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

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

Samples in this Reportn

(Continued)n

Lab IDn	Sample n	Matrixn	Date Sampledn	Date Receivedn
22L0005-05o	SB-3-0.5-113022o	Solido	11/30/2022 09:33o	12/01/2022o
22L0005-06o	SB-3-2.0-113022o	Solido	11/30/2022 09:40o	12/01/2022o
22L0005-07o	SB-4-0.5-113022o	Solido	11/30/2022 11:00o	12/01/2022o
22L0005-08o	SB-4-2.0-113022o	Solido	11/30/2022 11:10o	12/01/2022o
22L0005-09o	SB-5-0.5-113022o	Solido	11/30/2022 11:20o	12/01/2022o
22L0005-10o	SB-5-2.0-113022o	Solido	11/30/2022 11:30o	12/01/2022o
22L0005-11o	DUP-1-113022o	Solido	11/30/2022 11:30o	12/01/2022o
22L0005-12o	SB-6-0.5-113022o	Solido	11/30/2022 11:35o	12/01/2022o
22L0005-13o	DUP-2-113022o	Solido	11/30/2022 11:35o	12/01/2022o
22L0005-14o	SB-6-2.0-113022o	Solido	11/30/2022 11:45o	12/01/2022o
22L0005-15o	Field Blanko	Watero	11/30/2022 12:10o	12/01/2022o
22L0005-16o	EQP-1-SOILo	Watero	11/30/2022 09:50o	12/01/2022o

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Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

Containers Receivedn

Lab IDn	Container Typen	Countn	Preservation Checkn
22L0005-01t	50mL Centrifuge Tubest	1t	
22L0005-02t	50mL Centrifuge Tubest	1t	
22L0005-03t	50mL Centrifuge Tubest	1t	
22L0005-04t	50mL Centrifuge Tubest	1t	
22L0005-05t	50mL Centrifuge Tubest	1t	
22L0005-06t	50mL Centrifuge Tubest	1t	
22L0005-07t	50mL Centrifuge Tubest	1t	
22L0005-08t	50mL Centrifuge Tubest	1t	
22L0005-09t	50mL Centrifuge Tubest	1t	
22L0005-10t	50mL Centrifuge Tubest	1t	
22L0005-11t	50mL Centrifuge Tubest	1t	
22L0005-12t	50mL Centrifuge Tubest	1t	
22L0005-13t	50mL Centrifuge Tubest	1t	
22L0005-14t	50mL Centrifuge Tubest	2t	
22L0005-15t	50mL Centrifuge Tubest	1t	
22L0005-16t	250mL Pt	2t	

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Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

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Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

Sample Resultsa

a

Sample: aSB-1-0.5-113022 a

22L0005-01 (Solid)a

Per- and Polyfluoroalkyl Substances a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.20 Jo	1.2o	0.46o	0.12o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFPEAo	0.27 Jo	1.2o	0.46o	0.17o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHXAo	0.13 Jo	1.2o	0.46o	0.12o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHPAo	0.12 Jo	1.2o	0.46o	0.12o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOAo	0.52 Jo	1.2o	0.46o	0.17o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFNAo	2.7o	1.2o	0.46o	0.12o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDAo	0.54 Jo	1.2o	0.46o	0.17o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFUnAo	0.46 Uo	1.2o	0.46o	0.12o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDOAo	0.46 Uo	1.2o	0.46o	0.17o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFTRDAo	0.46 Uo	1.2o	0.46o	0.12o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFTEDAo	0.46 Uo	1.2o	0.46o	0.23o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFBSo	0.46 Uo	1.2o	0.46o	0.12o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFPESo	1.0 Uo	1.2o	1.0o	0.48o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHXSo	0.46 Uo	1.2o	0.46o	0.17o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHPSo	0.46 Uo	1.2o	0.46o	0.17o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOSo	0.66 Jo	1.2o	0.46o	0.12o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFNSo	0.93 Uo	1.2o	0.93o	0.45o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDSo	0.46 Uo	1.2o	0.46o	0.23o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
4:2FTSo	0.46 Uo	1.2o	0.46o	0.23o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
6:2FTSo	0.46 Uo	1.2o	0.46o	0.23o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
8:2FTSo	0.28 Jo	1.2o	0.46o	0.17o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOSAo	0.46 Uo	1.2o	0.46o	0.12o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSAo	1.0 Uo	1.2o	1.0o	0.57o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSAo	1.0 Uo	1.2o	1.0o	0.57o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSAAo	0.46 Uo	1.2o	0.46o	0.23o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSAAo	0.46 Uo	1.2o	0.46o	0.23o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSEo	0.95 Uo	1.2o	0.95o	0.47o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSEo	0.75 Uo	1.2o	0.75o	0.36o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
HFPO-DAo	0.46 Uo	1.2o	0.46o	0.23o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
ADONAo	0.46 Uo	1.2o	0.46o	0.23o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
9CL-PF3ONSo	0.46 Uo	1.2o	0.46o	0.23o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
11CL-PF3OUDSo	0.46 Uo	1.2o	0.46o	0.23o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
Surrogate: 13C4-PFBAo	*99.5%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C5-PFPEAo	*93.6%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C5-PFHXAo	*113%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C4-PFHPAo	*98.8%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOAo	*99.7%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C9-PFNAo	*99.8%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C6-PFDAo	*101%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C7-PFUnAo	*106%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-PFDOAo	*88.2%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-PFTEDAo	*91.9%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-PFBSo	*97.9%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-PFHXSo	*99.1%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOSo	*89.3%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*

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Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:49o

Sample Resultsa

(Continued) a

Sample: aSB-1-0.5-113022 (Continued)a

22L0005-01 (Solid)a

Per- and Polyfluoroalkyl Substances (Continued)a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*102%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-6:2FTSo	*82.5%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-8:2FTSo	*98.0%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOSAo	*78.8%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D3-NMEFOSAo	*44.5%o S1o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D5-NETFOSAo	*45.6%o S1o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D3-NMEFOSAAo	*91.2%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D5-NETFOSAAo	*110%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D7-NMEFOSEo	*47.6%o S1o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D9-NETFOSEo	*51.0%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-HFPO-DAo	*94.7%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*

WetLab a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
% Solidso	84.6o	2.00o	1.50o	0.750o	%o	12/07/22o	1o	ISM02.2o	BBL0135o

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 JPLo
Project Manager:oDavid Connero

Reported: 01/06/2023 15:49o

Sample Resultsa

(Continued) a

Sample: aSB-1-2.0-113022 a
22L0005-02 (Solid)a

Per- and Polyfluoroalkyl Substances a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.57 Jo	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFPEAo	1.2o	1.0o	0.40o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHXAo	0.52 Jo	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHPAo	0.58 Jo	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOAo	2.2o	1.0o	0.40o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFNAo	2.2o	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDAo	0.67 Jo	1.0o	0.40o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFUnAo	0.40 Uo	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDOAo	0.40 Uo	1.0o	0.40o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFTRDAo	0.40 Uo	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFTEDAo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFBSo	0.40 Uo	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFPESo	0.90 Uo	1.0o	0.90o	0.41o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHXSo	0.40 Uo	1.0o	0.40o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHPSo	0.40 Uo	1.0o	0.40o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOSo	0.13 Jo	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFNSo	0.80 Uo	1.0o	0.80o	0.39o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDSo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
4:2FTSo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
6:2FTSo	0.93 Jo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
8:2FTSo	0.80 Jo	1.0o	0.40o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOSAo	0.40 Uo	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSAo	0.90 Uo	1.0o	0.90o	0.49o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSAo	0.90 Uo	1.0o	0.90o	0.49o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSAAo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSAAo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSEo	0.82 Uo	1.0o	0.82o	0.41o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSEo	0.65 Uo	1.0o	0.65o	0.31o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
HFPO-DAo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
ADONAo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
9CL-PF3ONSo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
11CL-PF3OUDSo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
Surrogate: 13C4-PFBAo	*112%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C5-PFPEAo	*95.2%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C5-PFHXAo	*106%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C4-PFHPAo	*103%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOAo	*103%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C9-PFNAo	*105%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C6-PFDAo	*103%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C7-PFUnAo	*134%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-PFDOAo	*100%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-PFTEDAo	*94.4%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-PFBSo	*101%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-PFHXSo	*97.0%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOSo	*115%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*

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Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:49o

Sample Resultsa

(Continued) a

Sample: aSB-1-2.0-113022 (Continued)a

22L0005-02 (Solid)a

Per- and Polyfluoroalkyl Substances (Continued)a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*110%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-6:2FTSo	*96.0%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-8:2FTSo	*109%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOSAo	*74.4%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D3-NMEFOSAo	*49.2%o S1o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D3-NMEFOSAo	*58.1%o*		*50-150o*			*12/09/22o*	10o	*Table B-15o*	*BBL0032o*
Surrogate: D5-NETFOSAo	*51.1%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D3-NMEFOSAAo	*78.6%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D5-NETFOSAAo	*92.7%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D7-NMEFOSEo	*47.5%o S1o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D7-NMEFOSEo	*66.0%o*		*50-150o*			*12/09/22o*	10o	*Table B-15o*	*BBL0032o*
Surrogate: D9-NETFOSEo	*48.2%o S1o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D9-NETFOSEo	*53.2%o*		*50-150o*			*12/09/22o*	10o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-HFPO-DAo	*96.1%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*

WetLab a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
% Solidso	91.2o	2.00o	1.50o	0.750o	%o	12/07/22o	1o	ISM02.2o	BBL0135o

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

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

Sample Resultsa

(Continued) a

Sample: aSB-2-0.5-113022 a

22L0005-03 (Solid)a

Per- and Polyfluoroalkyl Substances a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.78 Jo	1.1o	0.44o	0.11o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFPEAo	0.78 Jo	1.1o	0.44o	0.17o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHXAo	0.57 Jo	1.1o	0.44o	0.11o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHPAo	3.4o	1.1o	0.44o	0.11o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOAo	3.5o	1.1o	0.44o	0.17o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFNAo	0.45 Jo	1.1o	0.44o	0.11o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDAo	0.44 Uo	1.1o	0.44o	0.17o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFUnAo	0.44 Uo	1.1o	0.44o	0.11o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDOAo	0.44 Uo	1.1o	0.44o	0.17o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFTRDAo	0.44 Uo	1.1o	0.44o	0.11o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFTEDAo	0.44 Uo	1.1o	0.44o	0.22o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFBSo	0.44 Uo	1.1o	0.44o	0.11o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFPESo	0.99 Uo	1.1o	0.99o	0.46o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHXSo	0.44 Uo	1.1o	0.44o	0.17o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHPSo	0.44 Uo	1.1o	0.44o	0.17o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOSo	0.15 Jo	1.1o	0.44o	0.11o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFNSo	0.88 Uo	1.1o	0.88o	0.43o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDSo	0.44 Uo	1.1o	0.44o	0.22o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
4:2FTSo	0.44 Uo	1.1o	0.44o	0.22o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
6:2FTSo	0.36 Jo	1.1o	0.44o	0.22o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
8:2FTSo	0.30 Jo	1.1o	0.44o	0.17o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOSAo	0.44 Uo	1.1o	0.44o	0.11o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSAo	0.99 Uo	1.1o	0.99o	0.54o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSAo	0.99 Uo	1.1o	0.99o	0.54o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSAAo	0.44 Uo	1.1o	0.44o	0.22o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSAAo	0.44 Uo	1.1o	0.44o	0.22o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSEo	0.90 Uo	1.1o	0.90o	0.45o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSEo	0.72 Uo	1.1o	0.72o	0.34o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
HFPO-DAo	0.44 Uo	1.1o	0.44o	0.22o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
ADONAo	0.44 Uo	1.1o	0.44o	0.22o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
9CL-PF3ONSo	0.44 Uo	1.1o	0.44o	0.22o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
11CL-PF3OUDSo	0.44 Uo	1.1o	0.44o	0.22o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
Surrogate: 13C4-PFBAo	*119%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C5-PFPEAo	*91.8%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C5-PFHXAo	*114%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C4-PFHPAo	*106%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOAo	*116%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C9-PFNAo	*108%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C6-PFDAo	*111%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C7-PFUnAo	*115%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-PFDOAo	*114%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-PFTEDAo	*92.2%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-PFBSo	*100%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-PFHXSo	*108%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOSo	*120%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*

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

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:49o

Sample Resultsa

(Continued) a

Sample: aSB-2-0.5-113022 (Continued)a

22L0005-03 (Solid)a

Per- and Polyfluoroalkyl Substances (Continued)a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*112%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-6:2FTSo	*103%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-8:2FTSo	*109%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOSAo	*116%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D3-NMEFOSAo	*72.4%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D5-NETFOSAo	*72.8%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D3-NMEFOSAAo	*113%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D5-NETFOSAAo	*132%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D7-NMEFOSEo	*73.2%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D9-NETFOSEo	*70.2%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-HFPO-DAo	*101%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*

WetLab a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
% Solidso	90.9o	2.00o	1.50o	0.750o	%o	12/07/22o	1o	ISM02.2o	BBL0135o

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

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

Sample Resultsa

(Continued) a

Sample: aSB-2-2.0-113022 a

22L0005-04 (Solid)a

Per- and Polyfluoroalkyl Substances a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	5.4o	1.1o	0.43o	0.11o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFPEAo	15o	1.1o	0.43o	0.16o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHXAo	10o	1.1o	0.43o	0.11o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHPAo	13o	1.1o	0.43o	0.11o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOAo	10o	1.1o	0.43o	0.16o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFNAo	1.2o	1.1o	0.43o	0.11o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDAo	0.35 Jo	1.1o	0.43o	0.16o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFUnAo	0.43 Uo	1.1o	0.43o	0.11o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDOAo	0.43 Uo	1.1o	0.43o	0.16o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFTRDAo	0.43 Uo	1.1o	0.43o	0.11o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFTEDAo	0.43 Uo	1.1o	0.43o	0.22o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFBSo	0.43 Uo	1.1o	0.43o	0.11o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFPESo	0.97 Uo	1.1o	0.97o	0.45o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHXSo	0.43 Uo	1.1o	0.43o	0.16o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHPSo	0.43 Uo	1.1o	0.43o	0.16o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOSo	0.19 Jo	1.1o	0.43o	0.11o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFNSo	0.86 Uo	1.1o	0.86o	0.42o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDSo	0.43 Uo	1.1o	0.43o	0.22o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
4:2FTSo	0.43 Uo	1.1o	0.43o	0.22o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
6:2FTSo	0.29 Jo	1.1o	0.43o	0.22o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
8:2FTSo	0.43 Uo	1.1o	0.43o	0.16o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOSAo	0.43 Uo	1.1o	0.43o	0.11o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSAo	0.97 Uo	1.1o	0.97o	0.53o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSAo	0.97 Uo	1.1o	0.97o	0.53o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSAAo	0.43 Uo	1.1o	0.43o	0.22o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSAAo	0.43 Uo	1.1o	0.43o	0.22o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSEo	0.88 Uo	1.1o	0.88o	0.44o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSEo	0.70 Uo	1.1o	0.70o	0.33o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
HFPO-DAo	0.43 Uo	1.1o	0.43o	0.22o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
ADONAo	0.43 Uo	1.1o	0.43o	0.22o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
9CL-PF3ONSo	0.43 Uo	1.1o	0.43o	0.22o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
11CL-PF3OUDSo	0.43 Uo	1.1o	0.43o	0.22o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
Surrogate: 13C4-PFBAo	*109%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C5-PFPEAo	*89.1%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C5-PFHXAo	*108%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C4-PFHPAo	*104%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOAo	*106%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C9-PFNAo	*95.0%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C6-PFDAo	*106%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C7-PFUnAo	*105%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-PFDOAo	*96.0%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-PFTEDAo	*86.8%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-PFBSo	*110%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-PFHXSo	*110%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOSo	*114%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*

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

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:49o

Sample Resultsa

(Continued) a

Sample: aSB-2-2.0-113022 (Continued)a

22L0005-04 (Solid)a

Per- and Polyfluoroalkyl Substances (Continued)a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*114%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-6:2FTSo	*85.6%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-8:2FTSo	*108%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOSAo	*99.4%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D3-NMEFOSAo	*76.9%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D5-NETFOSAo	*76.6%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D3-NMEFOSAAo	*102%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D5-NETFOSAAo	*112%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D7-NMEFOSEo	*67.9%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D9-NETFOSEo	*72.8%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-HFPO-DAo	*104%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*

WetLab a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
% Solidso	90.3o	2.00o	1.50o	0.750o	%o	12/07/22o	1o	ISM02.2o	BBL0135o

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

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

Sample Resultsa

(Continued) a

Sample: aSB-3-0.5-113022 a

22L0005-05 (Solid)a

Per- and Polyfluoroalkyl Substances a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.41 Uo	1.0o	0.41o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFPEAo	0.19 Jo	1.0o	0.41o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHXAo	0.41 Uo	1.0o	0.41o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHPAo	0.41 Uo	1.0o	0.41o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOAo	0.40 Jo	1.0o	0.41o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFNAo	0.24 Jo	1.0o	0.41o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDAo	0.22 Jo	1.0o	0.41o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFUnAo	0.41 Uo	1.0o	0.41o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDOAo	0.41 Uo	1.0o	0.41o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFTRDAo	0.41 Uo	1.0o	0.41o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFTEDAo	0.41 Uo	1.0o	0.41o	0.21o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFBSo	0.41 Uo	1.0o	0.41o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFPESo	0.92 Uo	1.0o	0.92o	0.42o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHXSo	0.41 Uo	1.0o	0.41o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHPSo	0.41 Uo	1.0o	0.41o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOSo	0.41 Uo	1.0o	0.41o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFNSo	0.82 Uo	1.0o	0.82o	0.40o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDSo	0.41 Uo	1.0o	0.41o	0.21o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
4:2FTSo	0.41 Uo	1.0o	0.41o	0.21o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
6:2FTSo	0.24 Jo	1.0o	0.41o	0.21o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
8:2FTSo	0.48 Jo	1.0o	0.41o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOSAo	0.41 Uo	1.0o	0.41o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSAo	0.92 Uo	1.0o	0.92o	0.51o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSAo	0.92 Uo	1.0o	0.92o	0.50o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSAAo	0.41 Uo	1.0o	0.41o	0.21o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSAAo	0.41 Uo	1.0o	0.41o	0.21o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSEo	0.84 Uo	1.0o	0.84o	0.42o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSEo	0.67 Uo	1.0o	0.67o	0.32o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
HFPO-DAo	0.41 Uo	1.0o	0.41o	0.21o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
ADONAo	0.41 Uo	1.0o	0.41o	0.21o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
9CL-PF3ONSo	0.41 Uo	1.0o	0.41o	0.21o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
11CL-PF3OUDSo	0.41 Uo	1.0o	0.41o	0.21o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
Surrogate: 13C4-PFBAo	*109%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C5-PFPEAo	*97.7%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C5-PFHXAo	*107%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C4-PFHPAo	*124%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOAo	*106%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C9-PFNAo	*108%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C6-PFDAo	*109%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C7-PFUnAo	*113%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-PFDOAo	*102%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-PFTEDAo	*97.2%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-PFBSo	*114%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-PFHXSo	*115%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOSo	*106%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*

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Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:49o

Sample Resultsa

(Continued) a

Sample: aSB-3-0.5-113022 (Continued)a

22L0005-05 (Solid)a

Per- and Polyfluoroalkyl Substances (Continued)a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*128%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-6:2FTSo	*109%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-8:2FTSo	*123%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOSAo	*84.5%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D3-NMEFOSAo	*63.6%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D5-NETFOSAo	*63.4%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D3-NMEFOSAAo	*93.5%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D5-NETFOSAAo	*114%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D7-NMEFOSEo	*57.9%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D9-NETFOSEo	*61.8%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-HFPO-DAo	*107%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*

WetLab a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
% Solidso	94.6o	2.00o	1.50o	0.750o	%o	12/07/22o	1o	ISM02.2o	BBL0135o

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

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

Sample Resultsa

(Continued) a

Sample: aSB-3-2.0-113022 a

22L0005-06 (Solid)a

Per- and Polyfluoroalkyl Substances a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	7.1o	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFPEAo	53o	1.0o	0.40o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHXAo	32o	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHPAo	10o	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOAo	4.6o	1.0o	0.40o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFNAo	0.59 Jo	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDAo	0.40 Uo	1.0o	0.40o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFUnAo	0.40 Uo	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDOAo	0.40 Uo	1.0o	0.40o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFTRDAo	0.40 Uo	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFTEDAo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFBSo	0.13 Jo	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFPESo	0.91 Uo	1.0o	0.91o	0.42o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHXSo	0.40 Uo	1.0o	0.40o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHPSo	0.40 Uo	1.0o	0.40o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOSo	0.39 Jo	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFNSo	0.81 Uo	1.0o	0.81o	0.39o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDSo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
4:2FTSo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
6:2FTSo	32o	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
8:2FTSo	27o	1.0o	0.40o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOSAo	0.40 Uo	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSAo	0.91 Uo	1.0o	0.91o	0.50o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSAo	0.91 Uo	1.0o	0.91o	0.50o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSAAo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSAAo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSEo	0.83 Uo	1.0o	0.83o	0.41o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSEo	0.66 Uo	1.0o	0.66o	0.31o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
HFPO-DAo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
ADONAo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
9CL-PF3ONSo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
11CL-PF3OUDSo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
Surrogate: 13C4-PFBAo	*101%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C5-PFPEAo	*75.8%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C5-PFHXAo	*96.5%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C4-PFHPAo	*96.6%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOAo	*86.4%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C9-PFNAo	*100%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C6-PFDAo	*95.3%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C7-PFUnAo	*106%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-PFDOAo	*104%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-PFTEDAo	*81.1%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-PFBSo	*92.3%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-PFHXSo	*96.3%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOSo	*95.3%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*

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Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:49o

Sample Resultsa

(Continued) a

Sample: aSB-3-2.0-113022 (Continued)a

22L0005-06 (Solid)a

Per- and Polyfluoroalkyl Substances (Continued)a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*98.0%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-6:2FTSo	*83.9%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-8:2FTSo	*86.3%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOSAo	*86.2%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D3-NMEFOSAo	*63.5%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D5-NETFOSAo	*64.4%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D3-NMEFOSAAo	*80.3%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D5-NETFOSAAo	*88.3%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D7-NMEFOSEo	*56.3%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D9-NETFOSEo	*62.1%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-HFPO-DAo	*85.1%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*

WetLab a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
% Solidso	91.0o	2.00o	1.50o	0.750o	%o	12/07/22o	1o	ISM02.2o	BBL0135o

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

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

Sample Resultsa

(Continued) a

Sample: aSB-4-0.5-113022 a

22L0005-07 (Solid)a

Per- and Polyfluoroalkyl Substances a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.39 Uo	0.98o	0.39o	0.098o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFPEAo	0.39 Uo	0.98o	0.39o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHXAo	0.39 Uo	0.98o	0.39o	0.098o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHPAo	0.39 Uo	0.98o	0.39o	0.098o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOAo	0.39 Uo	0.98o	0.39o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFNAo	0.39 Uo	0.98o	0.39o	0.098o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDAo	0.18 Jo	0.98o	0.39o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFUnAo	0.39 Uo	0.98o	0.39o	0.098o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDOAo	0.39 Uo	0.98o	0.39o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFTRDAo	0.39 Uo	0.98o	0.39o	0.098o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFTEDAo	0.39 Uo	0.98o	0.39o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFBSo	0.39 Uo	0.98o	0.39o	0.098o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFPESo	0.88 Uo	0.98o	0.88o	0.41o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHXSo	0.39 Uo	0.98o	0.39o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHPSo	0.39 Uo	0.98o	0.39o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOSo	1.8o	0.98o	0.39o	0.098o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFNSo	0.79 Uo	0.98o	0.79o	0.38o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDSo	0.39 Uo	0.98o	0.39o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
4:2FTSo	0.39 Uo	0.98o	0.39o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
6:2FTSo	0.39 Uo	0.98o	0.39o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
8:2FTSo	0.39 Uo	0.98o	0.39o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOSAo	0.39 Uo	0.98o	0.39o	0.098o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSAo	0.88 Uo	0.98o	0.88o	0.48o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSAo	0.88 Uo	0.98o	0.88o	0.48o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSAAo	0.39 Uo	0.98o	0.39o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSAAo	0.39 Uo	0.98o	0.39o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSEo	0.81 Uo	0.98o	0.81o	0.40o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSEo	0.64 Uo	0.98o	0.64o	0.30o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
HFPO-DAo	0.39 Uo	0.98o	0.39o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
ADONAo	0.39 Uo	0.98o	0.39o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
9CL-PF3ONSo	0.39 Uo	0.98o	0.39o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
11CL-PF3OUDSo	0.39 Uo	0.98o	0.39o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
Surrogate: 13C4-PFBAo	*119%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C5-PFPEAo	*98.9%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C5-PFHXAo	*122%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C4-PFHPAo	*101%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOAo	*108%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C9-PFNAo	*113%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C6-PFDAo	*104%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C7-PFUnAo	*133%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-PFDOAo	*114%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-PFTEDAo	*110%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-PFBSo	*107%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-PFHXSo	*116%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOSo	*102%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*

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

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:49o

Sample Resultsa

(Continued) a

Sample: aSB-4-0.5-113022 (Continued)a

22L0005-07 (Solid)a

Per- and Polyfluoroalkyl Substances (Continued)a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*120%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-6:2FTSo	*103%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-8:2FTSo	*98.9%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOSAo	*81.7%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D3-NMEFOSAo	*60.5%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D5-NETFOSAo	*60.0%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D3-NMEFOSAAo	*107%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D5-NETFOSAAo	*109%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D7-NMEFOSEo	*66.9%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D9-NETFOSEo	*70.4%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-HFPO-DAo	*102%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*

WetLab a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
% Solidso	97.8o	2.00o	1.50o	0.750o	%o	12/07/22o	1o	ISM02.2o	BBL0135o

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

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

Sample Resultsa

(Continued) a

Sample: aSB-4-2.0-113022 a

22L0005-08 (Solid)a

Per- and Polyfluoroalkyl Substances a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.41 Uo	1.0o	0.41o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFPEAo	0.41 Uo	1.0o	0.41o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHXAo	0.41 Uo	1.0o	0.41o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHPAo	0.41 Uo	1.0o	0.41o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOAo	0.41 Uo	1.0o	0.41o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFNAo	0.41 Uo	1.0o	0.41o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDAo	0.41 Uo	1.0o	0.41o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFUnAo	0.41 Uo	1.0o	0.41o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDOAo	0.41 Uo	1.0o	0.41o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFTRDAo	0.41 Uo	1.0o	0.41o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFTEDAo	0.41 Uo	1.0o	0.41o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFBSo	0.41 Uo	1.0o	0.41o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFPESo	0.92 Uo	1.0o	0.92o	0.42o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHXSo	0.41 Uo	1.0o	0.41o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHPSo	0.41 Uo	1.0o	0.41o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOSo	0.13 Jo	1.0o	0.41o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFNSo	0.82 Uo	1.0o	0.82o	0.40o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDSo	0.41 Uo	1.0o	0.41o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
4:2FTSo	0.41 Uo	1.0o	0.41o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
6:2FTSo	0.41 Uo	1.0o	0.41o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
8:2FTSo	0.41 Uo	1.0o	0.41o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOSAo	0.41 Uo	1.0o	0.41o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSAo	0.92 Uo	1.0o	0.92o	0.50o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSAo	0.92 Uo	1.0o	0.92o	0.50o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSAAo	0.41 Uo	1.0o	0.41o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSAAo	0.41 Uo	1.0o	0.41o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSEo	0.84 Uo	1.0o	0.84o	0.42o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSEo	0.66 Uo	1.0o	0.66o	0.32o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
HFPO-DAo	0.41 Uo	1.0o	0.41o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
ADONAo	0.41 Uo	1.0o	0.41o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
9CL-PF3ONSo	0.41 Uo	1.0o	0.41o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
11CL-PF3OUDSo	0.41 Uo	1.0o	0.41o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
Surrogate: 13C4-PFBAo	*109%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C5-PFPEAo	*103%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C5-PFHXAo	*105%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C4-PFHPAo	*106%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOAo	*103%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C9-PFNAo	*122%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C6-PFDAo	*109%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C7-PFUnAo	*120%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-PFDOAo	*107%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-PFTEDAo	*117%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-PFBSo	*115%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-PFHXSo	*108%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOSo	*119%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*

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

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:49o

Sample Resultsa

(Continued) a

Sample: aSB-4-2.0-113022 (Continued)a

22L0005-08 (Solid)a

Per- and Polyfluoroalkyl Substances (Continued)a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*116%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-6:2FTSo	*108%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-8:2FTSo	*103%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOSAo	*97.4%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D3-NMEFOSAo	*88.9%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D5-NETFOSAo	*94.5%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D3-NMEFOSAAo	*106%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D5-NETFOSAAo	*131%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D7-NMEFOSEo	*96.6%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D9-NETFOSEo	*96.3%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-HFPO-DAo	*108%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*

WetLab a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
% Solidso	94.1o	2.00o	1.50o	0.750o	%o	12/07/22o	1o	ISM02.2o	BBL0135o

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

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

Sample Resultsa

(Continued) a

Sample: aSB-5-0.5-113022 a

22L0005-09 (Solid)a

Per- and Polyfluoroalkyl Substances a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.39 Uo	0.97o	0.39o	0.097o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFPEAo	0.39 Uo	0.97o	0.39o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHXAo	0.39 Uo	0.97o	0.39o	0.097o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHPAo	0.39 Uo	0.97o	0.39o	0.097o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOAo	0.39 Uo	0.97o	0.39o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFNAo	0.39 Uo	0.97o	0.39o	0.097o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDAo	0.39 Uo	0.97o	0.39o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFUnAo	0.39 Uo	0.97o	0.39o	0.097o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDOAo	0.39 Uo	0.97o	0.39o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFTRDAo	0.39 Uo	0.97o	0.39o	0.097o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFTEDAo	0.39 Uo	0.97o	0.39o	0.19o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFBSo	0.39 Uo	0.97o	0.39o	0.097o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFPESo	0.87 Uo	0.97o	0.87o	0.40o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHXSo	0.39 Uo	0.97o	0.39o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHPSo	0.39 Uo	0.97o	0.39o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOSo	1.7o	0.97o	0.39o	0.097o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFNSo	0.78 Uo	0.97o	0.78o	0.38o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDSo	0.39 Uo	0.97o	0.39o	0.19o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
4:2FTSo	0.39 Uo	0.97o	0.39o	0.19o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
6:2FTSo	0.39 Uo	0.97o	0.39o	0.19o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
8:2FTSo	0.39 Uo	0.97o	0.39o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOSAo	0.39 Uo	0.97o	0.39o	0.097o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSAo	0.87 Uo	0.97o	0.87o	0.48o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSAo	0.87 Uo	0.97o	0.87o	0.48o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSAAo	0.39 Uo	0.97o	0.39o	0.19o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSAAo	0.39 Uo	0.97o	0.39o	0.19o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSEo	0.80 Uo	0.97o	0.80o	0.39o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSEo	0.63 Uo	0.97o	0.63o	0.30o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
HFPO-DAo	0.39 Uo	0.97o	0.39o	0.19o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
ADONAo	0.39 Uo	0.97o	0.39o	0.19o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
9CL-PF3ONSo	0.39 Uo	0.97o	0.39o	0.19o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
11CL-PF3OUDSo	0.39 Uo	0.97o	0.39o	0.19o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
Surrogate: 13C4-PFBAo	*96.7%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C5-PFPEAo	*82.7%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C5-PFHXAo	*94.4%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C4-PFHPAo	*88.2%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOAo	*101%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C9-PFNAo	*100%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C6-PFDAo	*96.2%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C7-PFUnAo	*111%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-PFDOAo	*104%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-PFTEDAo	*96.4%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-PFBSo	*99.3%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-PFHXSo	*109%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOSo	*122%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*

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

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:49o

Sample Resultsa

(Continued) a

Sample: aSB-5-0.5-113022 (Continued)a

22L0005-09 (Solid)a

Per- and Polyfluoroalkyl Substances (Continued)a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*126%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-6:2FTSo	*111%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-8:2FTSo	*120%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOSAo	*91.7%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D3-NMEFOSAo	*75.1%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D5-NETFOSAo	*80.4%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D3-NMEFOSAAo	*105%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D5-NETFOSAAo	*120%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D7-NMEFOSEo	*88.9%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D9-NETFOSEo	*91.6%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-HFPO-DAo	*88.9%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*

WetLab a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
% Solidso	95.4o	2.00o	1.50o	0.750o	%o	12/07/22o	1o	ISM02.2o	BBL0135o

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

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

Sample Resultsa

(Continued) a

Sample: aSB-5-2.0-113022 a

22L0005-10 (Solid)a

Per- and Polyfluoroalkyl Substances a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.36 Uo	0.90o	0.36o	0.090o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFPEAo	0.36 Uo	0.90o	0.36o	0.14o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHXAo	0.36 Uo	0.90o	0.36o	0.090o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHPAo	0.36 Uo	0.90o	0.36o	0.090o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOAo	0.36 Uo	0.90o	0.36o	0.14o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFNAo	0.36 Uo	0.90o	0.36o	0.090o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDAo	0.36 Uo	0.90o	0.36o	0.14o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFUnAo	0.36 Uo	0.90o	0.36o	0.090o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDOAo	0.36 Uo	0.90o	0.36o	0.14o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFTRDAo	0.36 Uo	0.90o	0.36o	0.090o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFTEDAo	0.36 Uo	0.90o	0.36o	0.18o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFBSo	0.36 Uo	0.90o	0.36o	0.090o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFPESo	0.81 Uo	0.90o	0.81o	0.37o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHXSo	0.36 Uo	0.90o	0.36o	0.14o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHPSo	0.36 Uo	0.90o	0.36o	0.14o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOSo	0.36 Uo	0.90o	0.36o	0.090o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFNSo	0.72 Uo	0.90o	0.72o	0.35o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDSo	0.36 Uo	0.90o	0.36o	0.18o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
4:2FTSo	0.36 Uo	0.90o	0.36o	0.18o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
6:2FTSo	0.36 Uo	0.90o	0.36o	0.18o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
8:2FTSo	0.36 Uo	0.90o	0.36o	0.14o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOSAo	0.36 Uo	0.90o	0.36o	0.090o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSAo	0.81 Uo	0.90o	0.81o	0.45o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSAo	0.81 Uo	0.90o	0.81o	0.44o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSAAo	0.36 Uo	0.90o	0.36o	0.18o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSAAo	0.36 Uo	0.90o	0.36o	0.18o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSEo	0.74 Uo	0.90o	0.74o	0.37o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSEo	0.59 Uo	0.90o	0.59o	0.28o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
HFPO-DAo	0.36 Uo	0.90o	0.36o	0.18o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
ADONAo	0.36 Uo	0.90o	0.36o	0.18o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
9CL-PF3ONSo	0.36 Uo	0.90o	0.36o	0.18o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
11CL-PF3OUDSo	0.36 Uo	0.90o	0.36o	0.18o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
Surrogate: 13C4-PFBAo	*114%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C5-PFPEAo	*93.6%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C5-PFHXAo	*120%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C4-PFHPAo	*113%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOAo	*124%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C9-PFNAo	*121%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C6-PFDAo	*102%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C7-PFUnAo	*96.7%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-PFDOAo	*91.3%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-PFTEDAo	*89.4%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-PFBSo	*110%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-PFHXSo	*110%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOSo	*111%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*

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

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:49o

Sample Resultsa

(Continued) a

Sample: aSB-5-2.0-113022 (Continued)a

22L0005-10 (Solid)a

Per- and Polyfluoroalkyl Substances (Continued)a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*134%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-6:2FTSo	*112%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-8:2FTSo	*116%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOSAo	*106%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D3-NMEFOSAo	*78.2%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D5-NETFOSAo	*81.5%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D3-NMEFOSAAo	*123%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D5-NETFOSAAo	*133%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D7-NMEFOSEo	*89.3%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D9-NETFOSEo	*93.3%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-HFPO-DAo	*107%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*

WetLab a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
% Solidso	95.4o	2.00o	1.50o	0.750o	%o	12/07/22o	1o	ISM02.2o	BBL0135o

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 JPLo
Project Manager:oDavid Connero

Reported: 01/06/2023 15:49o

Sample Resultsa

(Continued) a

Sample: aDUP-1-113022 a

22L0005-11 (Solid)a

Per- and Polyfluoroalkyl Substances a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.40 Uo	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFPEAo	0.40 Uo	1.0o	0.40o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHXAo	0.40 Uo	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHPAo	0.40 Uo	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOAo	0.40 Uo	1.0o	0.40o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFNAo	0.40 Uo	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDAo	0.40 Uo	1.0o	0.40o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFUnAo	0.40 Uo	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDOAo	0.40 Uo	1.0o	0.40o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFTRDAo	0.40 Uo	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFTEDAo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFBSo	0.40 Uo	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFPESo	0.90 Uo	1.0o	0.90o	0.41o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHXSo	0.40 Uo	1.0o	0.40o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHPSo	0.40 Uo	1.0o	0.40o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOSo	0.40 Uo	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFNSo	0.80 Uo	1.0o	0.80o	0.39o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDSo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
4:2FTSo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
6:2FTSo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
8:2FTSo	0.40 Uo	1.0o	0.40o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOSAo	0.40 Uo	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSAo	0.90 Uo	1.0o	0.90o	0.49o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSAo	0.90 Uo	1.0o	0.90o	0.49o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSAAo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSAAo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSEo	0.82 Uo	1.0o	0.82o	0.41o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSEo	0.65 Uo	1.0o	0.65o	0.31o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
HFPO-DAo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
ADONAo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
9CL-PF3ONSo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
11CL-PF3OUDSo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
Surrogate: 13C4-PFBAo	*114%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C5-PFPEAo	*101%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C5-PFHXAo	*112%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C4-PFHPAo	*110%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOAo	*107%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C9-PFNAo	*128%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C6-PFDAo	*110%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C7-PFUnAo	*115%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-PFDOAo	*108%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-PFTEDAo	*114%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-PFBSo	*111%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-PFHXSo	*118%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOSo	*117%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*

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

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:49o

Sample Resultsa

(Continued) a

Sample: aDUP-1-113022 (Continued)a

22L0005-11 (Solid)a

Per- and Polyfluoroalkyl Substances (Continued)a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*133%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-6:2FTSo	*116%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-8:2FTSo	*112%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOSAo	*102%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D3-NMEFOSAo	*81.3%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D5-NETFOSAo	*85.9%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D3-NMEFOSAAo	*107%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D5-NETFOSAAo	*127%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D7-NMEFOSEo	*100%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D9-NETFOSEo	*102%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-HFPO-DAo	*111%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*

WetLab a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
% Solidso	94.6o	2.00o	1.50o	0.750o	%o	12/07/22o	1o	ISM02.2o	BBL0135o

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

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

Sample Resultsa

(Continued) a

Sample: aSB-6-0.5-113022 a

22L0005-12 (Solid)a

Per- and Polyfluoroalkyl Substances a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.49 Uo	1.2o	0.49o	0.12o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFPEAo	0.49 Uo	1.2o	0.49o	0.19o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHXAo	0.49 Uo	1.2o	0.49o	0.12o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHPAo	0.49 Uo	1.2o	0.49o	0.12o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOAo	0.49 Uo	1.2o	0.49o	0.19o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFNAo	0.49 Uo	1.2o	0.49o	0.12o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDAo	0.27 Jo	1.2o	0.49o	0.19o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFUnAo	0.17 Jo	1.2o	0.49o	0.12o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDOAo	0.20 Jo	1.2o	0.49o	0.19o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFTRDAo	0.12 Jo	1.2o	0.49o	0.12o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFTEDAo	0.49 Uo	1.2o	0.49o	0.25o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFBSo	0.49 Uo	1.2o	0.49o	0.12o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFPESo	1.1 Uo	1.2o	1.1o	0.51o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHXSo	0.90 Jo	1.2o	0.49o	0.19o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHPSo	0.49 Uo	1.2o	0.49o	0.19o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOSo	22o	1.2o	0.49o	0.12o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFNSo	2.0o	1.2o	0.99o	0.48o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDSo	1.5o	1.2o	0.49o	0.25o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
4:2FTSo	0.49 Uo	1.2o	0.49o	0.25o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
6:2FTSo	0.49 Uo	1.2o	0.49o	0.25o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
8:2FTSo	0.49 Uo	1.2o	0.49o	0.19o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOSAo	0.49 Uo	1.2o	0.49o	0.12o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSAo	1.1 Uo	1.2o	1.1o	0.61o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSAo	1.1 Uo	1.2o	1.1o	0.61o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSAAo	0.49 Uo	1.2o	0.49o	0.25o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSAAo	0.49 Uo	1.2o	0.49o	0.25o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSEo	1.0 Uo	1.2o	1.0o	0.50o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSEo	0.80 Uo	1.2o	0.80o	0.38o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
HFPO-DAo	0.49 Uo	1.2o	0.49o	0.25o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
ADONAo	0.49 Uo	1.2o	0.49o	0.25o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
9CL-PF3ONSo	0.49 Uo	1.2o	0.49o	0.25o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
11CL-PF3OUDSo	0.49 Uo	1.2o	0.49o	0.25o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
Surrogate: 13C4-PFBAo	*76.3%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C5-PFPEAo	*75.1%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C5-PFHXAo	*85.1%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C4-PFHPAo	*86.7%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOAo	*92.2%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C9-PFNAo	*93.3%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C6-PFDAo	*95.1%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C7-PFUnAo	*103%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-PFDOAo	*91.1%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-PFTEDAo	*77.2%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-PFBSo	*106%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-PFHXSo	*119%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOSo	*123%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*

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Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:49o

Sample Resultsa

(Continued) a

Sample: aSB-6-0.5-113022 (Continued)a

22L0005-12 (Solid)a

Per- and Polyfluoroalkyl Substances (Continued)a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*123%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-6:2FTSo	*117%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-8:2FTSo	*118%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOSAo	*55.0%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D3-NMEFOSAo	*40.7%o S1o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D3-NMEFOSAo	*51.1%o*		*50-150o*			*12/09/22o*	10o	*Table B-15o*	*BBL0032o*
Surrogate: D5-NETFOSAo	*41.8%o S1o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D5-NETFOSAo	*54.8%o*		*50-150o*			*12/09/22o*	10o	*Table B-15o*	*BBL0032o*
Surrogate: D3-NMEFOSAAo	*82.4%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D5-NETFOSAAo	*110%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D7-NMEFOSEo	*48.7%o S1o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D7-NMEFOSEo	*69.5%o*		*50-150o*			*12/09/22o*	10o	*Table B-15o*	*BBL0032o*
Surrogate: D9-NETFOSEo	*51.1%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-HFPO-DAo	*78.3%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*

WetLab a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
% Solidso	79.4o	2.00o	1.50o	0.750o	%o	12/07/22o	1o	ISM02.2o	BBL0135o

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

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

Sample Resultsa

(Continued) a

Sample: aDUP-2-113022 a

22L0005-13 (Solid)a

Per- and Polyfluoroalkyl Substances a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.47 Uo	1.2o	0.47o	0.12o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFPEAo	0.47 Uo	1.2o	0.47o	0.18o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHXAo	0.47 Uo	1.2o	0.47o	0.12o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHPAo	0.47 Uo	1.2o	0.47o	0.12o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOAo	0.28 Jo	1.2o	0.47o	0.18o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFNAo	0.19 Jo	1.2o	0.47o	0.12o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDAo	0.38 Jo	1.2o	0.47o	0.18o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFUnAo	0.25 Jo	1.2o	0.47o	0.12o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDOAo	0.47 Uo	1.2o	0.47o	0.18o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFTRDAo	0.47 Uo	1.2o	0.47o	0.12o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFTEDAo	0.47 Uo	1.2o	0.47o	0.24o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFBSo	0.47 Uo	1.2o	0.47o	0.12o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFPESo	1.1 Uo	1.2o	1.1o	0.49o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHXSo	1.5o	1.2o	0.47o	0.18o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHPSo	0.47 Uo	1.2o	0.47o	0.18o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOSo	48o	1.2o	0.47o	0.12o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFNSo	5.3o	1.2o	0.94o	0.46o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDSo	2.5o	1.2o	0.47o	0.24o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
4:2FTSo	0.47 Uo	1.2o	0.47o	0.24o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
6:2FTSo	0.47 Uo	1.2o	0.47o	0.24o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
8:2FTSo	0.47 Uo	1.2o	0.47o	0.18o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOSAo	0.15 Jo	1.2o	0.47o	0.12o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSAo	1.1 Uo	1.2o	1.1o	0.58o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSAo	1.1 Uo	1.2o	1.1o	0.58o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSAAo	0.47 Uo	1.2o	0.47o	0.24o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSAAo	0.47 Uo	1.2o	0.47o	0.24o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSEo	0.97 Uo	1.2o	0.97o	0.48o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSEo	0.77 Uo	1.2o	0.77o	0.37o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
HFPO-DAo	0.47 Uo	1.2o	0.47o	0.24o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
ADONAo	0.47 Uo	1.2o	0.47o	0.24o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
9CL-PF3ONSo	0.47 Uo	1.2o	0.47o	0.24o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
11CL-PF3OUDSo	0.47 Uo	1.2o	0.47o	0.24o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
Surrogate: 13C4-PFBAo	*73.4%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C5-PFPEAo	*67.5%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C5-PFHXAo	*71.6%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C4-PFHPAo	*81.5%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOAo	*78.7%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C9-PFNAo	*80.3%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C6-PFDAo	*85.7%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C7-PFUnAo	*89.7%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-PFDOAo	*91.1%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-PFTEDAo	*81.2%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-PFBSo	*110%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-PFHXSo	*112%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOSo	*104%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*

