) (0.00 , N/A , 0.1)	97.7 186.4	0.6429 94.9 95.0	0.3055	N/A			
PFPeS	(349.0 / 80.0) 35550 (349.0 / 99.0) 8898	(7.19 , 0.89) (N/A , -0.03 , 0.1)	107.6 62.7	0.2503 68.6 74.5	0.0784	N/A			MI4 ABK 12/29/22
PFHxS	(399.0 / 80.0) 77304 (399.0 / 99.0) 24803	(8.06 , 1.00) (0.00 , N/A , 0.1)	298.3 107067.8	0.3209 93.1 97.2	0.1923	N/A			
PFHpS	(449.0 / 80.0) N/A (449.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFOS	(499.0 / 80.0) 396206 (499.0 / 99.0) 78537	(9.50 , 1.00) (0.00 , N/A , 0.1)	378.9 102.3	0.1982 77.0 83.7	0.9175	N/A			
PFNS	(549.0 / 80.0) N/A (549.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDS	(599.0 / 80.0) N/A (599.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoS	(698.9 / 80.0) N/A (698.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
4:2FTS	(327.0 / 307.0) N/A (327.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
6:2FTS	(427.0 / 407.0) N/A (427.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
8:2FTS	(527.0 / 507.0) N/A (527.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-08
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (30)
Acquired: 2022/12/10 - 05:02

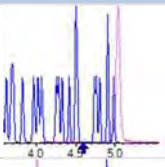
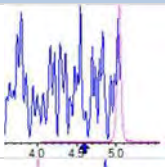
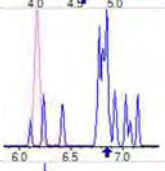
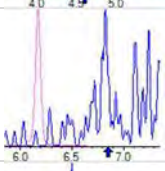
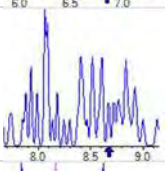
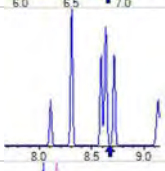
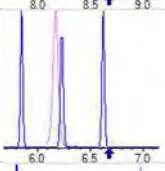
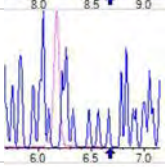
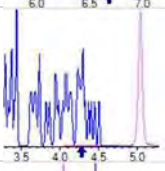
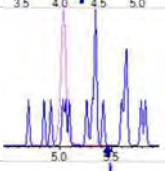
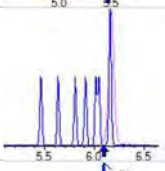
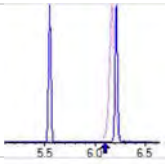
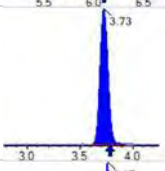
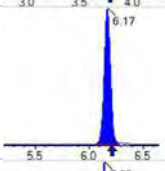
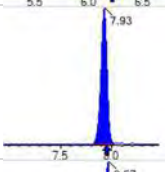
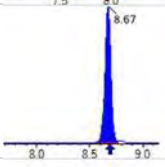
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) 9041 (498.0 / 478.0) 511	(10.19 , 1.00) (0.00 , N/A , -0.1)	57.0 5142.8	0.0565 236.6 223.7	0.0181	N/A			
NMeFOSA	(511.9 / 219.0) N/A (511.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSA	(526.0 / 219.0) N/A (526.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSAA	(570.0 / 419.0) N/A (570.0 / 483.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSAA	(584.0 / 419.0) N/A (584.0 / 526.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSE	(616.1 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSE	(630.0 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
HFPO-DA	(285.0 / 169.0) N/A (285.0 / 185.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
ADONA	(377.0 / 85.0) N/A (377.0 / 251.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
9Cl-Pf3ONS	(531.0 / 351.0) N/A (533.0 / 353.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
11Cl-PF3OUDS	(631.0 / 451.0) N/A (633.0 / 453.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-08
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (30)
Acquired: 2022/12/10 - 05:02

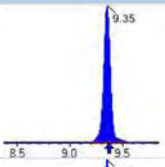
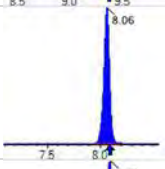
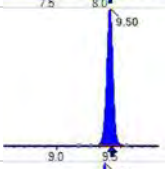
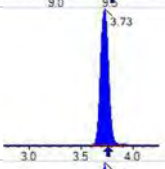
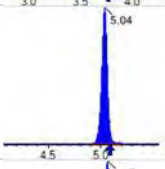
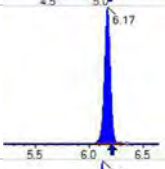
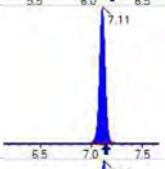
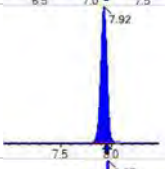
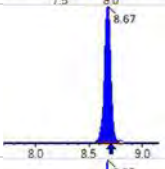
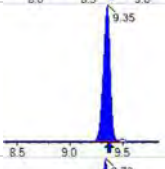
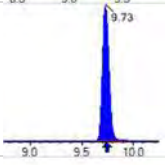
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
3:3FTCA	(241.0 / 177.0) N/A (241.0 / 117.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
5:3FTCA	(341.0 / 236.7) N/A (341.0 / 217.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
7:3FTCA	(441.0 / 317.0) N/A (441.0 / 337.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFEESA	(315.0 / 135.0) N/A (315.0 / 83.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFMPA	(229.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFMBA	(279.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NFDHA	(201.0 / 85.0) N/A (295.0 / 201.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
13C3_PFBA_IIS	(216.0 / 172.0) 85777	(3.73 , N/A) (N/A , -0.04 , N/A)	658.4	N/A	0.8923 [1.0000]	89.2% { 98.0% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 139667	(6.17 , N/A) (N/A , -0.04 , N/A)	529.3	N/A	1.1310 [1.0000]	113.1% { 107.7% }			
13C4_PFOA_IIS	(417.0 / 372.0) 147999	(7.93 , N/A) (N/A , -0.03 , N/A)	388.1	N/A	1.2484 [1.0000]	124.8% { 121.9% }			
13C5_PFNA_IIS	(468.0 / 423.0) 126887	(8.67 , N/A) (N/A , -0.02 , N/A)	513.5	N/A	1.3323 [1.0000]	133.2% { 129.2% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-08
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (30)
Acquired: 2022/12/10 - 05:02

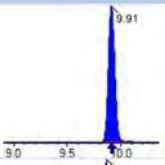
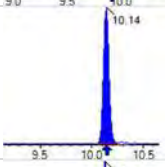
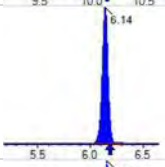
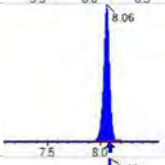
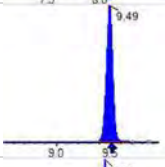
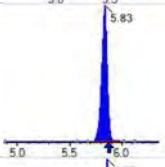
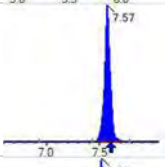
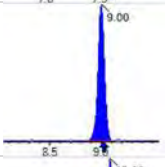
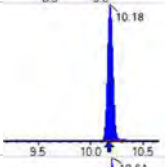
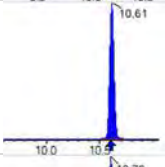
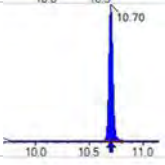
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDA_IIS	(515.1 / 470.1) 128293	(9.35 , N/A) (N/A , -0.02 , N/A)	286.9	N/A	1.5573 [1.0000]	155.7% { 142.3% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 311913	(8.06 , N/A) (N/A , -0.03 , N/A)	933.9	N/A	1.4532 [1.0000]	145.3% { 148.9% }			
13C4_PFOS_IIS	(502.8 / 79.9) 260028	(9.50 , N/A) (N/A , -0.01 , N/A)	426.5	N/A	1.3971 [1.0000]	139.7% { 136.1% }			
13C4_PFBA_EIS	(217.0 / 172.0) 619628	(3.73 , N/A) (N/A , -0.04 , N/A)	1164.5	N/A	7.7050 [8.0000]	96.3% { 94.6% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 392195	(5.04 , N/A) (N/A , -0.05 , N/A)	879.3	N/A	3.8495 [4.0000]	96.2% { 112.8% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 330385	(6.17 , N/A) (N/A , -0.04 , N/A)	702.5	N/A	2.3191 [2.0000]	116.0% { 125.9% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 343469	(7.11 , N/A) (N/A , -0.03 , N/A)	532.0	N/A	2.6710 [2.0000]	133.6% { 138.5% }			
13C8_PFOA_EIS	(421.0 / 376.0) 295757	(7.92 , N/A) (N/A , -0.03 , N/A)	702.8	N/A	1.9647 [2.0000]	98.2% { 113.4% }			
13C9_PFNA_EIS	(472.0 / 427.0) 132279	(8.67 , N/A) (N/A , -0.03 , N/A)	560.1	N/A	1.0564 [1.0000]	105.6% { 158.8% }			
13C6_PFDA_EIS	(519.0 / 474.0) 161417	(9.35 , N/A) (N/A , -0.02 , N/A)	257.1	N/A	0.8662 [1.0000]	86.6% { 138.8% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 217173	(9.73 , N/A) (N/A , -0.01 , N/A)	369.6	N/A	0.8682 [1.0000]	86.8% { 107.9% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-08
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (30)
Acquired: 2022/12/10 - 05:02