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Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:49o

Sample Resultsa

(Continued) a

Sample: aDUP-2-113022 (Continued)a

22L0005-13 (Solid)a

Per- and Polyfluoroalkyl Substances (Continued)a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*123%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-6:2FTSo	*114%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-8:2FTSo	*124%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOSAo	*47.8%o S1o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOSAo	*65.1%o*		*50-150o*			*12/09/22o*	10o	*Table B-15o*	*BBL0032o*
Surrogate: D3-NMEFOSAo	*30.8%o S1o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D3-NMEFOSAo	*49.3%o S1o*		*50-150o*			*12/09/22o*	10o	*Table B-15o*	*BBL0032o*
Surrogate: D5-NETFOSAo	*31.7%o S1o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D5-NETFOSAo	*49.8%o S1o*		*50-150o*			*12/09/22o*	10o	*Table B-15o*	*BBL0032o*
Surrogate: D3-NMEFOSAAo	*83.3%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D5-NETFOSAAo	*90.8%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D7-NMEFOSEo	*42.1%o S1o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D7-NMEFOSEo	*68.0%o*		*50-150o*			*12/09/22o*	10o	*Table B-15o*	*BBL0032o*
Surrogate: D9-NETFOSEo	*45.3%o S1o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D9-NETFOSEo	*65.0%o*		*50-150o*			*12/09/22o*	10o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-HFPO-DAo	*66.3%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*

WetLab a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
% Solidso	77.8o	2.00o	1.50o	0.750o	%o	12/07/22o	1o	ISM02.2o	BBL0135o

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

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

Sample Resultsa

(Continued) a

Sample: aSB-6-2.0-113022 a

22L0005-14 (Solid)a

Per- and Polyfluoroalkyl Substances a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.40 Uo	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFPEAo	0.40 Uo	1.0o	0.40o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHXAo	0.24 Jo	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHPAo	0.40 Uo	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOAo	0.16 Jo	1.0o	0.40o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFNAo	0.40 Uo	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDAo	0.40 Uo	1.0o	0.40o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFUnAo	0.40 Uo	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDOAo	0.40 Uo	1.0o	0.40o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFTRDAo	0.40 Uo	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFTEDAo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFBSo	0.40 Uo	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFPESo	0.90 Uo	1.0o	0.90o	0.41o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHXSo	2.4o	1.0o	0.40o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFHPSo	0.40 Uo	1.0o	0.40o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOSo	140o	10o	4.0o	1.0o	ng/g dryo	12/09/22o	10o	Table B-15o	BBL0032o
PFNSo	1.5o	1.0o	0.80o	0.39o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFDSo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
4:2FTSo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
6:2FTSo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
8:2FTSo	0.40 Uo	1.0o	0.40o	0.15o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
PFOSAo	0.40 Uo	1.0o	0.40o	0.10o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSAo	0.90 Uo	1.0o	0.90o	0.49o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSAo	0.90 Uo	1.0o	0.90o	0.49o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSAAo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSAAo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NMeFOSEo	0.82 Uo	1.0o	0.82o	0.41o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
NEtFOSEo	0.65 Uo	1.0o	0.65o	0.31o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
HFPO-DAo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
ADONAo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
9CL-PF3ONSo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
11CL-PF3OUDSo	0.40 Uo	1.0o	0.40o	0.20o	ng/g dryo	12/09/22o	1o	Table B-15o	BBL0032o
Surrogate: 13C4-PFBAo	*102%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C5-PFPEAo	*77.5%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C5-PFHXAo	*99.3%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C4-PFHPAo	*91.7%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOAo	*99.1%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C9-PFNAo	*99.9%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C6-PFDAo	*114%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C7-PFUnAo	*125%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-PFDOAo	*117%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-PFTEDAo	*118%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-PFBSo	*127%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-PFHXSo	*125%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOSo	*136%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*

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Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:49o

Sample Resultsa

(Continued) a

Sample: aSB-6-2.0-113022 (Continued)a

22L0005-14 (Solid)a

Per- and Polyfluoroalkyl Substances (Continued)a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*133%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-6:2FTSo	*120%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C2-8:2FTSo	*136%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C8-PFOSAo	*99.4%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D3-NMEFOSAo	*78.3%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D5-NETFOSAo	*93.5%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D3-NMEFOSAAo	*106%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D5-NETFOSAAo	*121%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D7-NMEFOSEo	*93.5%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: D9-NETFOSEo	*98.2%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*
Surrogate: 13C3-HFPO-DAo	*88.3%o*		*50-150o*			*12/09/22o*	1o	*Table B-15o*	*BBL0032o*

WetLab a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
% Solidso	89.9o	2.00o	1.50o	0.750o	%o	12/07/22o	1o	ISM02.2o	BBL0135o

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Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

Sample Resultsa

(Continued) a

Sample: aField Blank a

22L0005-15 (Water)a

Per- and Polyfluoroalkyl Substances a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	1.1 Uo	17o	1.1o	0.26o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFPEAo	1.1 Uo	8.5o	1.1o	0.33o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFHXAo	1.1 Uo	4.2o	1.1o	0.34o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFHPAo	1.1 Uo	4.2o	1.1o	0.26o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFOAo	1.1 Uo	4.2o	1.1o	0.43o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFNAo	1.1 Uo	4.2o	1.1o	0.26o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFDAo	1.1 Uo	4.2o	1.1o	0.26o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFUnAo	1.1 Uo	4.2o	1.1o	0.42o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFDOAo	1.1 Uo	4.2o	1.1o	0.26o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFTRDAo	1.1 Uo	4.2o	1.1o	0.31o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFTEDAo	1.1 Uo	4.2o	1.1o	0.45o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFBSo	1.1 Uo	4.2o	1.1o	0.26o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFPESo	1.1 Uo	4.2o	1.1o	0.31o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFHXSo	1.1 Uo	4.2o	1.1o	0.26o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFHPSo	1.1 Uo	4.2o	1.1o	0.30o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFOSo	1.1 Uo	4.2o	1.1o	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	1.1 Uo	4.2o	1.1o	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	1.1 Uo	17o	1.1o	0.48o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
8:2FTSo	3.2 Uo	17o	3.2o	1.1o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
PFOSAo	1.1 Uo	17o	1.1o	0.26o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
NMeFOSAo	11 Uo	17o	11o	5.2o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
NEtFOSAo	11 Uo	17o	11o	5.2o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
NMeFOSAAo	1.1 Uo	4.2o	1.1o	0.38o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
NEtFOSAAo	1.1 Uo	4.2o	1.1o	0.26o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
NMeFOSEo	6.3 Uo	17o	6.3o	3.2o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
NEtFOSEo	6.3 Uo	17o	6.3o	3.2o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
HFPO-DAo	5.3 Uo	8.5o	5.3o	2.6o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
ADONAo	3.2 Uo	8.5o	3.2o	1.4o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
9CL-PF3ONSo	3.2 Uo	8.5o	3.2o	1.2o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
11CL-PF3OUDSo	3.2 Uo	8.5o	3.2o	1.3o	ng/Lo	12/16/22o	1o	Table B-15o	BBL0249o
Surrogate: 13C4-PFBAo	*94.4%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C5-PFPEAo	*91.8%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C5-PFHXAo	*86.6%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C4-PFHPAo	*87.7%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C8-PFOAo	*101%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C9-PFNAo	*99.1%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C6-PFDAo	*92.7%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C7-PFUnAo	*101%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C2-PFDOAo	*93.0%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C2-PFTEDAo	*108%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C3-PFBSo	*114%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C3-PFHXSo	*96.1%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C8-PFOSo	*88.3%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 JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:49o

Sample Resultsa

(Continued) a

Sample: aField Blank (Continued)a

22L0005-15 (Water)a

Per- and Polyfluoroalkyl Substances (Continued)a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*113%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C2-6:2FTSo	*118%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C2-8:2FTSo	*104%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C8-PFOSAo	*97.6%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: D3-NMEFOSAo	*70.6%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: D5-NETFOSAo	*78.3%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: D3-NMEFOSAAo	*88.9%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: D5-NETFOSAAo	*102%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: D7-NMEFOSEo	*97.8%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: D9-NETFOSEo	*97.3%o*		*50-150o*			*12/16/22o*	1o	*Table B-15o*	*BBL0249o*
Surrogate: 13C3-HFPO-DAo	*87.7%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 JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

Sample Resultsa

(Continued) a

Sample: aEQP-1-SOIL a

22L0005-16 (Water)a

Per- and Polyfluoroalkyl Substances a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
PFBAo	0.16 Uo	2.6o	0.16o	0.040o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFPEAo	0.16 Uo	1.3o	0.16o	0.050o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFHXAo	0.16 Uo	0.64o	0.16o	0.051o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFHPAo	0.16 Uo	0.64o	0.16o	0.040o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFOAo	0.16 Uo	0.64o	0.16o	0.066o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFNAo	0.16 Uo	0.64o	0.16o	0.040o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFDAo	0.16 Uo	0.64o	0.16o	0.040o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFUnAo	0.16 Uo	0.64o	0.16o	0.064o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFDOAo	0.16 Uo	0.64o	0.16o	0.040o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFTRDAo	0.16 Uo	0.64o	0.16o	0.047o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFTEDAo	0.16 Uo	0.64o	0.16o	0.069o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFBSo	0.16 Uo	0.64o	0.16o	0.040o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFPESo	0.16 Uo	0.64o	0.16o	0.047o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFHXSo	0.16 Uo	0.64o	0.16o	0.040o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFHPSo	0.16 Uo	0.64o	0.16o	0.045o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFOSo	0.16 Uo	0.64o	0.16o	0.040o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFNSo	0.32 Uo	0.64o	0.32o	0.20o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFDSo	0.16 Uo	0.64o	0.16o	0.051o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
4:2FTSo	0.32 Uo	2.6o	0.32o	0.087o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
6:2FTSo	0.16 Uo	2.6o	0.16o	0.072o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
8:2FTSo	0.48 Uo	2.6o	0.48o	0.16o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
PFOSAo	0.16 Uo	2.6o	0.16o	0.040o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
NMeFOSAo	1.6 Uo	2.6o	1.6o	0.79o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
NEtFOSAo	1.6 Uo	2.6o	1.6o	0.79o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
NMeFOSAAo	0.16 Uo	0.64o	0.16o	0.058o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
NEtFOSAAo	0.16 Uo	0.64o	0.16o	0.040o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
NMeFOSEo	0.96 Uo	2.6o	0.96o	0.48o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
NEtFOSEo	0.96 Uo	2.6o	0.96o	0.48o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
HFPO-DAo	0.80 Uo	1.3o	0.80o	0.39o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
ADONAo	0.48 Uo	1.3o	0.48o	0.21o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
9CL-PF3ONSo	0.48 Uo	1.3o	0.48o	0.19o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
11CL-PF3OUDSo	0.48 Uo	1.3o	0.48o	0.19o	ng/Lo	12/30/22o	1o	Table B-15o	BBL0371o
Surrogate: 13C4-PFBAo	*90.9%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: 13C5-PFPEAo	*91.1%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: 13C5-PFHXAo	*89.9%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: 13C4-PFHPAo	*89.1%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: 13C8-PFOAo	*83.7%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: 13C9-PFNAo	*87.6%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: 13C6-PFDAo	*89.4%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: 13C7-PFUnAo	*77.5%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: 13C2-PFDOAo	*73.4%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: 13C2-PFTEDAo	*77.5%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: 13C3-PFBSo	*101%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: 13C3-PFHXSo	*84.8%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: 13C8-PFOSo	*88.3%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 JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:49o

Sample Resultsa

(Continued) a

Sample: aEQP-1-SOIL (Continued)a

22L0005-16 (Water)a

Per- and Polyfluoroalkyl Substances (Continued)a

Analyteo	Resulto/Qual o	LOQo	LODo	DLo	Unitso	Date o Analyzedo	DFo	Methodo	Prepo Batcho
Surrogate: 13C2-4:2FTSo	*138%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: 13C2-6:2FTSo	*124%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: 13C2-8:2FTSo	*106%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: 13C8-PFOSAo	*89.2%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: D3-NMEFOSAo	*52.9%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: D5-NETFOSAo	*47.5%o S1o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: D5-NETFOSAo	*64.2%o*		*50-150o*			*12/30/22o*	10o	*Table B-15o*	*BBL0371o*
Surrogate: D3-NMEFOSAAo	*85.2%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: D5-NETFOSAAo	*78.0%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: D7-NMEFOSEo	*84.8%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: D9-NETFOSEo	*87.5%o*		*50-150o*			*12/30/22o*	1o	*Table B-15o*	*BBL0371o*
Surrogate: 13C3-HFPO-DAo	*90.5%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 JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

Quality Controlu

Per- and Polyfluoroalkyl Substancesu

Analyteo	Result/Qual	LOQo	LODo	MDLo	Spikeo Levelo	Sourceo Resulto	%RECo	%RECo Limitso	RPDo	RPDo Limito
Batch: BBL0032 - Table B-15u										
Blank (BBL0032-BLK1)u							Prepared: 12/01/22 14:45 Analyzed: 12/09/22 13:17o			
	ng/g weto									
PFBAo	0.40 Uo	0.99o	0.40o	0.099o						
PFPEAo	0.40 Uo	0.99o	0.40o	0.15o						
PFHXAo	0.40 Uo	0.99o	0.40o	0.099o						
PFHPAo	0.40 Uo	0.99o	0.40o	0.099o						
PFOAo	0.40 Uo	0.99o	0.40o	0.15o						
PFNAo	0.40 Uo	0.99o	0.40o	0.099o						
PFDAo	0.40 Uo	0.99o	0.40o	0.15o						
PFUnAo	0.40 Uo	0.99o	0.40o	0.099o						
PFDOAo	0.40 Uo	0.99o	0.40o	0.15o						
PFTRDAo	0.40 Uo	0.99o	0.40o	0.099o						
PFTEDAo	0.40 Uo	0.99o	0.40o	0.20o						
PFBSo	0.40 Uo	0.99o	0.40o	0.099o						
PFPESo	0.89 Uo	0.99o	0.89o	0.41o						
PFHXSo	0.40 Uo	0.99o	0.40o	0.15o						
PFHPSo	0.40 Uo	0.99o	0.40o	0.15o						
PFOSo	0.40 Uo	0.99o	0.40o	0.099o						
PFNSo	0.79 Uo	0.99o	0.79o	0.39o						
PFDSo	0.40 Uo	0.99o	0.40o	0.20o						
4:2FTSo	0.40 Uo	0.99o	0.40o	0.20o						
6:2FTSo	0.40 Uo	0.99o	0.40o	0.20o						
8:2FTSo	0.40 Uo	0.99o	0.40o	0.15o						
PFOSAo	0.40 Uo	0.99o	0.40o	0.099o						
NMeFOSAo	0.89 Uo	0.99o	0.89o	0.49o						
NEtFOSAo	0.89 Uo	0.99o	0.89o	0.49o						
NMeFOSAAo	0.40 Uo	0.99o	0.40o	0.20o						
NEtFOSAAo	0.40 Uo	0.99o	0.40o	0.20o						
NMeFOSEo	0.81 Uo	0.99o	0.81o	0.40o						
NEtFOSEo	0.64 Uo	0.99o	0.64o	0.31o						
HFPO-DAo	0.40 Uo	0.99o	0.40o	0.20o						
ADONAo	0.40 Uo	0.99o	0.40o	0.20o						
9CL-PF3ONSo	0.40 Uo	0.99o	0.40o	0.20o						
11CL-PF3OUDSo	0.40 Uo	0.99o	0.40o	0.20o						
Surrogatesu										
13C4-PFBAo	*17.7o*				*15.8o*		*112o*	*50-150o*		
13C5-PFPEAo	*8.29o*				*7.92o*		*105o*	*50-150o*		
13C5-PFHXAo	*4.69o*				*3.96o*		*118o*	*50-150o*		
13C4-PFHPAo	*4.56o*				*3.96o*		*115o*	*50-150o*		
13C8-PFOAo	*4.24o*				*3.96o*		*107o*	*50-150o*		
13C9-PFNAo	*1.96o*				*1.98o*		*98.9o*	*50-150o*		
13C6-PFDAo	*1.93o*				*1.98o*		*97.6o*	*50-150o*		
13C7-PFUnAo	*1.86o*				*1.98o*		*93.9o*	*50-150o*		
13C2-PFDOAo	*1.75o*				*1.98o*		*88.4o*	*50-150o*		
13C2-PFTEDAo	*1.61o*				*1.98o*		*81.5o*	*50-150o*		
13C3-PFBSo	*4.14o*				*3.96o*		*105o*	*50-150o*		
13C3-PFHXSo	*3.98o*				*3.96o*		*100o*	*50-150o*		
13C8-PFOSo	*4.29o*				*3.96o*		*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 JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

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: BBL0032 - Table B-15 (Continued)u										
Blank (BBL0032-BLK1)u							Prepared: 12/01/22 14:45 Analyzed: 12/09/22 13:17o			
	ng/g weto									
Surrogatesu										
13C2-4:2FTSo	*9.75o*				*7.92o*		*123o*	*50-150*		
13C2-6:2FTSo	*7.56o*				*7.92o*		*95.4o*	*50-150*		
13C2-8:2FTSo	*8.29o*				*7.92o*		*105o*	*50-150*		
13C8-PFOSAo	*3.45o*				*3.96o*		*87.1o*	*50-150*		
D3-NMEFOSAo	*2.46o*				*3.96o*		*62.2o*	*50-150*		
D5-NETFOSAo	*2.63o*				*3.96o*		*66.5o*	*50-150*		
D3-NMEFOSAAo	*8.44o*				*7.92o*		*107o*	*50-150*		
D5-NETFOSAAo	*9.85o*				*7.92o*		*124o*	*50-150*		
D7-NMEFOSEo	*26.1o*				*39.6o*		*65.9o*	*50-150*		
D9-NETFOSEo	*27.1o*				*39.6o*		*68.5o*	*50-150*		
13C3-HFPO-DAo	*17.8o*				*15.8o*		*112o*	*50-150*		
LCS (BBL0032-BS1)u							Prepared: 12/01/22 14:45 Analyzed: 12/09/22 13:30 o			
	ng/g wet o									
PFBAo	7.61o				7.55o		101o	71-135o		
PFPEAo	3.51o				3.77o		93.0o	69-132o		
PFHXAo	1.96o				1.89o		104o	70-132o		
PFHPAo	2.05o				1.89o		108o	71-131o		
PFOAo	2.00o				1.89o		106o	69-133o		
PFNAo	1.87o				1.89o		99.1o	72-129o		
PFDAo	1.72o				1.89o		91.1o	69-133o		
PFUnAo	2.25o				1.89o		119o	64-136o		
PFDOAo	2.06o				1.89o		109o	69-135o		
PFTRDAo	1.95o				1.89o		103o	66-139o		
PFTEDAo	1.87o				1.89o		98.9o	69-133o		
PFBSo	1.71o				1.67o		102o	72-128o		
PFPESo	1.97o				1.77o		111o	71-127o		
PFHXSo	1.80o				1.73o		104o	67-130o		
PFHPSo	1.83o				1.80o		102o	70-132o		
PFOSo	1.95o				1.75o		111o	68-136o		
PFNSo	2.05o				1.81o		113o	69-127o		
PFDSo	1.72o				1.82o		94.6o	59-134o		
4:2FTSo	7.19o				7.08o		102o	62-145o		
6:2FTSo	7.04o				7.17o		98.2o	64-140o		
8:2FTSo	8.16o				7.25o		113o	65-137o		
PFOSAo	1.96o				1.89o		104o	67-137o		
NMeFOSAo	7.55o				7.55o		100o	68-141o		
NEtFOSAo	7.10o				7.55o		94.0o	70-130o		
NMeFOSAAo	1.72o				1.89o		91.2o	63-144o		
NEtFOSAAo	1.96o				1.89o		104o	61-139o		
NMeFOSEo	7.45o				7.55o		98.7o	70-130o		
NEtFOSEo	7.25o				7.55o		96.1o	70-130o		
HFPO-DAo	3.54o				3.77o		93.9o	70-130o		
ADONAo	3.53o				3.57o		99.1o	70-130o		
9CL-PF3ONSo	3.70o				3.53o		105o	70-130o		

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

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

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: BBL0032 - Table B-15 (Continued)u										
LCS (BBL0032-BS1)u							Prepared: 12/01/22 14:45 Analyzed: 12/09/22 13:30o			
	ng/g weto									
11CL-PF3OUDSo	3.21o				3.57o		90.0o	70-130o		
Surrogatesu										
13C4-PFBAo	*15.7o*				*15.1o*		*104o*	*50-150o*		
13C5-PFPEAo	*7.53o*				*7.55o*		*99.8o*	*50-150o*		
13C5-PFHXAo	*4.16o*				*3.77o*		*110o*	*50-150o*		
13C4-PFHPAo	*3.96o*				*3.77o*		*105o*	*50-150o*		
13C8-PFOAo	*3.97o*				*3.77o*		*105o*	*50-150o*		
13C9-PFNAo	*2.01o*				*1.89o*		*106o*	*50-150o*		
13C6-PFDAo	*2.03o*				*1.89o*		*108o*	*50-150o*		
13C7-PFUnAo	*2.17o*				*1.89o*		*115o*	*50-150o*		
13C2-PFDOAo	*1.85o*				*1.89o*		*97.9o*	*50-150o*		
13C2-PFTEDAo	*1.85o*				*1.89o*		*98.2o*	*50-150o*		
13C3-PFBSo	*3.93o*				*3.77o*		*104o*	*50-150o*		
13C3-PFHXSo	*3.90o*				*3.77o*		*103o*	*50-150o*		
13C8-PFOSo	*3.59o*				*3.77o*		*95.2o*	*50-150o*		
13C2-4:2FTSo	*9.09o*				*7.55o*		*120o*	*50-150o*		
13C2-6:2FTSo	*8.16o*				*7.55o*		*108o*	*50-150o*		
13C2-8:2FTSo	*7.95o*				*7.55o*		*105o*	*50-150o*		
13C8-PFOSAo	*3.39o*				*3.77o*		*89.8o*	*50-150o*		
D3-NMEFOSAo	*2.52o*				*3.77o*		*66.8o*	*50-150o*		
D5-NETFOSAo	*2.71o*				*3.77o*		*71.8o*	*50-150o*		
D3-NMEFOSAAo	*7.62o*				*7.55o*		*101o*	*50-150o*		
D5-NETFOSAAo	*9.23o*				*7.55o*		*122o*	*50-150o*		
D7-NMEFOSEo	*30.3o*				*37.7o*		*80.4o*	*50-150o*		
D9-NETFOSEo	*30.6o*				*37.7o*		*81.2o*	*50-150o*		
13C3-HFPO-DAo	*16.4o*				*15.1o*		*109o*	*50-150o*		
LCS Dup (BBL0032-BSD1)u							Prepared: 12/01/22 14:45 Analyzed: 12/09/22 13:43 o			
	ng/g wet o									
PFBAo	7.45o				7.84o		95.0o	71-135o	2.14o	30o
PFPEAo	3.92o				3.92o		99.8o	69-132o	11.0o	30o
PFHXAo	1.82o				1.96o		92.8o	70-132o	7.69o	30o
PFHPAo	1.91o				1.96o		97.2o	71-131o	7.15o	30o
PFOAo	1.93o				1.96o		98.6o	69-133o	3.62o	30o
PFNAo	1.77o				1.96o		90.3o	72-129o	5.44o	30o
PFDAo	2.02o				1.96o		103o	69-133o	16.3o	30o
PFUnAo	1.95o				1.96o		99.5o	64-136o	14.1o	30o
PFDOAo	2.32o				1.96o		118o	69-135o	11.8o	30o
PFTRDAo	2.05o				1.96o		105o	66-139o	5.08o	30o
PFTEDAo	2.17o				1.96o		111o	69-133o	15.3o	30o
PFBSo	1.70o				1.74o		97.8o	72-128o	0.484o	30o
PFPESo	1.89o				1.84o		103o	71-127o	3.76o	30o
PFHXSo	1.87o				1.79o		104o	67-130o	3.77o	30o
PFHPSo	1.70o				1.87o		90.8o	70-132o	7.59o	30o
PFOSo	1.83o				1.82o		100o	68-136o	6.29o	30o
PFNSo	1.71o				1.88o		90.8o	69-127o	18.0o	30o
PFDSo	1.82o				1.89o		96.2o	59-134o	5.53o	30o

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

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:49o

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: BBL0032 - Table B-15 (Continued)u										
LCS Dup (BBL0032-BSD1)u						Prepared: 12/01/22 14:45 Analyzed: 12/09/22 13:43o				
	ng/g weto									
4:2FTSo	6.82o				7.35o		92.7o	62-145	5.36o	30
6:2FTSo	7.49o				7.45o		100o	64-140	6.18o	30
8:2FTSo	7.56o				7.53o		100o	65-137	7.57o	30
PFOSAo	1.73o				1.96o		88.3o	67-137	12.4o	30
NMeFOSAo	7.74o				7.84o		98.7o	68-141	2.41o	30
NEtFOSAo	7.15o				7.84o		91.1o	70-130	0.694o	30
NMeFOSAAo	2.09o				1.96o		107o	63-144	19.5o	30
NEtFOSAAo	1.93o				1.96o		98.6o	61-139	1.16o	30
NMeFOSEo	7.10o				7.84o		90.6o	70-130	4.76o	30
NEtFOSEo	8.07o				7.84o		103o	70-130	10.6o	30
HFPO-DAo	4.10o				3.92o		105o	70-130	14.5o	30
ADONAo	4.23o				3.71o		114o	70-130	18.0o	30
9CL-PF3ONSo	4.48o				3.67o		122o	70-130	19.1o	30
11CL-PF3OUDSo	3.85o				3.71o		104o	70-130	18.0o	30
Surrogatesu										
13C4-PFBAo	*17.2o*				*15.7o*		*110o*	*50-150*		
13C5-PFPEAo	*7.46o*				*7.84o*		*95.1o*	*50-150*		
13C5-PFHXAo	*4.53o*				*3.92o*		*116o*	*50-150*		
13C4-PFHPAo	*4.44o*				*3.92o*		*113o*	*50-150*		
13C8-PFOAo	*4.43o*				*3.92o*		*113o*	*50-150*		
13C9-PFNAo	*2.63o*				*1.96o*		*134o*	*50-150*		
13C6-PFDAo	*2.09o*				*1.96o*		*107o*	*50-150*		
13C7-PFUnAo	*2.23o*				*1.96o*		*114o*	*50-150*		
13C2-PFDOAo	*1.72o*				*1.96o*		*87.7o*	*50-150*		
13C2-PFTEDAo	*1.69o*				*1.96o*		*86.1o*	*50-150*		
13C3-PFBSo	*4.05o*				*3.92o*		*103o*	*50-150*		
13C3-PFHXSo	*3.92o*				*3.92o*		*99.9o*	*50-150*		
13C8-PFOSo	*4.22o*				*3.92o*		*107o*	*50-150*		
13C2-4:2FTSo	*9.22o*				*7.84o*		*118o*	*50-150*		
13C2-6:2FTSo	*7.88o*				*7.84o*		*101o*	*50-150*		
13C2-8:2FTSo	*8.68o*				*7.84o*		*111o*	*50-150*		
13C8-PFOSAo	*3.75o*				*3.92o*		*95.6o*	*50-150*		
D3-NMEFOSAo	*2.98o*				*3.92o*		*76.0o*	*50-150*		
D5-NETFOSAo	*3.22o*				*3.92o*		*82.2o*	*50-150*		
D3-NMEFOSAAo	*7.94o*				*7.84o*		*101o*	*50-150*		
D5-NETFOSAAo	*9.76o*				*7.84o*		*124o*	*50-150*		
D7-NMEFOSEo	*33.2o*				*39.2o*		*84.7o*	*50-150*		
D9-NETFOSEo	*35.3o*				*39.2o*		*89.9o*	*50-150*		
13C3-HFPO-DAo	*16.1o*				*15.7o*		*103o*	*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 JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

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: BBL0032 - Table B-15 (Continued)u										
MRL Check (BBL0032-MRL1)u						Prepared: 12/01/22 14:45 Analyzed: 12/09/22 20:59o				
	ng/g weto									
PFBAo	0.593 Jo				0.734o		80.8o	71-135o		
PFPEAo	0.362 Jo				0.367o		98.7o	69-132o		
PFHXAo	0.169 Jo				0.183o		91.9o	70-132o		
PFHPAo	0.209 Jo				0.183o		114o	71-131o		
PFOAo	0.191 Jo				0.183o		104o	69-133o		
PFNAo	0.162 Jo				0.183o		88.5o	72-129o		
PFDAo	0.147 Jo				0.183o		80.0o	69-133o		
PFUnAo	0.212 Jo				0.183o		116o	64-136o		
PFDOAo	0.182 Jo				0.183o		99.1o	69-135o		
PFTRDAo	0.194 Jo				0.183o		106o	66-139o		
PFTEDAo	0.173 Jo				0.183o		94.5o	69-133o		
PFBSo	0.158 Jo				0.162o		97.3o	72-128o		
PFPESo	0.133 Jo				0.172o		77.2o	71-127o		
PFHXSo	0.157 Jo				0.168o		93.5o	67-130o		
PFHPSo	0.120 J BS1, o				0.175o		68.7o	70-132o		
PFOSo	0.162 Jo				0.171o		94.8o	68-136o		
PFNSo	0.187 Jo				0.176o		106o	69-127o		
PFDSo	0.151 Jo				0.177o		85.3o	59-134o		
4:2FTSo	0.631 Jo				0.688o		91.7o	62-145o		
6:2FTSo	0.627 Jo				0.697o		90.0o	64-140o		
8:2FTSo	0.780 Jo				0.705o		111o	65-137o		
PFOSAo	0.192 Jo				0.183o		104o	67-137o		
NMeFOSAo	0.643 Jo				0.734o		87.6o	68-141o		
NEtFOSAo	0.623 Jo				0.734o		84.8o	70-130o		
NMeFOSAAo	0.226 Jo				0.183o		123o	63-144o		
NEtFOSAAo	0.166 Jo				0.183o		90.5o	61-139o		
NMeFOSEo	0.537 Jo				0.734o		73.1o	70-130o		
NEtFOSEo	0.539 Jo				0.734o		73.5o	70-130o		
HFPO-DAo	0.328 Jo				0.367o		89.4o	70-130o		
ADONAo	0.301 Jo				0.347o		86.9o	70-130o		
9CL-PF3ONSo	0.338 Jo				0.343o		98.6o	70-130o		
11CL-PF3OUDSo	0.337 Jo				0.347o		97.1o	70-130o		
Surrogatesu										
13C4-PFBAo	*17.6o*				*14.7o*		*120o*	*50-150o*		
13C5-PFPEAo	*7.19o*				*7.34o*		*97.9o*	*50-150o*		
13C5-PFHXAo	*4.25o*				*3.67o*		*116o*	*50-150o*		
13C4-PFHPAo	*3.85o*				*3.67o*		*105o*	*50-150o*		
13C8-PFOAo	*4.23o*				*3.67o*		*115o*	*50-150o*		
13C9-PFNAo	*2.04o*				*1.83o*		*111o*	*50-150o*		
13C6-PFDAo	*2.17o*				*1.83o*		*118o*	*50-150o*		
13C7-PFUnAo	*2.40o*				*1.83o*		*131o*	*50-150o*		
13C2-PFDOAo	*2.03o*				*1.83o*		*111o*	*50-150o*		
13C2-PFTEDAo	*1.86o*				*1.83o*		*101o*	*50-150o*		
13C3-PFBSo	*4.25o*				*3.67o*		*116o*	*50-150o*		
13C3-PFHXSo	*4.36o*				*3.67o*		*119o*	*50-150o*		
13C8-PFOSo	*4.18o*				*3.67o*		*114o*	*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 JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

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: BBL0032 - Table B-15 (Continued)u										
MRL Check (BBL0032-MRL1)u						Prepared: 12/01/22 14:45 Analyzed: 12/09/22 20:59o				
	ng/g weto									
Surrogatesu										
13C2-4:2FTSo	*8.04o*				*7.34o*		*110o*	*50-150*		
13C2-6:2FTSo	*9.27o*				*7.34o*		*126o*	*50-150*		
13C2-8:2FTSo	*8.10o*				*7.34o*		*110o*	*50-150*		
13C8-PFOSAo	*3.83o*				*3.67o*		*104o*	*50-150*		
D3-NMEFOSAo	*2.92o*				*3.67o*		*79.4o*	*50-150*		
D5-NETFOSAo	*3.20o*				*3.67o*		*87.2o*	*50-150*		
D3-NMEFOSAAo	*8.04o*				*7.34o*		*110o*	*50-150*		
D5-NETFOSAAo	*9.04o*				*7.34o*		*123o*	*50-150*		
D7-NMEFOSEo	*34.5o*				*36.7o*		*94.1o*	*50-150*		
D9-NETFOSEo	*34.1o*				*36.7o*		*92.9o*	*50-150*		
13C3-HFPO-DAo	*17.0o*				*14.7o*		*116o*	*50-150*		
Matrix Spike (BBL0032-MS1)u	**Source: 22L0005-14u**					Prepared: 12/01/22 14:45 Analyzed: 12/09/22 14:12 o				
	ng/g dry o									
PFBAo	8.32o				8.72o	0.401 Uo	95.5o	71-135o		
PFPEAo	4.35o				4.36o	0.401 Uo	99.9o	69-132o		
PFHXAo	2.26o				2.18o	0.242o	92.8o	70-132o		
PFHPAo	2.19o				2.18o	0.401 Uo	101o	71-131o		
PFOAo	2.40o				2.18o	0.165o	103o	69-133o		
PFNAo	2.15o				2.18o	0.401 Uo	98.7o	72-129o		
PFDAo	1.99o				2.18o	0.401 Uo	91.1o	69-133o		
PFUnAo	1.90o				2.18o	0.401 Uo	87.0o	64-136o		
PFDOAo	2.22o				2.18o	0.401 Uo	102o	69-135o		
PFTRDAo	2.27o				2.18o	0.401 Uo	104o	66-139o		
PFTEDAo	2.00o				2.18o	0.401 Uo	91.6o	69-133o		
PFBSo	2.04o				1.93o	0.401 Uo	106o	72-128o		
PFPESo	1.93o				2.05o	0.901 Uo	94.2o	71-127o		
PFHXSo	4.44o				1.99o	2.39o	103o	67-130o		
PFHPSo	2.36o				2.08o	0.401 Uo	113o	70-132o		
PFOSo	155dMS2, Eo				2.03o	125o	1510o	68-136o		
PFNSo	5.04dMS2o				2.09o	1.51o	168o	69-127o		
PFDSo	2.30o				2.10o	0.401 Uo	109o	59-134o		
4:2FTSo	7.59o				8.17o	0.401 Uo	92.9o	62-145o		
6:2FTSo	8.74o				8.28o	0.401 Uo	106o	64-140o		
8:2FTSo	7.99o				8.37o	0.401 Uo	95.4o	65-137o		
PFOSAo	2.25o				2.18o	0.401 Uo	103o	67-137o		
NMeFOSAo	9.25o				8.72o	0.901 Uo	106o	68-141o		
NEtFOSAo	8.07o				8.72o	0.901 Uo	92.6o	70-130o		
NMeFOSAAo	2.18o				2.18o	0.401 Uo	99.8o	63-144o		
NEtFOSAAo	2.30o				2.18o	0.401 Uo	106o	61-139o		
NMeFOSEo	7.96o				8.72o	0.821 Uo	91.3o	70-130o		
NEtFOSEo	8.98o				8.72o	0.651 Uo	103o	70-130o		
HFPO-DAo	4.56o				4.36o	0.401 Uo	105o	70-130o		
ADONAo	4.12o				4.12o	0.401 Uo	99.9o	70-130o		
9CL-PF3ONSo	5.50dMS2o				4.08o	0.401 Uo	135o	70-130o		

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

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

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: BBL0032 - Table B-15 (Continued)u										
Matrix Spike (BBL0032-MS1)u	**Source: 22L0005-14**					Prepared: 12/01/22 14:45	Analyzed: 12/09/22 14:12			
	ng/g dryo									
11CL-PF3OUDSo	5.27o				4.12o	0.401 Uo	128	70-130		
Surrogatesu										
13C4-PFBAo	*16.0o*				*17.4o*		*92.0*	*50-150*		
13C5-PFPEAo	*6.80o*				*8.72o*		*78.0*	*50-150*		
13C5-PFHXAo	*4.10o*				*4.36o*		*94.0*	*50-150*		
13C4-PFHPAo	*4.25o*				*4.36o*		*97.4*	*50-150*		
13C8-PFOAo	*4.15o*				*4.36o*		*95.1*	*50-150*		
13C9-PFNAo	*2.17o*				*2.18o*		*99.6*	*50-150*		
13C6-PFDAo	*2.32o*				*2.18o*		*107*	*50-150*		
13C7-PFUnAo	*2.45o*				*2.18o*		*112*	*50-150*		
13C2-PFDOAo	*2.04o*				*2.18o*		*93.7*	*50-150*		
13C2-PFTEDAo	*2.02o*				*2.18o*		*92.6*	*50-150*		
13C3-PFBSo	*4.80o*				*4.36o*		*110*	*50-150*		
13C3-PFHXSo	*4.82o*				*4.36o*		*111*	*50-150*		
13C8-PFOSo	*4.72o*				*4.36o*		*108*	*50-150*		
13C2-4:2FTSo	*10.5o*				*8.72o*		*120*	*50-150*		
13C2-6:2FTSo	*8.92o*				*8.72o*		*102*	*50-150*		
13C2-8:2FTSo	*9.74o*				*8.72o*		*112*	*50-150*		
13C8-PFOSAo	*3.64o*				*4.36o*		*83.5*	*50-150*		
D3-NMEFOSAo	*2.81o*				*4.36o*		*64.4*	*50-150*		
D5-NETFOSAo	*3.25o*				*4.36o*		*74.6*	*50-150*		
D3-NMEFOSAAo	*8.80o*				*8.72o*		*101*	*50-150*		
D5-NETFOSAAo	*10.5o*				*8.72o*		*120*	*50-150*		
D7-NMEFOSEo	*35.3o*				*43.6o*		*81.0*	*50-150*		
D9-NETFOSEo	*34.2o*				*43.6o*		*78.5*	*50-150*		
13C3-HFPO-DAo	*15.4o*				*17.4o*		*88.3*	*50-150*		
Matrix Spike Dup (BBL0032-MSD1)u	**Source: 22L0005-14u**					Prepared: 12/01/22 14:45	Analyzed: 12/09/22 14:25 o			
	ng/g dry o									
PFBAo	7.84o				8.55o	0.401 Uo	91.7o	71-135o	5.94o	30o
PFPEAo	4.25o				4.28o	0.401 Uo	99.5o	69-132o	2.33o	30o
PFHXAo	2.17o				2.14o	0.242o	90.1o	70-132o	4.35o	30o
PFHPAo	2.01o				2.14o	0.401 Uo	94.1o	71-131o	8.65o	30o
PFOAo	2.24o				2.14o	0.165o	96.9o	69-133o	7.25o	30o
PFNAo	1.95o				2.14o	0.401 Uo	91.2o	72-129o	9.82o	30o
PFDAo	1.80o				2.14o	0.401 Uo	84.3o	69-133o	9.79o	30o
PFUnAo	1.79o				2.14o	0.401 Uo	83.8o	64-136o	5.65o	30o
PFDOAo	2.31o				2.14o	0.401 Uo	108o	69-135o	3.65o	30o
PFTRDAo	2.16o				2.14o	0.401 Uo	101o	66-139o	5.13o	30o
PFTEDAo	1.60o				2.14o	0.401 Uo	75.0o	69-133o	21.9o	30o
PFBSo	1.74o				1.89o	0.401 Uo	91.8o	72-128o	15.8o	30o
PFPESo	1.93o				2.01o	0.901 Uo	96.1o	71-127o	0.105o	30o
PFHXSo	3.89o				1.96o	2.39o	76.7o	67-130o	13.1o	30o
PFHPSo	2.27o				2.04o	0.401 Uo	111o	70-132o	3.91o	30o
PFOSo	118oMS1, Eo				1.99o	125o	-367o	68-136o	27.7o	30o
PFNSo	3.51oMS3o				2.05o	1.51o	97.1o	69-127o	35.9o	30o
PFDSo	2.09o				2.06o	0.401 Uo	101o	59-134o	9.61o	30o

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

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

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 Limit
Batch: BBL0032 - Table B-15 (Continued)u										
Matrix Spike Dup (BBL0032-MSD1)u	**Source: 22L0005-14**					Prepared: 12/01/22 14:45	Analyzed: 12/09/22 14:25			
	ng/g dryo									
4:2FTSo	7.31o				8.02o	0.401 Uo	91.2o	62-145	3.72	30
6:2FTSo	8.20o				8.12o	0.401 Uo	101o	64-140	6.32	30
8:2FTSo	8.84o				8.21o	0.401 Uo	108o	65-137	10.1	30
PFOSAo	2.05o				2.14o	0.401 Uo	95.7o	67-137	9.49	30
NMeFOSAo	8.40o				8.55o	0.901 Uo	98.2o	68-141	9.58	30
NEtFOSAo	8.18o				8.55o	0.901 Uo	95.6o	70-130	1.28	30
NMeFOSAAo	2.02o				2.14o	0.401 Uo	94.7o	63-144	7.17	30
NEtFOSAAo	1.95o				2.14o	0.401 Uo	91.0o	61-139	16.9	30
NMeFOSEo	8.49o				8.55o	0.821 Uo	99.2o	70-130	6.44	30
NEtFOSEo	8.04o				8.55o	0.651 Uo	94.0o	70-130	11.0	30
HFPO-DAo	4.04o				4.28o	0.401 Uo	94.6o	70-130	12.0	30
ADONAo	3.81o				4.04o	0.401 Uo	94.3o	70-130	7.79	30
9CL-PF3ONSo	5.31oMS2o				4.00o	0.401 U	133o	70-130	3.54	30
11CL-PF3OUDSo	4.62o				4.04o	0.401 Uo	114o	70-130	13.3	30
Surrogatesu										
13C4-PFBAo	*16.1o*				*17.1o*		*93.9*	*50-150*		
13C5-PFPEAo	*6.68o*				*8.55o*		*78.1*	*50-150*		
13C5-PFHXAo	*3.88o*				*4.28o*		*90.8*	*50-150*		
13C4-PFHPAo	*4.10o*				*4.28o*		*95.9*	*50-150*		
13C8-PFOAo	*3.80o*				*4.28o*		*88.9*	*50-150*		
13C9-PFNAo	*2.37o*				*2.14o*		*111*	*50-150*		
13C6-PFDAo	*2.11o*				*2.14o*		*98.7*	*50-150*		
13C7-PFUnAo	*2.32o*				*2.14o*		*108*	*50-150*		
13C2-PFDOAo	*1.95o*				*2.14o*		*91.4*	*50-150*		
13C2-PFTEDAo	*2.21o*				*2.14o*		*103*	*50-150*		
13C3-PFBSo	*4.94o*				*4.28o*		*115*	*50-150*		
13C3-PFHXSo	*4.57o*				*4.28o*		*107*	*50-150*		
13C8-PFOSo	*5.28o*				*4.28o*		*124*	*50-150*		
13C2-4:2FTSo	*10.5o*				*8.55o*		*122*	*50-150*		
13C2-6:2FTSo	*8.88o*				*8.55o*		*104*	*50-150*		
13C2-8:2FTSo	*9.89o*				*8.55o*		*116*	*50-150*		
13C8-PFOSAo	*3.40o*				*4.28o*		*79.5*	*50-150*		
D3-NMEFOSAo	*2.91o*				*4.28o*		*68.1*	*50-150*		
D5-NETFOSAo	*2.96o*				*4.28o*		*69.2*	*50-150*		
D3-NMEFOSAAo	*9.82o*				*8.55o*		*115*	*50-150*		
D5-NETFOSAAo	*12.8o*				*8.55o*		*150*	*50-150*		
D7-NMEFOSEo	*34.9o*				*42.8o*		*81.5*	*50-150*		
D9-NETFOSEo	*37.4o*				*42.8o*		*87.6*	*50-150*		
13C3-HFPO-DAo	*15.8o*				*17.1o*		*92.4*	*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 JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

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 JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

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 01:03 o			
	ng/L o									
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	55.8oBS2o				40.0o		140o	69-130o		
PFDAo	50.8o				40.0o		127o	71-129o		
PFUnAo	53.5oBS2o				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	216oBS2o				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	61.4oBS2o				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 JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

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 01:16 o			
	ng/L o									
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 JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:49o

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 JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

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*		

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

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

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: 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						

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

Tidewater, Inc.	Project: NASA JPL	
5835 Avenida Encinas, Suite 118	Project Number: NASA JPL	
Carlsbad, CA 92208	Project Manager: David Connero	Reported: 01/06/2023 15:49

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: BBL0371 - Table B-15 (Continued)											
Blank (BBL0371-BLK1)											
	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	*58.0*					*64.0*		*90.6*	*50-150*		
13C5-PFPEA	*29.6*					*32.0*		*92.6*	*50-150*		
13C5-PFHXA	*13.8*					*16.0*		*86.0*	*50-150*		
13C4-PFHPA	*15.1*					*16.0*		*94.4*	*50-150*		
13C8-PFOA	*13.2*					*16.0*		*82.5*	*50-150*		
13C9-PFNA	*7.00*					*8.00*		*87.5*	*50-150*		
13C6-PFDA	*6.82*					*8.00*		*85.2*	*50-150*		
13C7-PFUnA	*7.03*					*8.00*		*87.8*	*50-150*		
13C2-PFDOA	*7.04*					*8.00*		*87.9*	*50-150*		
13C2-PFTEDA	*6.73*					*8.00*		*84.1*	*50-150*		
13C3-PFBS	*15.5*					*16.0*		*97.1*	*50-150*		
13C3-PFHXS	*14.1*					*16.0*		*88.2*	*50-150*		
13C8-PFOS	*14.0*					*16.0*		*87.4*	*50-150*		
13C2-4:2FTS	*41.5*					*32.0*		*130*	*50-150*		
13C2-6:2FTS	*35.8*					*32.0*		*112*	*50-150*		
13C2-8:2FTS	*27.8*					*32.0*		*86.8*	*50-150*		
13C8-PFOSA	*14.3*					*16.0*		*89.1*	*50-150*		
D3-NMEFOSA	*5.08*	S1				*16.0*		*31.8*	*50-150*		
D5-NETFOSA	*4.26*	S1				*16.0*		*26.6*	*50-150*		
D3-NMEFOSAA	*23.4*					*32.0*		*73.0*	*50-150*		
D5-NETFOSAA	*23.6*					*32.0*		*73.6*	*50-150*		
D7-NMEFOSE	*105*					*160*		*65.7*	*50-150*		
D9-NETFOSE	*103*					*160*		*64.7*	*50-150*		
13C3-HFPO-DA	*57.6*					*64.0*		*89.9*	*50-150*		

Prepared: 12/19/22 12:17 Analyzed: 12/30/22 05:19

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

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

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									
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		
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*		

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

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

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									
Surrogatesu										
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 05:45 o				
	ng/L o									
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
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

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

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

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									
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*		
MRL Check (BBL0371-MRL1)u						Prepared: 12/19/22 12:17 Analyzed: 12/30/22 05:58 o				
	ng/L o									
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		

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

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported:o01/06/2023 15:49o

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: 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									
4:2FTSo	2.61 Jo				3.00o		87.0o	63-143		
6:2FTSo	2.55 Jo				3.04o		83.8o	64-140		
8:2FTSo	2.37 Jo				3.07o		77.1o	67-138		
PFOSAo	0.655 Jo				0.800o		81.9o	67-137		
NMeFOSAo	2.69 Jo				3.20o		84.0o	68-141		
NEtFOSAo	2.93 Jo				3.20o		91.7o	70-130		
NMeFOSAAo	0.642 Jo				0.800o		80.3o	65-136		
NEtFOSAAo	0.596 Jo				0.800o		74.6o	61-135		
NMeFOSEo	2.05 JdBS1, o				3.20o		64.0o	70-130		
NEtFOSEo	4.21dBS2o				3.20o		131o	70-130		
HFPO-DAo	1.25 Jo				1.60o		78.1o	44-175		
ADONAo	1.20 Jo				1.51o		79.6o	61-169		
9CL-PF3ONSo	1.16 Jo				1.50o		77.3o	62-140		
11CL-PF3OUDSo	1.30 Jo				1.51o		86.2o	54-138		
Surrogatesu										
13C4-PFBAo	*54.7o*				*64.0o*		*85.5o*	*50-150*		
13C5-PFPEAo	*29.6o*				*32.0o*		*92.4o*	*50-150*		
13C5-PFHXAo	*14.4o*				*16.0o*		*89.7o*	*50-150*		
13C4-PFHPAo	*12.8o*				*16.0o*		*80.2o*	*50-150*		
13C8-PFOAo	*13.3o*				*16.0o*		*83.4o*	*50-150*		
13C9-PFNAo	*7.37o*				*8.00o*		*92.2o*	*50-150*		
13C6-PFDAo	*6.20o*				*8.00o*		*77.5o*	*50-150*		
13C7-PFUnAo	*7.76o*				*8.00o*		*97.0o*	*50-150*		
13C2-PFDOAo	*8.26o*				*8.00o*		*103o*	*50-150*		
13C2-PFTEDAo	*6.95o*				*8.00o*		*86.8o*	*50-150*		
13C3-PFBSo	*15.9o*				*16.0o*		*99.5o*	*50-150*		
13C3-PFHXSo	*14.4o*				*16.0o*		*89.8o*	*50-150*		
13C8-PFOSo	*16.1o*				*16.0o*		*101o*	*50-150*		
13C2-4:2FTSo	*39.2o*				*32.0o*		*123o*	*50-150*		
13C2-6:2FTSo	*34.6o*				*32.0o*		*108o*	*50-150*		
13C2-8:2FTSo	*27.5o*				*32.0o*		*86.0o*	*50-150*		
13C8-PFOSAo	*17.1o*				*16.0o*		*107o*	*50-150*		
D3-NMEFOSAo	*7.55o* S1o				*16.0o*		*47.2o*	*50-150*		
D5-NETFOSAo	*8.04o*				*16.0o*		*50.3o*	*50-150*		
D3-NMEFOSAAo	*31.0o*				*32.0o*		*96.8o*	*50-150*		
D5-NETFOSAAo	*35.4o*				*32.0o*		*111o*	*50-150*		
D7-NMEFOSEo	*131o*				*160o*		*82.1o*	*50-150*		
D9-NETFOSEo	*123o*				*160o*		*76.8o*	*50-150*		
13C3-HFPO-DAo	*53.6o*				*64.0o*		*83.7o*	*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 JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

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 - 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		
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 JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

Quality Controlu
(Continued)u

WetLabu

Analyteo	Result/Qualo	LOQo	LODo	MDLo	Spikeo Levelo	Sourceo Resulto	%RECo	%RECo Limitso	RPDo	RPDo Limito
Batch: BBL0135 - ISM02.2u										
Duplicate (BBL0135-DUP1)u		**Source: 22L0005-14u**				Prepared & Analyzed: 12/07/22 13:06o				
	%o									
% Solidso	90.7o					89.9o			0.792	20o
MOISTUREo	9.33o					10.1o			7.38	20o

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

Tidewater, Inc.o	Project:oNASA JPLo	
5835 Avenida Encinas, Suite 118o	Project Number:oNASA JPLo	
Carlsbad, CA 92208o	Project Manager:oDavid Connero	Reported: 01/06/2023 15:49o

Notes and Definitions o

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
Eo	Response exceeds linear rangeo
IR1o	Ion ratio below the lower control limito
IR2o	Ion ratio above the upper control limito
Jo	Estimated valueo
MS1o	Matrix spike recovered below the lower control limito
MS2o	Matrix spike recovered above the upper 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

22L0005 R

Printed: 01/06/2023 3:50 pmi

Project: R **NASA JPL**
Project Number: R **NASA JPLR**
Project Manager:R **Gregory SalataR**
PO Number:R

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
22L0005-01 SB-1-0.5-113022 [Solid] Sampled 11/30/2022 8:35:00AMR	
% Solidsi	NONEi
B-15 DODi	NONEi
22L0005-02 SB-1-2.0-113022 [Solid] Sampled 11/30/2022 8:44:00AMR	
% Solidsi	NONEi
B-15 DODi	NONEi
22L0005-03 SB-2-0.5-113022 [Solid] Sampled 11/30/2022 9:05:00AMR	
% Solidsi	NONEi
B-15 DODi	NONEi
22L0005-04 SB-2-2.0-113022 [Solid] Sampled 11/30/2022 9:05:00AMR	
% Solidsi	NONEi
B-15 DODi	NONEi
22L0005-05 SB-3-0.5-113022 [Solid] Sampled 11/30/2022 9:33:00AMR	
% Solidsi	NONEi
B-15 DODi	NONEi
22L0005-06 SB-3-2.0-113022 [Solid] Sampled 11/30/2022 9:40:00AMR	
% Solidsi	NONEi
B-15 DODi	NONEi
22L0005-07 SB-4-0.5-113022 [Solid] Sampled 11/30/2022 11:00:00AMR	
% Solidsi	NONEi
B-15 DODi	NONEi
22L0005-08 SB-4-2.0-113022 [Solid] Sampled 11/30/2022 11:10:00AMR	
% Solidsi	NONEi
B-15 DODi	NONEi

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

WORK ORDER

22L0005 R

Printed: 01/06/2023 3:50 pmi

(Continued)R

Project: R **NASA JPLR**
Project Number: R **NASA JPLR**
Project Manager:R **Gregory SalataR**
PO Number:R

Analysisa	Commentsa

22L0005-09 SB-5-0.5-113022 [Solid] Sampled 11/30/2022 11:20:00AMR

% Solidsi	NONEi
B-15 DODi	NONEi

22L0005-10 SB-5-2.0-113022 [Solid] Sampled 11/30/2022 11:30:00AMR

% Solidsi	NONEi
B-15 DODi	NONEi

22L0005-11 DUP-1-113022 [Solid] Sampled 11/30/2022 11:30:00AMR

% Solidsi	NONEi
B-15 DODi	NONEi

22L0005-12 SB-6-0.5-113022 [Solid] Sampled 11/30/2022 11:35:00AMR

% Solidsi	NONEi
B-15 DODi	NONEi

22L0005-13 DUP-2-113022 [Solid] Sampled 11/30/2022 11:35:00AMR

% Solidsi	NONEi
B-15 DODi	NONEi

22L0005-14 SB-6-2.0-113022 [Solid] Sampled 11/30/2022 11:45:00AM R

Sample Comments: MS/MSD *R*

% Solidsi	NONEi
B-15 DODi	NONEi

22L0005-15 Field Blank [Water] Sampled 11/30/2022 12:10:00PMR

B-15 DODi	NONEi

22L0 50 **Sample Receipt LogR**

Default Coolerf

Samples Received at:i **1.2°CR**

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

2210005

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. 54789

Report to: PLEASE PRINT

Company Name: G2S LLC
Phone: 626-298-5715
Address: 37161 Attucks Drive
Powell, OH 43065
Fax: 614-792-2898
Attn: David Conner
Email: david.conner@tileh2o.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 SI
Purchase Order Number: 1001335-002-11
Sampler (Print): David Conner
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	Matrix: Sed.	Matrix: Soil	Analysis Requested/Method Number: PFAS
SB-1-0.5-113022	JPL	11/30/22	08:35	P	1			X	X
SB-1-2.0-113022	JPL	11/30/22	08:44	P	1			X	X
SB-2-0.5-113022	JPL	11/30/22	09:05	P	1			X	X
SB-2-2.0-113022	JPL	11/30/22	09:05	P	1			X	X
SB-3-0.5-113022	JPL	11/30/22	09:33	P	1			X	X
SB-3-2.0-113022	JPL	11/30/22	09:40	P	1			X	X
SB-4-0.5-113022	JPL	11/30/22	11:00	P	1			X	X
SB-4-2.0-113022	JPL	11/30/22	11:10	P	1			X	X
SB-5-0.5-113022	JPL	11/30/22	11:20	P	1			X	X
SB-5-2.0-113022	JPL	11/30/22	11:30	P	1			X	X
DUP-1-113022	JPL	11/30/22	11:30	P	1			X	X

Bottle Temperature: ~~2.3°C~~ 2.0°C
B5 3/1.2°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	14:45					
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

C.O.C. 54790

Report to: PLEASE PRINT		Invoice to: PLEASE PRINT	
Company Name: G2S LLC	Phone: 626-298-5715	Company Name: G2S LLC	Phone:
Address: 3761 Attucks Drive, Powell, OH 43065	Fax: 614-792-2898	Address: 3401 Carlins Park Dr. Suite B Suite 200, Baltimore, MD 21215	Fax:
Attn: David Conner		Attn: Nadika Aluthwehare	
Email: david.conner@tidech2o.net		Email: na@slc-ge.com	

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

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	Analysis Requested/Method Number: PFAS	Comments
SB-6-0.5-113022	JPL	11/30/22	11:35	P	1			X	X	
DUP-2-113022	JPL	11/30/22	11:35	P	1			X	X	
SB-6-2.0-113022	JPL	11/30/22	11:45	P	2			X	X	MS/MSD
Field Blank	JPL	11/30/22	12:10	P	1	X			X	
EQP-1-SOIL	JPL	11/30/22	09:50	P	2	X			X	

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

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 retentio

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
	11/30/22	14:45					
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

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

PFASA

SAMPLE DATAM

FORM IR
ANALYSIS DATA SHEETR

SB-1-0.5-113022-

Laboratory:-	APPL, LLC-			Work Order:-	22L0005-
Client:-	Tidewater, Inc.-			Project:-	NASA JPL-
Matrix:-	Solid-	Laboratory ID:-	22L0005-01-	File ID:	S2022-12-09A (10)-
Sampled:-	11/30/22 08:35-	Prepared:-	12/01/22 14:45-	Analyzed:-	12/09/22 14:38
Solids:-	84.56-	Preparation:-	Table B-15-	Dilution:-	1-
Initial/Final:-	1.02 g / 2 mL-			Instrument:-	Saphira-
Batch:-	BBL0032-	Sequence:-	SB03754-	Calibration:-	2250016

COMPOUNDR	CONC. (ng/g dry)R	LOQ	LODR	DL	Q
PFBA-	0.20 J-	1.2-	0.46	0.12	
PFPEA-	0.27 J-	1.2-	0.46	0.17	
PFHXA-	0.13 J-	1.2-	0.46	0.12	
PFHPA-	0.12 J-	1.2-	0.46	0.12	
PFOA-	0.52 J-	1.2-	0.46	0.17	
PFNA-	2.7-	1.2-	0.46	0.12	
PFDA-	0.54 J-	1.2-	0.46	0.17	
PFUnA-	0.46 U-	1.2-	0.46	0.12	
PFDOA-	0.46 U-	1.2-	0.46	0.17	
PFTRDA-	0.46 U-	1.2-	0.46	0.12	
PFTEDA-	0.46 U-	1.2-	0.46	0.23	
PFBS-	0.46 U-	1.2-	0.46	0.12	
PFPES-	1.0 U-	1.2-	1.0	0.48	
PFHXS-	0.46 U-	1.2-	0.46	0.17	
PFHPS-	0.46 U-	1.2-	0.46	0.17	
PFOS-	0.66 J-	1.2-	0.46	0.12	
PFNS-	0.93 U-	1.2-	0.93	0.45	
PFDS-	0.46 U-	1.2-	0.46	0.23	
4:2FTS-	0.46 U-	1.2-	0.46	0.23	
6:2FTS-	0.46 U-	1.2-	0.46	0.23	
8:2FTS-	0.28 J-	1.2-	0.46	0.17	
PFOSA-	0.46 U-	1.2-	0.46	0.12	
NMeFOSA-	1.0 U-	1.2-	1.0	0.57	
NEtFOSA-	1.0 U-	1.2-	1.0	0.57	
NMeFOSAA-	0.46 U-	1.2-	0.46	0.23	
NEtFOSAA-	0.46 U-	1.2-	0.46	0.23	
NMeFOSE-	0.95 U-	1.2-	0.95	0.47	
NEtFOSE-	0.75 U-	1.2-	0.75	0.36	
HFPO-DA-	0.46 U-	1.2-	0.46	0.23	
ADONA-	0.46 U-	1.2-	0.46	0.23	

FORM IR
ANALYSIS DATA SHEETR

SB-1-0.5-113022-

Laboratory:-	APPL, LLC-			Work Order:-	22L0005-
Client:-	Tidewater, Inc.-			Project:-	NASA JPL-
Matrix:-	Solid-	Laboratory ID:-	22L0005-01-	File ID:	S2022-12-09A (10)-
Sampled:-	11/30/22 08:35-	Prepared:-	12/01/22 14:45-	Analyzed:-	12/09/22 14:38
Solids:-	84.56-	Preparation:-	Table B-15-	Dilution:-	1-
Initial/Final:-	1.02 g / 2 mL-			Instrument:-	Saphira-
Batch:-	BBL0032-	Sequence:-	SB03754-	Calibration:-	2250016

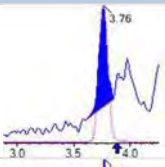
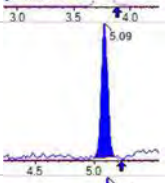
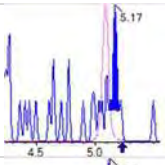
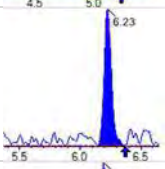
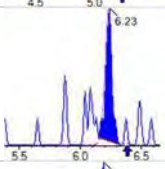
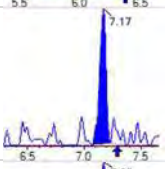
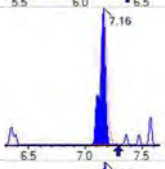
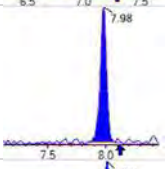
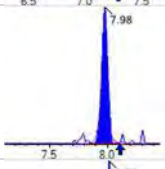
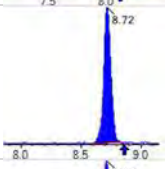
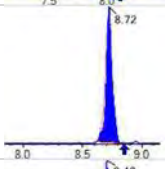
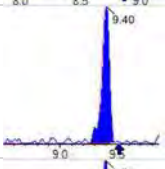
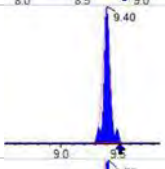
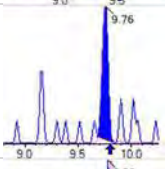
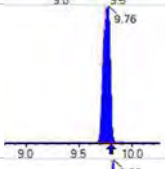
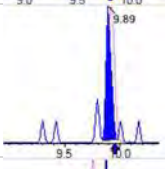
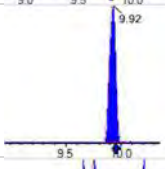
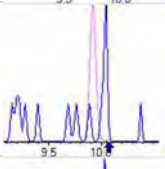
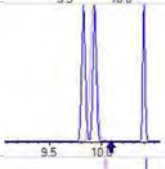
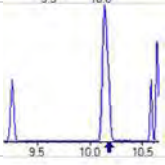
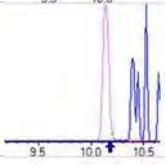
COMPOUNDR	CONC. (ng/g dry)R	LOQ	LODR	DL	Q
9CL-PF3ONS-	0.46 U-	1.2-	0.46	0.23	
11CL-PF3OUDS-	0.46 U-	1.2-	0.46	0.23	

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-01
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (10)
Acquired: 2022/12/09 - 14:38

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) 5528	(3.76 , 1.00) (0.00 , N/A , 0.0)	21.5	N/A 0.0 0.0	0.0876	N/A			
PFPeA	(262.9 / 219.0) 9547 (262.9 / 69.0) 71	(5.09 , 1.00) (0.00 , N/A , -4.9)	94.6 9.0	0.0074 64.0 72.7	0.1145	N/A			
PFHxA	(313.0 / 269.0) 8250 (313.0 / 119.0) 883	(6.23 , 1.00) (0.00 , N/A , -0.4)	39.8 18.6	0.1070 119.0 110.1	0.0558	N/A			
PFHpA	(363.0 / 319.0) 5854 (363.0 / 169.0) 2478	(7.17 , 1.00) (0.00 , N/A , 0.5)	29.4 67.6	0.4233 147.5 135.8	0.0500	N/A			
PFOA	(413.0 / 369.0) 26858 (413.0 / 169.0) 8931	(7.98 , 1.00) (0.00 , N/A , 0.1)	105.9 120.8	0.3325 102.8 100.3	0.2258	N/A			
PFNA	(463.0 / 419.0) 109335 (463.0 / 169.0) 24154	(8.72 , 1.00) (0.00 , N/A , -0.2)	294.7 71.8	0.2209 109.7 113.7	1.1671	N/A			
PFDA	(513.0 / 469.0) 33837 (513.0 / 169.0) 4256	(9.40 , 1.00) (0.01 , N/A , 0.3)	88.9 337812.3	0.1258 141.7 126.6	0.2348	N/A			
PFUnA	(563.0 / 519.0) 2982 (563.0 / 169.0) 2210	(9.76 , 1.00) (0.01 , N/A , -0.2)	13.9 828.4	0.7412 689.8 776.3	0.0168	N/A			IR2,
PFDoA	(613.0 / 569.0) 2567 (613.0 / 169.0) 3276	(9.89 , 1.00) (-0.03 , N/A , -2.0)	26.5 1202.8	1.2760 1071.5 894.9	0.0137	N/A			IR2,
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
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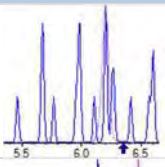
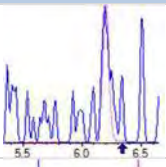
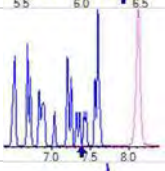
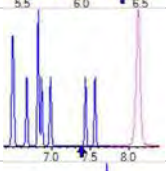
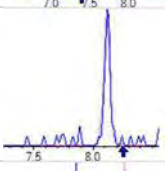
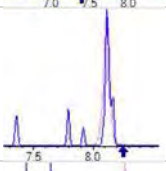
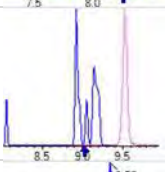
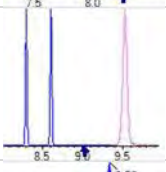
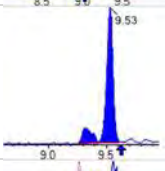
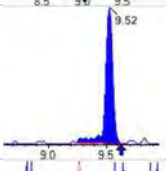
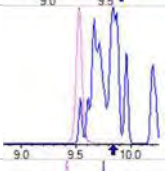
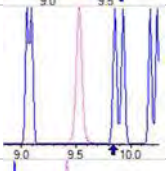
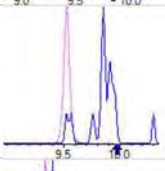
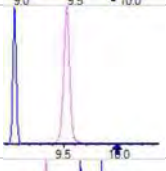
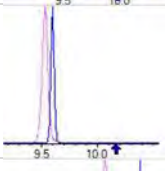
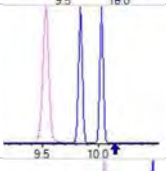
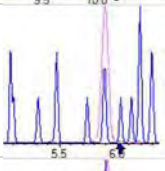
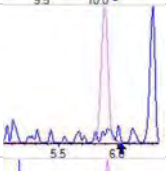
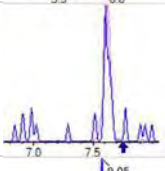
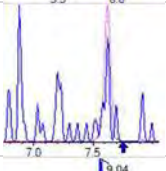
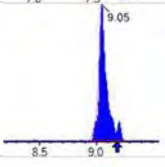
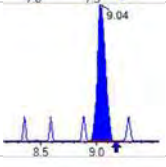
Sample I.D.: 22L0005-01
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (10)
Acquired: 2022/12/09 - 14:38

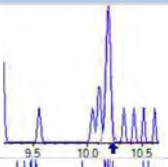
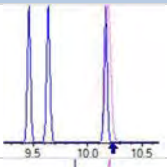
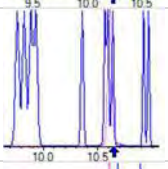
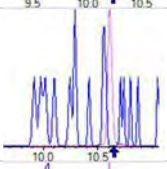
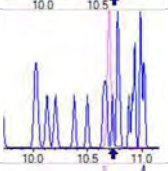
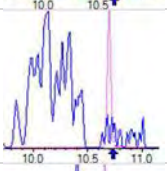
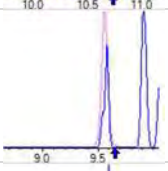
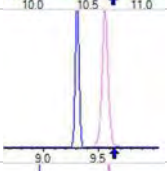
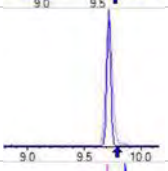
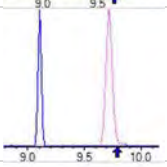
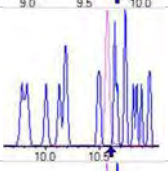
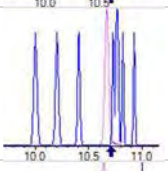
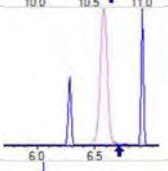
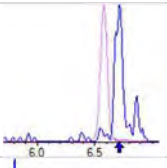
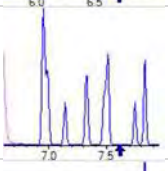
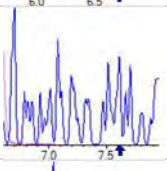
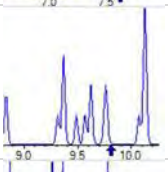
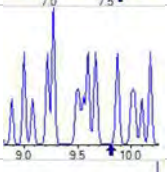
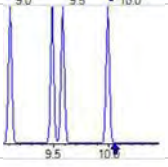
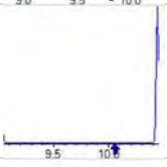
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) N/A (298.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	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) 93826 (499.0 / 99.0) 26638	(9.53 , 1.00) (0.00 , N/A , 0.5)	146.3 95.5	0.2839 110.3 122.9	0.2846	N/A			MI4 ABK 1/3/23
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) 4060 (527.0 / 81.0) 3722	(9.05 , 1.00) (0.00 , N/A , 0.7)	312274.6 34.4	0.9167 147.0 143.1	0.1190	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-01
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (10)
Acquired: 2022/12/09 - 14:38

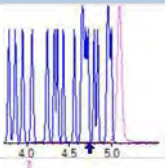
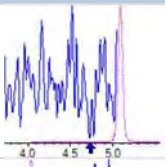
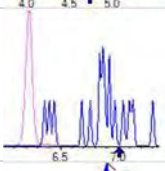
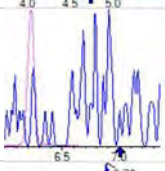
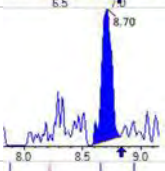
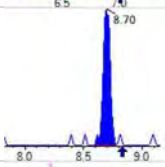
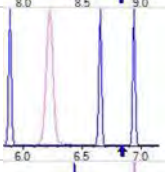
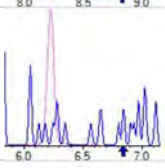
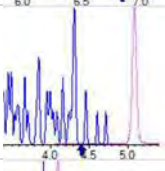
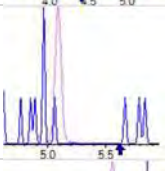
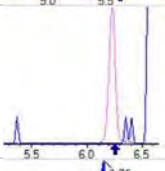
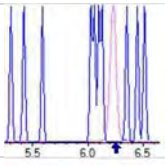
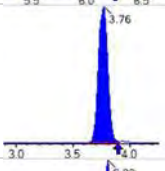
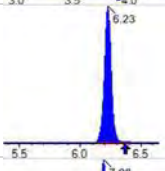
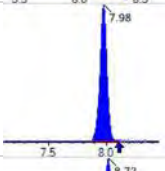
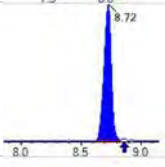
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) N/A (498.0 / 478.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	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

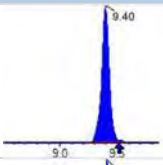
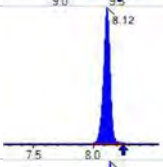
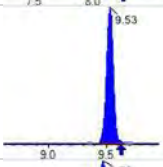
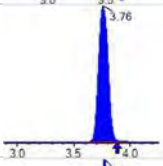
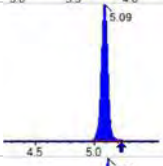
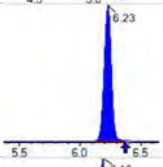
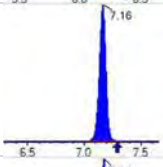
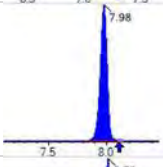
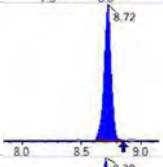
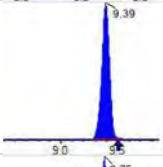
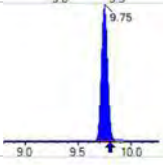
Sample I.D.: 22L0005-01
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (10)
Acquired: 2022/12/09 - 14:38

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) 6540 (441.0 / 337.0) 5065	(8.70 , 1.40) (N/A , 0.04 , 0.4)	36.0 67.4	0.7745 93.9 94.3	0.1618	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) 88880	(3.76 , N/A) (N/A , 0.03 , N/A)	761.2	N/A	0.9246 [1.0000]	92.5% { 111.0% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 127024	(6.23 , N/A) (N/A , 0.02 , N/A)	737.6	N/A	1.0287 [1.0000]	102.9% { 108.4% }			
13C4_PFOA_IIS	(417.0 / 372.0) 113750	(7.98 , N/A) (N/A , 0.03 , N/A)	453.0	N/A	0.9595 [1.0000]	96.0% { 103.6% }			
13C5_PFNA_IIS	(468.0 / 423.0) 98624	(8.72 , N/A) (N/A , 0.03 , N/A)	473.3	N/A	1.0355 [1.0000]	103.6% { 100.7% }			

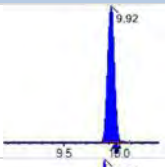
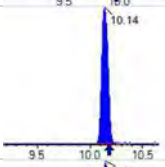
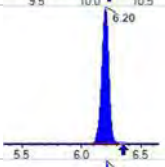
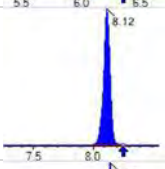
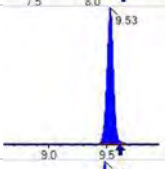
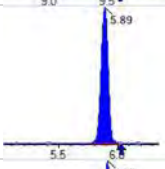
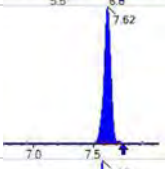
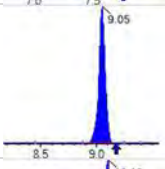
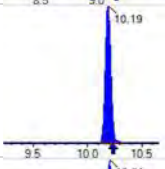
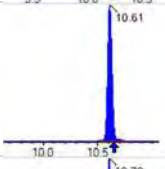
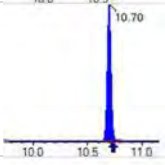
APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0005-01 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09A (10)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/09 - 14:38

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) 97262	(9.40 , N/A) (N/A , 0.02 , N/A)	1932.6	N/A	1.1806 [1.0000]	118.1% { 111.6% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 229765	(8.12 , N/A) (N/A , 0.03 , N/A)	528.3	N/A	1.0705 [1.0000]	107.1% { 103.0% }			
13C4_PFOS_IIS	(502.8 / 79.9) 215711	(9.53 , N/A) (N/A , 0.02 , N/A)	390.1	N/A	1.1590 [1.0000]	115.9% { 101.5% }			
13C4_PFBA_EIS	(217.0 / 172.0) 663082	(3.76 , N/A) (N/A , 0.02 , N/A)	896.2	N/A	7.9575 [8.0000]	99.5% { 110.5% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 346802	(5.09 , N/A) (N/A , 0.02 , N/A)	910.5	N/A	3.7428 [4.0000]	93.6% { 102.6% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 293152	(6.23 , N/A) (N/A , 0.02 , N/A)	363.4	N/A	2.2626 [2.0000]	113.1% { 120.7% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 231109	(7.16 , N/A) (N/A , 0.03 , N/A)	851.9	N/A	1.9761 [2.0000]	98.8% { 99.1% }			
13C8_PFOA_EIS	(421.0 / 376.0) 230775	(7.98 , N/A) (N/A , 0.03 , N/A)	481.6	N/A	1.9946 [2.0000]	99.7% { 99.6% }			
13C9_PFNA_EIS	(472.0 / 427.0) 97170	(8.72 , N/A) (N/A , 0.03 , N/A)	410.8	N/A	0.9984 [1.0000]	99.8% { 104.2% }			
13C6_PFDA_EIS	(519.0 / 474.0) 142041	(9.39 , N/A) (N/A , 0.03 , N/A)	13505.3	N/A	1.0054 [1.0000]	100.5% { 112.1% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 201400	(9.75 , N/A) (N/A , 0.01 , N/A)	770.4	N/A	1.0620 [1.0000]	106.2% { 112.1% }			

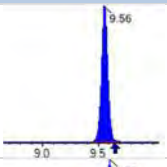
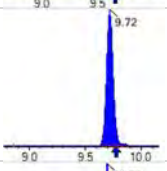
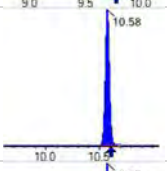
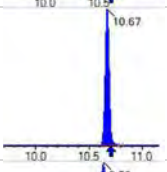
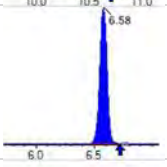
APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0005-01 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09A (10)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/09 - 14:38

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) 203039	(9.92 , N/A) (N/A , 0.01 , N/A)	319.8	N/A	0.8822 [1.0000]	88.2% { 106.6% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 155293	(10.14 , N/A) (N/A , 0.00 , N/A)	376.2	N/A	0.9192 [1.0000]	91.9% { 102.6% }			
13C3_PFBS_EIS	(302.0 / 80.0) 660859	(6.20 , N/A) (N/A , 0.03 , N/A)	640.6	N/A	1.9571 [2.0000]	97.9% { 101.2% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 380859	(8.12 , N/A) (N/A , 0.03 , N/A)	836.4	N/A	1.9814 [2.0000]	99.1% { 101.1% }			
13C8_PFOS_EIS	(507.0 / 80.0) 587363	(9.53 , N/A) (N/A , 0.02 , N/A)	633.8	N/A	1.7862 [2.0000]	89.3% { 107.6% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 77987	(5.89 , N/A) (N/A , 0.03 , N/A)	457.0	N/A	4.0950 [4.0000]	102.4% { 125.6% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 84282	(7.62 , N/A) (N/A , 0.03 , N/A)	457.6	N/A	3.2986 [4.0000]	82.5% { 101.0% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 86931	(9.05 , N/A) (N/A , 0.02 , N/A)	446.4	N/A	3.9199 [4.0000]	98.0% { 108.1% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 791439	(10.19 , N/A) (N/A , 0.00 , N/A)	791.9	N/A	1.5765 [2.0000]	78.8% { 95.5% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 132167	(10.61 , N/A) (N/A , 0.00 , N/A)	392.7	N/A	0.8897 [2.0000]	44.5% { 66.2% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 122786	(10.70 , N/A) (N/A , 0.00 , N/A)	646.8	N/A	0.9116 [2.0000]	45.6% { 61.6% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0005-01 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09A (10)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/09 - 14:38

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) 266794	(9.56 , N/A) (N/A , 0.02 , N/A)	573.0	N/A	3.6467 [4.0000]	91.2% { 104.2% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 276911	(9.72 , N/A) (N/A , 0.01 , N/A)	459.4	N/A	4.4038 [4.0000]	110.1% { 113.9% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 241451	(10.58 , N/A) (N/A , 0.01 , N/A)	694.9	N/A	9.5160 [20.0000]	47.6% { 59.1% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 131867	(10.67 , N/A) (N/A , 0.00 , N/A)	881.6	N/A	10.1999 [20.0000]	51.0% { 62.9% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 646324	(6.58 , N/A) (N/A , 0.03 , N/A)	773.4	N/A	7.5742 [8.0000]	94.7% { 102.3% }			

FORM IR
ANALYSIS DATA SHEETR

SB-1-2.0-113022-

Laboratory:	APPL, LLC-			Work Order:	22L0005-
Client:	Tidewater, Inc.-			Project:	NASA JPL-
Matrix:	Solid-	Laboratory ID:	22L0005-02-	File ID:	S2022-12-09A (12)-
Sampled:	11/30/22 08:44-	Prepared:	12/01/22 14:45-	Analyzed:	12/09/22 15:03
Solids:	91.16-	Preparation:	Table B-15-	Dilution:	1-
Initial/Final:	1.1 g / 2 mL-			Instrument:	Saphira-
Batch:	BBL0032-	Sequence:	SB03754-	Calibration:	2250016

COMPOUNDR	CONC. (ng/g dry)R	LOQ	LODR	DL	Q
PFBA-	0.57 J-	1.0-	0.40	0.10	
PFPEA-	1.2-	1.0-	0.40	0.15	
PFHXA-	0.52 J-	1.0-	0.40	0.10	
PFHPA-	0.58 J-	1.0-	0.40	0.10	
PFOA-	2.2-	1.0-	0.40	0.15	
PFNA-	2.2-	1.0-	0.40	0.10	
PFDA-	0.67 J-	1.0-	0.40	0.15	
PFUnA-	0.40 U-	1.0-	0.40	0.10	
PFDOA-	0.40 U-	1.0-	0.40	0.15	
PFTRDA-	0.40 U-	1.0-	0.40	0.10	
PFTEDA-	0.40 U-	1.0-	0.40	0.20	
PFBS-	0.40 U-	1.0-	0.40	0.10	
PFPES-	0.90 U-	1.0-	0.90	0.41	
PFHXS-	0.40 U-	1.0-	0.40	0.15	
PFHPS-	0.40 U-	1.0-	0.40	0.15	
PFOS-	0.13 J-	1.0-	0.40	0.10	
PFNS-	0.80 U-	1.0-	0.80	0.39	
PFDS-	0.40 U-	1.0-	0.40	0.20	
4:2FTS-	0.40 U-	1.0-	0.40	0.20	
6:2FTS-	0.93 J-	1.0-	0.40	0.20	
8:2FTS-	0.80 J-	1.0-	0.40	0.15	
PFOSA-	0.40 U-	1.0-	0.40	0.10	
NMeFOSA-	0.90 U-	1.0-	0.90	0.49	
NEtFOSA-	0.90 U-	1.0-	0.90	0.49	
NMeFOSAA-	0.40 U-	1.0-	0.40	0.20	
NEtFOSAA-	0.40 U-	1.0-	0.40	0.20	
NMeFOSE-	0.82 U-	1.0-	0.82	0.41	
NEtFOSE-	0.65 U-	1.0-	0.65	0.31	
HFPO-DA-	0.40 U-	1.0-	0.40	0.20	
ADONA-	0.40 U-	1.0-	0.40	0.20	

FORM IR
ANALYSIS DATA SHEETR

SB-1-2.0-113022-

Laboratory:	APPL, LLC-			Work Order:	22L0005-
Client:	Tidewater, Inc.-			Project:	NASA JPL-
Matrix:	Solid-	Laboratory ID:	22L0005-02-	File ID:	S2022-12-09A (12)-
Sampled:	11/30/22 08:44-	Prepared:	12/01/22 14:45-	Analyzed:	12/09/22 15:03
Solids:	91.16-	Preparation:	Table B-15-	Dilution:	1-
Initial/Final:	1.1 g / 2 mL-			Instrument:	Saphira-
Batch:	BBL0032-	Sequence:	SB03754-	Calibration:	2250016

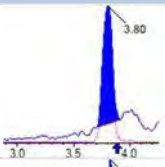
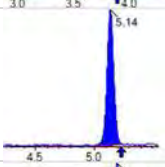
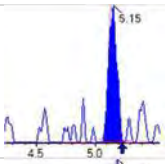
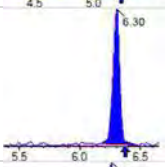
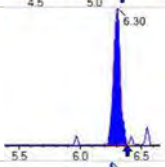
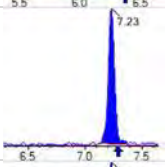
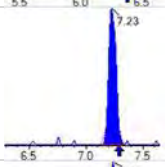
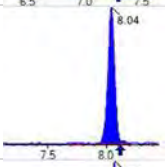
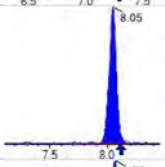
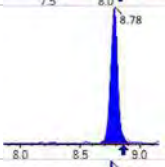
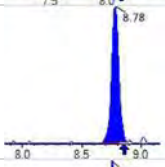
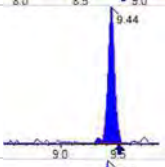
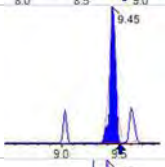
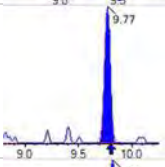
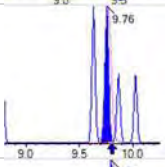
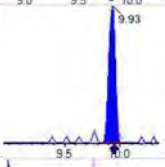
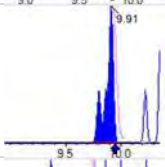
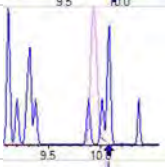
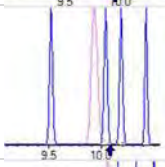
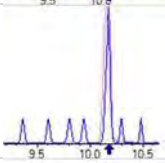
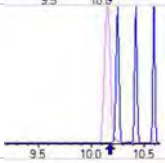
COMPOUNDR	CONC. (ng/g dry)R	LOQ	LODR	DL	Q
9CL-PF3ONS-	0.40 U-	1.0-	0.40	0.20	
11CL-PF3OUDS-	0.40 U-	1.0-	0.40	0.20	

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-02
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (12)
Acquired: 2022/12/09 - 15:03