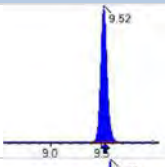
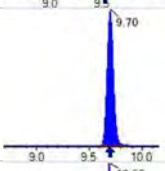
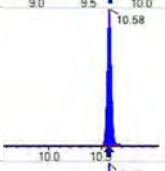
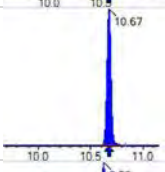
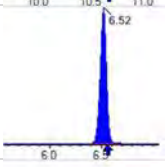
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDoA_EIS	(615.0 / 570.0) 238266	(9.91 , N/A) (N/A , 0.00 , N/A)	260.5	N/A	0.7849 [1.0000]	78.5% { 123.3% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 156181	(10.14 , N/A) (N/A , 0.00 , N/A)	371.3	N/A	0.7008 [1.0000]	70.1% { 120.3% }			
13C3_PFBS_EIS	(302.0 / 80.0) 734620	(6.14 , N/A) (N/A , -0.04 , N/A)	1023.8	N/A	1.6025 [2.0000]	80.1% { 111.0% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 479555	(8.06 , N/A) (N/A , -0.03 , N/A)	1224.0	N/A	1.8378 [2.0000]	91.9% { 135.9% }			
13C8_PFOS_EIS	(507.0 / 80.0) 769253	(9.49 , N/A) (N/A , -0.02 , N/A)	493.8	N/A	1.9406 [2.0000]	97.0% { 128.3% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 105802	(5.83 , N/A) (N/A , -0.04 , N/A)	470.9	N/A	4.0923 [4.0000]	102.3% { 147.9% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 127022	(7.57 , N/A) (N/A , -0.02 , N/A)	553.7	N/A	3.6621 [4.0000]	91.6% { 141.2% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 116096	(9.00 , N/A) (N/A , -0.03 , N/A)	508.2	N/A	3.8562 [4.0000]	96.4% { 133.9% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 899955	(10.18 , N/A) (N/A , 0.00 , N/A)	922.4	N/A	1.4872 [2.0000]	74.4% { 102.5% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 157699	(10.61 , N/A) (N/A , 0.00 , N/A)	636.6	N/A	0.8806 [2.0000]	44.0% { 66.1% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 142783	(10.70 , N/A) (N/A , 0.00 , N/A)	602.5	N/A	0.8794 [2.0000]	44.0% { 62.8% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-08
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (30)
Acquired: 2022/12/10 - 05:02

Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
D3_MeFOSAA_EIS	(573.0 / 419.0) 592591	(9.52 , N/A) (N/A , -0.02 , N/A)	473.2	N/A	6.7195 [4.0000]	168.0% { 218.7% }			S2,
D5_EtFOSAA_EIS	(589.0 / 419.0) 362416	(9.70 , N/A) (N/A , -0.01 , N/A)	408.8	N/A	4.7813 [4.0000]	119.5% { 164.5% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 312845	(10.58 , N/A) (N/A , 0.00 , N/A)	777.4	N/A	10.2284 [20.0000]	51.1% { 65.8% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 163146	(10.67 , N/A) (N/A , 0.00 , N/A)	1013.2	N/A	10.4685 [20.0000]	52.3% { 68.8% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 762031	(6.52 , N/A) (N/A , -0.04 , N/A)	959.7	N/A	8.1219 [8.0000]	101.5% { 113.6% }			

FORM IR
ANALYSIS DATA SHEETR

MW-17-S3-112922-

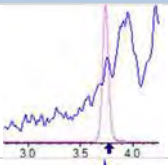
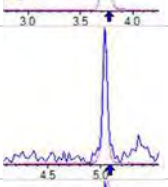
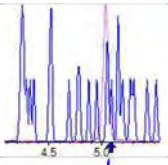
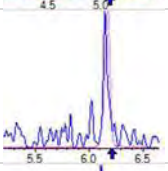
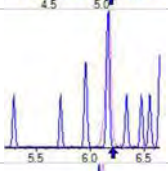
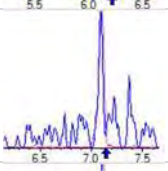
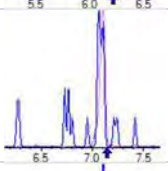
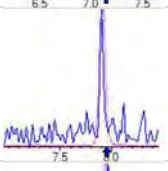
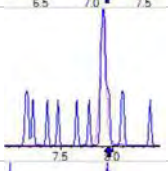
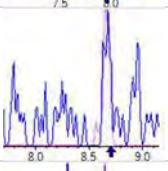
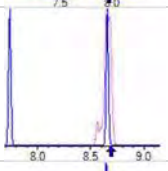
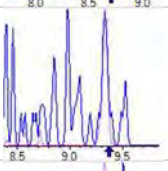
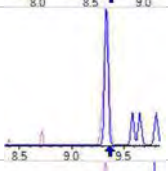
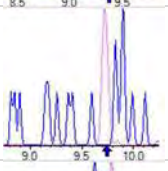
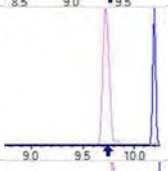
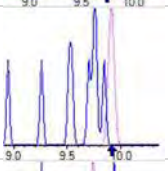
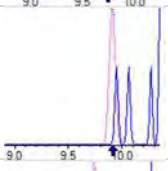
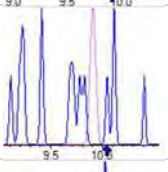
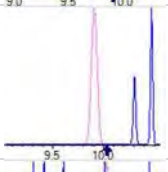
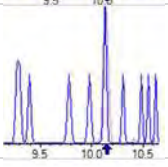
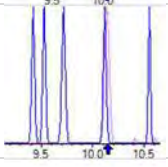
Laboratory:-	APPL, LLC-			Work Order:-	22L0004-
Client:-	Tidewater, Inc.-			Project:-	NASA JPL SI-
Matrix:-	Water-	Laboratory ID:-	22L0004-08RE1-	File ID:-	S2022-12-09B (31)-
Sampled:-	11/29/22 12:50-	Prepared:-	12/05/22 07:17-	Analyzed:-	12/10/22 05:15-
Solids:-		Preparation:-	Table B-15-	Dilution:-	10-
Initial/Final:-	278.97 mL / 2 mL-			Instrument:-	Saphira-
Batch:-	BBL0076-	Sequence:-	SB03769-	Calibration:-	2250016-

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-08RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (31)
Acquired: 2022/12/10 - 05:15

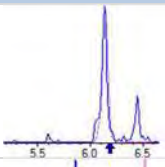
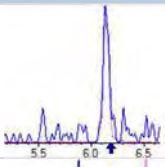
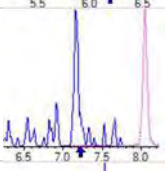
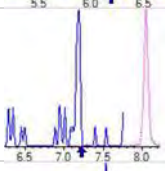
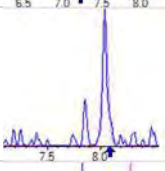
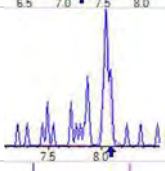
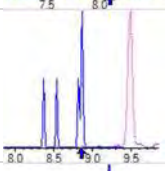
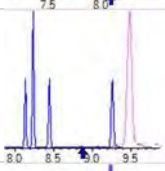
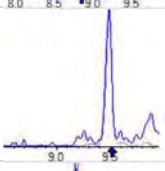
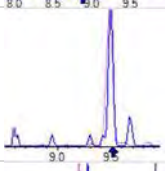
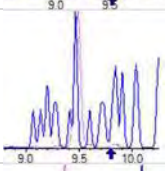
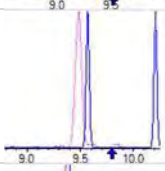
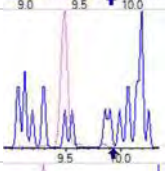
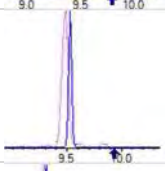
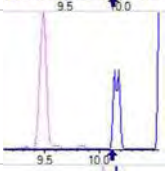
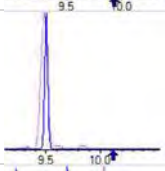
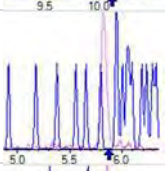
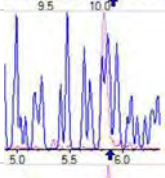
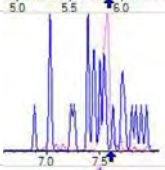
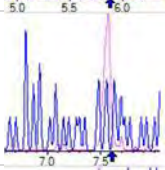
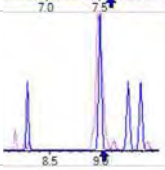
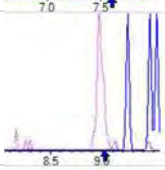
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(212.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFPeA	(262.9 / 219.0) N/A (262.9 / 69.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHxA	(313.0 / 269.0) N/A (313.0 / 119.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHpA	(363.0 / 319.0) N/A (363.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFOA	(413.0 / 369.0) N/A (413.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFNA	(463.0 / 419.0) N/A (463.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDA	(513.0 / 469.0) N/A (513.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFUnA	(563.0 / 519.0) N/A (563.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoA	(613.0 / 569.0) N/A (613.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTrDA	(663.0 / 619.0) N/A (663.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTeDA	(713.0 / 669.0) N/A (713.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-08RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (31)
Acquired: 2022/12/10 - 05:15