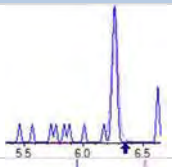
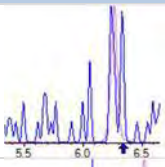
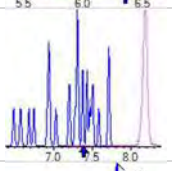
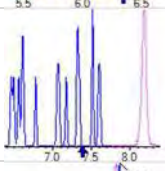
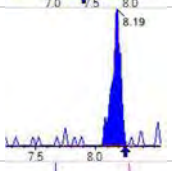
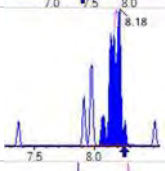
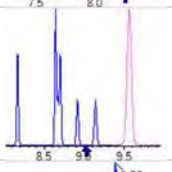
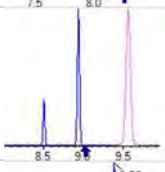
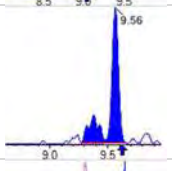
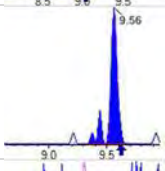
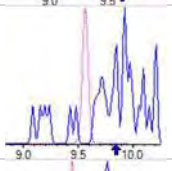
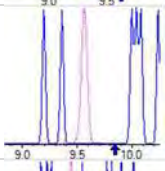
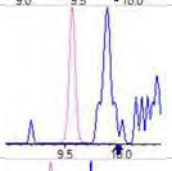
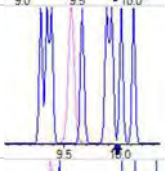
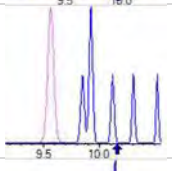
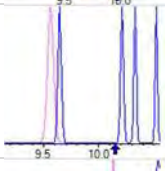
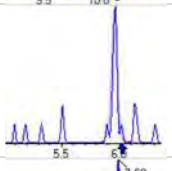
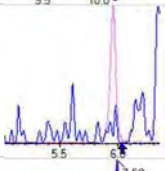
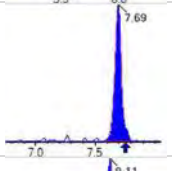
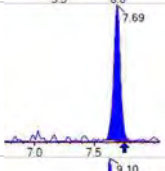
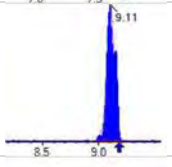
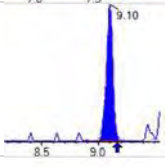
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(212.9 / 169.0) 19102	(3.80 , 1.00) (0.00 , N/A , 0.0)	32.9	N/A 0.0 0.0	0.2880	N/A			
PFPeA	(262.9 / 219.0) 48707 (262.9 / 69.0) 632	(5.14 , 1.00) (0.00 , N/A , -0.6)	375.9 23.0	0.0130 111.4 126.6	0.5816	N/A			
PFHxA	(313.0 / 269.0) 35630 (313.0 / 119.0) 2869	(6.30 , 1.00) (0.01 , N/A , 0.1)	161.1 124.7	0.0805 89.6 82.9	0.2606	N/A			
PFHpA	(363.0 / 319.0) 34772 (363.0 / 169.0) 9465	(7.23 , 1.00) (0.00 , N/A , 0.1)	164.3 147.0	0.2722 94.9 87.3	0.2890	N/A			
PFOA	(413.0 / 369.0) 146387 (413.0 / 169.0) 44259	(8.04 , 1.00) (0.00 , N/A , -0.2)	362.0 409.4	0.3023 93.5 91.2	1.1094	N/A			
PFNA	(463.0 / 419.0) 110038 (463.0 / 169.0) 26016	(8.78 , 1.00) (0.00 , N/A , 0.2)	351.5 111.1	0.2364 117.5 121.7	1.1175	N/A			
PFDA	(513.0 / 469.0) 46512 (513.0 / 169.0) 3452	(9.44 , 1.00) (-0.01 , N/A , -0.4)	178.3 184.8	0.0742 83.6 74.7	0.3362	N/A			
PFUnA	(563.0 / 519.0) 9790 (563.0 / 169.0) 626	(9.77 , 1.00) (0.00 , N/A , 1.0)	68.7 19.2	0.0640 59.5 67.0	0.0465	N/A			
PFDoA	(613.0 / 569.0) 12700 (613.0 / 169.0) 1512	(9.93 , 1.00) (0.00 , N/A , 1.1)	69.8 109.4	0.1191 100.0 83.5	0.0637	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.: 22L0005-02
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (12)
Acquired: 2022/12/09 - 15:03

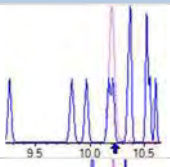
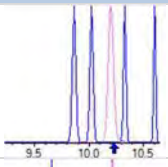
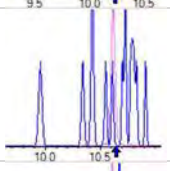
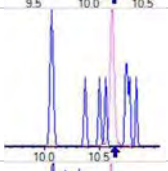
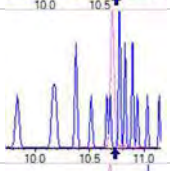
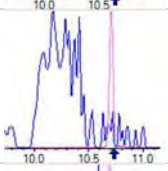
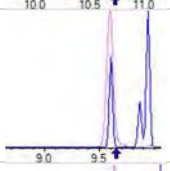
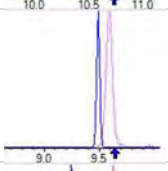
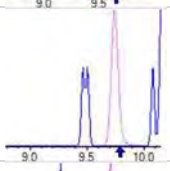
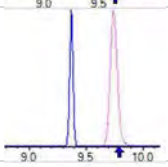
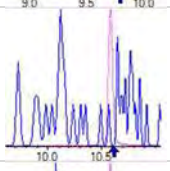
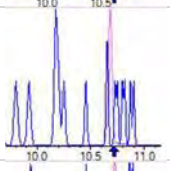
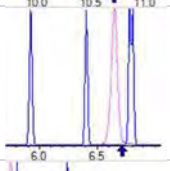
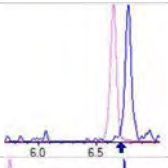
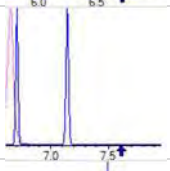
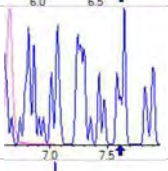
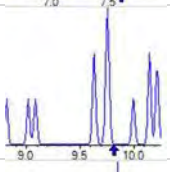
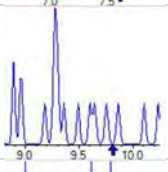
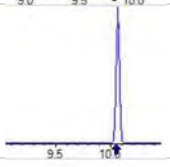
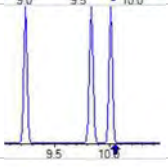
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) N/A (298.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	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) 4375 (399.0 / 99.0) 1786	(8.19 , 1.00) (0.00 , N/A , 0.4)	124.4 196.6	0.4082 118.4 125.5	0.0149	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) 28140 (499.0 / 99.0) 6669	(9.56 , 1.00) (0.00 , N/A , 0.2)	114.3 434.5	0.2370 92.0 102.6	0.0627	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) 16933 (427.0 / 81.0) 14381	(7.69 , 1.00) (0.00 , N/A , 0.2)	161.0 89.7	0.8493 118.1 118.8	0.4646	N/A			
8:2FTS	(527.0 / 507.0) 14337 (527.0 / 81.0) 8003	(9.11 , 1.00) (0.00 , N/A , 0.3)	86.9 75.1	0.5582 89.5 87.1	0.4027	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

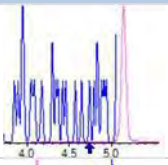
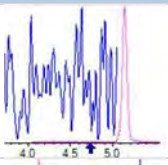
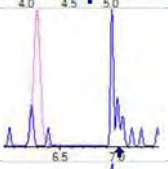
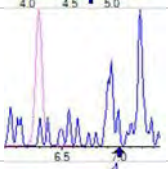
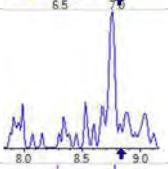
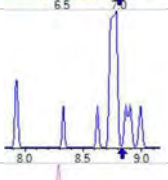
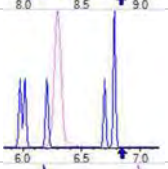
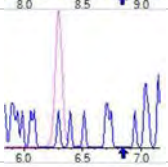
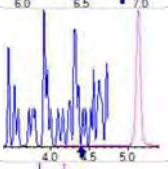
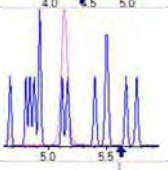
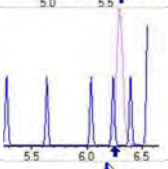
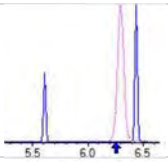
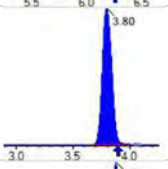
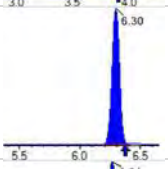
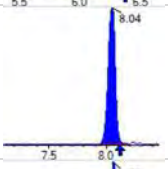
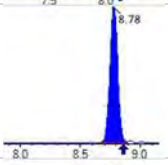
Sample I.D.: 22L0005-02
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (12)
Acquired: 2022/12/09 - 15:03

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 | Sample I.D.: 22L0005-02 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09A (12)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/09 - 15:03

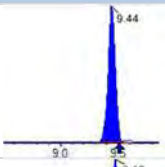
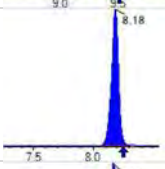
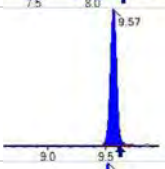
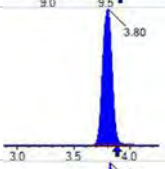
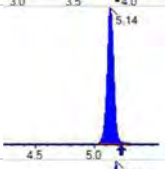
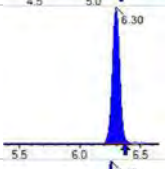
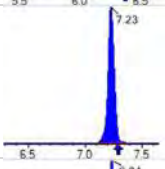
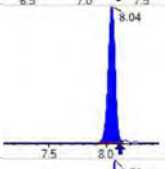
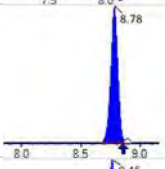
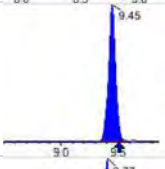
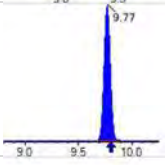
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
3:3FTCA	(241.0 / 177.0) N/A (241.0 / 117.0) N/A	(N/A , N/A) (N/A , N/A , 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) 83220	(3.80 , N/A) (N/A , 0.06 , N/A)	699.6	N/A	0.8657 [1.0000]	86.6% { 103.9% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 125465	(6.30 , N/A) (N/A , 0.09 , N/A)	534.9	N/A	1.0160 [1.0000]	101.6% { 107.0% }			
13C4_PFOA_IIS	(417.0 / 372.0) 121869	(8.04 , N/A) (N/A , 0.09 , N/A)	442.4	N/A	1.0280 [1.0000]	102.8% { 111.0% }			
13C5_PFNA_IIS	(468.0 / 423.0) 98784	(8.78 , N/A) (N/A , 0.09 , N/A)	302.4	N/A	1.0372 [1.0000]	103.7% { 100.9% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

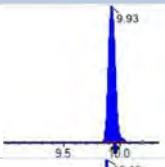
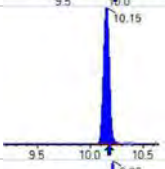
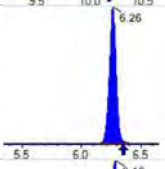
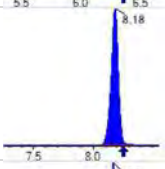
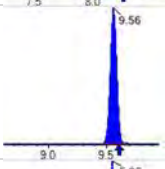
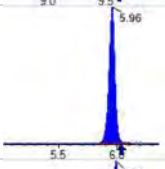
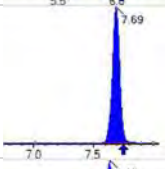
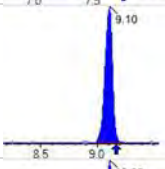
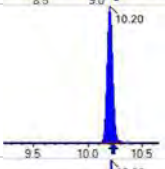
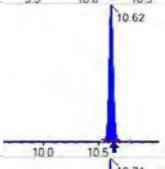
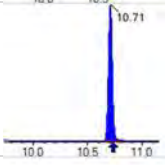
Sample I.D.: 22L0005-02
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (12)
Acquired: 2022/12/09 - 15:03

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) 91502	(9.44 , N/A) (N/A , 0.07 , N/A)	3363.0	N/A	1.1107 [1.0000]	111.1% { 104.9% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 215155	(8.18 , N/A) (N/A , 0.09 , N/A)	725.1	N/A	1.0024 [1.0000]	100.2% { 96.5% }			
13C4_PFOS_IIS	(502.8 / 79.9) 228740	(9.57 , N/A) (N/A , 0.05 , N/A)	236.7	N/A	1.2290 [1.0000]	122.9% { 107.7% }			
13C4_PFBA_EIS	(217.0 / 172.0) 696919	(3.80 , N/A) (N/A , 0.06 , N/A)	895.3	N/A	8.9324 [8.0000]	111.7% { 116.2% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 348444	(5.14 , N/A) (N/A , 0.07 , N/A)	933.4	N/A	3.8072 [4.0000]	95.2% { 103.1% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 271264	(6.30 , N/A) (N/A , 0.09 , N/A)	726.0	N/A	2.1197 [2.0000]	106.0% { 111.7% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 237516	(7.23 , N/A) (N/A , 0.10 , N/A)	532.3	N/A	2.0562 [2.0000]	102.8% { 101.9% }			
13C8_PFOA_EIS	(421.0 / 376.0) 256003	(8.04 , N/A) (N/A , 0.09 , N/A)	627.4	N/A	2.0653 [2.0000]	103.3% { 110.5% }			
13C9_PFNA_EIS	(472.0 / 427.0) 102137	(8.78 , N/A) (N/A , 0.09 , N/A)	595.9	N/A	1.0477 [1.0000]	104.8% { 109.6% }			
13C6_PFDA_EIS	(519.0 / 474.0) 136351	(9.45 , N/A) (N/A , 0.08 , N/A)	502.2	N/A	1.0259 [1.0000]	102.6% { 107.7% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 239140	(9.77 , N/A) (N/A , 0.03 , N/A)	512.3	N/A	1.3404 [1.0000]	134.0% { 133.2% }			

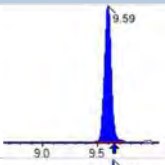
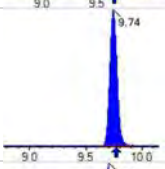
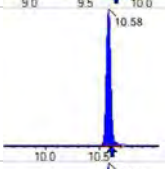
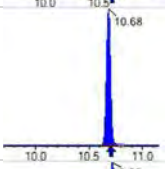
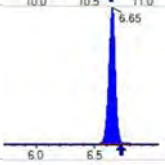
APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0005-02 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09A (12)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/09 - 15:03

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) 216547	(9.93 , N/A) (N/A , 0.02 , N/A)	386.1	N/A	1.0001 [1.0000]	100.0% { 113.7% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 150000	(10.15 , N/A) (N/A , 0.02 , N/A)	393.8	N/A	0.9437 [1.0000]	94.4% { 99.1% }			
13C3_PFBS_EIS	(302.0 / 80.0) 640797	(6.26 , N/A) (N/A , 0.09 , N/A)	875.2	N/A	2.0265 [2.0000]	101.3% { 98.1% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 349280	(8.18 , N/A) (N/A , 0.09 , N/A)	793.1	N/A	1.9405 [2.0000]	97.0% { 92.7% }			
13C8_PFOS_EIS	(507.0 / 80.0) 799729	(9.56 , N/A) (N/A , 0.05 , N/A)	723.7	N/A	2.2935 [2.0000]	114.7% { 146.5% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 78764	(5.96 , N/A) (N/A , 0.09 , N/A)	660.9	N/A	4.4166 [4.0000]	110.4% { 126.8% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 91904	(7.69 , N/A) (N/A , 0.09 , N/A)	477.1	N/A	3.8412 [4.0000]	96.0% { 110.2% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 90686	(9.10 , N/A) (N/A , 0.08 , N/A)	436.5	N/A	4.3668 [4.0000]	109.2% { 112.8% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 791776	(10.20 , N/A) (N/A , 0.02 , N/A)	835.4	N/A	1.4874 [2.0000]	74.4% { 95.6% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 155031	(10.62 , N/A) (N/A , 0.01 , N/A)	874.2	N/A	0.9842 [2.0000]	49.2% { 77.6% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 146048	(10.71 , N/A) (N/A , 0.01 , N/A)	829.6	N/A	1.0225 [2.0000]	51.1% { 73.3% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0005-02 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09A (12)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/09 - 15:03

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) 243954	(9.59 , N/A) (N/A , 0.06 , N/A)	457.1	N/A	3.1446 [4.0000]	78.6% { 95.3% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 247109	(9.74 , N/A) (N/A , 0.04 , N/A)	519.7	N/A	3.7060 [4.0000]	92.7% { 101.7% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 255401	(10.58 , N/A) (N/A , 0.01 , N/A)	850.9	N/A	9.4924 [20.0000]	47.5% { 62.5% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 132288	(10.68 , N/A) (N/A , 0.01 , N/A)	847.3	N/A	9.6496 [20.0000]	48.2% { 63.1% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 648291	(6.65 , N/A) (N/A , 0.10 , N/A)	876.9	N/A	7.6917 [8.0000]	96.1% { 102.6% }			

FORM IR
ANALYSIS DATA SHEETR

SB-1-2.0-113022-

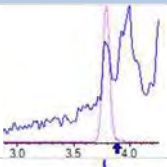
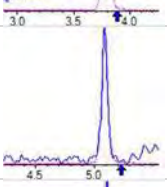
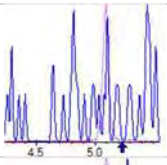
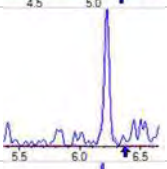
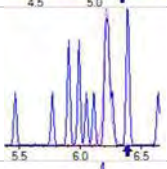
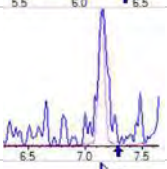
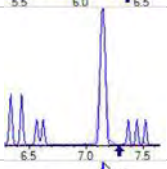
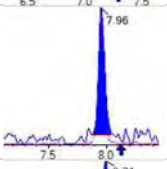
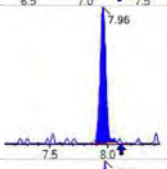
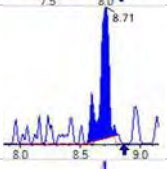
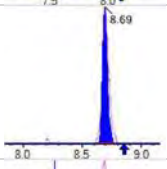
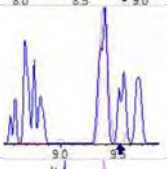
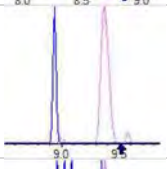
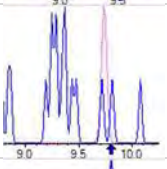
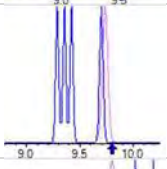
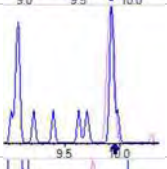
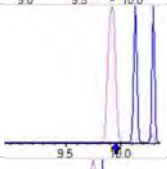
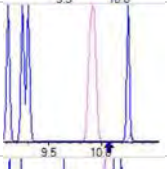
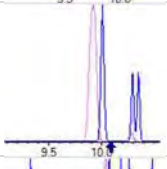
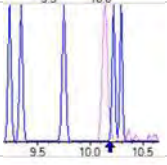
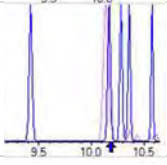
Laboratory:	APPL, LLC-			Work Order:	22L0005-
Client:	Tidewater, Inc.-			Project:	NASA JPL-
Matrix:	Solid-	Laboratory ID:	22L0005-02RE1-	File ID:	S2022-12-09A (13)-
Sampled:	11/30/22 08:44-	Prepared:	12/01/22 14:45-	Analyzed:	12/09/22 15:16-
Solids:	91.16-	Preparation:	Table B-15-	Dilution:	10-
Initial/Final:	1.1 g / 2 mL-			Instrument:	Saphira-
Batch:	BBL0032-	Sequence:	SB03754-	Calibration:	2250016-

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-02RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (13)
Acquired: 2022/12/09 - 15:16

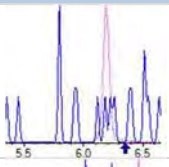
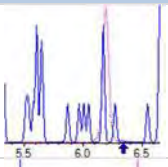
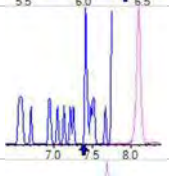
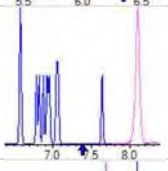
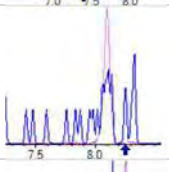
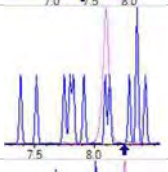
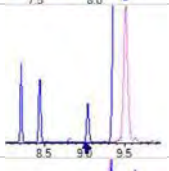
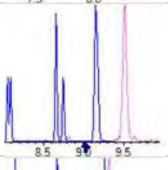
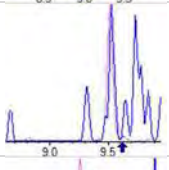
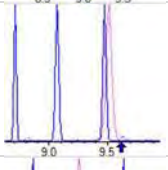
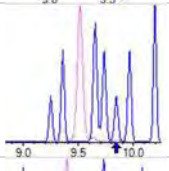
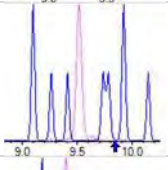
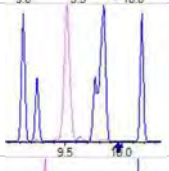
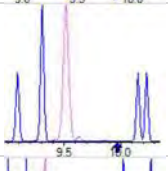
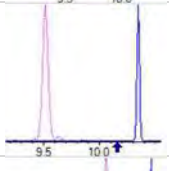
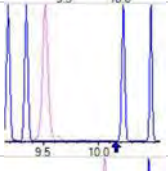
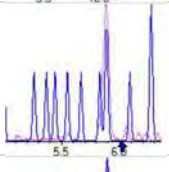
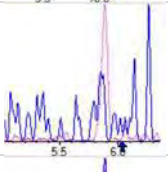
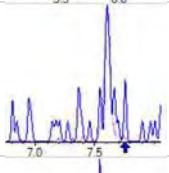
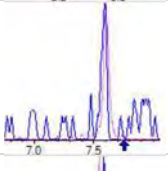
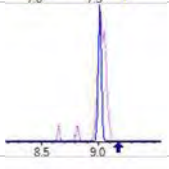
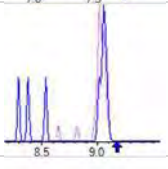
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(212.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	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) 11881 (413.0 / 169.0) 5041	(7.96 , 1.00) (0.00 , N/A , -0.1)	48.6 87.1	0.4243 131.1 128.0	0.1049	N/A			
PFNA	(463.0 / 419.0) 7141 (463.0 / 169.0) 2614	(8.71 , 1.00) (0.01 , N/A , 0.9)	30.3 133.9	0.3661 181.9 188.5	0.0806	N/A			IR2,
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.: 22L0005-02RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (13)
Acquired: 2022/12/09 - 15:16

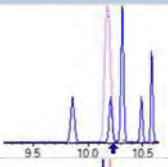
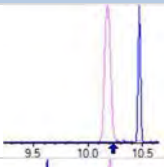
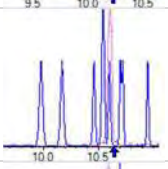
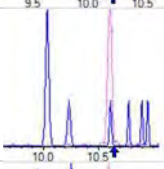
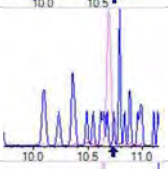
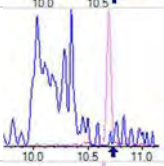
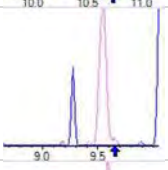
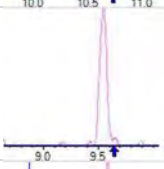
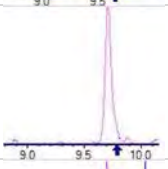
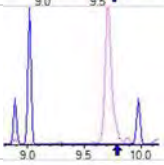
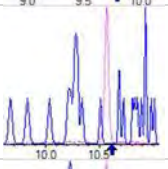
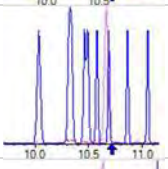
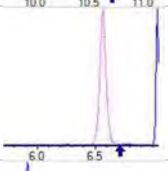
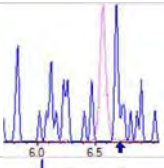
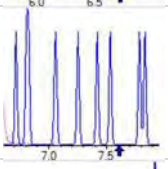
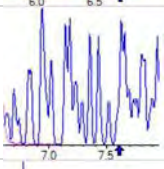
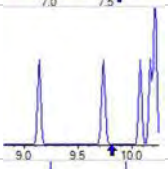
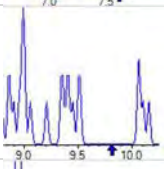
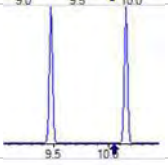
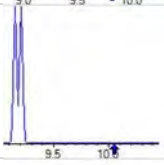
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) N/A (298.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	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.: 22L0005-02RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (13)
Acquired: 2022/12/09 - 15:16

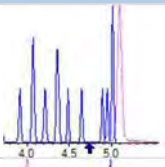
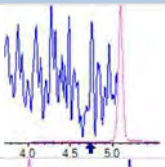
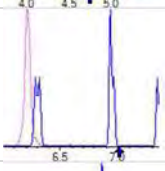
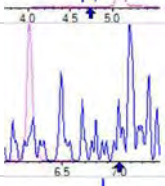
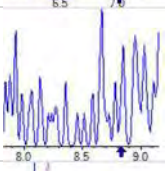
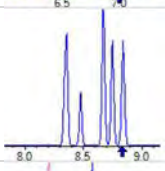
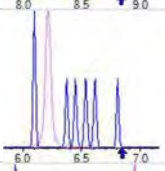
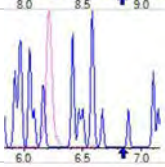
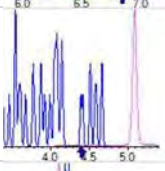
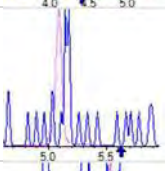
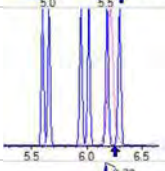
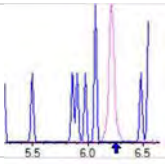
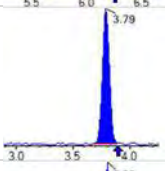
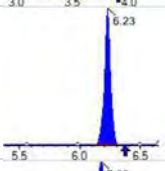
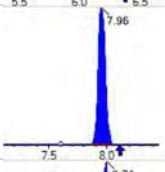
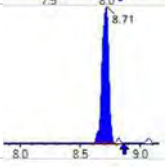
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) N/A (498.0 / 478.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	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.: 22L0005-02RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (13)
Acquired: 2022/12/09 - 15:16

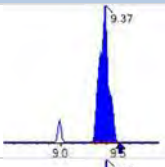
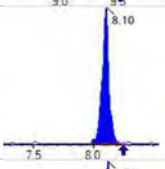
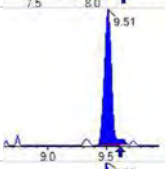
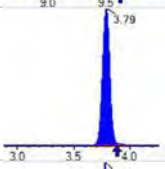
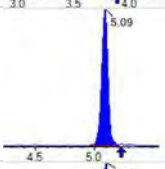
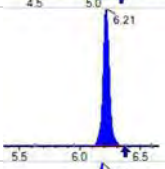
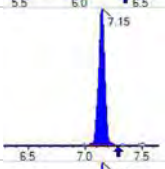
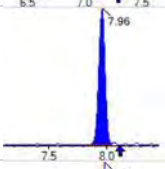
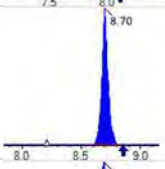
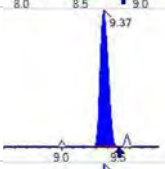
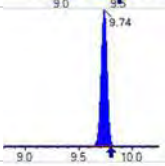
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
3:3FTCA	(241.0 / 177.0) N/A (241.0 / 117.0) N/A	(N/A , N/A) (N/A , N/A , 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) 8900	(3.79 , N/A) (N/A , 0.05 , N/A)	248.1	N/A	0.9258 [1.0000]	92.6% { 11.1% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 10504	(6.23 , N/A) (N/A , 0.02 , N/A)	450.8	N/A	0.8507 [1.0000]	85.1% { 9.0% }			
13C4_PFOA_IIS	(417.0 / 372.0) 11229	(7.96 , N/A) (N/A , 0.01 , N/A)	6771.7	N/A	0.9472 [1.0000]	94.7% { 10.2% }			
13C5_PFNA_IIS	(468.0 / 423.0) 10038	(8.71 , N/A) (N/A , 0.01 , N/A)	249.8	N/A	1.0540 [1.0000]	105.4% { 10.3% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-02RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (13)
Acquired: 2022/12/09 - 15:16

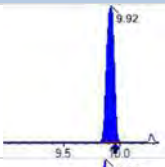
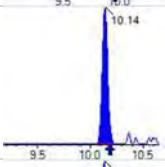
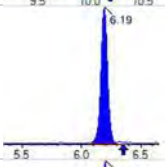
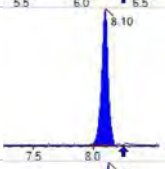
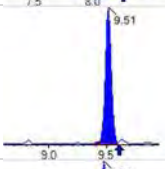
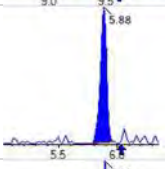
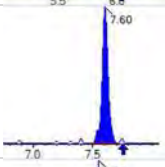
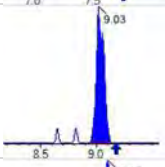
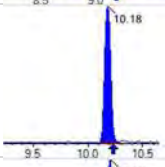
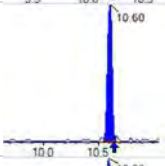
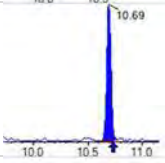
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDA_IIS	(515.1 / 470.1) 8591	(9.37 , N/A) (N/A , 0.00 , N/A)	1289.5	N/A	1.0428 [1.0000]	104.3% { 9.9% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 23765	(8.10 , N/A) (N/A , 0.01 , N/A)	277.1	N/A	1.1073 [1.0000]	110.7% { 10.7% }			
13C4_PFOS_IIS	(502.8 / 79.9) 15350	(9.51 , N/A) (N/A , 0.00 , N/A)	76.5	N/A	0.8247 [1.0000]	82.5% { 7.2% }			
13C4_PFBA_EIS	(217.0 / 172.0) 70415	(3.79 , N/A) (N/A , 0.05 , N/A)	978.3	N/A	0.8439 [0.8000]	105.5% { 11.7% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 34806	(5.09 , N/A) (N/A , 0.03 , N/A)	492.6	N/A	0.4542 [0.4000]	113.6% { 10.3% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 25998	(6.21 , N/A) (N/A , 0.01 , N/A)	429.5	N/A	0.2426 [0.2000]	121.3% { 10.7% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 24835	(7.15 , N/A) (N/A , 0.01 , N/A)	319.3	N/A	0.2568 [0.2000]	128.4% { 10.6% }			
13C8_PFOA_EIS	(421.0 / 376.0) 21964	(7.96 , N/A) (N/A , 0.01 , N/A)	353.5	N/A	0.1923 [0.2000]	96.2% { 9.5% }			
13C9_PFNA_EIS	(472.0 / 427.0) 9192	(8.70 , N/A) (N/A , 0.00 , N/A)	878.9	N/A	0.0928 [0.1000]	92.8% { 9.9% }			
13C6_PFDA_EIS	(519.0 / 474.0) 14752	(9.37 , N/A) (N/A , 0.00 , N/A)	434.9	N/A	0.1182 [0.1000]	118.2% { 11.6% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 23053	(9.74 , N/A) (N/A , 0.00 , N/A)	179.1	N/A	0.1376 [0.1000]	137.6% { 12.8% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-02RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (13)
Acquired: 2022/12/09 - 15:16

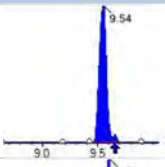
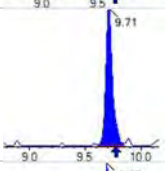
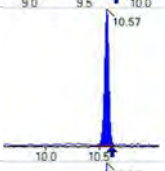
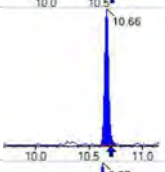
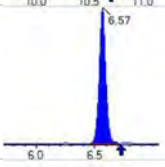
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDoA_EIS	(615.0 / 570.0) 25653	(9.92 , N/A) (N/A , 0.01 , N/A)	2656.8	N/A	0.1262 [0.1000]	126.2% { 13.5% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 9805	(10.14 , N/A) (N/A , 0.00 , N/A)	62.3	N/A	0.0657 [0.1000]	65.7% { 6.5% }			
13C3_PFBS_EIS	(302.0 / 80.0) 64774	(6.19 , N/A) (N/A , 0.02 , N/A)	446.8	N/A	0.1855 [0.2000]	92.7% { 9.9% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 38122	(8.10 , N/A) (N/A , 0.01 , N/A)	319.6	N/A	0.1917 [0.2000]	95.9% { 10.1% }			
13C8_PFOS_EIS	(507.0 / 80.0) 59670	(9.51 , N/A) (N/A , 0.00 , N/A)	315.2	N/A	0.2550 [0.2000]	127.5% { 10.9% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 7125	(5.88 , N/A) (N/A , 0.02 , N/A)	75.5	N/A	0.3617 [0.4000]	90.4% { 11.5% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 9654	(7.60 , N/A) (N/A , 0.01 , N/A)	131.7	N/A	0.3653 [0.4000]	91.3% { 11.6% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 5542	(9.03 , N/A) (N/A , 0.01 , N/A)	332.4	N/A	0.2416 [0.4000]	60.4% { 6.9% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 78577	(10.18 , N/A) (N/A , 0.00 , N/A)	234.2	N/A	0.2200 [0.2000]	110.0% { 9.5% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 12282	(10.60 , N/A) (N/A , 0.00 , N/A)	200.0	N/A	0.1162 [0.2000]	58.1% { 6.2% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 14604	(10.69 , N/A) (N/A , 0.00 , N/A)	181.0	N/A	0.1524 [0.2000]	76.2% { 7.3% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-02RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (13)
Acquired: 2022/12/09 - 15:16

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) 21868	(9.54 , N/A) (N/A , 0.01 , N/A)	152.8	N/A	0.4200 [0.4000]	105.0% { 8.5% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 28136	(9.71 , N/A) (N/A , 0.01 , N/A)	112.0	N/A	0.6288 [0.4000]	157.2% { 11.6% }			S2,
D7_NMeFOSE_EIS	(623.2 / 58.9) 23827	(10.57 , N/A) (N/A , 0.00 , N/A)	236.3	N/A	1.3196 [2.0000]	66.0% { 5.8% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 9794	(10.66 , N/A) (N/A , -0.01 , N/A)	226.3	N/A	1.0645 [2.0000]	53.2% { 4.7% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 72748	(6.57 , N/A) (N/A , 0.01 , N/A)	476.7	N/A	1.0309 [0.8000]	128.9% { 11.5% }			

FORM IR
ANALYSIS DATA SHEETR

SB-2-0.5-113022-

Laboratory:-	APPL, LLC-			Work Order:-	22L0005-
Client:-	Tidewater, Inc.-			Project:-	NASA JPL-
Matrix:-	Solid-	Laboratory ID:-	22L0005-03-	File ID:	S2022-12-09A (14)-
Sampled:-	11/30/22 09:05-	Prepared:-	12/01/22 14:45-	Analyzed:-	12/09/22 15:29
Solids:-	90.87-	Preparation:-	Table B-15-	Dilution:-	1-
Initial/Final:-	1 g / 2 mL-			Instrument:-	Saphira-
Batch:-	BBL0032-	Sequence:-	SB03754-	Calibration:-	2250016

COMPOUNDR	CONC. (ng/g dry)R	LOQ	LODR	DL	Q
PFBA-	0.78 J-	1.1-	0.44	0.11-	
PFPEA-	0.78 J-	1.1-	0.44	0.17	
PFHXA-	0.57 J-	1.1-	0.44	0.11-	
PFHPA-	3.4-	1.1-	0.44	0.11-	
PFOA-	3.5-	1.1-	0.44	0.17	
PFNA-	0.45 J-	1.1-	0.44	0.11-	
PFDA-	0.44 U-	1.1-	0.44	0.17	
PFUnA-	0.44 U-	1.1-	0.44	0.11-	
PFDOA-	0.44 U-	1.1-	0.44	0.17	
PFTRDA-	0.44 U-	1.1-	0.44	0.11-	
PFTEDA-	0.44 U-	1.1-	0.44	0.22	
PFBS-	0.44 U-	1.1-	0.44	0.11-	
PFPES-	0.99 U-	1.1-	0.99	0.46	
PFHXS-	0.44 U-	1.1-	0.44	0.17	
PFHPS-	0.44 U-	1.1-	0.44	0.17	
PFOS-	0.15 J-	1.1-	0.44	0.11-	
PFNS-	0.88 U-	1.1-	0.88	0.43	
PFDS-	0.44 U-	1.1-	0.44	0.22	
4:2FTS-	0.44 U-	1.1-	0.44	0.22	
6:2FTS-	0.36 J-	1.1-	0.44	0.22	
8:2FTS-	0.30 J-	1.1-	0.44	0.17	
PFOSA-	0.44 U-	1.1-	0.44	0.11-	
NMeFOSA-	0.99 U-	1.1-	0.99	0.54	
NEtFOSA-	0.99 U-	1.1-	0.99	0.54	
NMeFOSAA-	0.44 U-	1.1-	0.44	0.22	
NEtFOSAA-	0.44 U-	1.1-	0.44	0.22	
NMeFOSE-	0.90 U-	1.1-	0.90	0.45	
NEtFOSE-	0.72 U-	1.1-	0.72	0.34	
HFPO-DA-	0.44 U-	1.1-	0.44	0.22	
ADONA-	0.44 U-	1.1-	0.44	0.22	

FORM IR
ANALYSIS DATA SHEETR

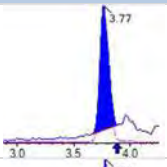
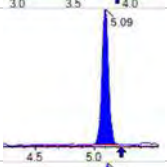
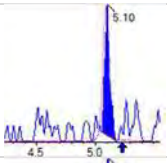
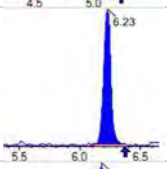
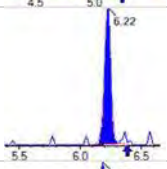
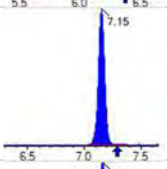
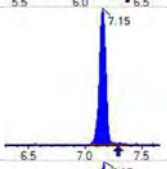
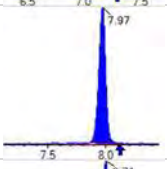
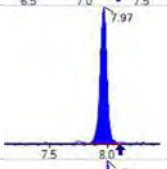
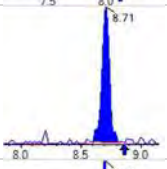
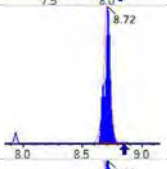
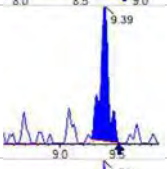
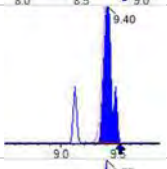
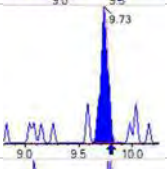
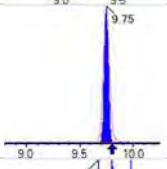
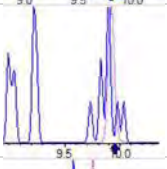
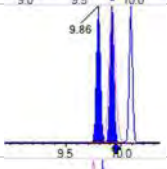
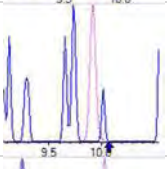
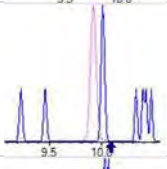
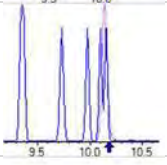
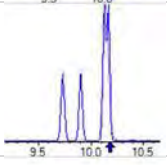
SB-2-0.5-113022-

Laboratory:-	APPL, LLC-			Work Order:-	22L0005-
Client:-	Tidewater, Inc.-			Project:-	NASA JPL-
Matrix:-	Solid-	Laboratory ID:-	22L0005-03-	File ID:	S2022-12-09A (14)-
Sampled:-	11/30/22 09:05-	Prepared:-	12/01/22 14:45-	Analyzed:-	12/09/22 15:29
Solids:-	90.87-	Preparation:-	Table B-15-	Dilution:-	1-
Initial/Final:-	1 g / 2 mL-			Instrument:-	Saphira-
Batch:-	BBL0032-	Sequence:-	SB03754-	Calibration:-	2250016

COMPOUNDR	CONC. (ng/g dry)R	LOQ	LODR	DL	Q
9CL-PF3ONS-	0.44 U-	1.1-	0.44	0.22	
11CL-PF3OUDS-	0.44 U-	1.1-	0.44	0.22	

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0005-03 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09A (14)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/09 - 15:29

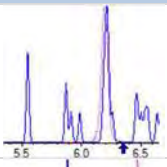
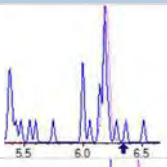
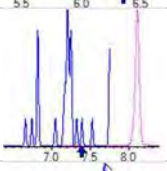
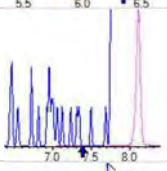
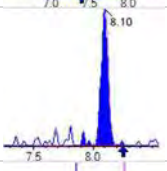
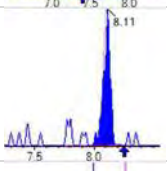
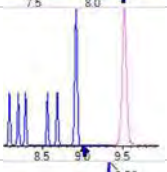
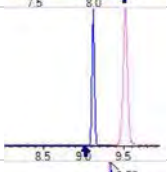
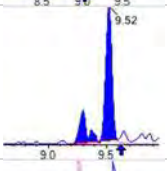
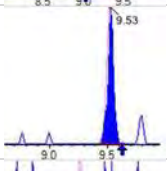
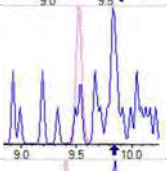
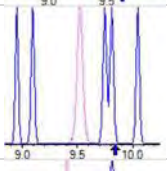
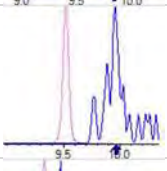
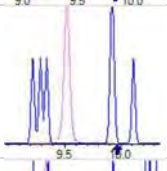
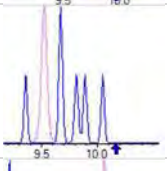
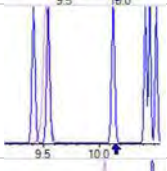
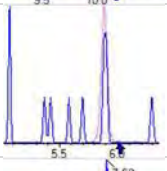
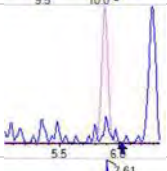
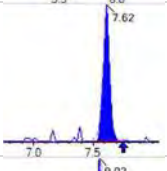
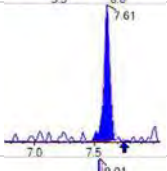
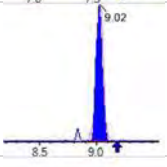
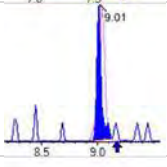
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(212.9 / 169.0) 25307	(3.77 , 1.00) (0.00 , N/A , 0.0)	37.9	N/A 0.0 0.0	0.3535	N/A			
PFPeA	(262.9 / 219.0) 34192 (262.9 / 69.0) 320	(5.09 , 1.00) (0.00 , N/A , -0.4)	278.3 20.7	0.0093 80.3 91.2	0.3541	N/A			
PFHxA	(313.0 / 269.0) 45572 (313.0 / 119.0) 4940	(6.23 , 1.00) (0.00 , N/A , 0.1)	180.4 85.5	0.1084 120.6 111.6	0.2596	N/A			
PFHpA	(363.0 / 319.0) 230618 (363.0 / 169.0) 63519	(7.15 , 1.00) (0.00 , N/A , -0.1)	403.6 375.1	0.2754 96.0 88.4	1.5558	N/A			
PFOA	(413.0 / 369.0) 255086 (413.0 / 169.0) 82831	(7.97 , 1.00) (0.00 , N/A , 0.1)	467.5 351.3	0.3247 100.4 97.9	1.5837	N/A			
PFNA	(463.0 / 419.0) 24268 (463.0 / 169.0) 3798	(8.71 , 1.00) (0.00 , N/A , -0.4)	82.2 68.8	0.1565 77.7 80.6	0.2038	N/A			
PFDA	(513.0 / 469.0) 9451 (513.0 / 169.0) 1595	(9.39 , 1.00) (0.01 , N/A , -0.9)	25.8 734.9	0.1687 190.1 169.8	0.0586	N/A			IR2,
PFUnA	(563.0 / 519.0) 4084 (563.0 / 169.0) 1894	(9.73 , 1.00) (-0.01 , N/A , -0.7)	25.8 55462.2	0.4639 431.7 485.8	0.0210	N/A			IR2,
PFDoA	(613.0 / 569.0) N/A (613.0 / 169.0) 614	(N/A , N/A) (N/A , N/A , N/A)	N/A 267.8	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.: 22L0005-03
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (14)
Acquired: 2022/12/09 - 15:29