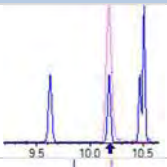
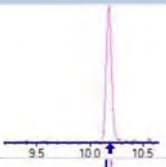
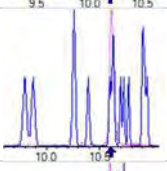
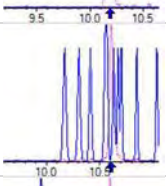
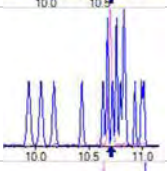
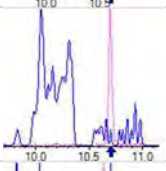
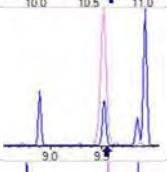
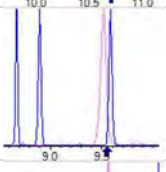
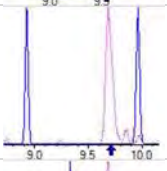
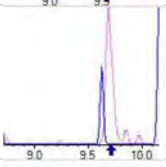
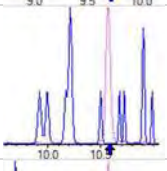
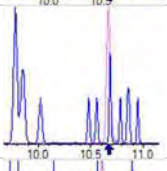
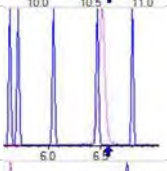
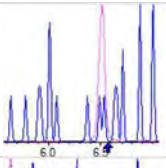
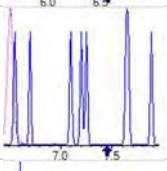
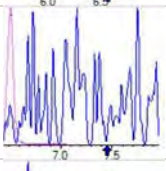
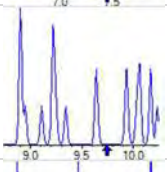
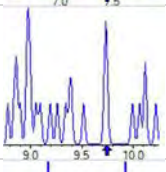
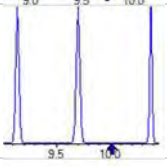
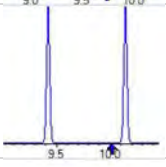
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) N/A (298.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFPeS	(349.0 / 80.0) N/A (349.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHxS	(399.0 / 80.0) N/A (399.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHpS	(449.0 / 80.0) N/A (449.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFOS	(499.0 / 80.0) N/A (499.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFNS	(549.0 / 80.0) N/A (549.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDS	(599.0 / 80.0) N/A (599.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoS	(698.9 / 80.0) N/A (698.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
4:2FTS	(327.0 / 307.0) N/A (327.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
6:2FTS	(427.0 / 407.0) N/A (427.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
8:2FTS	(527.0 / 507.0) N/A (527.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-08RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (31)
Acquired: 2022/12/10 - 05:15

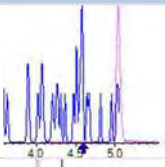
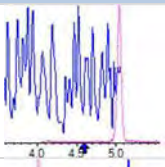
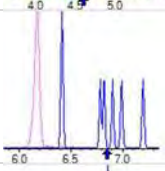
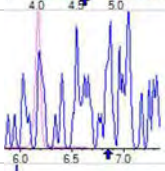
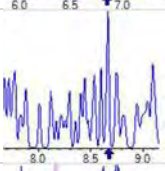
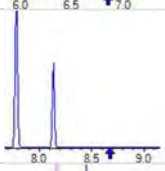
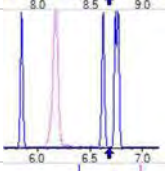
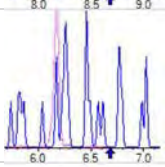
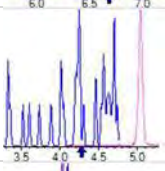
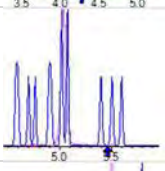
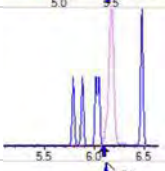
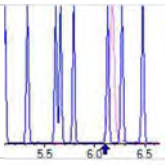
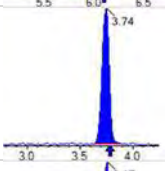
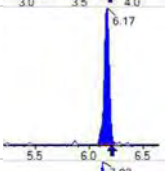
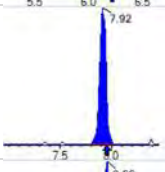
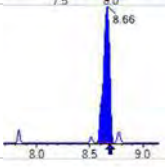
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) N/A (498.0 / 478.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSA	(511.9 / 219.0) N/A (511.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSA	(526.0 / 219.0) N/A (526.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSAA	(570.0 / 419.0) N/A (570.0 / 483.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSAA	(584.0 / 419.0) N/A (584.0 / 526.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSE	(616.1 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSE	(630.0 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
HFPO-DA	(285.0 / 169.0) N/A (285.0 / 185.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
ADONA	(377.0 / 85.0) N/A (377.0 / 251.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
9Cl-Pf3ONS	(531.0 / 351.0) N/A (533.0 / 353.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
11Cl-PF3OUDS	(631.0 / 451.0) N/A (633.0 / 453.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-08RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (31)
Acquired: 2022/12/10 - 05:15

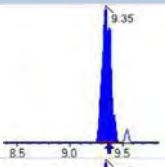
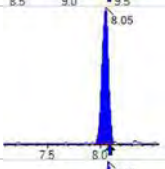
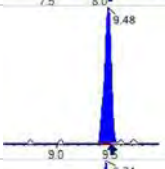
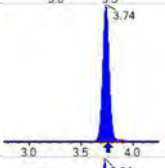
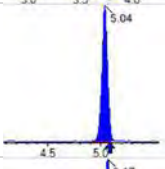
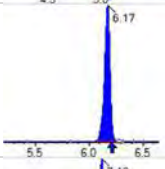
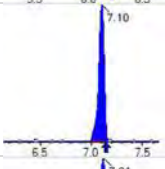
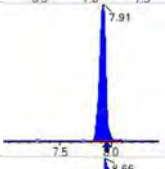
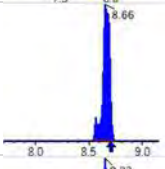
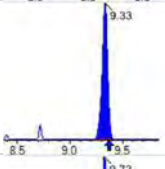
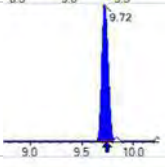
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
3:3FTCA	(241.0 / 177.0) N/A (241.0 / 117.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
5:3FTCA	(341.0 / 236.7) N/A (341.0 / 217.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
7:3FTCA	(441.0 / 317.0) N/A (441.0 / 337.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFEESA	(315.0 / 135.0) N/A (315.0 / 83.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFMPA	(229.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFMBA	(279.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NFDHA	(201.0 / 85.0) N/A (295.0 / 201.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
13C3_PFBA_IIS	(216.0 / 172.0) 8892	(3.74 , N/A) (N/A , -0.03 , N/A)	246.8	N/A	0.9251 [1.0000]	92.5% { 10.2% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 12161	(6.17 , N/A) (N/A , -0.05 , N/A)	252.9	N/A	0.9848 [1.0000]	98.5% { 9.4% }			
13C4_PFOA_IIS	(417.0 / 372.0) 13632	(7.92 , N/A) (N/A , -0.04 , N/A)	375.5	N/A	1.1499 [1.0000]	115.0% { 11.2% }			
13C5_PFNA_IIS	(468.0 / 423.0) 8204	(8.66 , N/A) (N/A , -0.03 , N/A)	220.2	N/A	0.8614 [1.0000]	86.1% { 8.4% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-08RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (31)
Acquired: 2022/12/10 - 05:15

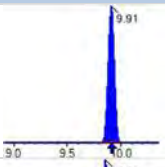
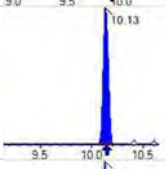
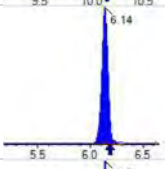
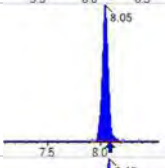
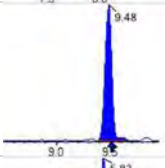
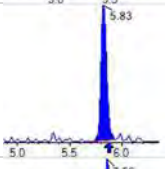
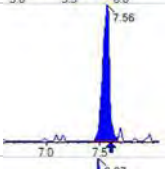
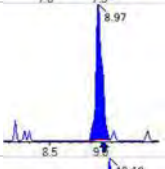
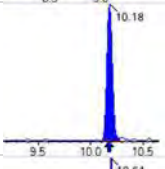
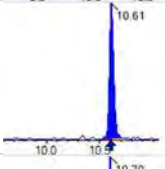
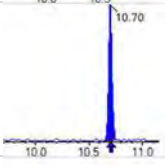
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDA_IIS	(515.1 / 470.1) 7848	(9.35 , N/A) (N/A , -0.02 , N/A)	1777.4	N/A	0.9526 [1.0000]	95.3% { 8.7% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 23375	(8.05 , N/A) (N/A , -0.04 , N/A)	331.6	N/A	1.0891 [1.0000]	108.9% { 11.2% }			
13C4_PFOS_IIS	(502.8 / 79.9) 18212	(9.48 , N/A) (N/A , -0.03 , N/A)	137.7	N/A	0.9785 [1.0000]	97.8% { 9.5% }			
13C4_PFBA_EIS	(217.0 / 172.0) 69850	(3.74 , N/A) (N/A , -0.03 , N/A)	968.7	N/A	0.8378 [0.8000]	104.7% { 10.7% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 35685	(5.04 , N/A) (N/A , -0.04 , N/A)	438.0	N/A	0.4023 [0.4000]	100.6% { 10.3% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 29839	(6.17 , N/A) (N/A , -0.04 , N/A)	456.7	N/A	0.2406 [0.2000]	120.3% { 11.4% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 24458	(7.10 , N/A) (N/A , -0.04 , N/A)	365.2	N/A	0.2185 [0.2000]	109.2% { 9.9% }			
13C8_PFOA_EIS	(421.0 / 376.0) 29678	(7.91 , N/A) (N/A , -0.04 , N/A)	387.4	N/A	0.2140 [0.2000]	107.0% { 11.4% }			
13C9_PFNA_EIS	(472.0 / 427.0) 14037	(8.66 , N/A) (N/A , -0.04 , N/A)	562225.2	N/A	0.1734 [0.1000]	173.4% { 16.8% }			S2,
13C6_PFDA_EIS	(519.0 / 474.0) 13376	(9.33 , N/A) (N/A , -0.04 , N/A)	456.2	N/A	0.1173 [0.1000]	117.3% { 11.5% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 18948	(9.72 , N/A) (N/A , -0.02 , N/A)	4044.8	N/A	0.1238 [0.1000]	123.8% { 9.4% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-08RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (31)
Acquired: 2022/12/10 - 05:15

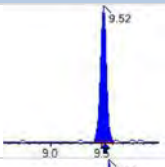
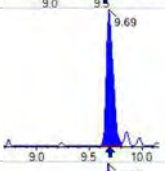
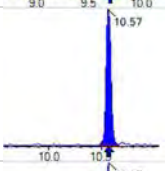
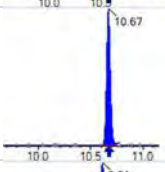
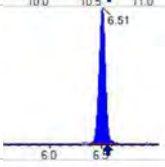
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDoA_EIS	(615.0 / 570.0) 21223	(9.91 , N/A) (N/A , 0.00 , N/A)	265.7	N/A	0.1143 [0.1000]	114.3% { 11.0% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 15396	(10.13 , N/A) (N/A , 0.00 , N/A)	720.1	N/A	0.1129 [0.1000]	112.9% { 11.9% }			
13C3_PFBS_EIS	(302.0 / 80.0) 72388	(6.14 , N/A) (N/A , -0.04 , N/A)	620.1	N/A	0.2107 [0.2000]	105.4% { 10.9% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 38967	(8.05 , N/A) (N/A , -0.04 , N/A)	474.2	N/A	0.1993 [0.2000]	99.6% { 11.0% }			
13C8_PFOS_EIS	(507.0 / 80.0) 63556	(9.48 , N/A) (N/A , -0.03 , N/A)	197.0	N/A	0.2289 [0.2000]	114.5% { 10.6% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 7950	(5.83 , N/A) (N/A , -0.05 , N/A)	96.2	N/A	0.4103 [0.4000]	102.6% { 11.1% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 9772	(7.56 , N/A) (N/A , -0.03 , N/A)	111.9	N/A	0.3759 [0.4000]	94.0% { 10.9% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 7619	(8.97 , N/A) (N/A , -0.05 , N/A)	71.3	N/A	0.3377 [0.4000]	84.4% { 8.8% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 80099	(10.18 , N/A) (N/A , 0.00 , N/A)	243.7	N/A	0.1890 [0.2000]	94.5% { 9.1% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 16155	(10.61 , N/A) (N/A , 0.00 , N/A)	208.6	N/A	0.1288 [0.2000]	64.4% { 6.8% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 13290	(10.70 , N/A) (N/A , 0.00 , N/A)	234.7	N/A	0.1169 [0.2000]	58.4% { 5.8% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-08RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (31)
Acquired: 2022/12/10 - 05:15

Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
D3_MeFOSAA_EIS	(573.0 / 419.0) 28521	(9.52 , N/A) (N/A , -0.02 , N/A)	201.1	N/A	0.4618 [0.4000]	115.4% { 10.5% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 23520	(9.69 , N/A) (N/A , -0.01 , N/A)	95.9	N/A	0.4430 [0.4000]	110.8% { 10.7% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 31105	(10.57 , N/A) (N/A , 0.00 , N/A)	277.2	N/A	1.4520 [2.0000]	72.6% { 6.5% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 16858	(10.67 , N/A) (N/A , 0.00 , N/A)	436.4	N/A	1.5445 [2.0000]	77.2% { 7.1% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 71943	(6.51 , N/A) (N/A , -0.05 , N/A)	673.8	N/A	0.8807 [0.8000]	110.1% { 10.7% }			

FORM IR
ANALYSIS DATA SHEETR

DUP-3-112922P

Laboratory:	AP L, LLCP			Work Order:	22L0004P
Client:	Tidewater, Inc.P			roject:	NASA JPL SIP
Matrix:	WaterP	Laboratory ID:	22L0004-09P	File ID:	S2022-12-09B (32)P
Sampled:	11/29/22 13:00P	repared:	12/05/22 07:17	Analyzed:	12/10/22 05:28
Solids:		reparation:	Table B-15P	Dilution:	1P
Initial/Final:	284.45 mL / 2 mLP			Instrument:	Saphira
Batch:	BBL0076P	Sequence:	SB03769	Calibration:	2250016

COMPOUNDR	CONC. (ng/L)	LOQ	LODR	DL	Q
FBAP	0.80 JP	2.8	0.18	0.044	
FPEAP	1.9P	1.4	0.18	0.054	
FHXAP	1.4P	0.70P	0.18	0.056	IR2
PFHPAP	0.92P	0.70	0.18	0.044	
FOAP	2.0P	0.70P	0.18	0.072	MI4
FNAP	0.53 JP	0.70	0.18	0.044	
FDAP	0.91P	0.70	0.18	0.044	
FUnAP	0.18 UP	0.70	0.18	0.070	
FDOAP	0.18 UP	0.70	0.18	0.044	
FTRDAP	0.18 UP	0.70	0.18	0.051	
FTEDAP	0.18 UP	0.70	0.18	0.076	
FBSP	2.4P	0.70	0.18	0.044	
FPESP	0.53 JP	0.70	0.18	0.051	
FHXSP	1.4P	0.70	0.18	0.044	
FHPSP	0.18 UP	0.70	0.18	0.049	
FOSP	5.9P	0.70	0.18	0.044	
FNSP	0.35 UP	0.70	0.35	0.22	
FDSP	0.18 UP	0.70	0.18	0.056	
4:2FTSP	0.35 UP	2.8	0.35	0.095	
6:2FTSP	0.18 UP	2.8	0.18	0.079	
8:2FTSP	0.53 UP	2.8	0.53	0.18	
FOSAP	0.18 UP	2.8	0.18	0.044	
NMeFOSAP	1.8 UP	2.8	1.8	0.87	
NEtFOSAP	1.8 UP	2.8	1.8	0.86	
NMeFOSAAP	0.18 UP	0.70	0.18	0.063	
NEtFOSAAP	0.18 UP	0.70	0.18	0.044	
NMeFOSEP	1.1 UP	2.8	1.1	0.53	
NEtFOSEP	1.1 UP	2.8	1.1	0.53	
HFPO-DAP	0.88 UP	1.4	0.88	0.43	
ADONAP	0.53 UP	1.4	0.53	0.23	