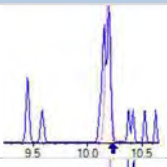
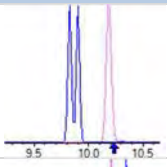
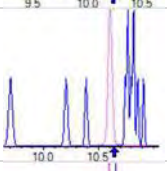
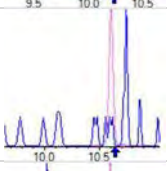
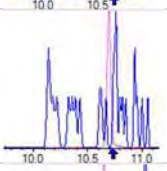
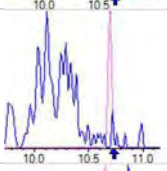
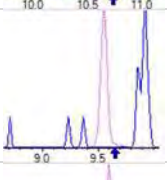
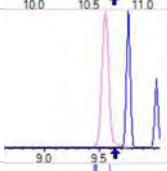
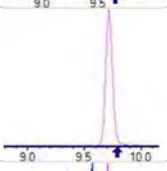
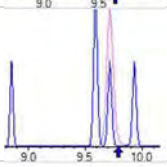
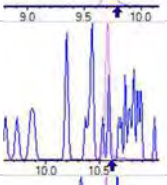
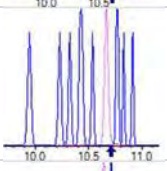
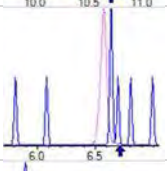
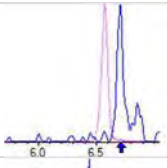
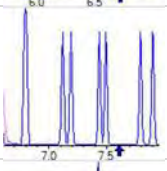
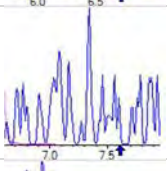
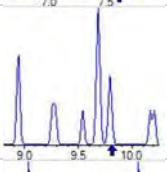
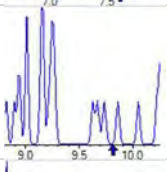
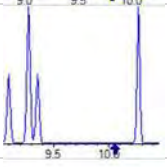
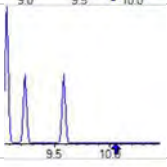
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) N/A (298.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	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) 6833 (399.0 / 99.0) 2273	(8.10 , 1.00) (-0.01 , N/A , -0.9)	3718.6 279684.4	0.3326 96.4 102.2	0.0183	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) 31554 (499.0 / 99.0) 5354	(9.52 , 1.00) (0.00 , N/A , -0.6)	52.6 124.8	0.1697 65.9 73.5	0.0703	N/A			MI4 ABK 1/3/23
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) 7323 (427.0 / 81.0) 5253	(7.62 , 1.00) (0.00 , N/A , 0.4)	110.9 64.4	0.7173 99.7 100.3	0.1627	N/A			
8:2FTS	(527.0 / 507.0) 5501 (527.0 / 81.0) 2774	(9.02 , 1.00) (-0.01 , N/A , 0.9)	133025.2 34.0	0.5042 80.9 78.7	0.1344	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

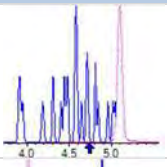
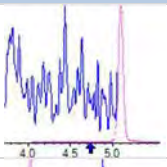
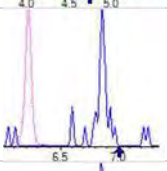
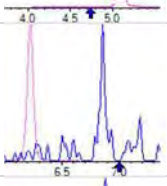
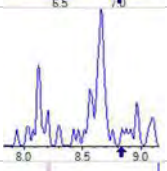
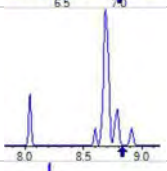
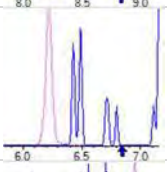
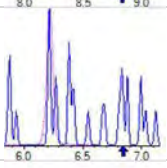
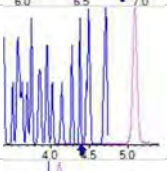
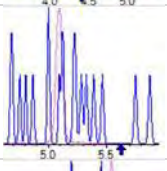
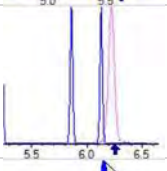
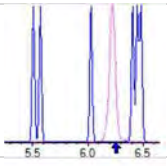
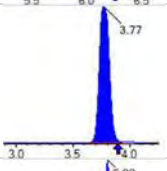
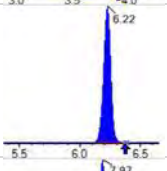
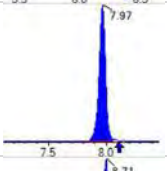
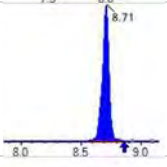
Sample I.D.: 22L0005-03
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (14)
Acquired: 2022/12/09 - 15:29

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 | Sample I.D.: 22L0005-03 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09A (14)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/09 - 15:29

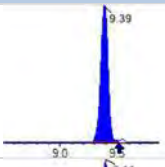
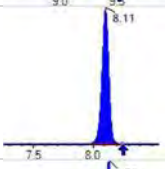
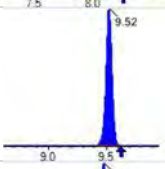
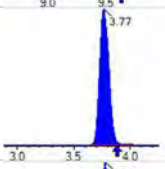
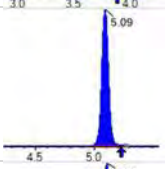
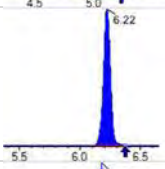
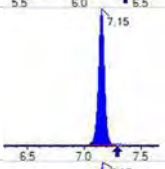
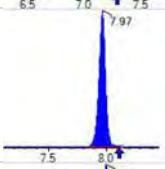
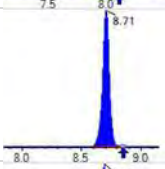
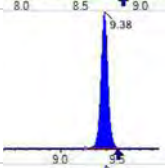
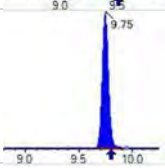
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
3:3FTCA	(241.0 / 177.0) N/A (241.0 / 117.0) N/A	(N/A , N/A) (N/A , N/A , 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) 84389	(3.77 , N/A) (N/A , 0.04 , N/A)	548.4	N/A	0.8779 [1.0000]	87.8% { 105.4% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 150009	(6.22 , N/A) (N/A , 0.02 , N/A)	741.1	N/A	1.2148 [1.0000]	121.5% { 128.0% }			
13C4_PFOA_IIS	(417.0 / 372.0) 132101	(7.97 , N/A) (N/A , 0.02 , N/A)	713.2	N/A	1.1143 [1.0000]	111.4% { 120.4% }			
13C5_PFNA_IIS	(468.0 / 423.0) 115626	(8.71 , N/A) (N/A , 0.02 , N/A)	347.3	N/A	1.2140 [1.0000]	121.4% { 118.1% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-03
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (14)
Acquired: 2022/12/09 - 15:29

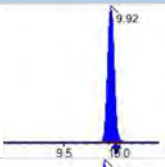
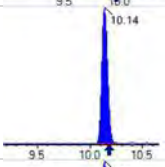
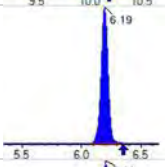
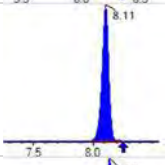
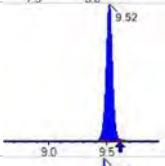
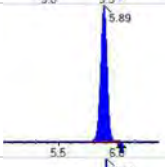
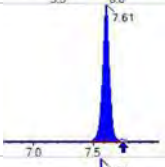
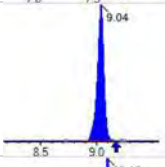
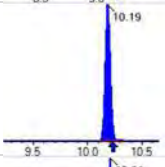
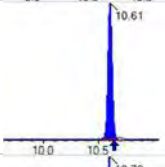
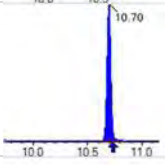
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDA_IIS	(515.1 / 470.1) 98692	(9.39 , N/A) (N/A , 0.01 , N/A)	4095.7	N/A	1.1980 [1.0000]	119.8% { 113.2% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 246666	(8.11 , N/A) (N/A , 0.01 , N/A)	519.7	N/A	1.1493 [1.0000]	114.9% { 110.6% }			
13C4_PFOS_IIS	(502.8 / 79.9) 218839	(9.52 , N/A) (N/A , 0.01 , N/A)	653.4	N/A	1.1758 [1.0000]	117.6% { 103.0% }			
13C4_PFBA_EIS	(217.0 / 172.0) 752122	(3.77 , N/A) (N/A , 0.03 , N/A)	824.5	N/A	9.5064 [8.0000]	118.8% { 125.4% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 401779	(5.09 , N/A) (N/A , 0.03 , N/A)	802.6	N/A	3.6717 [4.0000]	91.8% { 118.9% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 348357	(6.22 , N/A) (N/A , 0.02 , N/A)	737.7	N/A	2.2767 [2.0000]	113.8% { 143.5% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 292664	(7.15 , N/A) (N/A , 0.02 , N/A)	610.4	N/A	2.1190 [2.0000]	106.0% { 125.5% }			
13C8_PFOA_EIS	(421.0 / 376.0) 312492	(7.97 , N/A) (N/A , 0.02 , N/A)	724.9	N/A	2.3257 [2.0000]	116.3% { 134.8% }			
13C9_PFNA_EIS	(472.0 / 427.0) 123516	(8.71 , N/A) (N/A , 0.01 , N/A)	411.3	N/A	1.0825 [1.0000]	108.2% { 132.5% }			
13C6_PFDA_EIS	(519.0 / 474.0) 158971	(9.38 , N/A) (N/A , 0.01 , N/A)	429.3	N/A	1.1089 [1.0000]	110.9% { 125.5% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 221286	(9.75 , N/A) (N/A , 0.01 , N/A)	704.6	N/A	1.1500 [1.0000]	115.0% { 123.2% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

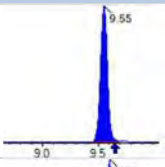
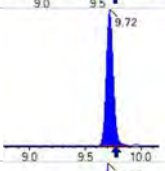
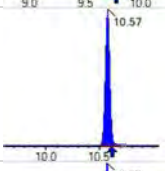
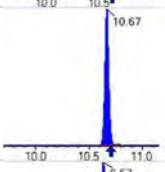
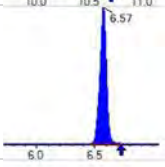
Sample I.D.: 22L0005-03
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (14)
Acquired: 2022/12/09 - 15:29

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) 266507	(9.92 , N/A) (N/A , 0.01 , N/A)	410.6	N/A	1.1412 [1.0000]	114.1% { 140.0% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 158137	(10.14 , N/A) (N/A , 0.00 , N/A)	265.3	N/A	0.9224 [1.0000]	92.2% { 104.5% }			
13C3_PFBS_EIS	(302.0 / 80.0) 725830	(6.19 , N/A) (N/A , 0.02 , N/A)	606.3	N/A	2.0022 [2.0000]	100.1% { 111.1% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 445328	(8.11 , N/A) (N/A , 0.02 , N/A)	885.7	N/A	2.1581 [2.0000]	107.9% { 118.2% }			
13C8_PFOS_EIS	(507.0 / 80.0) 799175	(9.52 , N/A) (N/A , 0.01 , N/A)	629.4	N/A	2.3956 [2.0000]	119.8% { 146.4% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 91766	(5.89 , N/A) (N/A , 0.02 , N/A)	619.7	N/A	4.4883 [4.0000]	112.2% { 147.7% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 113468	(7.61 , N/A) (N/A , 0.01 , N/A)	513.5	N/A	4.1366 [4.0000]	103.4% { 136.0% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 104241	(9.04 , N/A) (N/A , 0.01 , N/A)	439.9	N/A	4.3783 [4.0000]	109.5% { 129.7% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 1182584	(10.19 , N/A) (N/A , 0.00 , N/A)	663.1	N/A	2.3220 [2.0000]	116.1% { 142.7% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 218319	(10.61 , N/A) (N/A , 0.00 , N/A)	847.1	N/A	1.4486 [2.0000]	72.4% { 109.3% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 199047	(10.70 , N/A) (N/A , 0.00 , N/A)	753.3	N/A	1.4566 [2.0000]	72.8% { 99.9% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0005-03 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09A (14)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/09 - 15:29

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) 336430	(9.55 , N/A) (N/A , 0.02 , N/A)	306.3	N/A	4.5328 [4.0000]	113.3% { 131.4% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 337122	(9.72 , N/A) (N/A , 0.01 , N/A)	606.2	N/A	5.2847 [4.0000]	132.1% { 138.7% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 376931	(10.57 , N/A) (N/A , 0.00 , N/A)	643.4	N/A	14.6431 [20.0000]	73.2% { 92.3% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 184163	(10.67 , N/A) (N/A , 0.00 , N/A)	932.4	N/A	14.0413 [20.0000]	70.2% { 87.8% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 810727	(6.57 , N/A) (N/A , 0.02 , N/A)	941.6	N/A	8.0451 [8.0000]	100.6% { 128.4% }			

FORM IR
ANALYSIS DATA SHEETR

SB-2-2.0-113022-

Laboratory:	APPL, LLC-			Work Order:	22L0005-
Client:	Tidewater, Inc.-			Project:	NASA JPL-
Matrix:	Solid-	Laboratory ID:	22L0005-04-	File ID:	S2022-12-09A (16)-
Sampled:	11/30/22 09:05-	Prepared:	12/01/22 14:45-	Analyzed:	12/09/22 15:54
Solids:	90.26-	Preparation:	Table B-15-	Dilution:	1-
Initial/Final:	1.03 g / 2 mL-			Instrument:	Saphira-
Batch:	BBL0032-	Sequence:	SB03754-	Calibration:	2250016

COMPOUNDR	CONC. (ng/g dry)R	LOQ	LODR	DL	Q
PFBA-	5.4-	1.1-	0.43	0.11-	
PFPEA-	15-	1.1-	0.43	0.16	
PFHXA-	10-	1.1-	0.43	0.11-	
PFHPA-	13-	1.1-	0.43	0.11-	
PFOA-	10-	1.1-	0.43	0.16	
PFNA-	1.2-	1.1-	0.43	0.11-	
PFDA-	0.35 J-	1.1-	0.43	0.16	
PFUnA-	0.43 U-	1.1-	0.43	0.11-	
PFDOA-	0.43 U-	1.1-	0.43	0.16	
PFTRDA-	0.43 U-	1.1-	0.43	0.11-	
PFTEDA-	0.43 U-	1.1-	0.43	0.22	
PFBS-	0.43 U-	1.1-	0.43	0.11-	
PFPES-	0.97 U-	1.1-	0.97	0.45	
PFHXS-	0.43 U-	1.1-	0.43	0.16	
PFHPS-	0.43 U-	1.1-	0.43	0.16	
PFOS-	0.19 J-	1.1-	0.43	0.11-	
PFNS-	0.86 U-	1.1-	0.86	0.42	
PFDS-	0.43 U-	1.1-	0.43	0.22	
4:2FTS-	0.43 U-	1.1-	0.43	0.22	
6:2FTS-	0.29 J-	1.1-	0.43	0.22	
8:2FTS-	0.43 U-	1.1-	0.43	0.16	
PFOSA-	0.43 U-	1.1-	0.43	0.11-	
NMeFOSA-	0.97 U-	1.1-	0.97	0.53	
NEtFOSA-	0.97 U-	1.1-	0.97	0.53	
NMeFOSAA-	0.43 U-	1.1-	0.43	0.22	
NEtFOSAA-	0.43 U-	1.1-	0.43	0.22	
NMeFOSE-	0.88 U-	1.1-	0.88	0.44	
NEtFOSE-	0.70 U-	1.1-	0.70	0.33	
HFPO-DA-	0.43 U-	1.1-	0.43	0.22	
ADONA-	0.43 U-	1.1-	0.43	0.22	

FORM IR
ANALYSIS DATA SHEETR

SB-2-2.0-113022-

Laboratory:	APPL, LLC-			Work Order:	22L0005-
Client:	Tidewater, Inc.-			Project:	NASA JPL-
Matrix:	Solid-	Laboratory ID:	22L0005-04-	File ID:	S2022-12-09A (16)-
Sampled:	11/30/22 09:05-	Prepared:	12/01/22 14:45-	Analyzed:	12/09/22 15:54
Solids:	90.26-	Preparation:	Table B-15-	Dilution:	1-
Initial/Final:	1.03 g / 2 mL-			Instrument:	Saphira-
Batch:	BBL0032-	Sequence:	SB03754-	Calibration:	2250016

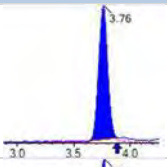
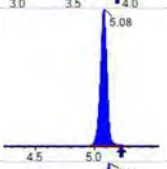
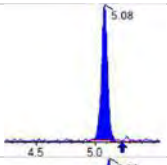
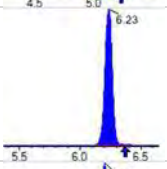
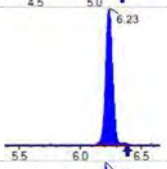
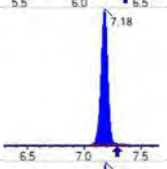
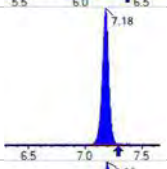
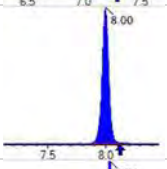
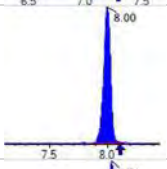
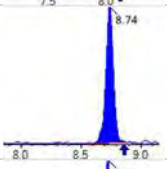
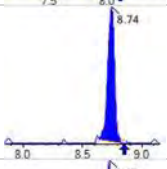
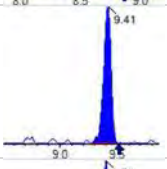
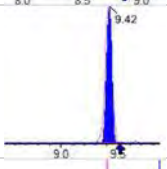
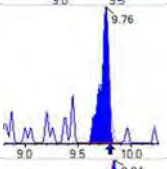
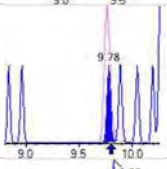
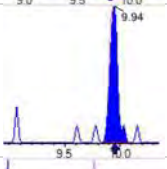
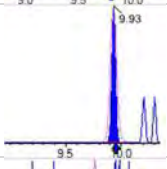
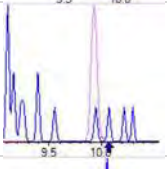
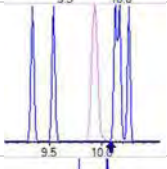
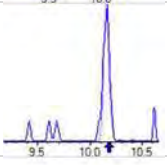
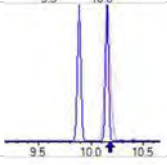
COMPOUNDR	CONC. (ng/g dry)R	LOQ	LODR	DL	Q
9CL-PF3ONS-	0.43 U-	1.1-	0.43	0.22	
11CL-PF3OUDS-	0.43 U-	1.1-	0.43	0.22	

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

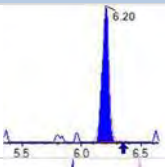
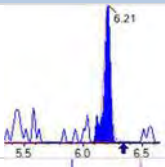
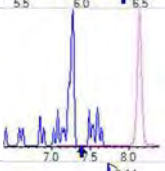
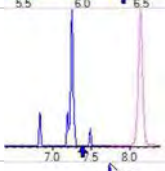
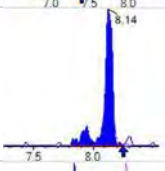
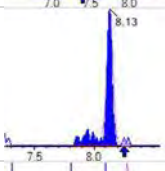
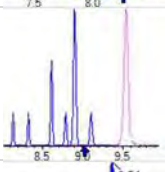
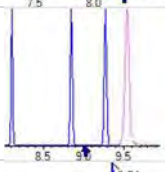
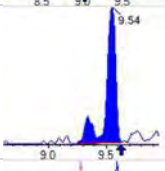
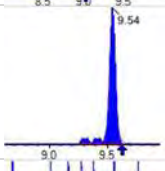
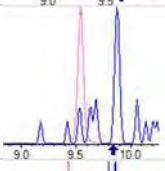
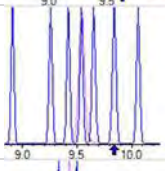
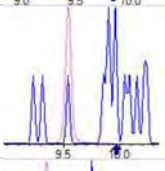
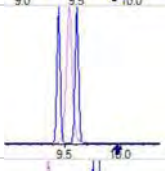
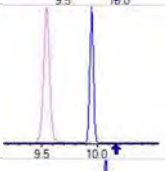
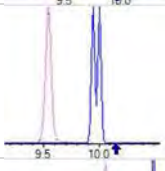
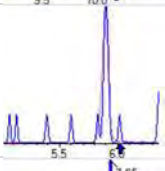
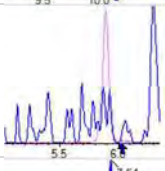
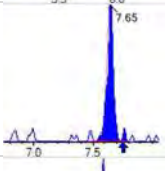
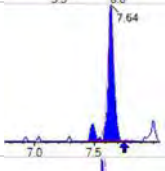
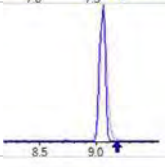
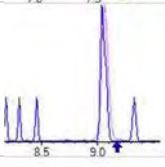
Sample I.D.: 22L0005-04
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (16)
Acquired: 2022/12/09 - 15:54

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) 173878	(3.76 , 1.00) (0.00 , N/A , 0.0)	58.1	N/A 0.0 0.0	2.5242	N/A			
PFPeA	(262.9 / 219.0) 571623 (262.9 / 69.0) 5969	(5.08 , 1.00) (0.00 , N/A , 0.1)	928.6 187.5	0.0104 89.7 101.9	7.0907	N/A			
PFHxA	(313.0 / 269.0) 698663 (313.0 / 119.0) 67329	(6.23 , 1.00) (0.01 , N/A , 0.1)	739.0 630.4	0.0964 107.2 99.2	4.8562	N/A			
PFHpA	(363.0 / 319.0) 763289 (363.0 / 169.0) 244611	(7.18 , 1.00) (0.00 , N/A , -0.1)	873.8 906.3	0.3205 111.7 102.8	6.1000	N/A			
PFOA	(413.0 / 369.0) 608286 (413.0 / 169.0) 200170	(8.00 , 1.00) (0.00 , N/A , -0.3)	850.5 564.9	0.3291 101.7 99.2	4.6960	N/A			
PFNA	(463.0 / 419.0) 55427 (463.0 / 169.0) 12644	(8.74 , 1.00) (0.00 , N/A , -0.2)	237.3 84.8	0.2281 113.3 117.5	0.5749	N/A			
PFDA	(513.0 / 469.0) 24707 (513.0 / 169.0) 3452	(9.41 , 1.00) (0.00 , N/A , -0.4)	111.3 9296.9	0.1397 157.3 140.6	0.1631	N/A			IR2,
PFUnA	(563.0 / 519.0) 5951 (563.0 / 169.0) 309	(9.76 , 1.00) (0.00 , N/A , -1.0)	21.0 10.5	0.0520 48.4 54.5	0.0341	N/A			IR1,
PFDoA	(613.0 / 569.0) 4976 (613.0 / 169.0) 894	(9.94 , 1.00) (0.01 , N/A , 0.6)	41.1 336.8	0.1796 150.8 125.9	0.0246	N/A			IR2,
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.: 22L0005-04 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09A (16)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/09 - 15:54

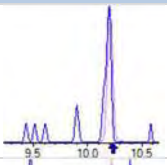
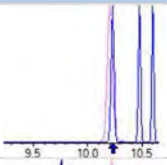
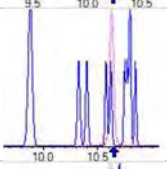
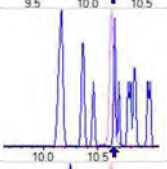
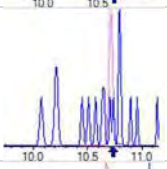
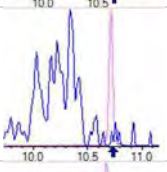
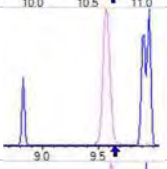
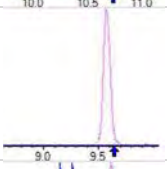
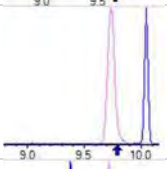
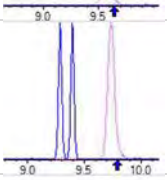
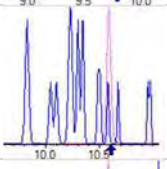
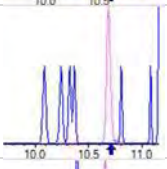
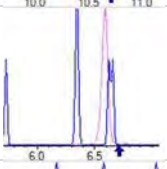
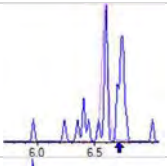
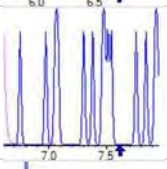
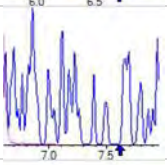
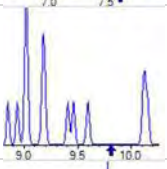
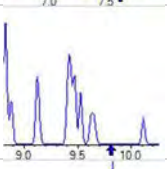
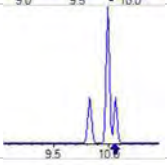
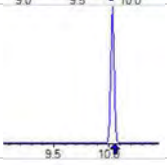
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) 4122 (298.9 / 99.0) 1874	(6.20 , 1.00) (0.00 , N/A , -0.4)	110.2 51.6	0.4547 67.1 72.9	0.0205	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) 10948 (399.0 / 99.0) 3851	(8.14 , 1.00) (0.00 , N/A , 0.4)	156.6 580.0	0.3518 102.0 108.1	0.0349	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) 33802 (499.0 / 99.0) 11352	(9.54 , 1.00) (0.00 , N/A , 0.1)	101.2 111.8	0.3358 130.4 145.4	0.0865	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) 4190 (427.0 / 81.0) 5563	(7.65 , 1.00) (0.01 , N/A , 0.5)	364.9 5041.5	1.3276 184.6 185.7	0.1364	N/A			IR2,
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.: 22L0005-04
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (16)
Acquired: 2022/12/09 - 15:54

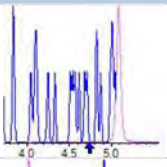
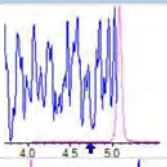
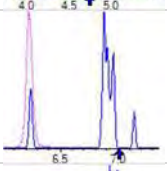
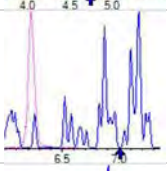
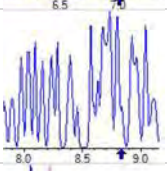
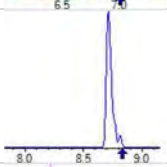
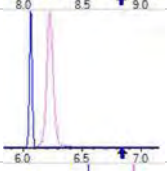
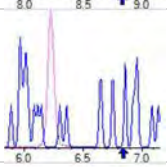
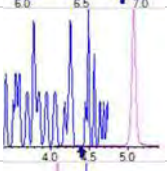
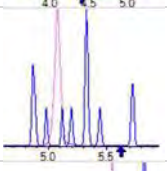
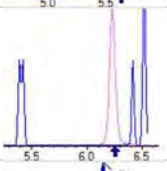
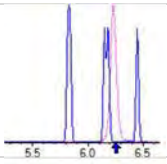
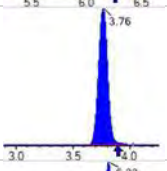
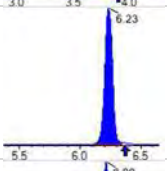
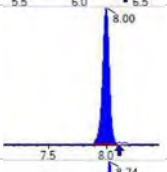
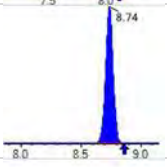
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) N/A (498.0 / 478.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	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.: 22L0005-04
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (16)
Acquired: 2022/12/09 - 15:54

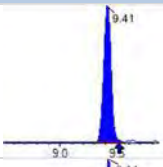
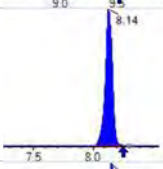
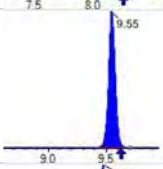
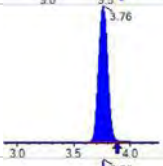
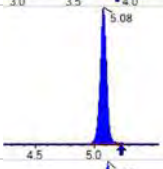
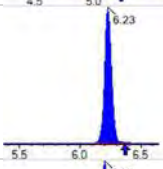
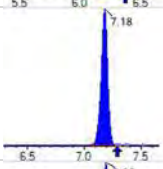
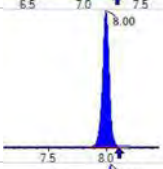
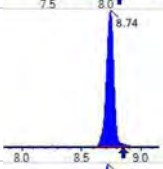
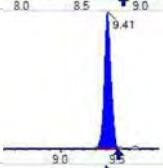
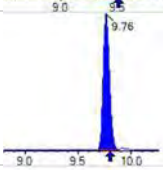
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
3:3FTCA	(241.0 / 177.0) N/A (241.0 / 117.0) N/A	(N/A , N/A) (N/A , N/A , 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) 88423	(3.76 , N/A) (N/A , 0.03 , N/A)	876.1	N/A	0.9199 [1.0000]	92.0% { 110.4% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 129076	(6.23 , N/A) (N/A , 0.03 , N/A)	682.8	N/A	1.0453 [1.0000]	104.5% { 110.1% }			
13C4_PFOA_IIS	(417.0 / 372.0) 116321	(8.00 , N/A) (N/A , 0.05 , N/A)	546.6	N/A	0.9812 [1.0000]	98.1% { 106.0% }			
13C5_PFNA_IIS	(468.0 / 423.0) 106631	(8.74 , N/A) (N/A , 0.04 , N/A)	545.1	N/A	1.1196 [1.0000]	112.0% { 108.9% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

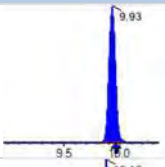
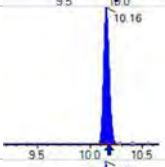
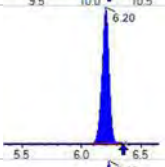
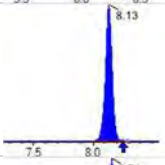
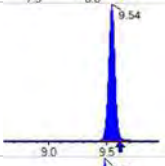
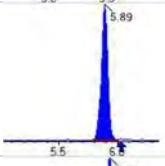
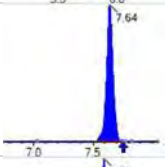
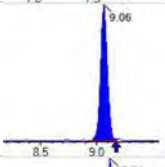
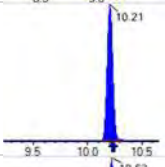
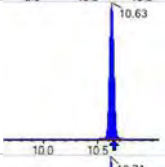
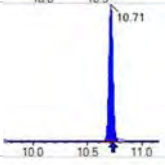
Sample I.D.: 22L0005-04
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (16)
Acquired: 2022/12/09 - 15:54

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) 96728	(9.41 , N/A) (N/A , 0.04 , N/A)	211.5	N/A	1.1741 [1.0000]	117.4% { 110.9% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 203509	(8.14 , N/A) (N/A , 0.04 , N/A)	721.9	N/A	0.9482 [1.0000]	94.8% { 91.2% }			
13C4_PFOS_IIS	(502.8 / 79.9) 200091	(9.55 , N/A) (N/A , 0.03 , N/A)	454.3	N/A	1.0750 [1.0000]	107.5% { 94.2% }			
13C4_PFBA_EIS	(217.0 / 172.0) 723749	(3.76 , N/A) (N/A , 0.02 , N/A)	926.6	N/A	8.7304 [8.0000]	109.1% { 120.6% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 335446	(5.08 , N/A) (N/A , 0.02 , N/A)	1132.9	N/A	3.5626 [4.0000]	89.1% { 99.3% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 285485	(6.23 , N/A) (N/A , 0.02 , N/A)	969.4	N/A	2.1684 [2.0000]	108.4% { 117.6% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 247051	(7.18 , N/A) (N/A , 0.04 , N/A)	537.3	N/A	2.0789 [2.0000]	103.9% { 105.9% }			
13C8_PFOA_EIS	(421.0 / 376.0) 251311	(8.00 , N/A) (N/A , 0.05 , N/A)	502.0	N/A	2.1241 [2.0000]	106.2% { 108.4% }			
13C9_PFNA_EIS	(472.0 / 427.0) 99998	(8.74 , N/A) (N/A , 0.05 , N/A)	794.9	N/A	0.9503 [1.0000]	95.0% { 107.3% }			
13C6_PFDA_EIS	(519.0 / 474.0) 149336	(9.41 , N/A) (N/A , 0.04 , N/A)	326.4	N/A	1.0629 [1.0000]	106.3% { 117.9% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 198248	(9.76 , N/A) (N/A , 0.02 , N/A)	258.2	N/A	1.0512 [1.0000]	105.1% { 110.4% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0005-04 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09A (16)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/09 - 15:54

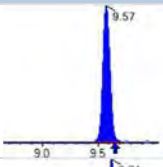
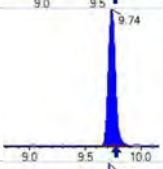
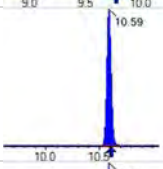
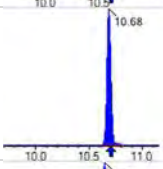
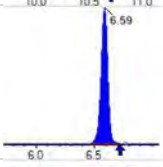
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDoA_EIS	(615.0 / 570.0) 219644	(9.93 , N/A) (N/A , 0.02 , N/A)	373.4	N/A	0.9596 [1.0000]	96.0% { 115.4% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 145817	(10.16 , N/A) (N/A , 0.02 , N/A)	492.4	N/A	0.8678 [1.0000]	86.8% { 96.3% }			
13C3_PFBS_EIS	(302.0 / 80.0) 658232	(6.20 , N/A) (N/A , 0.03 , N/A)	876.5	N/A	2.2008 [2.0000]	110.0% { 100.8% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 374411	(8.13 , N/A) (N/A , 0.04 , N/A)	651.0	N/A	2.1992 [2.0000]	110.0% { 99.4% }			
13C8_PFOS_EIS	(507.0 / 80.0) 696537	(9.54 , N/A) (N/A , 0.03 , N/A)	470.7	N/A	2.2835 [2.0000]	114.2% { 127.6% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 77214	(5.89 , N/A) (N/A , 0.03 , N/A)	422.1	N/A	4.5775 [4.0000]	114.4% { 124.3% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 77457	(7.64 , N/A) (N/A , 0.04 , N/A)	546.2	N/A	3.4226 [4.0000]	85.6% { 92.9% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 84966	(9.06 , N/A) (N/A , 0.04 , N/A)	501.3	N/A	4.3255 [4.0000]	108.1% { 105.7% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 925801	(10.21 , N/A) (N/A , 0.02 , N/A)	715.1	N/A	1.9882 [2.0000]	99.4% { 111.7% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 211956	(10.63 , N/A) (N/A , 0.02 , N/A)	613.3	N/A	1.5382 [2.0000]	76.9% { 106.1% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 191476	(10.71 , N/A) (N/A , 0.02 , N/A)	713.9	N/A	1.5325 [2.0000]	76.6% { 96.1% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-04
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (16)
Acquired: 2022/12/09 - 15:54

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) 276446	(9.57 , N/A) (N/A , 0.04 , N/A)	474.5	N/A	4.0736 [4.0000]	101.8% { 107.9% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 261766	(9.74 , N/A) (N/A , 0.03 , N/A)	362.9	N/A	4.4879 [4.0000]	112.2% { 107.7% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 319436	(10.59 , N/A) (N/A , 0.02 , N/A)	887.0	N/A	13.5723 [20.0000]	67.9% { 78.2% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 174503	(10.68 , N/A) (N/A , 0.02 , N/A)	814.2	N/A	14.5514 [20.0000]	72.8% { 83.2% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 720406	(6.59 , N/A) (N/A , 0.04 , N/A)	754.5	N/A	8.3082 [8.0000]	103.9% { 114.1% }			

FORM IR
ANALYSIS DATA SHEETR

SB-3-0.5-113022-

Laboratory:-	APPL, LLC-			Work Order:-	22L0005-
Client:-	Tidewater, Inc.-			Project:-	NASA JPL-
Matrix:-	Solid-	Laboratory ID:-	22L0005-05-	File ID:	S2022-12-09A (18)-
Sampled:-	11/30/22 09:33-	Prepared:-	12/01/22 14:45-	Analyzed:-	12/09/22 16:19
Solids:-	94.61-	Preparation:-	Table B-15-	Dilution:-	1-
Initial/Final:-	1.03 g / 2 mL-			Instrument:-	Saphira-
Batch:-	BBL0032-	Sequence:-	SB03754-	Calibration:-	2250016

COMPOUNDR	CONC. (ng/g dry)R	LOQ	LODR	DL	Q
PFBA-	0.41 U-	1.0-	0.41	0.10	
PFPEA-	0.19 J-	1.0-	0.41	0.15	
PFHXA-	0.41 U-	1.0-	0.41	0.10	
PFHPA-	0.41 U-	1.0-	0.41	0.10	
PFOA-	0.40 J-	1.0-	0.41	0.15	
PFNA-	0.24 J-	1.0-	0.41	0.10	
PFDA-	0.22 J-	1.0-	0.41	0.15	
PFUnA-	0.41 U-	1.0-	0.41	0.10	
PFDOA-	0.41 U-	1.0-	0.41	0.15	
PFTRDA-	0.41 U-	1.0-	0.41	0.10	
PFTEDA-	0.41 U-	1.0-	0.41	0.21	
PFBS-	0.41 U-	1.0-	0.41	0.10	
PFPES-	0.92 U-	1.0-	0.92	0.42	
PFHXS-	0.41 U-	1.0-	0.41	0.15	
PFHPS-	0.41 U-	1.0-	0.41	0.15	
PFOS-	0.41 U-	1.0-	0.41	0.10	
PFNS-	0.82 U-	1.0-	0.82	0.40	
PFDS-	0.41 U-	1.0-	0.41	0.21	
4:2FTS-	0.41 U-	1.0-	0.41	0.21	
6:2FTS-	0.24 J-	1.0-	0.41	0.21	
8:2FTS-	0.48 J-	1.0-	0.41	0.15	
PFOSA-	0.41 U-	1.0-	0.41	0.10	
NMeFOSA-	0.92 U-	1.0-	0.92	0.51	
NEtFOSA-	0.92 U-	1.0-	0.92	0.50	
NMeFOSAA-	0.41 U-	1.0-	0.41	0.21	
NEtFOSAA-	0.41 U-	1.0-	0.41	0.21	
NMeFOSE-	0.84 U-	1.0-	0.84	0.42	
NEtFOSE-	0.67 U-	1.0-	0.67	0.32	
HFPO-DA-	0.41 U-	1.0-	0.41	0.21	
ADONA-	0.41 U-	1.0-	0.41	0.21	

FORM IR
ANALYSIS DATA SHEETR

SB-3-0.5-113022-

Laboratory:-	APPL, LLC-			Work Order:-	22L0005-
Client:-	Tidewater, Inc.-			Project:-	NASA JPL-
Matrix:-	Solid-	Laboratory ID:-	22L0005-05-	File ID:	S2022-12-09A (18)-
Sampled:-	11/30/22 09:33-	Prepared:-	12/01/22 14:45-	Analyzed:-	12/09/22 16:19
Solids:-	94.61-	Preparation:-	Table B-15-	Dilution:-	1-
Initial/Final:-	1.03 g / 2 mL-			Instrument:-	Saphira-
Batch:-	BBL0032-	Sequence:-	SB03754-	Calibration:-	2250016

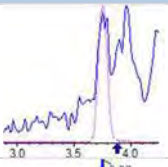
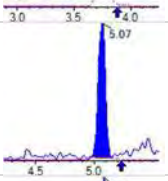
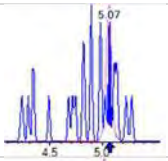
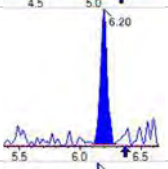
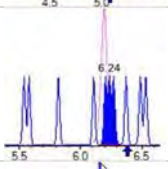
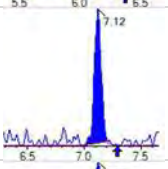
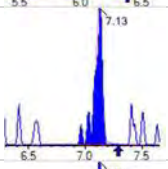
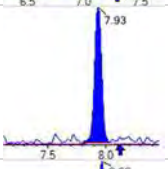
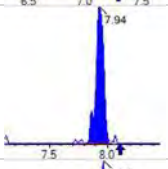
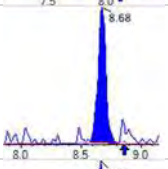
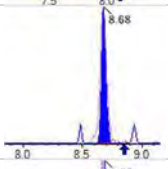
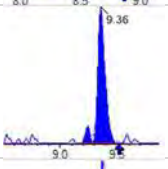
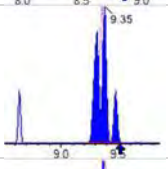
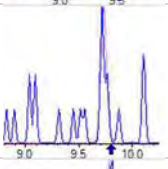
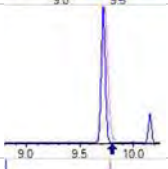
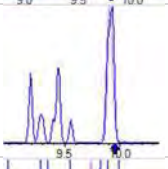
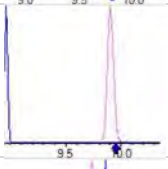
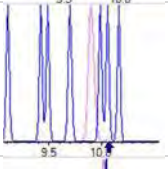
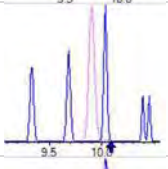
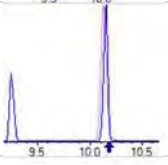
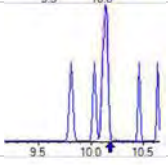
COMPOUNDR	CONC. (ng/g dry)R	LOQ	LODR	DL	Q
9CL-PF3ONS-	0.41 U-	1.0-	0.41	0.21	
11CL-PF3OUDS-	0.41 U-	1.0-	0.41	0.21	

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-05
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (18)
Acquired: 2022/12/09 - 16:19

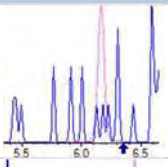
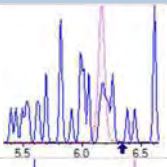
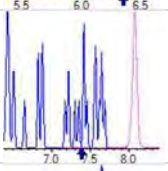
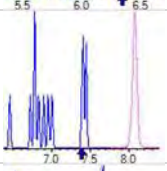
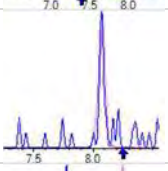
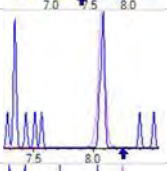
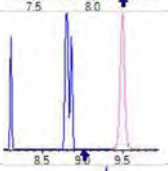
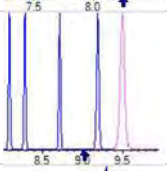
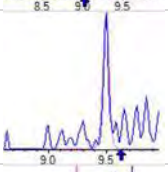
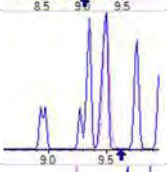
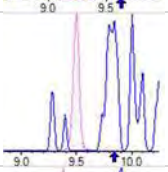
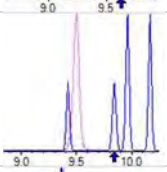
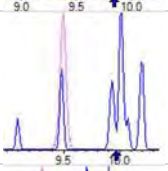
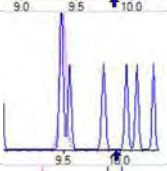
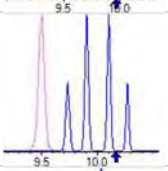
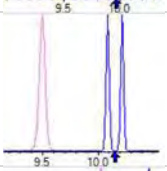
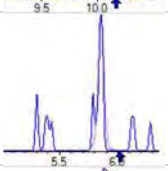
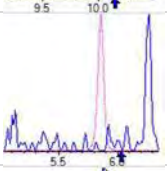
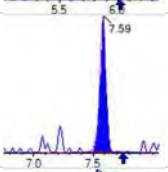
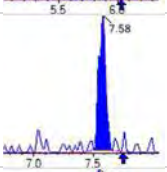
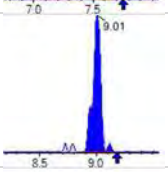
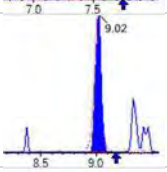
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(212.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFPeA	(262.9 / 219.0) 8574 (262.9 / 69.0) 42	(5.07 , 1.00) (0.00 , N/A , -0.3)	66.5 5.3	0.0048 41.6 47.3	0.0912	N/A			
PFHxA	(313.0 / 269.0) 6601 (313.0 / 119.0) 262	(6.20 , 1.00) (0.00 , N/A , -2.4)	32.3 6.1	0.0397 44.2 40.9	0.0440	N/A			IR1,
PFHpA	(363.0 / 319.0) 6280 (363.0 / 169.0) 1780	(7.12 , 1.00) (0.00 , N/A , -0.6)	62.0 214.9	0.2834 98.8 90.9	0.0395	N/A			
PFOA	(413.0 / 369.0) 28102 (413.0 / 169.0) 9234	(7.93 , 1.00) (0.00 , N/A , -0.3)	90.6 191.5	0.3286 101.6 99.1	0.1958	N/A			
PFNA	(463.0 / 419.0) 13044 (463.0 / 169.0) 1738	(8.68 , 1.00) (0.00 , N/A , 0.1)	43.8 42.3	0.1333 66.2 68.6	0.1177	N/A			
PFDA	(513.0 / 469.0) 17781 (513.0 / 169.0) 1887	(9.36 , 1.00) (0.00 , N/A , 0.3)	609.6 138.2	0.1061 119.5 106.8	0.1060	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.: 22L0005-05
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (18)
Acquired: 2022/12/09 - 16:19

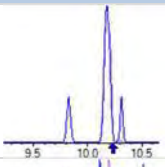
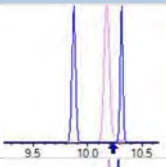
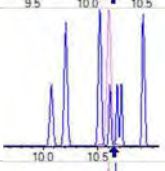
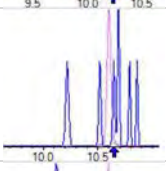
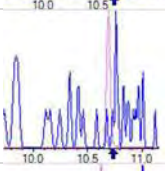
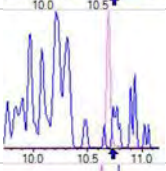
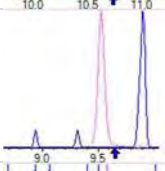
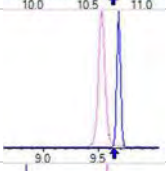
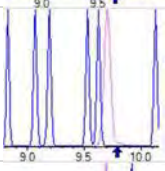
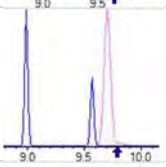
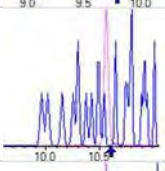
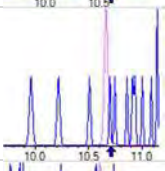
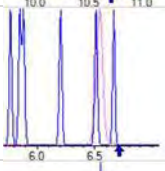
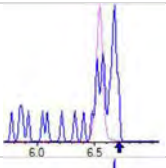
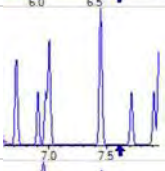
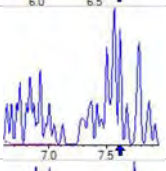
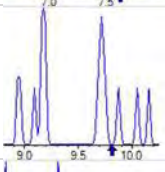
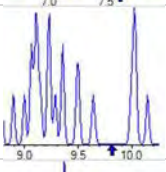
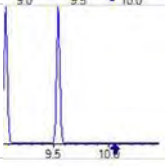
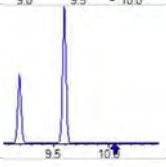
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) N/A (298.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	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) 5200 (427.0 / 81.0) 4369	(7.59 , 1.00) (0.00 , N/A , 0.6)	58.5 35.6	0.8403 116.8 117.5	0.1185	N/A			
8:2FTS	(527.0 / 507.0) 9851 (527.0 / 81.0) 2602	(9.01 , 1.00) (0.00 , N/A , -0.3)	119.3 66.4	0.2641 42.4 41.2	0.2320	N/A			IR1,

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-05
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (18)
Acquired: 2022/12/09 - 16:19

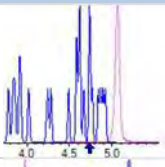
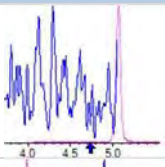
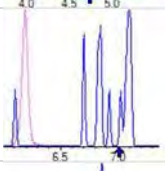
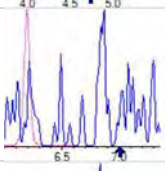
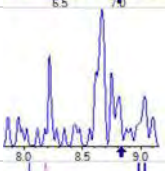
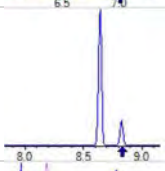
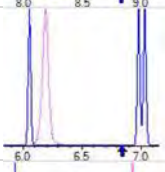
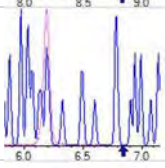
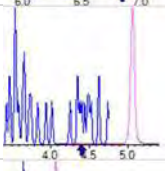
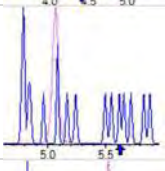
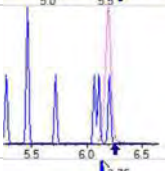
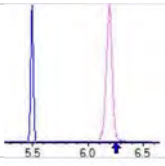
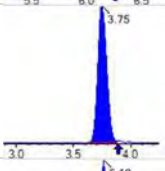
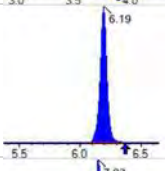
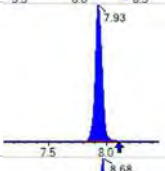
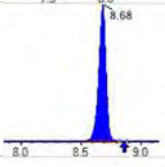
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) N/A (498.0 / 478.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	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

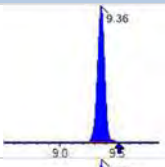
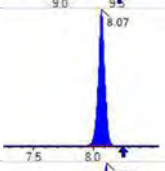
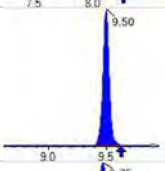
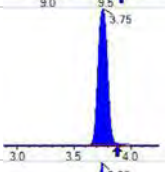
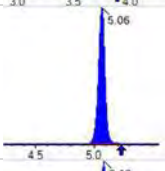
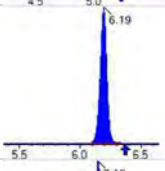
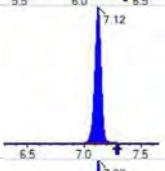
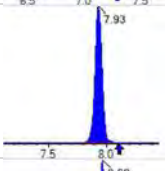
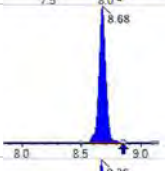
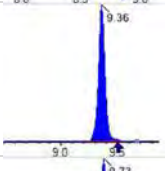
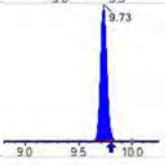
Sample I.D.: 22L0005-05
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (18)
Acquired: 2022/12/09 - 16:19

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) 96703	(3.75 , N/A) (N/A , 0.01 , N/A)	848.4	N/A	1.0060 [1.0000]	100.6% { 120.8% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 137155	(6.19 , N/A) (N/A , -0.01 , N/A)	690.5	N/A	1.1107 [1.0000]	111.1% { 117.0% }			
13C4_PFOA_IIS	(417.0 / 372.0) 128604	(7.93 , N/A) (N/A , -0.02 , N/A)	721.3	N/A	1.0848 [1.0000]	108.5% { 117.2% }			
13C5_PFNA_IIS	(468.0 / 423.0) 107369	(8.68 , N/A) (N/A , -0.01 , N/A)	339.7	N/A	1.1274 [1.0000]	112.7% { 109.7% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0005-05 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09A (18)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/09 - 16:19

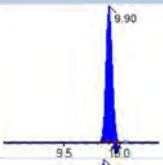
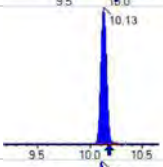
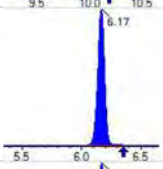
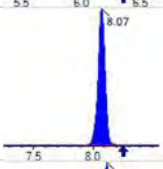
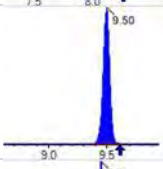
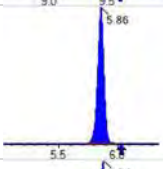
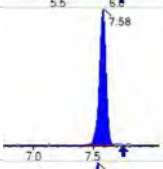
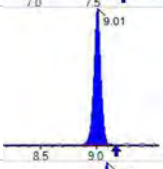
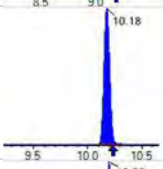
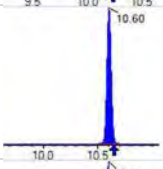
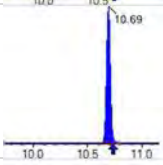
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDA_IIS	(515.1 / 470.1) 104877	(9.36 , N/A) (N/A , -0.01 , N/A)	904.5	N/A	1.2730 [1.0000]	127.3% { 120.3% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 227698	(8.07 , N/A) (N/A , -0.02 , N/A)	1094.9	N/A	1.0609 [1.0000]	106.1% { 102.1% }			
13C4_PFOS_IIS	(502.8 / 79.9) 237760	(9.50 , N/A) (N/A , -0.01 , N/A)	611.6	N/A	1.2774 [1.0000]	127.7% { 111.9% }			
13C4_PFBA_EIS	(217.0 / 172.0) 790320	(3.75 , N/A) (N/A , 0.01 , N/A)	838.6	N/A	8.7171 [8.0000]	109.0% { 131.7% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 391078	(5.06 , N/A) (N/A , 0.00 , N/A)	829.8	N/A	3.9089 [4.0000]	97.7% { 115.8% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 297994	(6.19 , N/A) (N/A , -0.01 , N/A)	823.9	N/A	2.1301 [2.0000]	106.5% { 122.7% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 314318	(7.12 , N/A) (N/A , -0.01 , N/A)	719.5	N/A	2.4891 [2.0000]	124.5% { 134.8% }			
13C8_PFOA_EIS	(421.0 / 376.0) 278466	(7.93 , N/A) (N/A , -0.02 , N/A)	790.6	N/A	2.1288 [2.0000]	106.4% { 120.2% }			
13C9_PFNA_EIS	(472.0 / 427.0) 114956	(8.68 , N/A) (N/A , -0.02 , N/A)	272.3	N/A	1.0849 [1.0000]	108.5% { 123.3% }			
13C6_PFDA_EIS	(519.0 / 474.0) 165328	(9.36 , N/A) (N/A , -0.01 , N/A)	309.8	N/A	1.0853 [1.0000]	108.5% { 130.5% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 230057	(9.73 , N/A) (N/A , -0.01 , N/A)	386.7	N/A	1.1251 [1.0000]	112.5% { 128.1% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

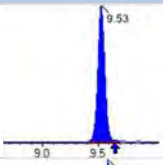
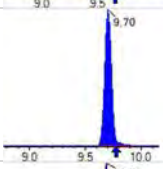
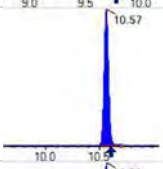
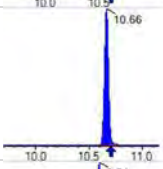
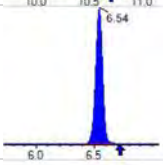
Sample I.D.: 22L0005-05
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (18)
Acquired: 2022/12/09 - 16:19

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) 252231	(9.90 , N/A) (N/A , -0.01 , N/A)	627.8	N/A	1.0164 [1.0000]	101.6% { 132.5% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 177103	(10.13 , N/A) (N/A , -0.01 , N/A)	481.4	N/A	0.9721 [1.0000]	97.2% { 117.0% }			
13C3_PFBS_EIS	(302.0 / 80.0) 765901	(6.17 , N/A) (N/A , -0.01 , N/A)	776.7	N/A	2.2887 [2.0000]	114.4% { 117.3% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 437556	(8.07 , N/A) (N/A , -0.01 , N/A)	917.7	N/A	2.2970 [2.0000]	114.9% { 116.1% }			
13C8_PFOS_EIS	(507.0 / 80.0) 767747	(9.50 , N/A) (N/A , -0.01 , N/A)	398.3	N/A	2.1182 [2.0000]	105.9% { 140.6% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 96681	(5.86 , N/A) (N/A , 0.00 , N/A)	714.7	N/A	5.1227 [4.0000]	128.1% { 155.7% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 110633	(7.58 , N/A) (N/A , -0.01 , N/A)	478.6	N/A	4.3692 [4.0000]	109.2% { 132.6% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 108170	(9.01 , N/A) (N/A , -0.02 , N/A)	323.2	N/A	4.9218 [4.0000]	123.0% { 134.6% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 935564	(10.18 , N/A) (N/A , -0.01 , N/A)	594.4	N/A	1.6908 [2.0000]	84.5% { 112.9% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 208362	(10.60 , N/A) (N/A , 0.00 , N/A)	653.7	N/A	1.2725 [2.0000]	63.6% { 104.3% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 188248	(10.69 , N/A) (N/A , 0.00 , N/A)	741.0	N/A	1.2680 [2.0000]	63.4% { 94.5% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0005-05 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09A (18)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/09 - 16:19

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) 301645	(9.53 , N/A) (N/A , -0.01 , N/A)	380.9	N/A	3.7407 [4.0000]	93.5% { 117.8% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 315155	(9.70 , N/A) (N/A , 0.00 , N/A)	638.6	N/A	4.5472 [4.0000]	113.7% { 129.7% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 323734	(10.57 , N/A) (N/A , 0.00 , N/A)	918.3	N/A	11.5757 [20.0000]	57.9% { 79.3% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 176122	(10.66 , N/A) (N/A , 0.00 , N/A)	1458.4	N/A	12.3596 [20.0000]	61.8% { 84.0% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 789371	(6.54 , N/A) (N/A , -0.01 , N/A)	918.7	N/A	8.5673 [8.0000]	107.1% { 125.0% }			

FORM IR
ANALYSIS DATA SHEETR

SB-3-2.0-113022-

Laboratory:	APPL, LLC-			Work Order:	22L0005-
Client:	Tidewater, Inc.-			Project:	NASA JPL-
Matrix:	Solid-	Laboratory ID:	22L0005-06-	File ID:	S2022-12-09A (20)-
Sampled:	11/30/22 09:40-	Prepared:	12/01/22 14:45-	Analyzed:	12/09/22 16:45
Solids:	90.99-	Preparation:	Table B-15-	Dilution:	1-
Initial/Final:	1.09 g / 2 mL-			Instrument:	Saphira-
Batch:	BBL0032-	Sequence:	SB03754-	Calibration:	2250016

COMPOUNDR	CONC. (ng/g dry)R	LOQ	LODR	DL	Q
PFBA-	7.1-	1.0-	0.40	0.10	
PFPEA-	53-	1.0-	0.40	0.15	
PFHXA-	32-	1.0-	0.40	0.10	
PFHPA-	10-	1.0-	0.40	0.10	
PFOA-	4.6-	1.0-	0.40	0.15	
PFNA-	0.59 J-	1.0-	0.40	0.10	
PFDA-	0.40 U-	1.0-	0.40	0.15	
PFUnA-	0.40 U-	1.0-	0.40	0.10	
PFDOA-	0.40 U-	1.0-	0.40	0.15	
PFTRDA-	0.40 U-	1.0-	0.40	0.10	
PFTEDA-	0.40 U-	1.0-	0.40	0.20	
PFBS-	0.13 J-	1.0-	0.40	0.10	
PFPES-	0.91 U-	1.0-	0.91	0.42	
PFHXS-	0.40 U-	1.0-	0.40	0.15	
PFHPS-	0.40 U-	1.0-	0.40	0.15	
PFOS-	0.39 J-	1.0-	0.40	0.10	
PFNS-	0.81 U-	1.0-	0.81	0.39	
PFDS-	0.40 U-	1.0-	0.40	0.20	
4:2FTS-	0.40 U-	1.0-	0.40	0.20	
6:2FTS-	32-	1.0-	0.40	0.20	
8:2FTS-	27-	1.0-	0.40	0.15	
PFOSA-	0.40 U-	1.0-	0.40	0.10	
NMeFOSA-	0.91 U-	1.0-	0.91	0.50	
NEtFOSA-	0.91 U-	1.0-	0.91	0.50	
NMeFOSAA-	0.40 U-	1.0-	0.40	0.20	
NEtFOSAA-	0.40 U-	1.0-	0.40	0.20	
NMeFOSE-	0.83 U-	1.0-	0.83	0.41	
NEtFOSE-	0.66 U-	1.0-	0.66	0.31	
HFPO-DA-	0.40 U-	1.0-	0.40	0.20	
ADONA-	0.40 U-	1.0-	0.40	0.20	

FORM IR
ANALYSIS DATA SHEETR

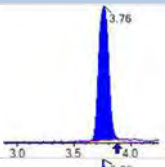
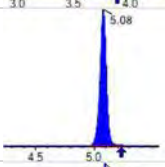
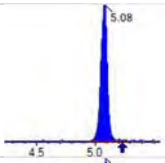
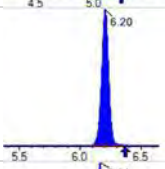
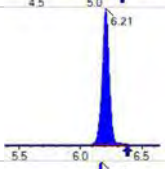
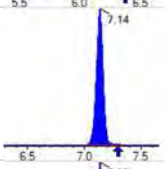
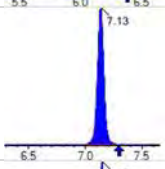
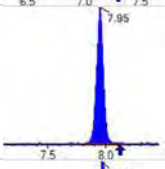
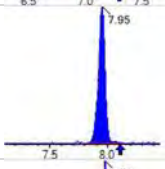
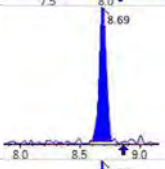
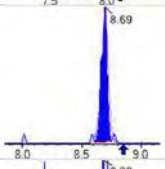
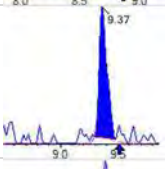
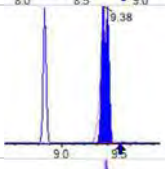
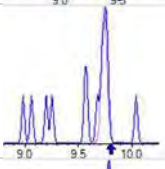
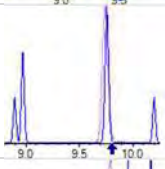
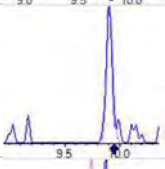
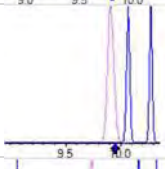
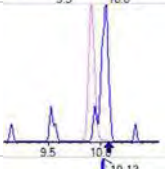
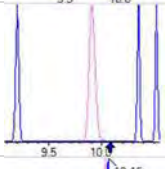
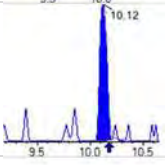
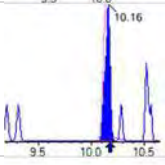
SB-3-2.0-113022-

Laboratory:	APPL, LLC-			Work Order:	22L0005-
Client:	Tidewater, Inc.-			Project:	NASA JPL-
Matrix:	Solid-	Laboratory ID:	22L0005-06-	File ID:	S2022-12-09A (20)-
Sampled:	11/30/22 09:40-	Prepared:	12/01/22 14:45-	Analyzed:	12/09/22 16:45
Solids:	90.99-	Preparation:	Table B-15-	Dilution:	1-
Initial/Final:	1.09 g / 2 mL-			Instrument:	Saphira-
Batch:	BBL0032-	Sequence:	SB03754-	Calibration:	2250016

COMPOUNDR	CONC. (ng/g dry)R	LOQ	LODR	DL	Q
9CL-PF3ONS-	0.40 U-	1.0-	0.40	0.20	
11CL-PF3OUDS-	0.40 U-	1.0-	0.40	0.20	

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0005-06 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09A (20)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/09 - 16:45

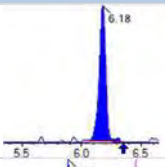
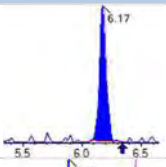
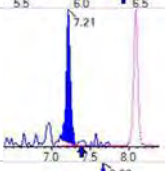
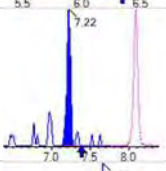
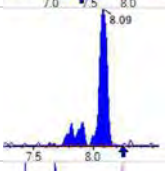
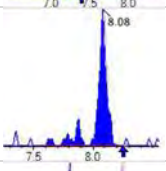
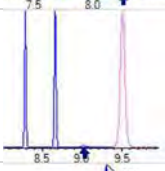
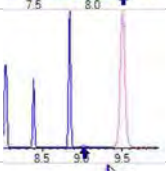
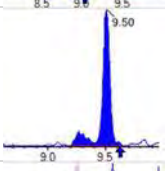
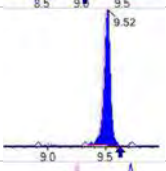
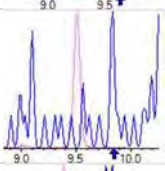
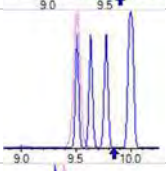
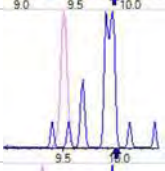
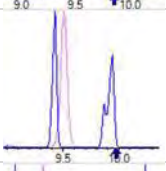
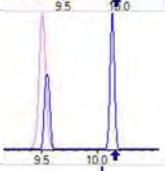
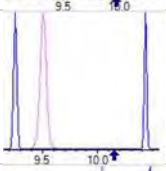
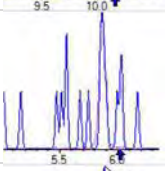
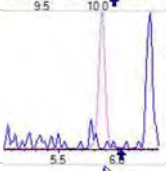
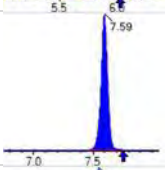
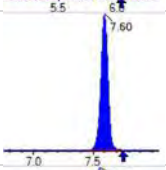
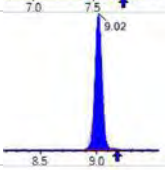
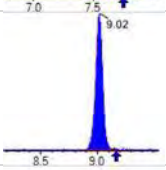
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(212.9 / 169.0) 232155	(3.76 , 1.00) (0.00 , N/A , 0.0)	55.1	N/A 0.0 0.0	3.5108	N/A			
PFPeA	(262.9 / 219.0) 2027361 (262.9 / 69.0) 24985	(5.08 , 1.00) (0.00 , N/A , 0.1)	824.7 392.5	0.0123 105.8 120.2	26.3777	N/A			
PFHxA	(313.0 / 269.0) 2275381 (313.0 / 119.0) 206787	(6.20 , 1.00) (0.00 , N/A , -0.1)	922.3 584.2	0.0909 101.1 93.5	15.8594	N/A			
PFHpA	(363.0 / 319.0) 651715 (363.0 / 169.0) 220106	(7.14 , 1.00) (0.00 , N/A , 0.1)	780.7 732.1	0.3377 117.7 108.4	5.0047	N/A			
PFOA	(413.0 / 369.0) 288285 (413.0 / 169.0) 96718	(7.95 , 1.00) (0.00 , N/A , -0.3)	530.5 399.6	0.3355 103.7 101.2	2.2684	N/A			
PFNA	(463.0 / 419.0) 30742 (463.0 / 169.0) 4490	(8.69 , 1.00) (-0.01 , N/A , -0.2)	103.8 71.6	0.1461 72.6 75.2	0.2937	N/A			
PFDA	(513.0 / 469.0) 9109 (513.0 / 169.0) 535	(9.37 , 1.00) (0.00 , N/A , -1.0)	29.1 3929.8	0.0587 66.2 59.1	0.0620	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) 5039 (713.0 / 169.0) 1578	(10.12 , 1.00) (-0.02 , N/A , -2.4)	35.1 20.4	0.3131 159.1 148.3	0.0347	N/A			IR2,

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-06
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (20)
Acquired: 2022/12/09 - 16:45

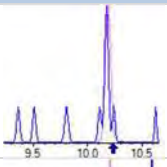
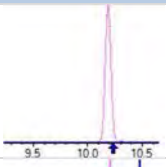
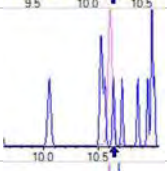
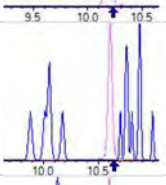
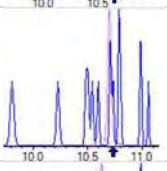
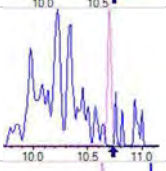
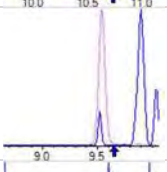
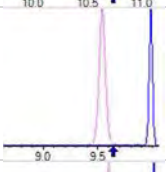
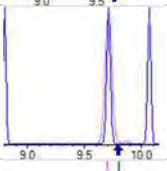
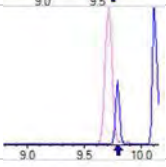
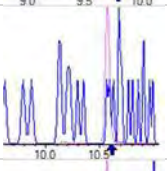
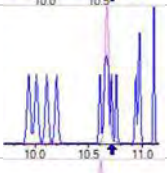
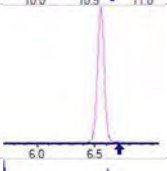
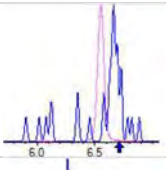
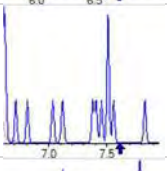
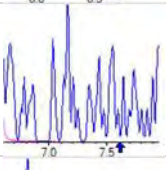
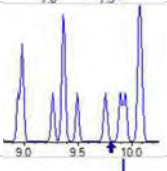
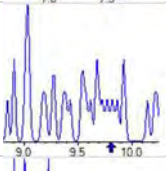
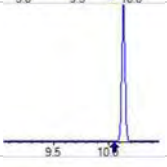
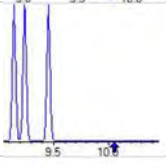
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) 12839 (298.9 / 99.0) 11394	(6.18 , 1.00) (0.00 , N/A , 0.2)	146.8 88.1	0.8874 131.0 142.3	0.0635	N/A			
PFPeS	(349.0 / 80.0) 7480 (349.0 / 99.0) 2487	(7.21 , 0.89) (N/A , 0.00 , -0.4)	52.9 48.5	0.3325 91.2 86.5	0.0201	N/A			
PFHxS	(399.0 / 80.0) 16791 (399.0 / 99.0) 5513	(8.09 , 1.00) (0.00 , N/A , 0.4)	6176.4 33882.6	0.3284 95.2 100.9	0.0510	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) 66055 (499.0 / 99.0) 15462	(9.50 , 1.00) (0.00 , N/A , -0.7)	166.5 132.9	0.2341 90.9 101.4	0.1909	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) 581048 (427.0 / 81.0) 388913	(7.59 , 1.00) (0.00 , N/A , -0.1)	875.0 889.7	0.6693 93.1 93.6	16.0973	N/A			
8:2FTS	(527.0 / 507.0) 427828 (527.0 / 81.0) 256117	(9.02 , 1.00) (0.00 , N/A , -0.2)	621.6 838.2	0.5986 96.0 93.5	13.4080	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-06
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (20)
Acquired: 2022/12/09 - 16:45

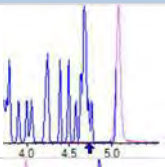
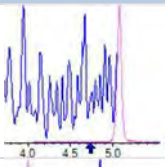
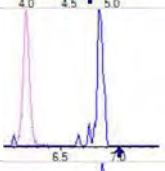
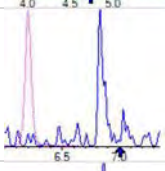
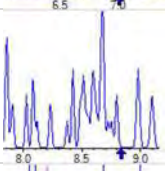
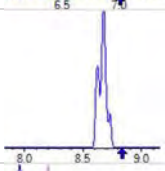
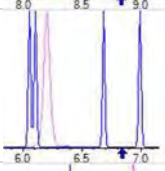
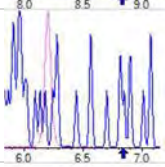
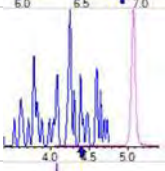
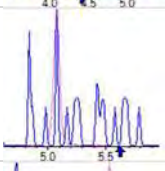
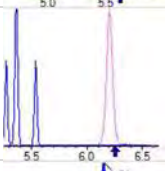
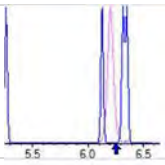
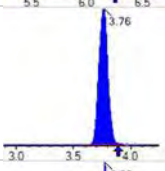
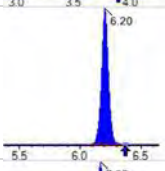
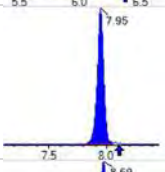
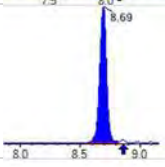
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) N/A (498.0 / 478.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	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

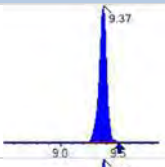
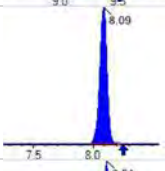
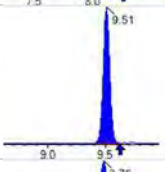
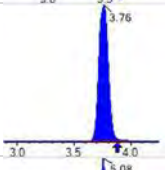
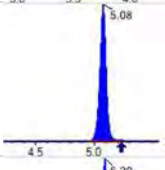
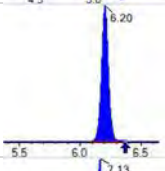
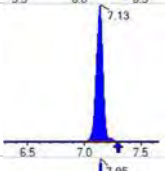
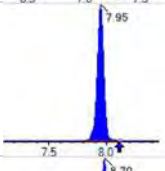
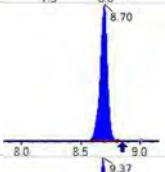
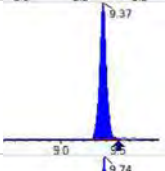
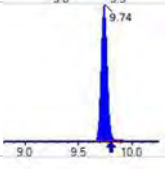
Sample I.D.: 22L0005-06
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (20)
Acquired: 2022/12/09 - 16:45

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) 91587	(3.76 , N/A) (N/A , 0.02 , N/A)	905.5	N/A	0.9528 [1.0000]	95.3% { 114.4% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 144586	(6.20 , N/A) (N/A , 0.00 , N/A)	650.3	N/A	1.1709 [1.0000]	117.1% { 123.4% }			
13C4_PFOA_IIS	(417.0 / 372.0) 140251	(7.95 , N/A) (N/A , 0.00 , N/A)	670.5	N/A	1.1831 [1.0000]	118.3% { 127.8% }			
13C5_PFNA_IIS	(468.0 / 423.0) 109965	(8.69 , N/A) (N/A , 0.00 , N/A)	195.1	N/A	1.1546 [1.0000]	115.5% { 112.3% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0005-06 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09A (20)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/09 - 16:45

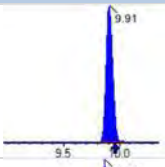
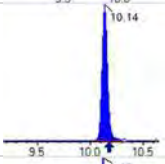
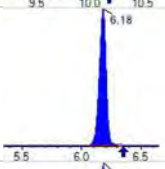
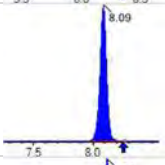
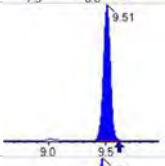
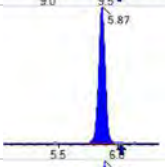
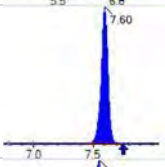
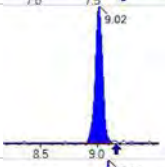
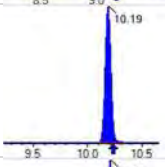
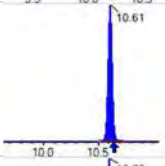
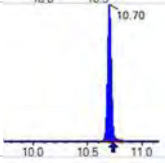
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDA_IIS	(515.1 / 470.1) 104657	(9.37 , N/A) (N/A , 0.00 , N/A)	766.0	N/A	1.2704 [1.0000]	127.0% { 120.0% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 243936	(8.09 , N/A) (N/A , -0.01 , N/A)	812.5	N/A	1.1365 [1.0000]	113.7% { 109.4% }			
13C4_PFOS_IIS	(502.8 / 79.9) 212013	(9.51 , N/A) (N/A , -0.01 , N/A)	577.2	N/A	1.1391 [1.0000]	113.9% { 99.8% }			
13C4_PFBA_EIS	(217.0 / 172.0) 694755	(3.76 , N/A) (N/A , 0.02 , N/A)	949.3	N/A	8.0912 [8.0000]	101.1% { 115.8% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 319812	(5.08 , N/A) (N/A , 0.01 , N/A)	899.7	N/A	3.0323 [4.0000]	75.8% { 94.7% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 284691	(6.20 , N/A) (N/A , 0.00 , N/A)	584.3	N/A	1.9304 [2.0000]	96.5% { 117.2% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 257100	(7.13 , N/A) (N/A , 0.00 , N/A)	513.1	N/A	1.9314 [2.0000]	96.6% { 110.2% }			
13C8_PFOA_EIS	(421.0 / 376.0) 246567	(7.95 , N/A) (N/A , 0.00 , N/A)	701.9	N/A	1.7284 [2.0000]	86.4% { 106.4% }			
13C9_PFNA_EIS	(472.0 / 427.0) 108582	(8.70 , N/A) (N/A , 0.00 , N/A)	522.2	N/A	1.0006 [1.0000]	100.1% { 116.5% }			
13C6_PFDA_EIS	(519.0 / 474.0) 144903	(9.37 , N/A) (N/A , 0.00 , N/A)	453.3	N/A	0.9532 [1.0000]	95.3% { 114.4% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 216625	(9.74 , N/A) (N/A , 0.00 , N/A)	731.7	N/A	1.0616 [1.0000]	106.2% { 120.6% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

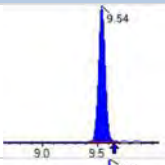
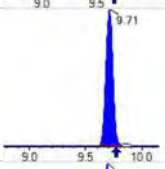
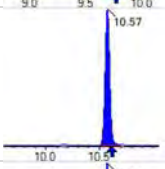
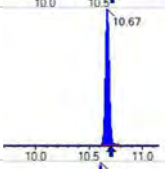
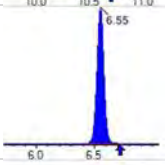
Sample I.D.: 22L0005-06
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (20)
Acquired: 2022/12/09 - 16:45

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) 258296	(9.91 , N/A) (N/A , 0.00 , N/A)	280.0	N/A	1.0430 [1.0000]	104.3% { 135.7% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 147483	(10.14 , N/A) (N/A , 0.00 , N/A)	248.9	N/A	0.8112 [1.0000]	81.1% { 97.4% }			
13C3_PFBS_EIS	(302.0 / 80.0) 662147	(6.18 , N/A) (N/A , 0.01 , N/A)	733.7	N/A	1.8470 [2.0000]	92.3% { 101.4% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 393026	(8.09 , N/A) (N/A , 0.00 , N/A)	871.7	N/A	1.9259 [2.0000]	96.3% { 104.3% }			
13C8_PFOS_EIS	(507.0 / 80.0) 616316	(9.51 , N/A) (N/A , 0.00 , N/A)	422.2	N/A	1.9069 [2.0000]	95.3% { 112.9% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 79258	(5.87 , N/A) (N/A , 0.01 , N/A)	498.6	N/A	3.9199 [4.0000]	98.0% { 127.6% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 91022	(7.60 , N/A) (N/A , 0.00 , N/A)	549.0	N/A	3.3555 [4.0000]	83.9% { 109.1% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 81274	(9.02 , N/A) (N/A , -0.01 , N/A)	317.9	N/A	3.4519 [4.0000]	86.3% { 101.1% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 850266	(10.19 , N/A) (N/A , 0.00 , N/A)	466.7	N/A	1.7233 [2.0000]	86.2% { 102.6% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 185449	(10.61 , N/A) (N/A , 0.00 , N/A)	853.1	N/A	1.2701 [2.0000]	63.5% { 92.9% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 170454	(10.70 , N/A) (N/A , 0.00 , N/A)	975.8	N/A	1.2876 [2.0000]	64.4% { 85.5% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0005-06 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09A (20)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/09 - 16:45

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) 230964	(9.54 , N/A) (N/A , 0.00 , N/A)	191.0	N/A	3.2120 [4.0000]	80.3% { 90.2% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 218288	(9.71 , N/A) (N/A , 0.00 , N/A)	664.5	N/A	3.5320 [4.0000]	88.3% { 89.8% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 280585	(10.57 , N/A) (N/A , 0.00 , N/A)	595.3	N/A	11.2512 [20.0000]	56.3% { 68.7% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 157824	(10.67 , N/A) (N/A , 0.00 , N/A)	1035.9	N/A	12.4205 [20.0000]	62.1% { 75.2% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 661575	(6.55 , N/A) (N/A , 0.00 , N/A)	677.9	N/A	6.8113 [8.0000]	85.1% { 104.7% }			

FORM IR
ANALYSIS DATA SHEETR

SB-4-0.5-113022-

Laboratory:-	APPL, LLC-			Work Order:-	22L0005-
Client:-	Tidewater, Inc.-			Project:-	NASA JPL-
Matrix:-	Solid-	Laboratory ID:-	22L0005-07-	File ID:	S2022-12-09A (24)-
Sampled:-	11/30/22 11:00-	Prepared:-	12/01/22 14:45-	Analyzed:-	12/09/22 17:36
Solids:-	97.80-	Preparation:-	Table B-15-	Dilution:-	1-
Initial/Final:-	1.04 g / 2 mL-			Instrument:-	Saphira-
Batch:-	BBL0032-	Sequence:-	SB03754-	Calibration:-	2250016

COMPOUNDR	CONC. (ng/g dry)R	LOQ	LODR	DL	Q
PFBA-	0.39 U-	0.98-	0.39	0.098	
PFPEA-	0.39 U-	0.98-	0.39	0.15	
PFHXA-	0.39 U-	0.98-	0.39	0.098	
PFHPA-	0.39 U-	0.98-	0.39	0.098	
PFOA-	0.39 U-	0.98-	0.39	0.15	
PFNA-	0.39 U-	0.98-	0.39	0.098	
PFDA-	0.18 J-	0.98-	0.39	0.15	
PFUnA-	0.39 U-	0.98-	0.39	0.098	
PFDOA-	0.39 U-	0.98-	0.39	0.15	
PFTRDA-	0.39 U-	0.98-	0.39	0.098	
PFTEDA-	0.39 U-	0.98-	0.39	0.20	
PFBS-	0.39 U-	0.98-	0.39	0.098	
PFPES-	0.88 U-	0.98-	0.88	0.41	
PFHXS-	0.39 U-	0.98-	0.39	0.15	
PFHPS-	0.39 U-	0.98-	0.39	0.15	
PFOS-	1.8-	0.98-	0.39	0.098	
PFNS-	0.79 U-	0.98-	0.79	0.38	
PFDS-	0.39 U-	0.98-	0.39	0.20	
4:2FTS-	0.39 U-	0.98-	0.39	0.20	
6:2FTS-	0.39 U-	0.98-	0.39	0.20	
8:2FTS-	0.39 U-	0.98-	0.39	0.15	
PFOSA-	0.39 U-	0.98-	0.39	0.098	
NMeFOSA-	0.88 U-	0.98-	0.88	0.48	
NEtFOSA-	0.88 U-	0.98-	0.88	0.48	
NMeFOSAA-	0.39 U-	0.98-	0.39	0.20	
NEtFOSAA-	0.39 U-	0.98-	0.39	0.20	
NMeFOSE-	0.81 U-	0.98-	0.81	0.40	
NEtFOSE-	0.64 U-	0.98-	0.64	0.30	
HFPO-DA-	0.39 U-	0.98-	0.39	0.20	
ADONA-	0.39 U-	0.98-	0.39	0.20	

FORM IR
ANALYSIS DATA SHEETR

SB-4-0.5-113022-

Laboratory:-	APPL, LLC-			Work Order:-	22L0005-
Client:-	Tidewater, Inc.-			Project:-	NASA JPL-
Matrix:-	Solid-	Laboratory ID:-	22L0005-07-	File ID:	S2022-12-09A (24)-
Sampled:-	11/30/22 11:00-	Prepared:-	12/01/22 14:45-	Analyzed:-	12/09/22 17:36
Solids:-	97.80-	Preparation:-	Table B-15-	Dilution:-	1-
Initial/Final:-	1.04 g / 2 mL-			Instrument:-	Saphira-
Batch:-	BBL0032-	Sequence:-	SB03754-	Calibration:-	2250016

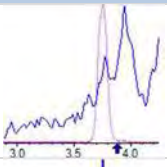
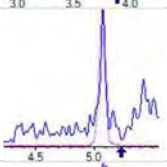
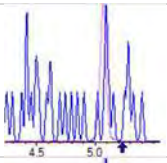
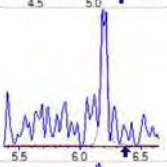
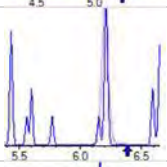
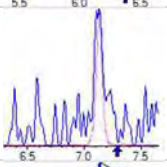
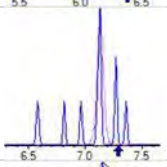
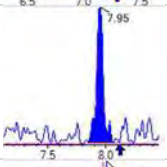
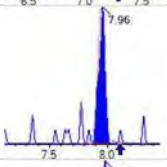
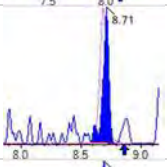
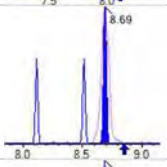
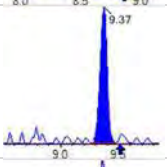
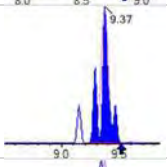
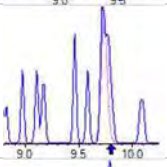
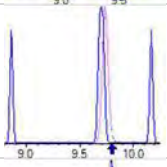
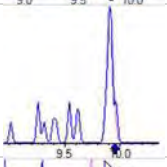
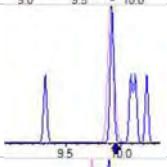
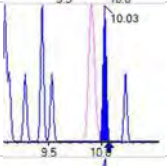
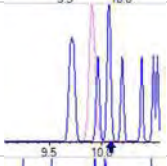
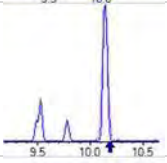
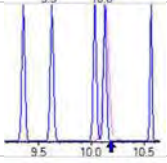
COMPOUNDR	CONC. (ng/g dry)R	LOQ	LODR	DL	Q
9CL-PF3ONS-	0.39 U-	0.98-	0.39	0.20	
11CL-PF3OUDS-	0.39 U-	0.98-	0.39	0.20	

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-07
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (24)
Acquired: 2022/12/09 - 17:36