FORM IR
ANALYSIS DATA SHEETR

DUP-3-112922P

Laboratory:	AP L, LLCP			Work Order:	22L0004P
Client:	Tidewater, Inc.P			roject:	NASA JPL SIP
Matrix:	WaterP	Laboratory ID:	22L0004-09P	File ID:	S2022-12-09B (32)P
Sampled:	11/29/22 13:00P	repared:	12/05/22 07:17P	Analyzed:	12/10/22 05:28P
Solids:		reparation:	Table B-15P	Dilution:	1P
Initial/Final:	284.45 mL / 2 mLP			Instrument:	SaphiraP
Batch:	BBL0076P	Sequence:	SB03769P	Calibration:	2250016P

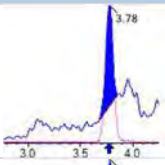
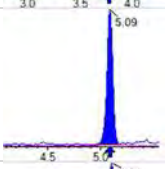
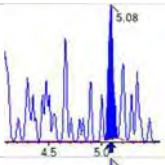
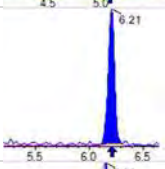
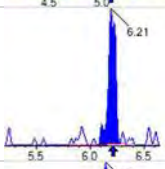
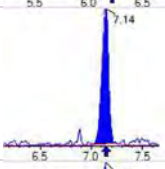
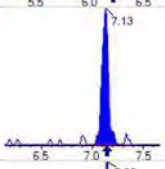
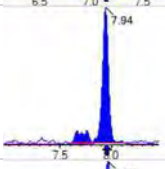
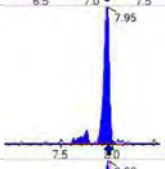
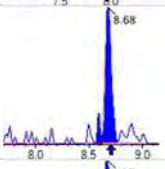
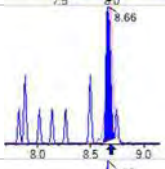
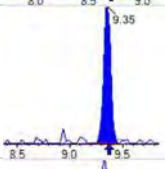
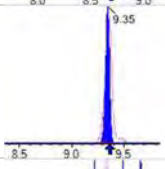
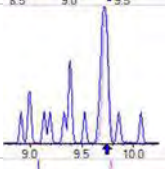
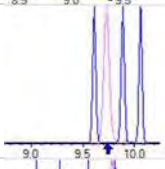
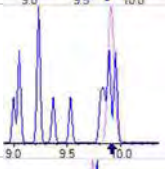
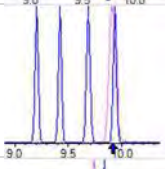
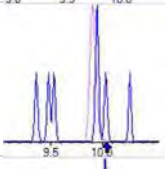
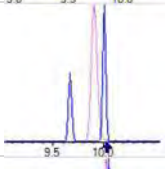
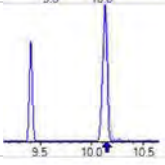
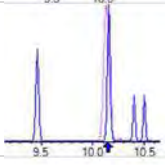
COMPOUNDR	CONC. (ng/L)R	LOQ	LODR	DLR	Q
9CL-PF3ONSP	0.53 UP	1.4P	0.53P	0.21P	
11CL-PF3OUDSP	0.53 UP	1.4P	0.53P	0.21P	

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-09
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (32)
Acquired: 2022/12/10 - 05:28

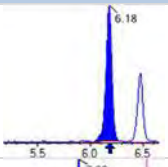
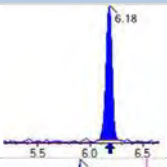
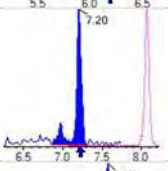
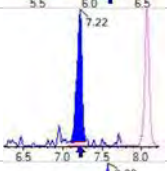
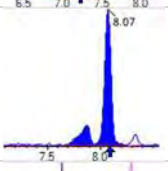
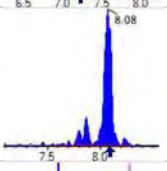
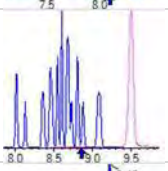
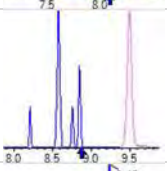
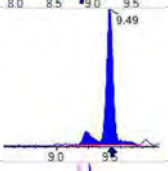
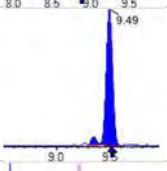
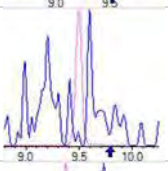
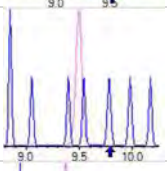
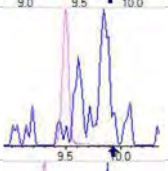
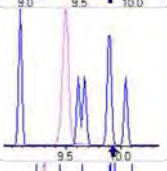
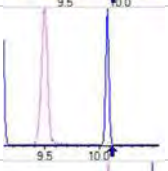
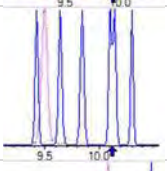
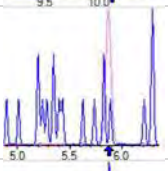
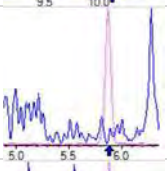
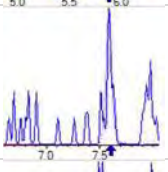
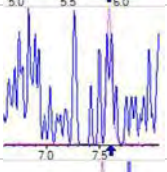
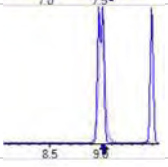
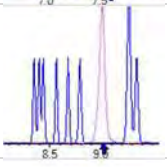
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(212.9 / 169.0) 7716	(3.78 , 1.00) (0.00 , N/A , 0.0)	22.4	N/A 0.0 0.0	0.1134	N/A			
PFPeA	(262.9 / 219.0) 26825 (262.9 / 69.0) 249	(5.09 , 1.00) (0.00 , N/A , 0.1)	203.5 9.1	0.0093 79.7 83.9	0.2678	N/A			
PFHxA	(313.0 / 269.0) 33994 (313.0 / 119.0) 4743	(6.21 , 1.00) (0.00 , N/A , 0.1)	128.4 43.3	0.1395 155.2 142.5	0.1955	N/A			IR2,
PFHpA	(363.0 / 319.0) 19822 (363.0 / 169.0) 6268	(7.14 , 1.00) (0.01 , N/A , 0.8)	90.7 88.8	0.3162 110.2 111.9	0.1312	N/A			
PFOA	(413.0 / 369.0) 44947 (413.0 / 169.0) 16857	(7.94 , 1.00) (0.00 , N/A , -0.4)	255.3 124.6	0.3750 115.9 115.9	0.2791	N/A			MI4 ABK 12/29/22
PFNA	(463.0 / 419.0) 9075 (463.0 / 169.0) 1106	(8.68 , 1.00) (0.00 , N/A , 0.8)	63.2 15.2	0.1219 60.5 57.8	0.0761	N/A			
PFDA	(513.0 / 469.0) 24006 (513.0 / 169.0) 2720	(9.35 , 1.00) (0.00 , N/A , 0.5)	79.1 8136.5	0.1133 127.6 114.0	0.1299	N/A			
PFUnA	(563.0 / 519.0) N/A (563.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoA	(613.0 / 569.0) N/A (613.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTrDA	(663.0 / 619.0) N/A (663.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTeDA	(713.0 / 669.0) N/A (713.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-09
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (32)
Acquired: 2022/12/10 - 05:28