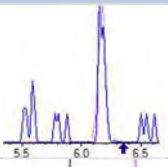
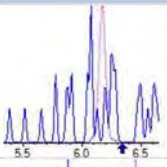
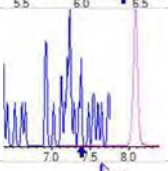
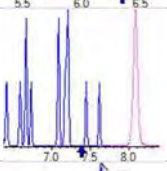
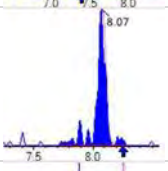
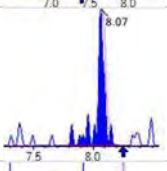
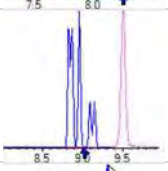
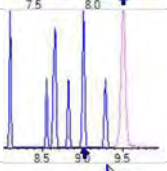
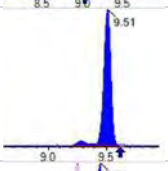
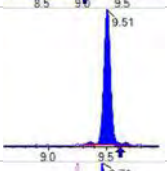
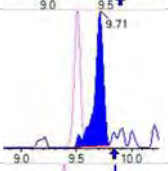
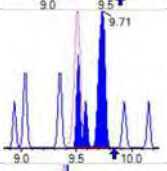
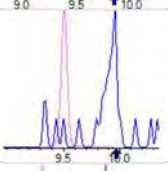
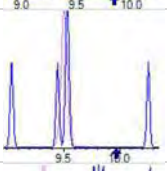
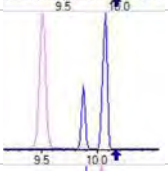
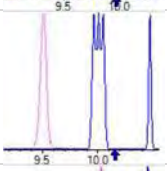
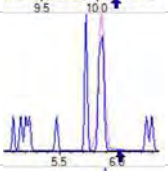
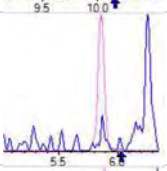
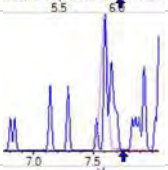
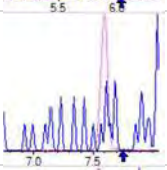
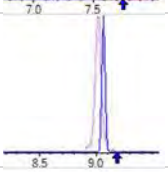
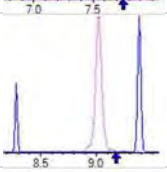
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(212.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	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) 6947 (413.0 / 169.0) 2109	(7.95 , 1.00) (0.00 , N/A , -0.6)	45.5 41.0	0.3036 93.8 91.6	0.0460	N/A			
PFNA	(463.0 / 419.0) 4118 (463.0 / 169.0) 290	(8.71 , 1.00) (0.02 , N/A , 1.5)	39.1 28.0	0.0705 35.0 36.3	0.0362	N/A			IR1,
PFDA	(513.0 / 469.0) 13653 (513.0 / 169.0) 2146	(9.37 , 1.00) (0.00 , N/A , 0.2)	44.9 126.0	0.1572 177.1 158.2	0.0922	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) 562 (663.0 / 169.0) N/A	(10.03 , 1.01) (N/A , 0.00 , #Value!)	15.2 N/A	N/A 0.0 0.0	0.0027	N/A			IR1,
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.: 22L0005-07
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (24)
Acquired: 2022/12/09 - 17:36

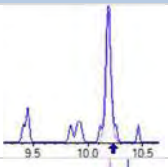
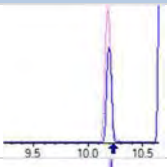
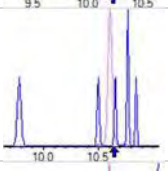
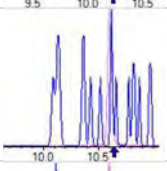
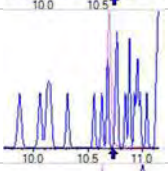
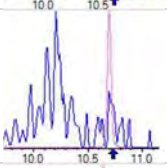
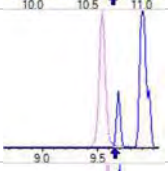
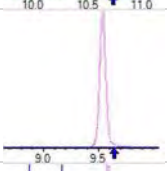
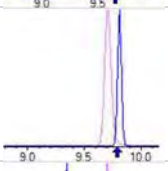
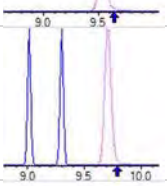
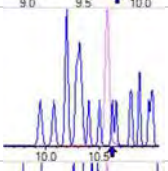
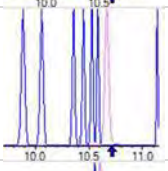
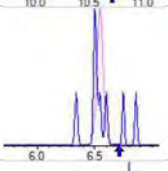
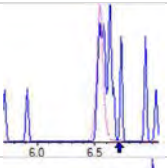
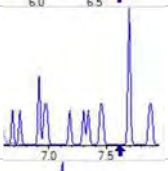
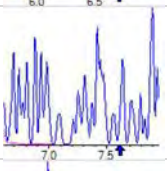
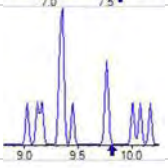
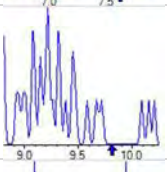
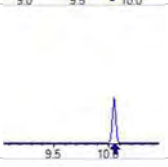
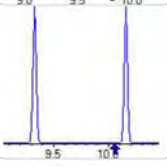
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) N/A (298.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	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) 9033 (399.0 / 99.0) 3122	(8.07 , 1.00) (-0.01 , N/A , 0.4)	36376.9 18723.6	0.3456 100.2 106.2	0.0231	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) 386241 (499.0 / 99.0) 87874	(9.51 , 1.00) (0.00 , N/A , 0.2)	160.3 236.6	0.2275 88.3 98.5	0.9201	N/A			
PFNS	(549.0 / 80.0) 16384 (549.0 / 99.0) 2391	(9.71 , 1.02) (N/A , -0.08 , 0.3)	60.5 542.4	0.1459 61.0 57.6	0.0332	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.: 22L0005-07
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (24)
Acquired: 2022/12/09 - 17:36

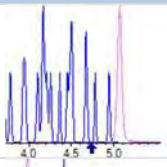
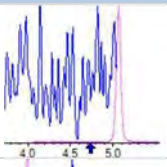
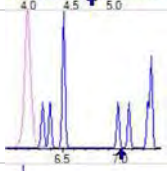
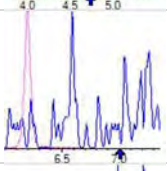
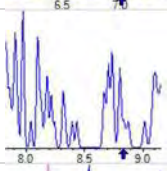
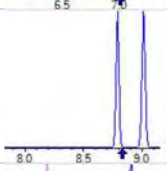
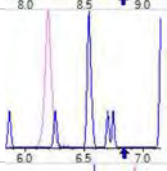
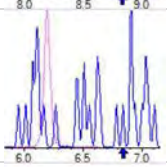
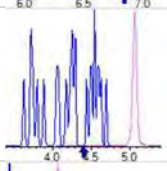
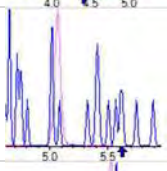
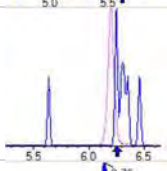
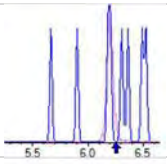
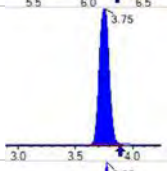
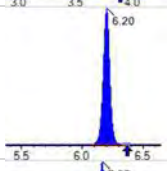
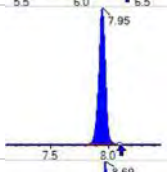
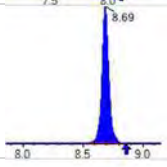
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) N/A (498.0 / 478.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	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.: 22L0005-07
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (24)
Acquired: 2022/12/09 - 17:36

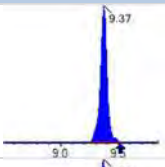
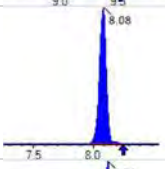
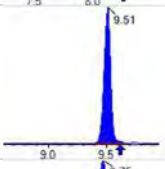
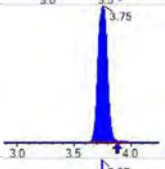
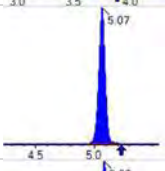
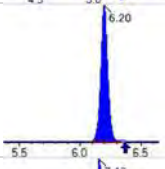
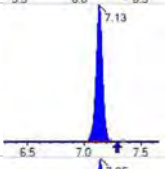
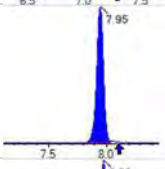
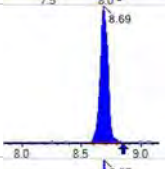
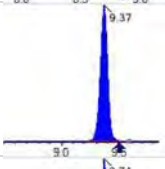
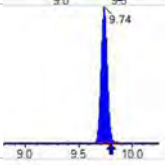
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
3:3FTCA	(241.0 / 177.0) N/A (241.0 / 117.0) N/A	(N/A , N/A) (N/A , N/A , 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) 94610	(3.75 , N/A) (N/A , 0.01 , N/A)	687.5	N/A	0.9842 [1.0000]	98.4% { 118.2% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 145219	(6.20 , N/A) (N/A , 0.00 , N/A)	605.2	N/A	1.1760 [1.0000]	117.6% { 123.9% }			
13C4_PFOA_IIS	(417.0 / 372.0) 133840	(7.95 , N/A) (N/A , 0.00 , N/A)	394.9	N/A	1.1290 [1.0000]	112.9% { 121.9% }			
13C5_PFNA_IIS	(468.0 / 423.0) 106130	(8.69 , N/A) (N/A , -0.01 , N/A)	441.2	N/A	1.1143 [1.0000]	111.4% { 108.4% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

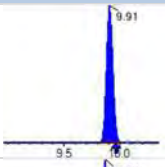
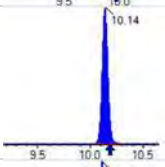
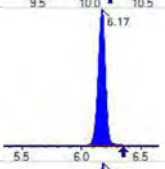
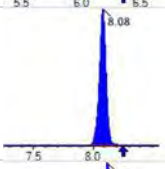
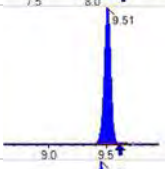
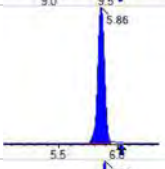
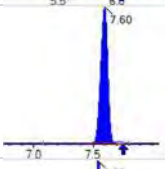
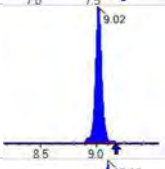
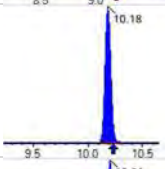
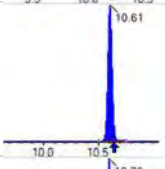
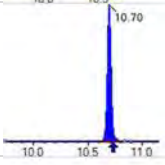
Sample I.D.: 22L0005-07
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (24)
Acquired: 2022/12/09 - 17:36

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) 96505	(9.37 , N/A) (N/A , 0.00 , N/A)	1932.5	N/A	1.1714 [1.0000]	117.1% { 110.7% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 239319	(8.08 , N/A) (N/A , -0.01 , N/A)	1045.2	N/A	1.1150 [1.0000]	111.5% { 107.3% }			
13C4_PFOS_IIS	(502.8 / 79.9) 240412	(9.51 , N/A) (N/A , 0.00 , N/A)	567.9	N/A	1.2917 [1.0000]	129.2% { 113.2% }			
13C4_PFBA_EIS	(217.0 / 172.0) 844693	(3.75 , N/A) (N/A , 0.01 , N/A)	1040.9	N/A	9.5230 [8.0000]	119.0% { 140.8% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 419085	(5.07 , N/A) (N/A , 0.00 , N/A)	915.5	N/A	3.9562 [4.0000]	98.9% { 124.0% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 362877	(6.20 , N/A) (N/A , -0.01 , N/A)	1097.3	N/A	2.4498 [2.0000]	122.5% { 149.4% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 269249	(7.13 , N/A) (N/A , 0.00 , N/A)	741.1	N/A	2.0138 [2.0000]	100.7% { 115.5% }			
13C8_PFOA_EIS	(421.0 / 376.0) 292874	(7.95 , N/A) (N/A , 0.00 , N/A)	691.2	N/A	2.1514 [2.0000]	107.6% { 126.4% }			
13C9_PFNA_EIS	(472.0 / 427.0) 118082	(8.69 , N/A) (N/A , 0.00 , N/A)	410.6	N/A	1.1274 [1.0000]	112.7% { 126.7% }			
13C6_PFDA_EIS	(519.0 / 474.0) 145915	(9.37 , N/A) (N/A , 0.00 , N/A)	268.9	N/A	1.0409 [1.0000]	104.1% { 115.2% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 249482	(9.74 , N/A) (N/A , 0.00 , N/A)	318.7	N/A	1.3259 [1.0000]	132.6% { 138.9% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0005-07 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09A (24)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/09 - 17:36

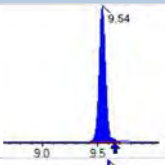
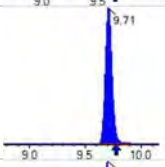
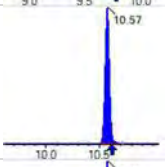
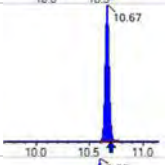
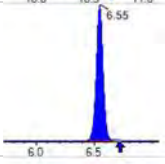
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDoA_EIS	(615.0 / 570.0) 259969	(9.91 , N/A) (N/A , 0.00 , N/A)	503.2	N/A	1.1384 [1.0000]	113.8% { 136.5% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 184618	(10.14 , N/A) (N/A , 0.00 , N/A)	403.9	N/A	1.1013 [1.0000]	110.1% { 122.0% }			
13C3_PFBS_EIS	(302.0 / 80.0) 751107	(6.17 , N/A) (N/A , 0.00 , N/A)	865.4	N/A	2.1355 [2.0000]	106.8% { 115.0% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 465836	(8.08 , N/A) (N/A , -0.01 , N/A)	913.9	N/A	2.3268 [2.0000]	116.3% { 123.6% }			
13C8_PFOS_EIS	(507.0 / 80.0) 747806	(9.51 , N/A) (N/A , 0.00 , N/A)	490.1	N/A	2.0404 [2.0000]	102.0% { 137.0% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 95370	(5.86 , N/A) (N/A , 0.00 , N/A)	626.3	N/A	4.8078 [4.0000]	120.2% { 153.5% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 109178	(7.60 , N/A) (N/A , 0.00 , N/A)	529.6	N/A	4.1024 [4.0000]	102.6% { 130.9% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 91362	(9.02 , N/A) (N/A , -0.01 , N/A)	297.4	N/A	3.9552 [4.0000]	98.9% { 113.7% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 913795	(10.18 , N/A) (N/A , 0.00 , N/A)	823.8	N/A	1.6333 [2.0000]	81.7% { 110.3% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 200178	(10.61 , N/A) (N/A , 0.00 , N/A)	748.7	N/A	1.2091 [2.0000]	60.5% { 100.2% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 180105	(10.70 , N/A) (N/A , 0.00 , N/A)	772.5	N/A	1.1998 [2.0000]	60.0% { 90.4% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-07
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (24)
Acquired: 2022/12/09 - 17:36

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) 348080	(9.54 , N/A) (N/A , 0.00 , N/A)	367.8	N/A	4.2690 [4.0000]	106.7% { 135.9% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 306720	(9.71 , N/A) (N/A , 0.00 , N/A)	454.4	N/A	4.3767 [4.0000]	109.4% { 126.2% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 378322	(10.57 , N/A) (N/A , 0.00 , N/A)	971.4	N/A	13.3784 [20.0000]	66.9% { 92.6% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 202755	(10.67 , N/A) (N/A , 0.00 , N/A)	845.2	N/A	14.0716 [20.0000]	70.4% { 96.7% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 796433	(6.55 , N/A) (N/A , 0.00 , N/A)	867.3	N/A	8.1640 [8.0000]	102.0% { 126.1% }			

FORM IR
ANALYSIS DATA SHEETR

SB-4-2.0-113022-

Laboratory:-	APPL, LLC-			Work Order:-	22L0005-
Client:-	Tidewater, Inc.-			Project:-	NASA JPL-
Matrix:-	Solid-	Laboratory ID:-	22L0005-08-	File ID:	S2022-12-09A (26)-
Sampled:-	11/30/22 11:10-	Prepared:-	12/01/22 14:45-	Analyzed:-	12/09/22 18:01
Solids:-	94.12-	Preparation:-	Table B-15-	Dilution:-	1-
Initial/Final:-	1.04 g / 2 mL-			Instrument:-	Saphira-
Batch:-	BBL0032-	Sequence:-	SB03754-	Calibration:-	2250016

COMPOUNDR	CONC. (ng/g dry)R	LOQ	LODR	DL	Q
PFBA-	0.41 U-	1.0-	0.41	0.10	
PFPEA-	0.41 U-	1.0-	0.41	0.15	
PFHXA-	0.41 U-	1.0-	0.41	0.10	
PFHPA-	0.41 U-	1.0-	0.41	0.10	
PFOA-	0.41 U-	1.0-	0.41	0.15	
PFNA-	0.41 U-	1.0-	0.41	0.10	
PFDA-	0.41 U-	1.0-	0.41	0.15	
PFUnA-	0.41 U-	1.0-	0.41	0.10	
PFDOA-	0.41 U-	1.0-	0.41	0.15	
PFTRDA-	0.41 U-	1.0-	0.41	0.10	
PFTEDA-	0.41 U-	1.0-	0.41	0.20	
PFBS-	0.41 U-	1.0-	0.41	0.10	
PFPES-	0.92 U-	1.0-	0.92	0.42	
PFHXS-	0.41 U-	1.0-	0.41	0.15	
PFHPS-	0.41 U-	1.0-	0.41	0.15	
PFOS-	0.13 J-	1.0-	0.41	0.10	
PFNS-	0.82 U-	1.0-	0.82	0.40	
PFDS-	0.41 U-	1.0-	0.41	0.20	
4:2FTS-	0.41 U-	1.0-	0.41	0.20	
6:2FTS-	0.41 U-	1.0-	0.41	0.20	
8:2FTS-	0.41 U-	1.0-	0.41	0.15	
PFOSA-	0.41 U-	1.0-	0.41	0.10	
NMeFOSA-	0.92 U-	1.0-	0.92	0.50	
NEtFOSA-	0.92 U-	1.0-	0.92	0.50	
NMeFOSAA-	0.41 U-	1.0-	0.41	0.20	
NEtFOSAA-	0.41 U-	1.0-	0.41	0.20	
NMeFOSE-	0.84 U-	1.0-	0.84	0.42	
NEtFOSE-	0.66 U-	1.0-	0.66	0.32	
HFPO-DA-	0.41 U-	1.0-	0.41	0.20	
ADONA-	0.41 U-	1.0-	0.41	0.20	

FORM IR
ANALYSIS DATA SHEETR

SB-4-2.0-113022-

Laboratory:-	APPL, LLC-			Work Order:-	22L0005-
Client:-	Tidewater, Inc.-			Project:-	NASA JPL-
Matrix:-	Solid-	Laboratory ID:-	22L0005-08-	File ID:	S2022-12-09A (26)-
Sampled:-	11/30/22 11:10-	Prepared:-	12/01/22 14:45-	Analyzed:-	12/09/22 18:01
Solids:-	94.12-	Preparation:-	Table B-15-	Dilution:-	1-
Initial/Final:-	1.04 g / 2 mL-			Instrument:-	Saphira-
Batch:-	BBL0032-	Sequence:-	SB03754-	Calibration:-	2250016

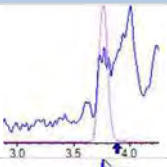
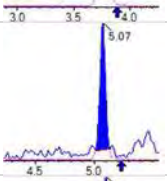
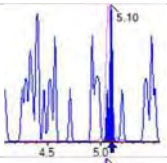
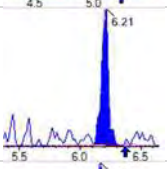
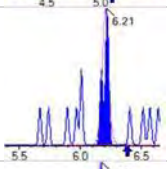
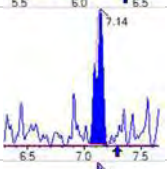
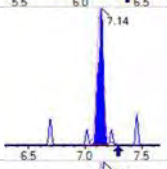
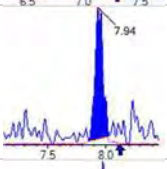
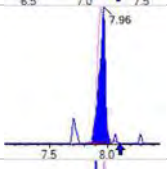
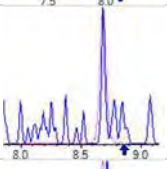
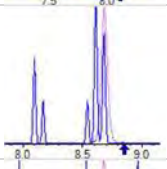
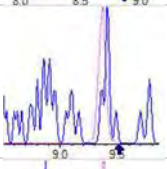
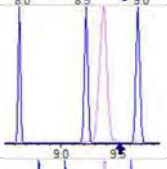
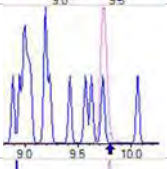
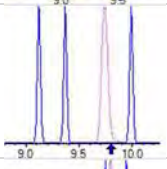
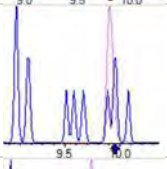
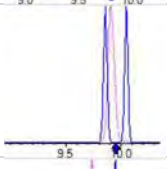
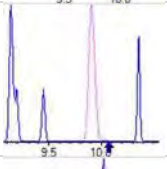
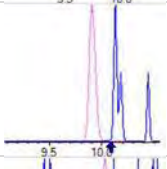
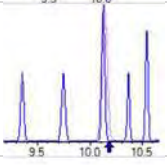
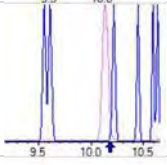
COMPOUNDR	CONC. (ng/g dry)R	LOQ	LODR	DL	Q
9CL-PF3ONS-	0.41 U-	1.0-	0.41	0.20	
11CL-PF3OUDS-	0.41 U-	1.0-	0.41	0.20	

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-08
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (26)
Acquired: 2022/12/09 - 18:01

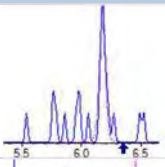
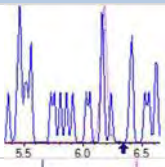
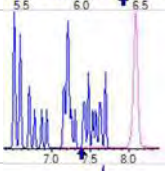
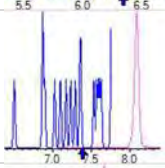
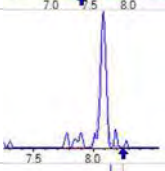
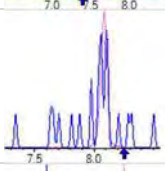
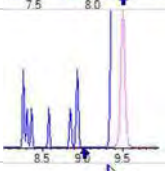
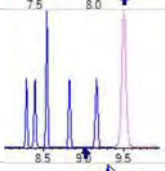
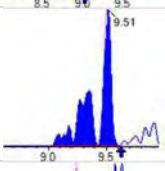
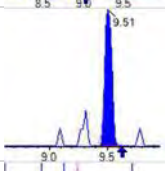
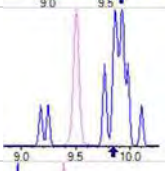
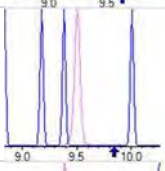
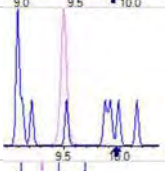
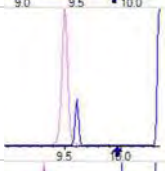
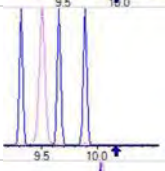
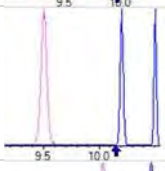
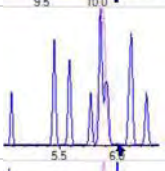
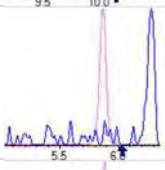
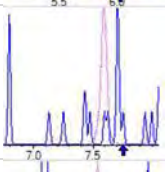
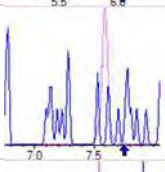
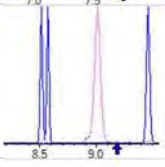
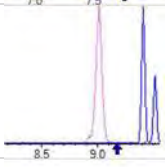
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(212.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFPeA	(262.9 / 219.0) 3600 (262.9 / 69.0) 73	(5.07 , 1.00) (0.00 , N/A , -1.4)	58.5 55.8	0.0202 173.6 197.2	0.0409	N/A			
PFHxA	(313.0 / 269.0) 4249 (313.0 / 119.0) 515	(6.21 , 1.00) (0.00 , N/A , -0.5)	31.3 17.3	0.1213 135.0 124.9	0.0323	N/A			
PFHpA	(363.0 / 319.0) 3297 (363.0 / 169.0) 1578	(7.14 , 1.00) (0.01 , N/A , 0.0)	20.0 74.2	0.4787 166.8 153.6	0.0273	N/A			IR2,
PFOA	(413.0 / 369.0) 6874 (413.0 / 169.0) 2863	(7.94 , 1.00) (0.00 , N/A , -1.4)	23.1 151.6	0.4166 128.8 125.6	0.0507	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.: 22L0005-08
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (26)
Acquired: 2022/12/09 - 18:01

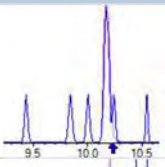
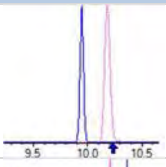
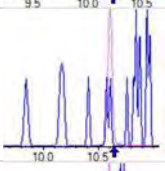
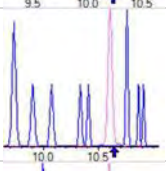
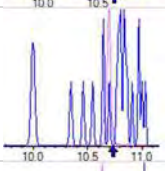
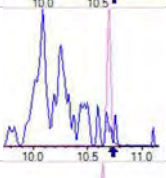
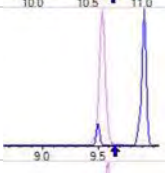
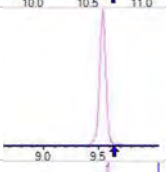
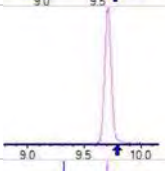
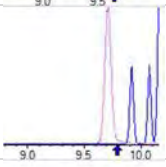
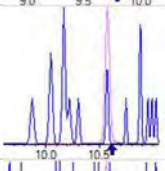
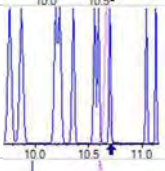
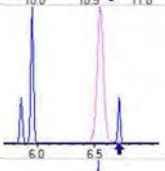
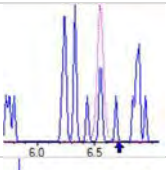
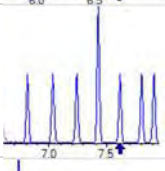
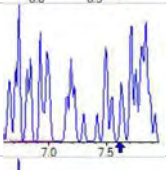
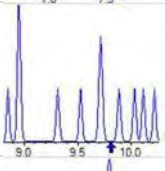
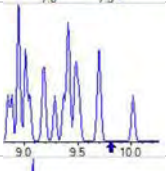
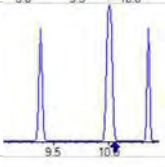
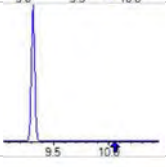
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) N/A (298.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	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) 25010 (499.0 / 99.0) 4256	(9.51 , 1.00) (0.01 , N/A , 0.3)	96.2 76.4	0.1702 66.1 73.7	0.0635	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.: 22L0005-08
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (26)
Acquired: 2022/12/09 - 18:01

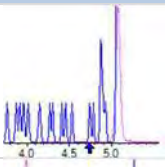
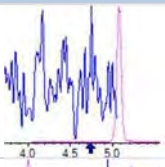
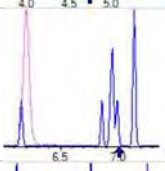
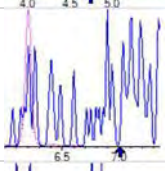
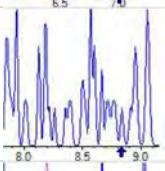
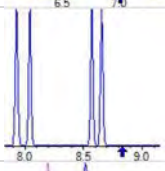
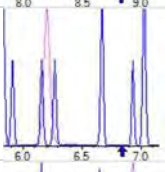
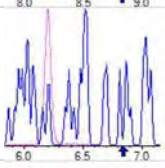
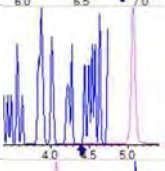
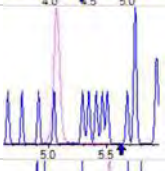
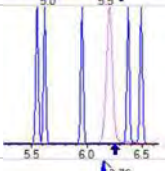
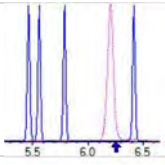
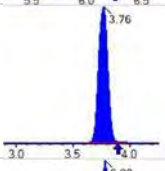
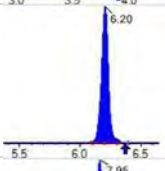
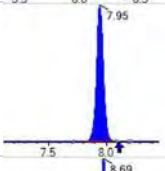
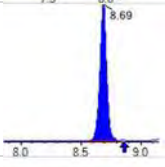
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) N/A (498.0 / 478.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	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.: 22L0005-08
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (26)
Acquired: 2022/12/09 - 18:01

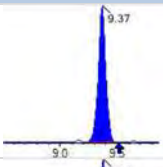
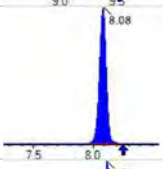
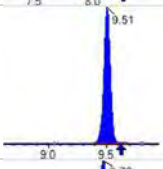
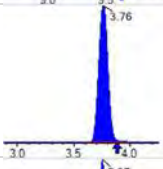
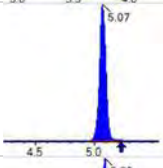
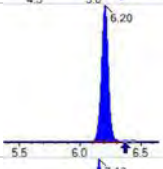
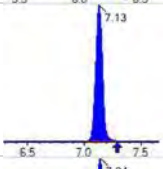
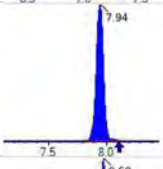
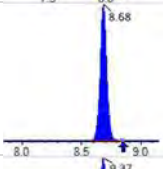
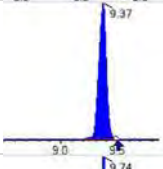
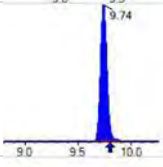
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
3:3FTCA	(241.0 / 177.0) N/A (241.0 / 117.0) N/A	(N/A , N/A) (N/A , N/A , 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) 86029	(3.76 , N/A) (N/A , 0.03 , N/A)	820.0	N/A	0.8950 [1.0000]	89.5% { 107.5% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 121883	(6.20 , N/A) (N/A , 0.00 , N/A)	458.5	N/A	0.9870 [1.0000]	98.7% { 104.0% }			
13C4_PFOA_IIS	(417.0 / 372.0) 125249	(7.95 , N/A) (N/A , 0.00 , N/A)	395.2	N/A	1.0565 [1.0000]	105.7% { 114.1% }			
13C5_PFNA_IIS	(468.0 / 423.0) 102662	(8.69 , N/A) (N/A , -0.01 , N/A)	303.8	N/A	1.0779 [1.0000]	107.8% { 104.9% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-08
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (26)
Acquired: 2022/12/09 - 18:01

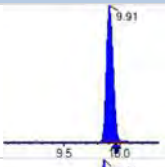
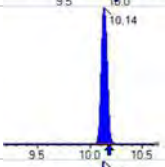
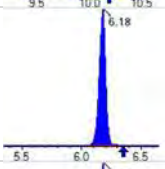
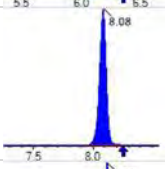
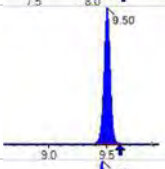
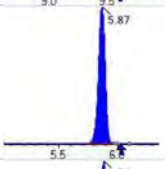
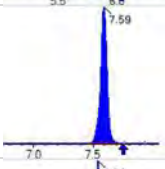
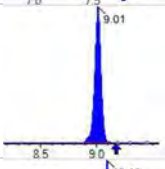
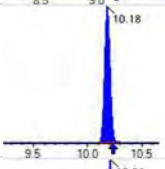
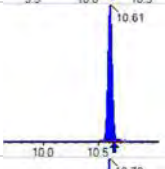
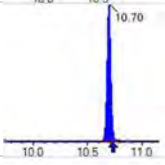
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDA_IIS	(515.1 / 470.1) 84893	(9.37 , N/A) (N/A , -0.01 , N/A)	385.1	N/A	1.0305 [1.0000]	103.0% { 97.4% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 225966	(8.08 , N/A) (N/A , -0.01 , N/A)	1017.5	N/A	1.0528 [1.0000]	105.3% { 101.3% }			
13C4_PFOS_IIS	(502.8 / 79.9) 193111	(9.51 , N/A) (N/A , -0.01 , N/A)	403.7	N/A	1.0375 [1.0000]	103.8% { 90.9% }			
13C4_PFBA_EIS	(217.0 / 172.0) 703058	(3.76 , N/A) (N/A , 0.02 , N/A)	1049.7	N/A	8.7169 [8.0000]	109.0% { 117.2% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 366513	(5.07 , N/A) (N/A , 0.01 , N/A)	980.4	N/A	4.1223 [4.0000]	103.1% { 108.5% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 261341	(6.20 , N/A) (N/A , 0.00 , N/A)	581.6	N/A	2.1022 [2.0000]	105.1% { 107.6% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 238589	(7.13 , N/A) (N/A , 0.00 , N/A)	868.4	N/A	2.1261 [2.0000]	106.3% { 102.3% }			
13C8_PFOA_EIS	(421.0 / 376.0) 262804	(7.94 , N/A) (N/A , -0.01 , N/A)	600.7	N/A	2.0629 [2.0000]	103.1% { 113.4% }			
13C9_PFNA_EIS	(472.0 / 427.0) 123100	(8.68 , N/A) (N/A , -0.01 , N/A)	586.7	N/A	1.2151 [1.0000]	121.5% { 132.1% }			
13C6_PFDA_EIS	(519.0 / 474.0) 133897	(9.37 , N/A) (N/A , 0.00 , N/A)	398.6	N/A	1.0859 [1.0000]	108.6% { 105.7% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 198250	(9.74 , N/A) (N/A , 0.00 , N/A)	733.7	N/A	1.1977 [1.0000]	119.8% { 110.4% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

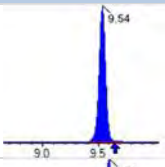
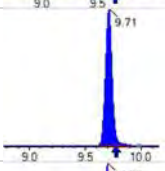
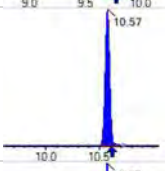
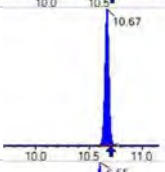
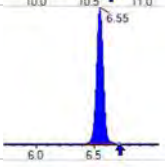
Sample I.D.: 22L0005-08
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (26)
Acquired: 2022/12/09 - 18:01

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) 214205	(9.91 , N/A) (N/A , 0.00 , N/A)	628.8	N/A	1.0663 [1.0000]	106.6% { 112.5% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 172191	(10.14 , N/A) (N/A , 0.00 , N/A)	443.1	N/A	1.1677 [1.0000]	116.8% { 113.8% }			
13C3_PFBS_EIS	(302.0 / 80.0) 766886	(6.18 , N/A) (N/A , 0.01 , N/A)	1193.2	N/A	2.3092 [2.0000]	115.5% { 117.4% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 408743	(8.08 , N/A) (N/A , 0.00 , N/A)	1131.7	N/A	2.1622 [2.0000]	108.1% { 108.5% }			
13C8_PFOS_EIS	(507.0 / 80.0) 701604	(9.50 , N/A) (N/A , -0.01 , N/A)	415.5	N/A	2.3833 [2.0000]	119.2% { 128.5% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 86811	(5.87 , N/A) (N/A , 0.01 , N/A)	576.9	N/A	4.6349 [4.0000]	115.9% { 139.8% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 108715	(7.59 , N/A) (N/A , 0.00 , N/A)	620.5	N/A	4.3264 [4.0000]	108.2% { 130.3% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 89506	(9.01 , N/A) (N/A , -0.01 , N/A)	444.9	N/A	4.1038 [4.0000]	102.6% { 111.3% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 875562	(10.18 , N/A) (N/A , 0.00 , N/A)	790.1	N/A	1.9482 [2.0000]	97.4% { 105.7% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 236560	(10.61 , N/A) (N/A , 0.00 , N/A)	787.8	N/A	1.7788 [2.0000]	88.9% { 118.5% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 227845	(10.70 , N/A) (N/A , 0.00 , N/A)	840.0	N/A	1.8895 [2.0000]	94.5% { 114.3% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0005-08 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09A (26)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/09 - 18:01

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) 276774	(9.54 , N/A) (N/A , 0.00 , N/A)	270.2	N/A	4.2259 [4.0000]	105.6% { 108.1% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 294714	(9.71 , N/A) (N/A , 0.00 , N/A)	332.3	N/A	5.2355 [4.0000]	130.9% { 121.2% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 438959	(10.57 , N/A) (N/A , 0.00 , N/A)	847.1	N/A	19.3247 [20.0000]	96.6% { 107.5% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 222841	(10.67 , N/A) (N/A , 0.00 , N/A)	1285.1	N/A	19.2538 [20.0000]	96.3% { 106.2% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 705820	(6.55 , N/A) (N/A , 0.00 , N/A)	813.7	N/A	8.6204 [8.0000]	107.8% { 111.8% }			

FORM IR
ANALYSIS DATA SHEETR

SB-5-0.5-113022-

Laboratory:-	APPL, LLC-			Work Order:-	22L0005-
Client:-	Tidewater, Inc.-			Project:-	NASA JPL-
Matrix:-	Solid-	Laboratory ID:-	22L0005-09-	File ID:	S2022-12-09A (28)-
Sampled:-	11/30/22 11:20-	Prepared:-	12/01/22 14:45-	Analyzed:-	12/09/22 18:26
Solids:-	95.42-	Preparation:-	Table B-15-	Dilution:-	1-
Initial/Final:-	1.08 g / 2 mL-			Instrument:-	Saphira-
Batch:-	BBL0032-	Sequence:-	SB03754-	Calibration:-	2250016

COMPOUNDR	CONC. (ng/g dry)R	LOQ	LODR	DL	Q
PFBA-	0.39 U-	0.97-	0.39	0.097	
PFPEA-	0.39 U-	0.97-	0.39	0.15	
PFHXA-	0.39 U-	0.97-	0.39	0.097	
PFHPA-	0.39 U-	0.97-	0.39	0.097	
PFOA-	0.39 U-	0.97-	0.39	0.15	
PFNA-	0.39 U-	0.97-	0.39	0.097	
PFDA-	0.39 U-	0.97-	0.39	0.15	
PFUnA-	0.39 U-	0.97-	0.39	0.097	
PFDOA-	0.39 U-	0.97-	0.39	0.15	
PFTRDA-	0.39 U-	0.97-	0.39	0.097	
PFTEDA-	0.39 U-	0.97-	0.39	0.19	
PFBS-	0.39 U-	0.97-	0.39	0.097	
PFPES-	0.87 U-	0.97-	0.87	0.40	
PFHXS-	0.39 U-	0.97-	0.39	0.15	
PFHPS-	0.39 U-	0.97-	0.39	0.15	
PFOS-	1.7-	0.97-	0.39	0.097	
PFNS-	0.78 U-	0.97-	0.78	0.38	
PFDS-	0.39 U-	0.97-	0.39	0.19	
4:2FTS-	0.39 U-	0.97-	0.39	0.19	
6:2FTS-	0.39 U-	0.97-	0.39	0.19	
8:2FTS-	0.39 U-	0.97-	0.39	0.15	
PFOSA-	0.39 U-	0.97-	0.39	0.097	
NMeFOSA-	0.87 U-	0.97-	0.87	0.48	
NEtFOSA-	0.87 U-	0.97-	0.87	0.48	
NMeFOSAA-	0.39 U-	0.97-	0.39	0.19	
NEtFOSAA-	0.39 U-	0.97-	0.39	0.19	
NMeFOSE-	0.80 U-	0.97-	0.80	0.39	
NEtFOSE-	0.63 U-	0.97-	0.63	0.30	
HFPO-DA-	0.39 U-	0.97-	0.39	0.19	
ADONA-	0.39 U-	0.97-	0.39	0.19	

FORM IR
ANALYSIS DATA SHEETR

SB-5-0.5-113022-

Laboratory:-	APPL, LLC-			Work Order:-	22L0005-
Client:-	Tidewater, Inc.-			Project:-	NASA JPL-
Matrix:-	Solid-	Laboratory ID:-	22L0005-09-	File ID:	S2022-12-09A (28)-
Sampled:-	11/30/22 11:20-	Prepared:-	12/01/22 14:45-	Analyzed:-	12/09/22 18:26
Solids:-	95.42-	Preparation:-	Table B-15-	Dilution:-	1-
Initial/Final:-	1.08 g / 2 mL-			Instrument:-	Saphira-
Batch:-	BBL0032-	Sequence:-	SB03754-	Calibration:-	2250016

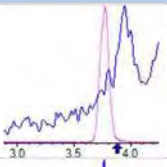
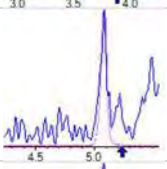
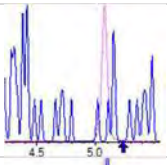
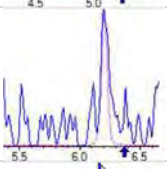
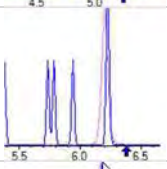
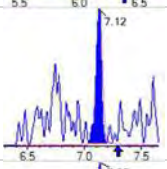
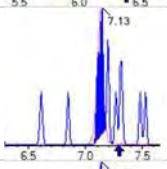
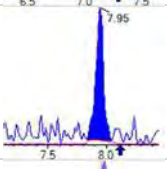
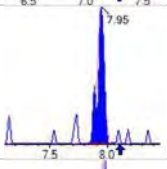
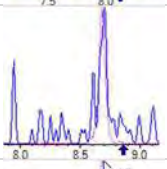
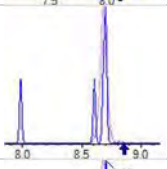
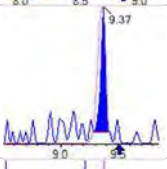
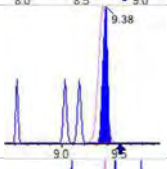
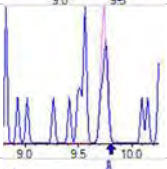
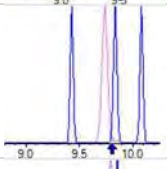
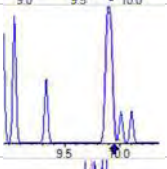
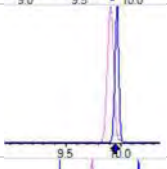
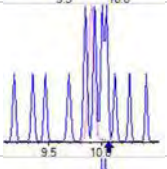
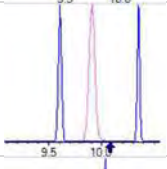
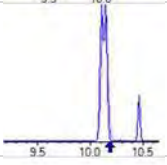
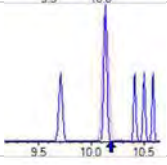
COMPOUNDR	CONC. (ng/g dry)R	LOQ	LODR	DL	Q
9CL-PF3ONS-	0.39 U-	0.97-	0.39	0.19	
11CL-PF3OUDS-	0.39 U-	0.97-	0.39	0.19	

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-09
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (28)
Acquired: 2022/12/09 - 18:26