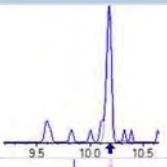
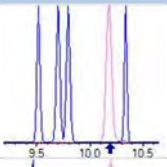
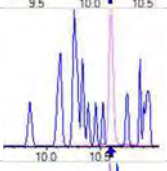
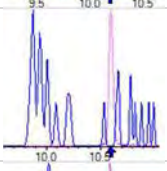
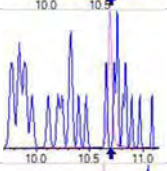
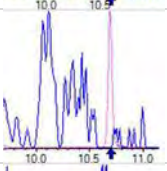
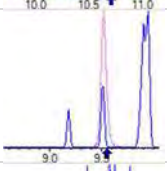
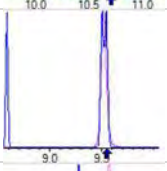
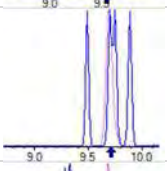
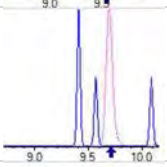
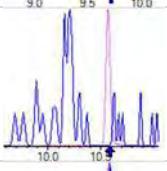
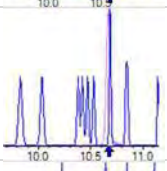
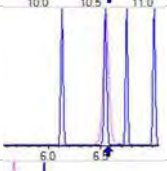
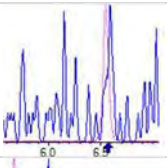
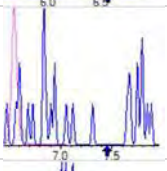
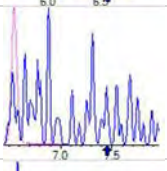
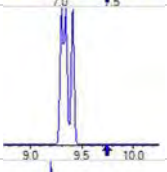
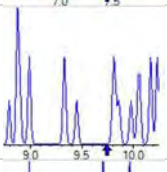
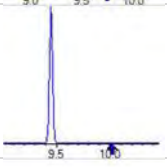
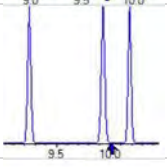
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) 78479 (298.9 / 99.0) 44620	(6.18 , 1.00) (0.00 , N/A , -0.1)	113.9 184.0	0.5686 83.9 84.0	0.3371	N/A			
PFPeS	(349.0 / 80.0) 34919 (349.0 / 99.0) 9849	(7.20 , 0.89) (N/A , -0.02 , -0.7)	129.0 59.6	0.2820 77.3 83.9	0.0754	N/A			
PFHxS	(399.0 / 80.0) 80830 (399.0 / 99.0) 27680	(8.07 , 1.00) (0.00 , N/A , -0.1)	354.4 8890.2	0.3424 99.3 103.7	0.1968	N/A			
PFHpS	(449.0 / 80.0) N/A (449.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFOS	(499.0 / 80.0) 380542 (499.0 / 99.0) 81038	(9.49 , 1.00) (0.00 , N/A , 0.3)	1657.3 147.0	0.2130 82.7 90.0	0.8349	N/A			
PFNS	(549.0 / 80.0) N/A (549.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDS	(599.0 / 80.0) N/A (599.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoS	(698.9 / 80.0) N/A (698.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
4:2FTS	(327.0 / 307.0) N/A (327.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
6:2FTS	(427.0 / 407.0) N/A (427.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
8:2FTS	(527.0 / 507.0) N/A (527.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-09
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (32)
Acquired: 2022/12/10 - 05:28

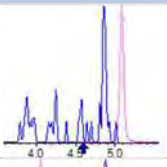
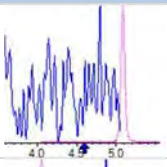
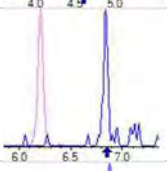
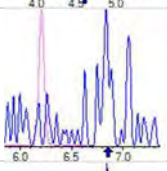
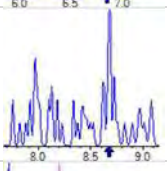
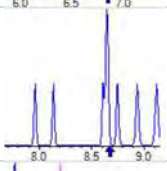
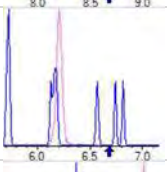
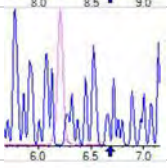
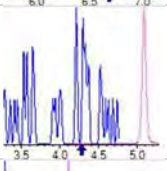
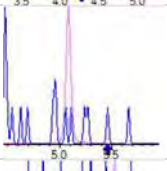
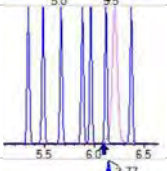
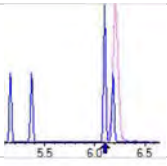
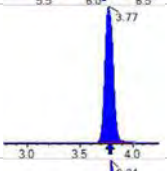
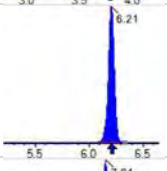
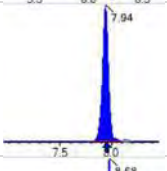
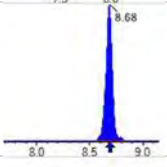
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) N/A (498.0 / 478.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSA	(511.9 / 219.0) N/A (511.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSA	(526.0 / 219.0) N/A (526.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSAA	(570.0 / 419.0) N/A (570.0 / 483.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSAA	(584.0 / 419.0) N/A (584.0 / 526.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSE	(616.1 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSE	(630.0 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
HFPO-DA	(285.0 / 169.0) N/A (285.0 / 185.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
ADONA	(377.0 / 85.0) N/A (377.0 / 251.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
9Cl-Pf3ONS	(531.0 / 351.0) N/A (533.0 / 353.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
11Cl-PF3OUDS	(631.0 / 451.0) N/A (633.0 / 453.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-09
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (32)
Acquired: 2022/12/10 - 05:28

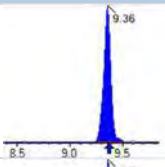
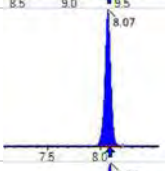
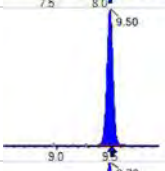
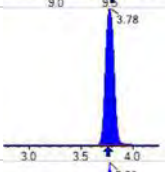
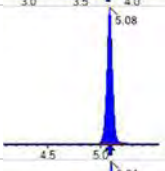
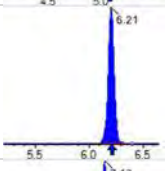
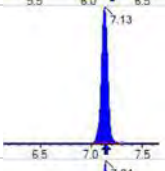
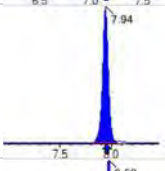
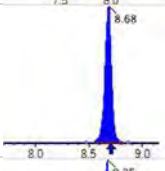
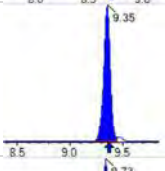
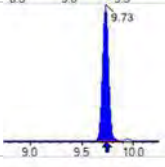
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
3:3FTCA	(241.0 / 177.0) N/A (241.0 / 117.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
5:3FTCA	(341.0 / 236.7) N/A (341.0 / 217.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
7:3FTCA	(441.0 / 317.0) N/A (441.0 / 337.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFEESA	(315.0 / 135.0) N/A (315.0 / 83.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFMPA	(229.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFMBA	(279.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NFDHA	(201.0 / 85.0) N/A (295.0 / 201.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
13C3_PFBA_IIS	(216.0 / 172.0) 99801	(3.77 , N/A) (N/A , 0.00 , N/A)	725.2	N/A	1.0382 [1.0000]	103.8% { 114.0% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 157268	(6.21 , N/A) (N/A , 0.00 , N/A)	620.2	N/A	1.2736 [1.0000]	127.4% { 121.3% }			
13C4_PFOA_IIS	(417.0 / 372.0) 150811	(7.94 , N/A) (N/A , -0.01 , N/A)	372.2	N/A	1.2721 [1.0000]	127.2% { 124.2% }			
13C5_PFNA_IIS	(468.0 / 423.0) 127415	(8.68 , N/A) (N/A , -0.01 , N/A)	587.7	N/A	1.3378 [1.0000]	133.8% { 129.7% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-09
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (32)
Acquired: 2022/12/10 - 05:28

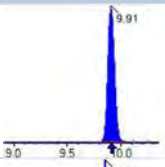
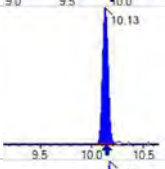
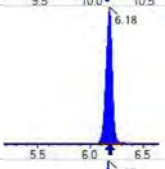
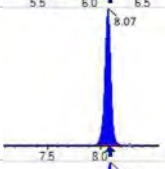
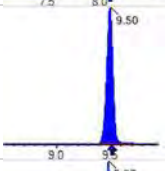
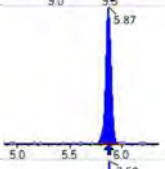
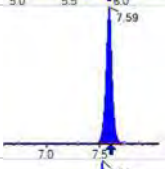
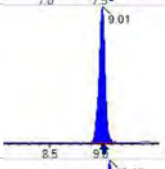
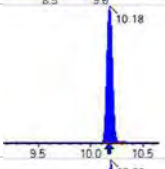
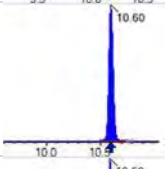
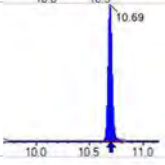
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDA_IIS	(515.1 / 470.1) 122850	(9.36 , N/A) (N/A , -0.01 , N/A)	547.6	N/A	1.4912 [1.0000]	149.1% { 136.3% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 287631	(8.07 , N/A) (N/A , -0.02 , N/A)	1135.1	N/A	1.3401 [1.0000]	134.0% { 137.3% }			
13C4_PFOS_IIS	(502.8 / 79.9) 303137	(9.50 , N/A) (N/A , -0.01 , N/A)	455.7	N/A	1.6287 [1.0000]	162.9% { 158.7% }			
13C4_PFBA_EIS	(217.0 / 172.0) 715167	(3.78 , N/A) (N/A , 0.01 , N/A)	943.8	N/A	7.6433 [8.0000]	95.5% { 109.2% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 416786	(5.08 , N/A) (N/A , 0.00 , N/A)	924.8	N/A	3.6330 [4.0000]	90.8% { 119.9% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 345009	(6.21 , N/A) (N/A , -0.01 , N/A)	724.4	N/A	2.1508 [2.0000]	107.5% { 131.5% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 298296	(7.13 , N/A) (N/A , -0.01 , N/A)	797.2	N/A	2.0601 [2.0000]	103.0% { 120.3% }			
13C8_PFOA_EIS	(421.0 / 376.0) 312389	(7.94 , N/A) (N/A , -0.01 , N/A)	476.4	N/A	2.0365 [2.0000]	101.8% { 119.7% }			
13C9_PFNA_EIS	(472.0 / 427.0) 123715	(8.68 , N/A) (N/A , -0.02 , N/A)	350.6	N/A	0.9839 [1.0000]	98.4% { 148.5% }			
13C6_PFDA_EIS	(519.0 / 474.0) 182109	(9.35 , N/A) (N/A , -0.02 , N/A)	450.7	N/A	1.0205 [1.0000]	102.1% { 156.6% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 252996	(9.73 , N/A) (N/A , -0.01 , N/A)	614.3	N/A	1.0562 [1.0000]	105.6% { 125.7% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-09
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (32)
Acquired: 2022/12/10 - 05:28

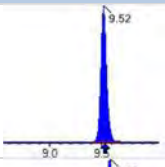
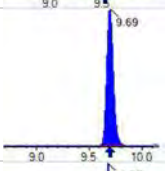
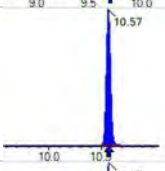
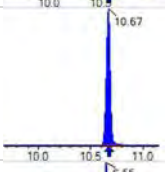
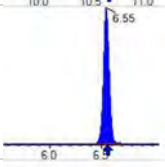
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDoA_EIS	(615.0 / 570.0) 213167	(9.91 , N/A) (N/A , 0.00 , N/A)	326.7	N/A	0.7333 [1.0000]	73.3% { 110.3% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 151455	(10.13 , N/A) (N/A , -0.01 , N/A)	478.9	N/A	0.7097 [1.0000]	71.0% { 116.7% }			
13C3_PFBS_EIS	(302.0 / 80.0) 762568	(6.18 , N/A) (N/A , 0.00 , N/A)	724.4	N/A	1.8039 [2.0000]	90.2% { 115.2% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 489910	(8.07 , N/A) (N/A , -0.01 , N/A)	875.3	N/A	2.0360 [2.0000]	101.8% { 138.8% }			
13C8_PFOS_EIS	(507.0 / 80.0) 811996	(9.50 , N/A) (N/A , -0.01 , N/A)	496.1	N/A	1.7571 [2.0000]	87.9% { 135.4% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 107611	(5.87 , N/A) (N/A , 0.00 , N/A)	468.1	N/A	4.5137 [4.0000]	112.8% { 150.4% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 120053	(7.59 , N/A) (N/A , -0.01 , N/A)	511.7	N/A	3.7533 [4.0000]	93.8% { 133.5% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 128089	(9.01 , N/A) (N/A , -0.02 , N/A)	408.1	N/A	4.6137 [4.0000]	115.3% { 147.8% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 906327	(10.18 , N/A) (N/A , 0.00 , N/A)	518.6	N/A	1.2847 [2.0000]	64.2% { 103.3% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 164851	(10.60 , N/A) (N/A , -0.01 , N/A)	577.6	N/A	0.7897 [2.0000]	39.5% { 69.1% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 149880	(10.69 , N/A) (N/A , 0.00 , N/A)	536.0	N/A	0.7918 [2.0000]	39.6% { 65.9% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-09
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (32)
Acquired: 2022/12/10 - 05:28

Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
D3_MeFOSAA_EIS	(573.0 / 419.0) 785898	(9.52 , N/A) (N/A , -0.02 , N/A)	1052.7	N/A	7.6441 [4.0000]	191.1% { 290.0% }			S2,
D5_EtFOSAA_EIS	(589.0 / 419.0) 343545	(9.69 , N/A) (N/A , -0.01 , N/A)	551.4	N/A	3.8878 [4.0000]	97.2% { 155.9% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 308712	(10.57 , N/A) (N/A , 0.00 , N/A)	968.1	N/A	8.6579 [20.0000]	43.3% { 64.9% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 161144	(10.67 , N/A) (N/A , 0.00 , N/A)	1073.4	N/A	8.8696 [20.0000]	44.3% { 67.9% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 867452	(6.55 , N/A) (N/A , -0.01 , N/A)	982.0	N/A	8.2107 [8.0000]	102.6% { 129.3% }			

FORM IR
ANALYSIS DATA SHEETR

DUP-3-112922P

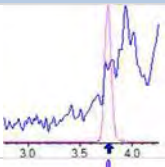
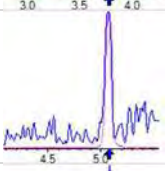
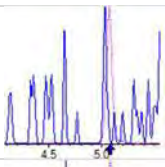
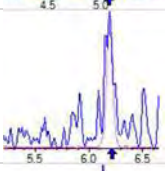
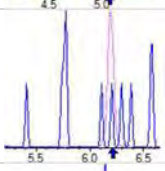
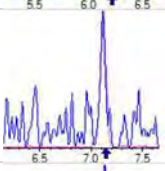
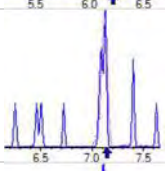
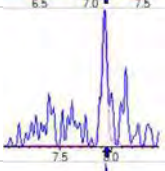
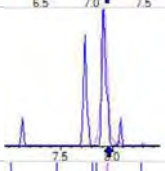
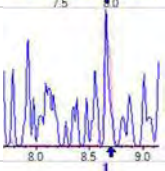
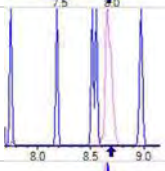
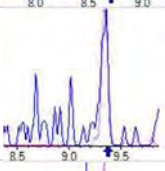
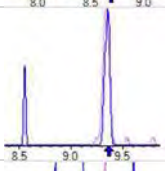
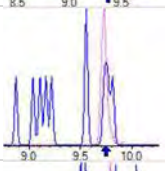
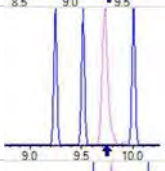
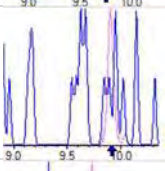
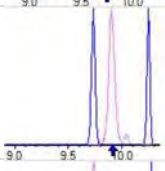
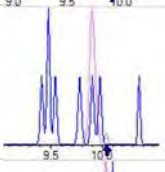
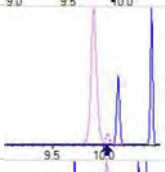
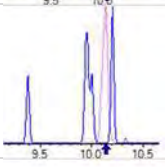
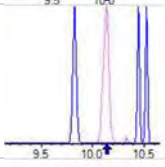
Laboratory:	AP L, LLCP			Work Order:	22L0004P
Client:	Tidewater, Inc.P			roject:	NASA JPL SIP
Matrix:	WaterP	Laboratory ID:	22L0004-09RE1P	File ID:	S2022-12-09B (33)P
Sampled:	11/29/22 13:00P	repared:	12/05/22 07:17P	Analyzed:	12/10/22 05:40P
Solids:		reparation:	Table B-15P	Dilution:	10P
Initial/Final:	284.45 mL / 2 mLP			Instrument:	SaphiraP
Batch:	BBL0076P	Sequence:	SB03769P	Calibration:	2250016P

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-09RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (33)
Acquired: 2022/12/10 - 05:40

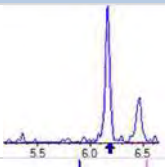
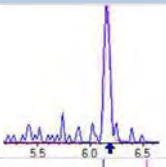
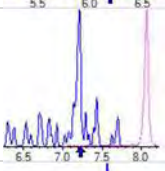
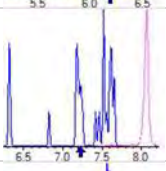
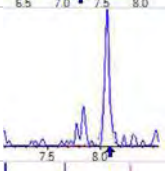
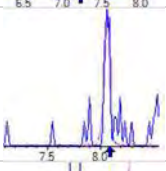
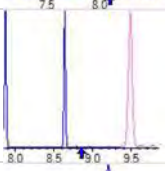
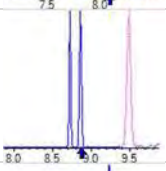
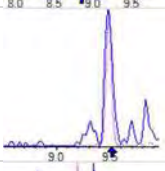
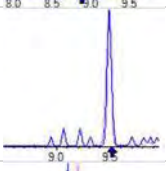
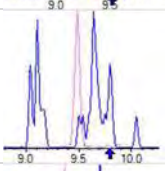
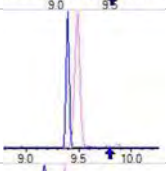
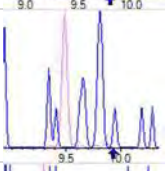
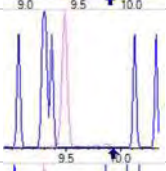
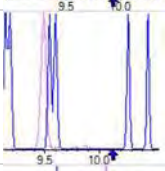
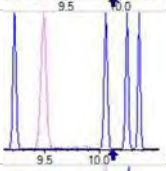
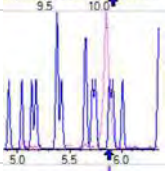
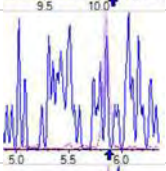
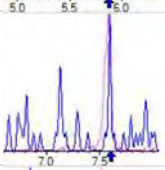
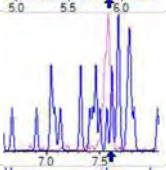
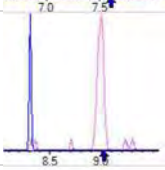
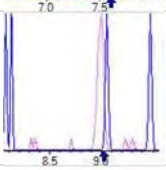
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(212.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFPeA	(262.9 / 219.0) N/A (262.9 / 69.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHxA	(313.0 / 269.0) N/A (313.0 / 119.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHpA	(363.0 / 319.0) N/A (363.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFOA	(413.0 / 369.0) N/A (413.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFNA	(463.0 / 419.0) N/A (463.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDA	(513.0 / 469.0) N/A (513.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFUnA	(563.0 / 519.0) N/A (563.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoA	(613.0 / 569.0) N/A (613.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTrDA	(663.0 / 619.0) N/A (663.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFTeDA	(713.0 / 669.0) N/A (713.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-09RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (33)
Acquired: 2022/12/10 - 05:40

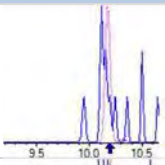
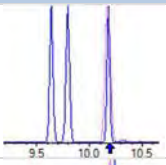
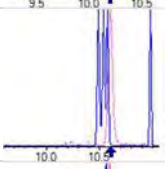
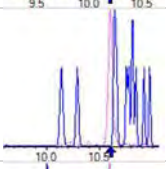
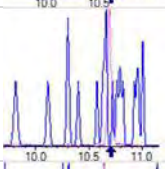
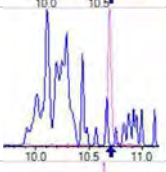
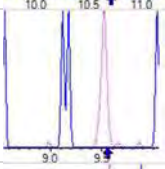
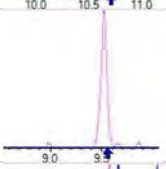
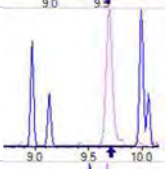
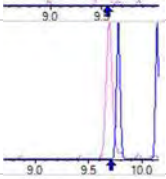
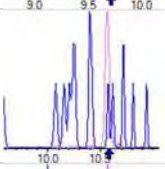
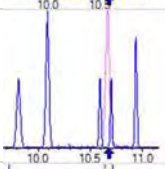
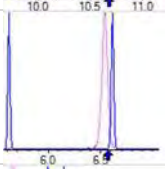
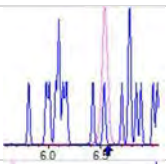
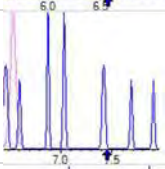
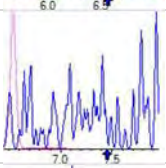
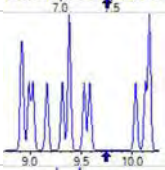
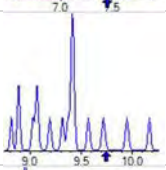
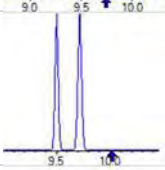
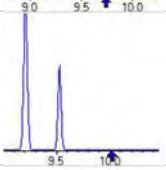
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) N/A (298.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFPeS	(349.0 / 80.0) N/A (349.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHxS	(399.0 / 80.0) N/A (399.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFHpS	(449.0 / 80.0) N/A (449.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFOS	(499.0 / 80.0) N/A (499.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFNS	(549.0 / 80.0) N/A (549.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDS	(599.0 / 80.0) N/A (599.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFDoS	(698.9 / 80.0) N/A (698.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
4:2FTS	(327.0 / 307.0) N/A (327.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
6:2FTS	(427.0 / 407.0) N/A (427.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
8:2FTS	(527.0 / 507.0) N/A (527.0 / 81.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-09RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (33)
Acquired: 2022/12/10 - 05:40

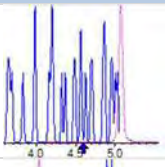
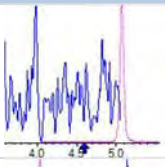
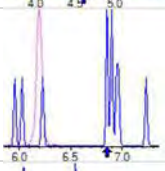
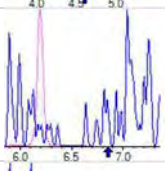
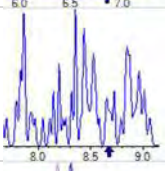
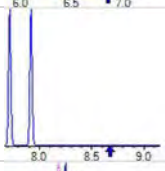
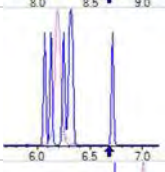
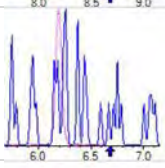
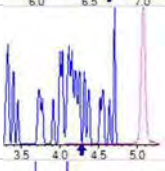
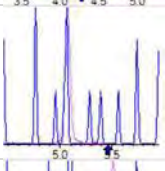
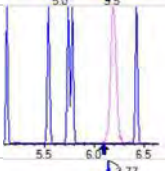
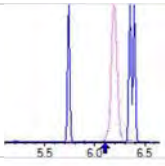
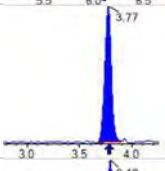
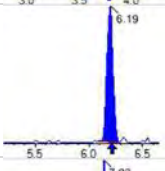
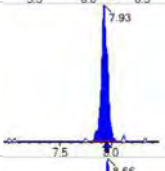
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) N/A (498.0 / 478.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSA	(511.9 / 219.0) N/A (511.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSA	(526.0 / 219.0) N/A (526.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSAA	(570.0 / 419.0) N/A (570.0 / 483.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSAA	(584.0 / 419.0) N/A (584.0 / 526.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSE	(616.1 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NEtFOSE	(630.0 / 59.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
HFPO-DA	(285.0 / 169.0) N/A (285.0 / 185.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
ADONA	(377.0 / 85.0) N/A (377.0 / 251.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
9Cl-Pf3ONS	(531.0 / 351.0) N/A (533.0 / 353.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
11Cl-PF3OUDS	(631.0 / 451.0) N/A (633.0 / 453.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0004-09RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09B (33)
Acquired: 2022/12/10 - 05:40

Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
3:3FTCA	(241.0 / 177.0) N/A (241.0 / 117.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
5:3FTCA	(341.0 / 236.7) N/A (341.0 / 217.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
7:3FTCA	(441.0 / 317.0) N/A (441.0 / 337.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFEESA	(315.0 / 135.0) N/A (315.0 / 83.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
PFMPA	(229.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFMBA	(279.0 / 85.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
NFDHA	(201.0 / 85.0) N/A (295.0 / 201.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
13C3_PFBA_IIS	(216.0 / 172.0) 8649	(3.77 , N/A) (N/A , 0.00 , N/A)	273.6	N/A	0.8997 [1.0000]	90.0% { 9.9% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 11702	(6.19 , N/A) (N/A , -0.02 , N/A)	185.1	N/A	0.9476 [1.0000]	94.8% { 9.0% }			
13C4_PFOA_IIS	(417.0 / 372.0) 10610	(7.93 , N/A) (N/A , -0.02 , N/A)	165.0	N/A	0.8950 [1.0000]	89.5% { 8.7% }			
13C5_PFNA_IIS	(468.0 / 423.0) 9762	(8.66 , N/A) (N/A , -0.03 , N/A)	673.4	N/A	1.0250 [1.0000]	102.5% { 9.9% }