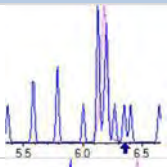
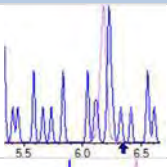
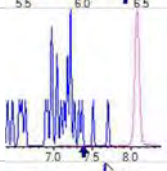
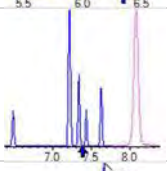
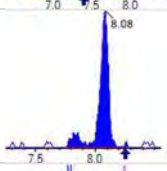
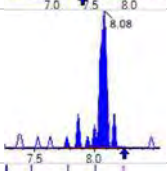
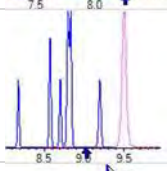
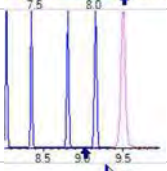
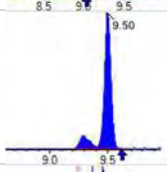
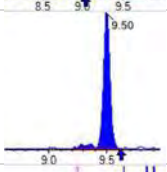
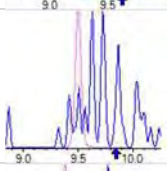
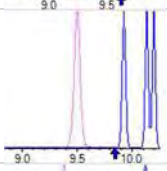
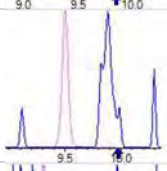
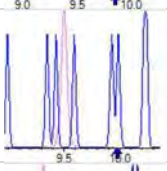
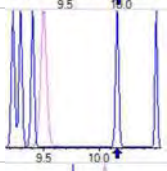
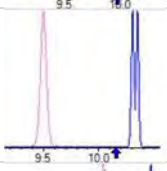
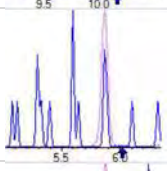
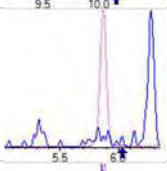
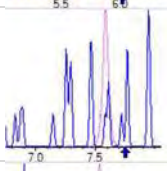
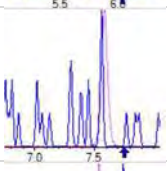
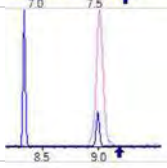
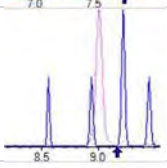
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(212.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	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) 2171 (363.0 / 169.0) 419	(7.12 , 1.00) (0.00 , N/A , -0.5)	12.1 12.7	0.1928 67.2 61.9	0.0191	N/A			
PFOA	(413.0 / 369.0) 6746 (413.0 / 169.0) 2214	(7.95 , 1.00) (0.01 , N/A , 0.0)	26.8 51.6	0.3282 101.4 99.0	0.0518	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) 3651 (513.0 / 169.0) 801	(9.37 , 1.00) (0.01 , N/A , -0.5)	17.9 107.4	0.2195 247.2 220.8	0.0258	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
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-09
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (28)
Acquired: 2022/12/09 - 18:26

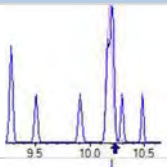
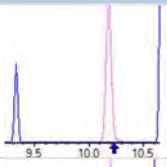
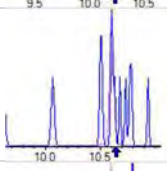
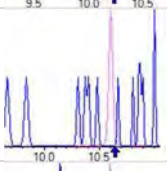
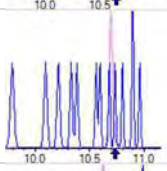
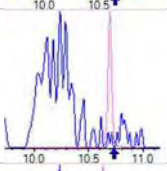
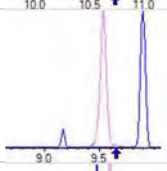
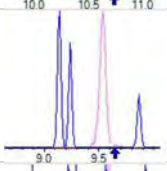
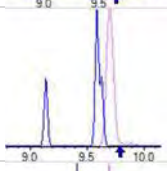
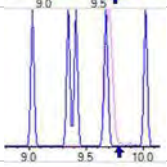
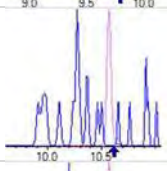
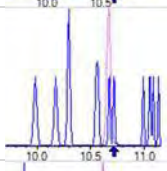
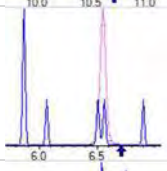
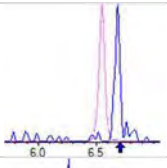
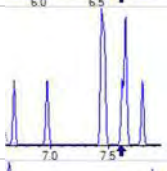
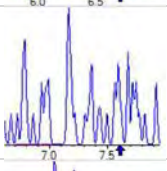
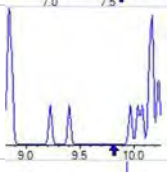
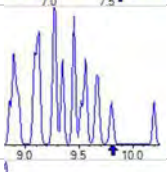
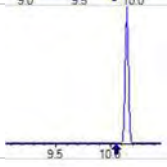
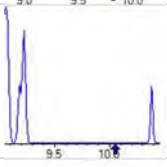
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) N/A (298.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	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) 7174 (399.0 / 99.0) 3309	(8.08 , 1.00) (0.00 , N/A , 0.3)	45674.2 264914.9	0.4612 133.8 141.8	0.0199	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) 380491 (499.0 / 99.0) 76831	(9.50 , 1.00) (0.00 , N/A , 0.0)	187.9 738.1	0.2019 78.4 87.4	0.8981	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.: 22L0005-09
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (28)
Acquired: 2022/12/09 - 18:26

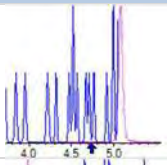
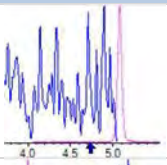
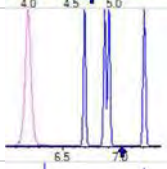
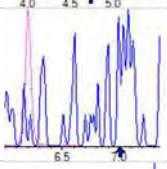
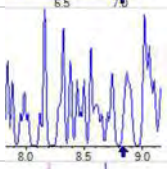
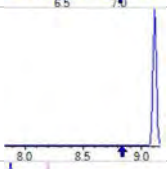
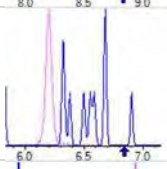
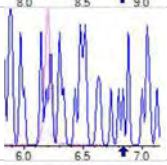
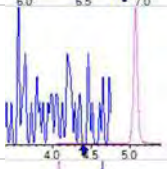
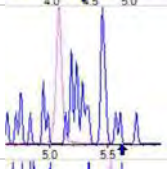
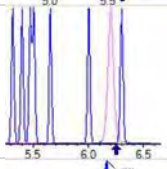
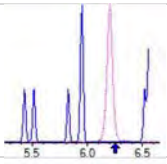
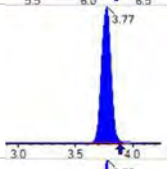
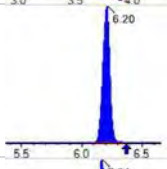
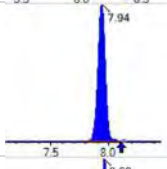
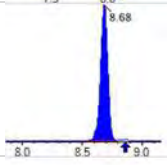
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) N/A (498.0 / 478.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	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.: 22L0005-09
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (28)
Acquired: 2022/12/09 - 18:26

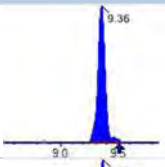
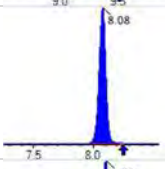
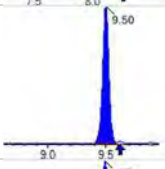
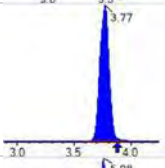
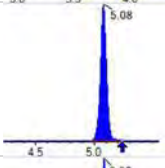
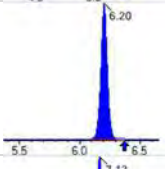
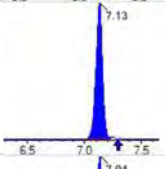
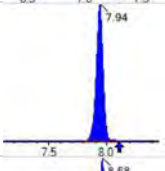
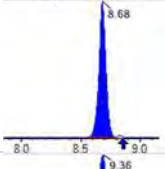
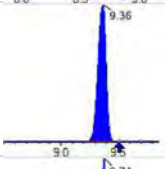
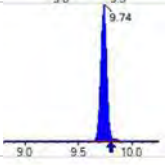
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
3:3FTCA	(241.0 / 177.0) N/A (241.0 / 117.0) N/A	(N/A , N/A) (N/A , N/A , 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) 85924	(3.77 , N/A) (N/A , 0.03 , N/A)	975.4	N/A	0.8939 [1.0000]	89.4% { 107.3% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 138440	(6.20 , N/A) (N/A , 0.00 , N/A)	458.9	N/A	1.1211 [1.0000]	112.1% { 118.1% }			
13C4_PFOA_IIS	(417.0 / 372.0) 122941	(7.94 , N/A) (N/A , -0.01 , N/A)	434.4	N/A	1.0370 [1.0000]	103.7% { 112.0% }			
13C5_PFNA_IIS	(468.0 / 423.0) 116426	(8.68 , N/A) (N/A , -0.01 , N/A)	459.8	N/A	1.2225 [1.0000]	122.2% { 118.9% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

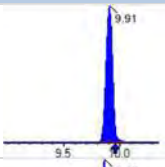
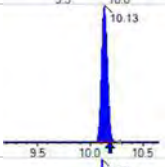
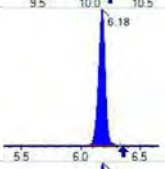
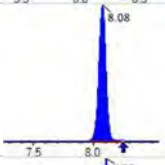
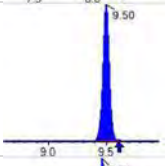
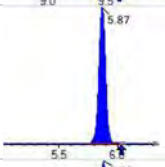
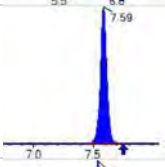
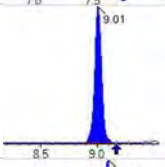
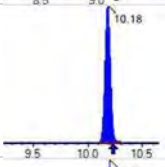
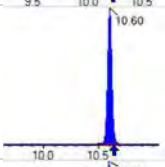
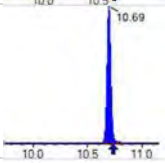
Sample I.D.: 22L0005-09
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (28)
Acquired: 2022/12/09 - 18:26

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) 99729	(9.36 , N/A) (N/A , -0.02 , N/A)	399.1	N/A	1.2105 [1.0000]	121.1% { 114.4% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 236416	(8.08 , N/A) (N/A , -0.01 , N/A)	770.2	N/A	1.1015 [1.0000]	110.1% { 106.0% }			
13C4_PFOS_IIS	(502.8 / 79.9) 203556	(9.50 , N/A) (N/A , -0.01 , N/A)	488.1	N/A	1.0937 [1.0000]	109.4% { 95.8% }			
13C4_PFBA_EIS	(217.0 / 172.0) 623040	(3.77 , N/A) (N/A , 0.02 , N/A)	1013.4	N/A	7.7342 [8.0000]	96.7% { 103.8% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 334261	(5.08 , N/A) (N/A , 0.01 , N/A)	910.7	N/A	3.3099 [4.0000]	82.7% { 98.9% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 266476	(6.20 , N/A) (N/A , 0.00 , N/A)	764.9	N/A	1.8871 [2.0000]	94.4% { 109.7% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 224858	(7.13 , N/A) (N/A , -0.01 , N/A)	596.1	N/A	1.7641 [2.0000]	88.2% { 96.4% }			
13C8_PFOA_EIS	(421.0 / 376.0) 252477	(7.94 , N/A) (N/A , -0.01 , N/A)	663.9	N/A	2.0191 [2.0000]	101.0% { 108.9% }			
13C9_PFNA_EIS	(472.0 / 427.0) 115026	(8.68 , N/A) (N/A , -0.01 , N/A)	338.2	N/A	1.0011 [1.0000]	100.1% { 123.4% }			
13C6_PFDA_EIS	(519.0 / 474.0) 139293	(9.36 , N/A) (N/A , -0.01 , N/A)	280.3	N/A	0.9616 [1.0000]	96.2% { 110.0% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 216339	(9.74 , N/A) (N/A , 0.00 , N/A)	2309.8	N/A	1.1126 [1.0000]	111.3% { 120.5% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0005-09 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09A (28)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/09 - 18:26

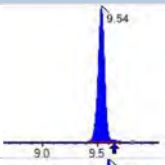
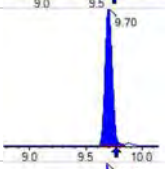
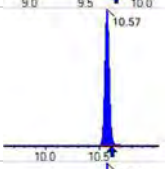
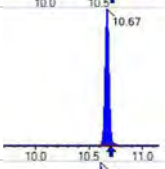
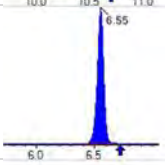
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDoA_EIS	(615.0 / 570.0) 246471	(9.91 , N/A) (N/A , 0.00 , N/A)	391.9	N/A	1.0444 [1.0000]	104.4% { 129.4% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 167050	(10.13 , N/A) (N/A , 0.00 , N/A)	352.9	N/A	0.9643 [1.0000]	96.4% { 110.4% }			
13C3_PFBS_EIS	(302.0 / 80.0) 689943	(6.18 , N/A) (N/A , 0.01 , N/A)	810.6	N/A	1.9857 [2.0000]	99.3% { 105.6% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 430007	(8.08 , N/A) (N/A , -0.01 , N/A)	804.1	N/A	2.1742 [2.0000]	108.7% { 114.1% }			
13C8_PFOS_EIS	(507.0 / 80.0) 754732	(9.50 , N/A) (N/A , -0.01 , N/A)	1132.5	N/A	2.4322 [2.0000]	121.6% { 138.2% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 98563	(5.87 , N/A) (N/A , 0.01 , N/A)	611.6	N/A	5.0297 [4.0000]	125.7% { 158.7% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 117232	(7.59 , N/A) (N/A , -0.01 , N/A)	994.8	N/A	4.4592 [4.0000]	111.5% { 140.5% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 109807	(9.01 , N/A) (N/A , -0.02 , N/A)	424.4	N/A	4.8121 [4.0000]	120.3% { 136.6% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 868421	(10.18 , N/A) (N/A , 0.00 , N/A)	722.5	N/A	1.8332 [2.0000]	91.7% { 104.8% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 210515	(10.60 , N/A) (N/A , 0.00 , N/A)	726.5	N/A	1.5017 [2.0000]	75.1% { 105.4% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 204390	(10.69 , N/A) (N/A , 0.00 , N/A)	667.2	N/A	1.6080 [2.0000]	80.4% { 102.6% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-09
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (28)
Acquired: 2022/12/09 - 18:26

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) 288604	(9.54 , N/A) (N/A , 0.00 , N/A)	463.6	N/A	4.1804 [4.0000]	104.5% { 112.7% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 283999	(9.70 , N/A) (N/A , 0.00 , N/A)	468.4	N/A	4.7862 [4.0000]	119.7% { 116.8% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 425840	(10.57 , N/A) (N/A , 0.00 , N/A)	762.5	N/A	17.7852 [20.0000]	88.9% { 104.3% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 223484	(10.67 , N/A) (N/A , 0.00 , N/A)	963.9	N/A	18.3186 [20.0000]	91.6% { 106.5% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 661188	(6.55 , N/A) (N/A , 0.00 , N/A)	652.4	N/A	7.1095 [8.0000]	88.9% { 104.7% }			

FORM IR
ANALYSIS DATA SHEETR

SB-5-2.0-113022-

Laboratory:-	APPL, LLC-			Work Order:-	22L0005-
Client:-	Tidewater, Inc.-			Project:-	NASA JPL-
Matrix:-	Solid-	Laboratory ID:-	22L0005-10-	File ID:	S2022-12-09A (30)-
Sampled:-	11/30/22 11:30-	Prepared:-	12/01/22 14:45-	Analyzed:-	12/09/22 18:52
Solids:-	95.37-	Preparation:-	Table B-15-	Dilution:-	1-
Initial/Final:-	1.16 g / 2 mL-			Instrument:-	Saphira-
Batch:-	BBL0032-	Sequence:-	SB03754-	Calibration:-	2250016

COMPOUNDR	CONC. (ng/g dry)R	LOQ	LODR	DL	Q
PFBA-	0.36 U-	0.90-	0.36	0.090	
PFPEA-	0.36 U-	0.90-	0.36	0.14	
PFHXA-	0.36 U-	0.90-	0.36	0.090	
PFHPA-	0.36 U-	0.90-	0.36	0.090	
PFOA-	0.36 U-	0.90-	0.36	0.14	
PFNA-	0.36 U-	0.90-	0.36	0.090	
PFDA-	0.36 U-	0.90-	0.36	0.14	
PFUnA-	0.36 U-	0.90-	0.36	0.090	
PFDOA-	0.36 U-	0.90-	0.36	0.14	
PFTRDA-	0.36 U-	0.90-	0.36	0.090	
PFTEDA-	0.36 U-	0.90-	0.36	0.18	
PFBS-	0.36 U-	0.90-	0.36	0.090	
PFPES-	0.81 U-	0.90-	0.81	0.37	
PFHXS-	0.36 U-	0.90-	0.36	0.14	
PFHPS-	0.36 U-	0.90-	0.36	0.14	
PFOS-	0.36 U-	0.90-	0.36	0.090	
PFNS-	0.72 U-	0.90-	0.72	0.35	
PFDS-	0.36 U-	0.90-	0.36	0.18	
4:2FTS-	0.36 U-	0.90-	0.36	0.18	
6:2FTS-	0.36 U-	0.90-	0.36	0.18	
8:2FTS-	0.36 U-	0.90-	0.36	0.14	
PFOSA-	0.36 U-	0.90-	0.36	0.090	
NMeFOSA-	0.81 U-	0.90-	0.81	0.45	
NEtFOSA-	0.81 U-	0.90-	0.81	0.44	
NMeFOSAA-	0.36 U-	0.90-	0.36	0.18	
NEtFOSAA-	0.36 U-	0.90-	0.36	0.18	
NMeFOSE-	0.74 U-	0.90-	0.74	0.37	
NEtFOSE-	0.59 U-	0.90-	0.59	0.28	
HFPO-DA-	0.36 U-	0.90-	0.36	0.18	
ADONA-	0.36 U-	0.90-	0.36	0.18	

FORM IR
ANALYSIS DATA SHEETR

SB-5-2.0-113022-

Laboratory:-	APPL, LLC-			Work Order:-	22L0005-
Client:-	Tidewater, Inc.-			Project:-	NASA JPL-
Matrix:-	Solid-	Laboratory ID:-	22L0005-10-	File ID:	S2022-12-09A (30)-
Sampled:-	11/30/22 11:30-	Prepared:-	12/01/22 14:45-	Analyzed:-	12/09/22 18:52
Solids:-	95.37-	Preparation:-	Table B-15-	Dilution:-	1-
Initial/Final:-	1.16 g / 2 mL-			Instrument:-	Saphira-
Batch:-	BBL0032-	Sequence:-	SB03754-	Calibration:-	2250016

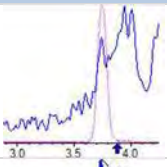
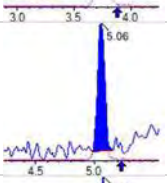
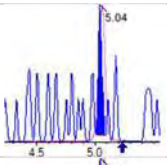
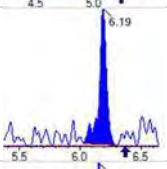
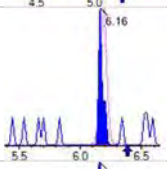
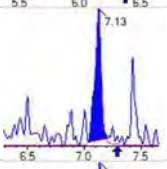
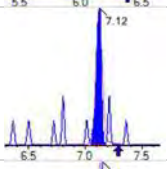
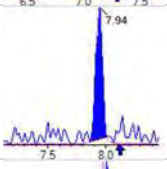
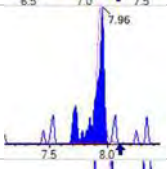
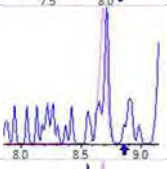
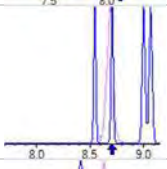
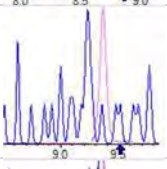
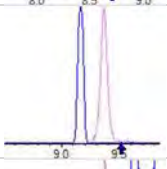
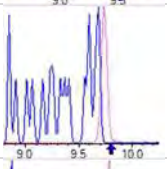
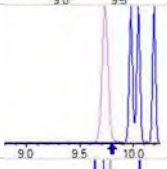
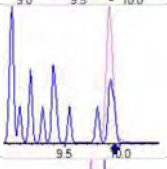
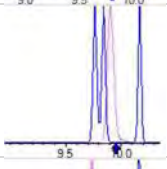
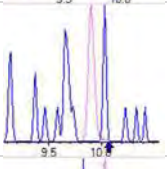
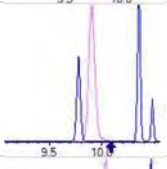
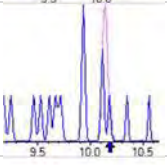
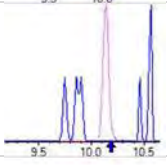
COMPOUNDR	CONC. (ng/g dry)R	LOQ	LODR	DL	Q
9CL-PF3ONS-	0.36 U-	0.90-	0.36	0.18	
11CL-PF3OUDS-	0.36 U-	0.90-	0.36	0.18	

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-10
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (30)
Acquired: 2022/12/09 - 18:52

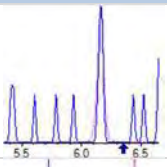
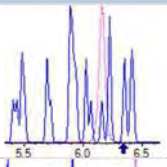
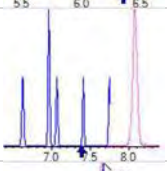
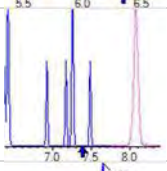
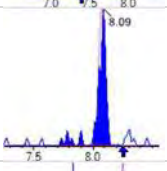
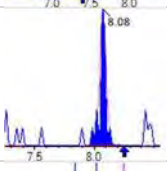
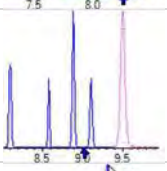
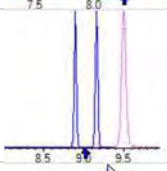
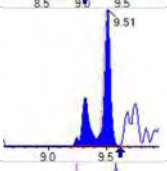
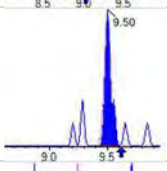
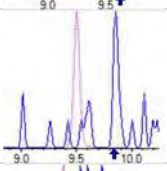
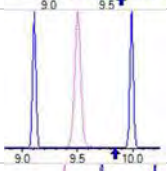
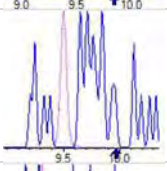
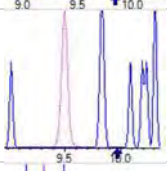
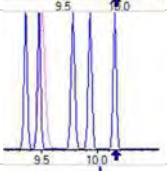
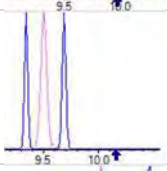
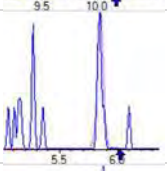
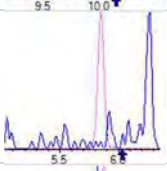
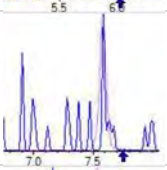
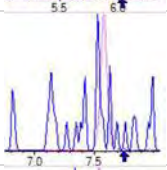
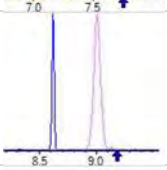
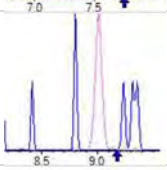
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(212.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFPeA	(262.9 / 219.0) 3236 (262.9 / 69.0) 89	(5.06 , 1.00) (0.00 , N/A , 1.2)	32.4 7.0	0.0276 236.8 269.0	0.0354	N/A			
PFHxA	(313.0 / 269.0) 4290 (313.0 / 119.0) 596	(6.19 , 1.00) (0.00 , N/A , 1.8)	46.5 25.3	0.1390 154.6 143.0	0.0250	N/A			IR2,
PFHpA	(363.0 / 319.0) 2968 (363.0 / 169.0) 1030	(7.13 , 1.00) (0.00 , N/A , 0.3)	20.5 26.1	0.3470 120.9 111.3	0.0202	N/A			
PFOA	(413.0 / 369.0) 8134 (413.0 / 169.0) 2820	(7.94 , 1.00) (0.00 , N/A , -0.9)	29.5 90.1	0.3467 107.2 104.5	0.0494	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.: 22L0005-10
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (30)
Acquired: 2022/12/09 - 18:52

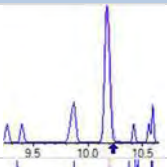
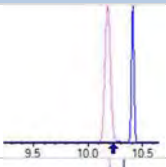
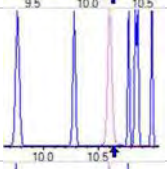
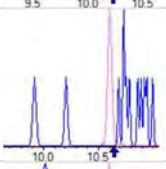
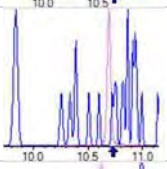
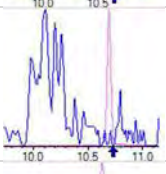
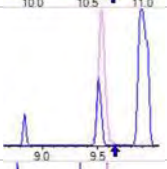
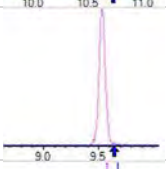
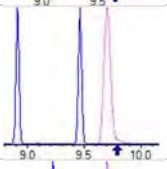
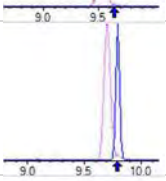
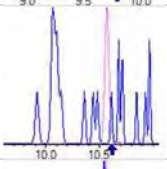
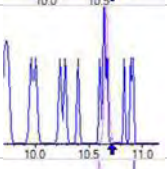
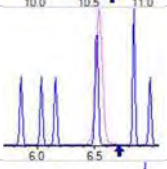
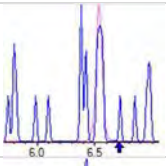
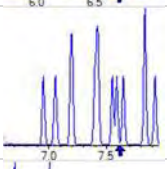
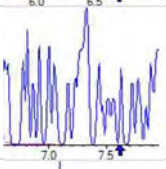
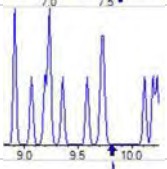
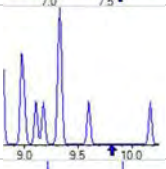
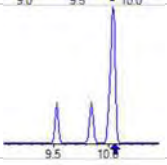
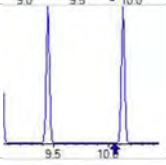
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) N/A (298.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	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) 4507 (399.0 / 99.0) 1384	(8.09 , 1.00) (0.01 , N/A , 0.5)	201794.8 206.9	0.3070 89.0 94.4	0.0125	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) 9900 (499.0 / 99.0) 2663	(9.51 , 1.00) (0.01 , N/A , 0.6)	37.3 35.8	0.2690 104.5 116.5	0.0254	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.: 22L0005-10
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (30)
Acquired: 2022/12/09 - 18:52

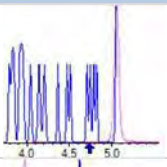
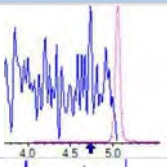
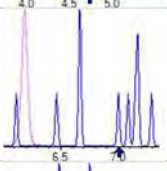
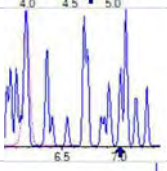
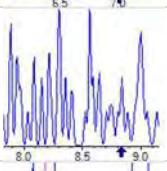
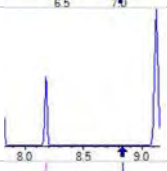
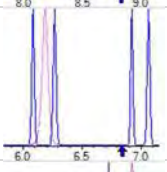
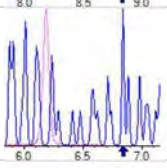
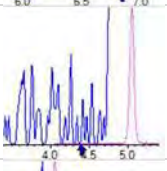
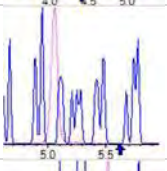
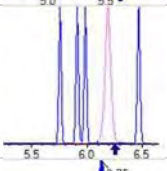
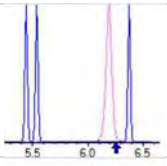
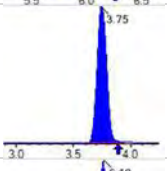
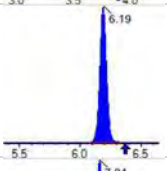
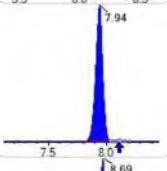
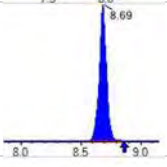
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) N/A (498.0 / 478.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	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

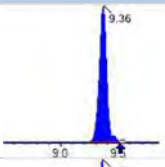
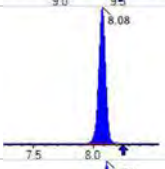
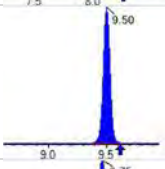
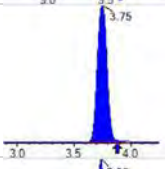
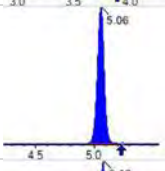
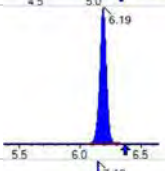
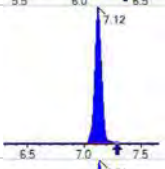
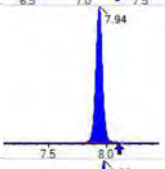
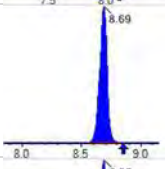
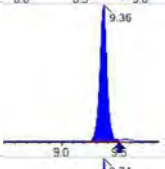
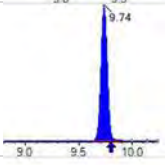
Sample I.D.: 22L0005-10
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (30)
Acquired: 2022/12/09 - 18:52

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) 89323	(3.75 , N/A) (N/A , 0.01 , N/A)	806.1	N/A	0.9292 [1.0000]	92.9% { 111.6% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 139084	(6.19 , N/A) (N/A , -0.02 , N/A)	1175.1	N/A	1.1263 [1.0000]	112.6% { 118.7% }			
13C4_PFOA_IIS	(417.0 / 372.0) 126379	(7.94 , N/A) (N/A , -0.01 , N/A)	428.4	N/A	1.0660 [1.0000]	106.6% { 115.1% }			
13C5_PFNA_IIS	(468.0 / 423.0) 107870	(8.69 , N/A) (N/A , -0.01 , N/A)	3337.1	N/A	1.1326 [1.0000]	113.3% { 110.2% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0005-10 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09A (30)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/09 - 18:52

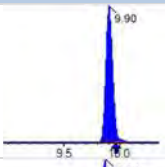
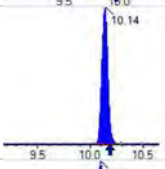
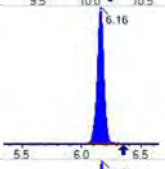
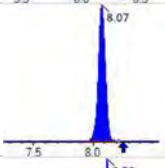
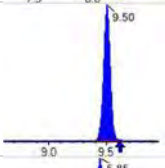
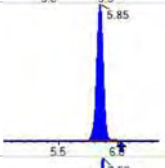
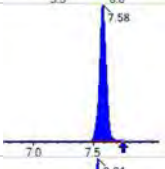
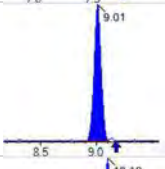
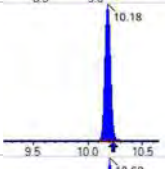
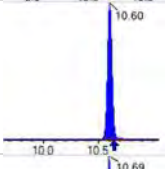
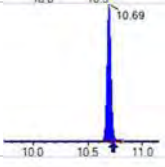
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDA_IIS	(515.1 / 470.1) 115291	(9.36 , N/A) (N/A , -0.01 , N/A)	568.6	N/A	1.3994 [1.0000]	139.9% { 132.2% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 232257	(8.08 , N/A) (N/A , -0.01 , N/A)	888.6	N/A	1.0821 [1.0000]	108.2% { 104.1% }			
13C4_PFOS_IIS	(502.8 / 79.9) 205731	(9.50 , N/A) (N/A , -0.01 , N/A)	612.8	N/A	1.1053 [1.0000]	110.5% { 96.8% }			
13C4_PFBA_EIS	(217.0 / 172.0) 762243	(3.75 , N/A) (N/A , 0.00 , N/A)	862.2	N/A	9.1022 [8.0000]	113.8% { 127.0% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 379936	(5.06 , N/A) (N/A , -0.01 , N/A)	793.6	N/A	3.7448 [4.0000]	93.6% { 112.5% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 340645	(6.19 , N/A) (N/A , -0.02 , N/A)	841.6	N/A	2.4012 [2.0000]	120.1% { 140.3% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 290196	(7.12 , N/A) (N/A , -0.01 , N/A)	678.5	N/A	2.2662 [2.0000]	113.3% { 124.4% }			
13C8_PFOA_EIS	(421.0 / 376.0) 319648	(7.94 , N/A) (N/A , -0.01 , N/A)	352.4	N/A	2.4867 [2.0000]	124.3% { 137.9% }			
13C9_PFNA_EIS	(472.0 / 427.0) 129001	(8.69 , N/A) (N/A , -0.01 , N/A)	494.4	N/A	1.2118 [1.0000]	121.2% { 138.4% }			
13C6_PFDA_EIS	(519.0 / 474.0) 170093	(9.36 , N/A) (N/A , -0.01 , N/A)	181.7	N/A	1.0157 [1.0000]	101.6% { 134.3% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 217407	(9.74 , N/A) (N/A , 0.00 , N/A)	248.3	N/A	0.9672 [1.0000]	96.7% { 121.1% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

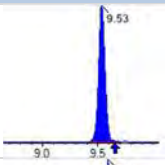
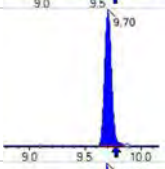
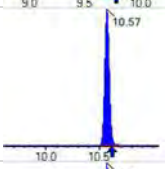
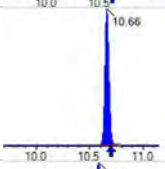
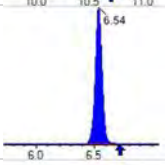
Sample I.D.: 22L0005-10
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (30)
Acquired: 2022/12/09 - 18:52

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) 249212	(9.90 , N/A) (N/A , -0.01 , N/A)	3912.0	N/A	0.9135 [1.0000]	91.3% { 130.9% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 179108	(10.14 , N/A) (N/A , 0.00 , N/A)	300.7	N/A	0.8943 [1.0000]	89.4% { 118.3% }			
13C3_PFBS_EIS	(302.0 / 80.0) 750665	(6.16 , N/A) (N/A , -0.01 , N/A)	864.1	N/A	2.1992 [2.0000]	110.0% { 114.9% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 428641	(8.07 , N/A) (N/A , -0.01 , N/A)	1005.0	N/A	2.2061 [2.0000]	110.3% { 113.8% }			
13C8_PFOS_EIS	(507.0 / 80.0) 694534	(9.50 , N/A) (N/A , -0.01 , N/A)	724.1	N/A	2.2146 [2.0000]	110.7% { 127.2% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 103329	(5.85 , N/A) (N/A , -0.01 , N/A)	732.6	N/A	5.3674 [4.0000]	134.2% { 166.4% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 115470	(7.58 , N/A) (N/A , -0.01 , N/A)	480.4	N/A	4.4708 [4.0000]	111.8% { 138.4% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 103660	(9.01 , N/A) (N/A , -0.02 , N/A)	573.1	N/A	4.6240 [4.0000]	115.6% { 129.0% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 1011922	(10.18 , N/A) (N/A , 0.00 , N/A)	574.0	N/A	2.1135 [2.0000]	105.7% { 122.1% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 221709	(10.60 , N/A) (N/A , 0.00 , N/A)	707.9	N/A	1.5649 [2.0000]	78.2% { 111.0% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 209473	(10.69 , N/A) (N/A , 0.00 , N/A)	659.7	N/A	1.6306 [2.0000]	81.5% { 105.1% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0005-10 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09A (30)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/09 - 18:52

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) 342060	(9.53 , N/A) (N/A , 0.00 , N/A)	325.9	N/A	4.9023 [4.0000]	122.6% { 133.6% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 319494	(9.70 , N/A) (N/A , 0.00 , N/A)	471.8	N/A	5.3275 [4.0000]	133.2% { 131.4% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 432311	(10.57 , N/A) (N/A , 0.00 , N/A)	807.0	N/A	17.8646 [20.0000]	89.3% { 105.9% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 230051	(10.66 , N/A) (N/A , 0.00 , N/A)	1072.0	N/A	18.6575 [20.0000]	93.3% { 109.7% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 798357	(6.54 , N/A) (N/A , -0.01 , N/A)	976.8	N/A	8.5447 [8.0000]	106.8% { 126.4% }			

FORM IR
ANALYSIS DATA SHEETR

DUP-1-113022P

Laboratory:	AP L, LLCP			Work Order:	22L0005P
Client:	Tidewater, Inc.P			roject:	NASA JPLP
Matrix:	SolidP	Laboratory ID:	22L0005-11P	File ID:	S2022-12-09A (32)P
Sampled:	11/30/22 11:30P	repared:	12/01/22 14:45P	Analyzed:	12/09/22 19:17P
Solids:	94.60P	reparation:	Table B-15P	Dilution:	1P
Initial/Final:	1.06 g / 2 mLP			Instrument:	SaphiraP
Batch:	BBL0032P	Sequence:	SB03754P	Calibration:	2250016P

COMPOUNDR	CONC. (ng/g dry)R	LOQ	LODR	DL	Q
FBAP	0.40 UP	1.0	0.40	0.10	
FPEAP	0.40 UP	1.0	0.40	0.15	
FHXAP	0.40 UP	1.0	0.40	0.10	
PFHPAP	0.40 UP	1.0	0.40	0.10	
FOAP	0.40 UP	1.0	0.40	0.15	
FNAP	0.40 UP	1.0	0.40	0.10	
FDAP	0.40 UP	1.0	0.40	0.15	
FUnAP	0.40 UP	1.0	0.40	0.10	
FDOAP	0.40 UP	1.0	0.40	0.15	
FTRDAP	0.40 UP	1.0	0.40	0.10	
FTEDAP	0.40 UP	1.0	0.40	0.20	
FBSP	0.40 UP	1.0	0.40	0.10	
FPESP	0.90 UP	1.0	0.90	0.41	
FHXSP	0.40 UP	1.0	0.40	0.15	
FHPSP	0.40 UP	1.0	0.40	0.15	
FOSP	0.40 UP	1.0	0.40	0.10	
FNSP	0.80 UP	1.0	0.80	0.39	
FDSP	0.40 UP	1.0	0.40	0.20	
4:2FTSP	0.40 UP	1.0P	0.40	0.20	
6:2FTSP	0.40 UP	1.0P	0.40	0.20	
8:2FTSP	0.40 UP	1.0P	0.40	0.15	
FOSAP	0.40 UP	1.0	0.40	0.10	
NMeFOSAP	0.90 UP	1.0P	0.90	0.49	
NEtFOSAP	0.90 UP	1.0P	0.90	0.49	
NMeFOSAAP	0.40 UP	1.0P	0.40	0.20	
NEtFOSAAP	0.40 UP	1.0P	0.40	0.20	
NMeFOSEP	0.82 UP	1.0P	0.82	0.41	
NEtFOSEP	0.65 UP	1.0P	0.65	0.31	
HFPO-DAP	0.40 UP	1.0P	0.40	0.20	
ADONAP	0.40 UP	1.0P	0.40	0.20	

FORM IR
ANALYSIS DATA SHEETR

DUP-1-113022P

Laboratory:	AP L, LLCP			Work Order:	22L0005P
Client:	Tidewater, Inc.P			roject:	NASA JPLP
Matrix:	SolidP	Laboratory ID:	22L0005-11P	File ID:	S2022-12-09A (32)P
Sampled:	11/30/22 11:30P	repared:	12/01/22 14:45P	Analyzed:	12/09/22 19:17
Solids:	94.60P	reparation:	Table B-15P	Dilution:	1P
Initial/Final:	1.06 g / 2 mLP			Instrument:	SaphiraP
Batch:	BBL0032P	Sequence:	SB03754P	Calibration:	2250016

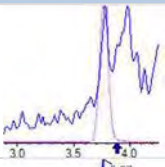
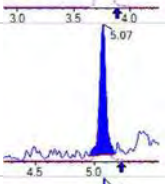
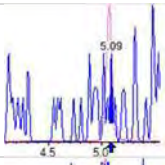
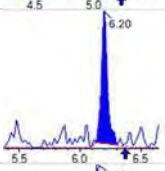
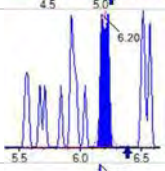
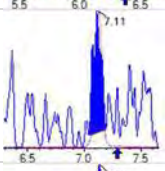
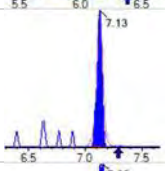
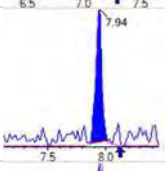
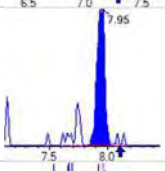
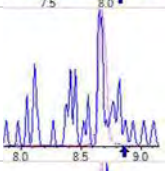
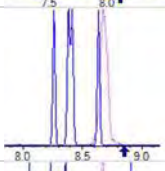
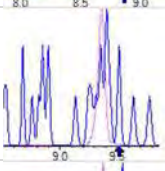
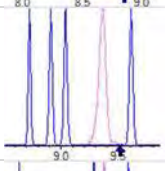
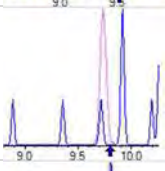
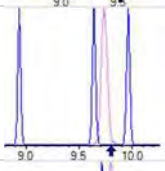
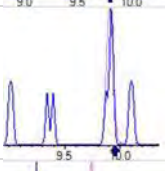
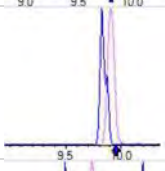
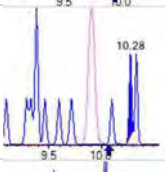
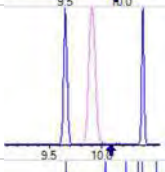
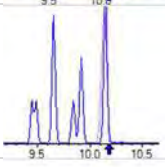
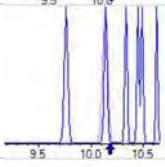
COMPOUNDR	CONC. (ng/g dry)R	LOQ	LODR	DL	Q
9CL-PF3ONSP	0.40 UP	1.0P	0.40	0.20	
11CL-PF3OUDSP	0.40 UP	1.0P	0.40	0.20	

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-11
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (32)
Acquired: 2022/12/09 - 19:17

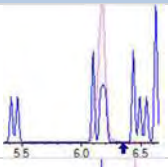
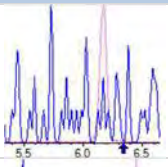
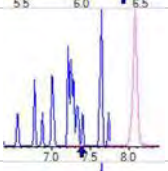
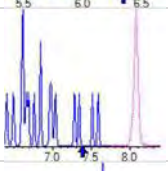
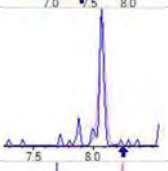
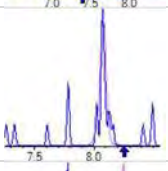
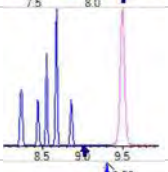
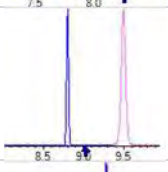
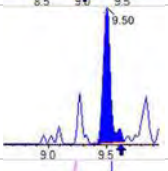
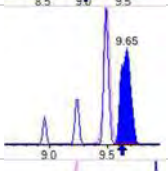
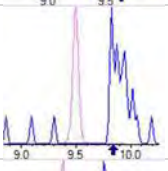
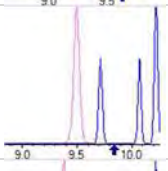
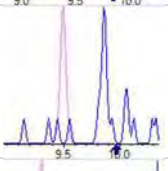
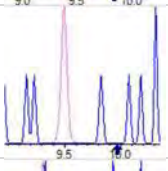
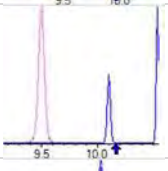
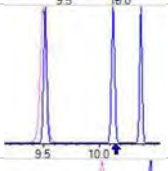
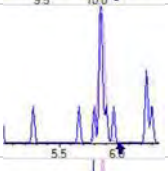
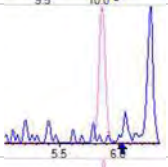
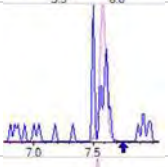
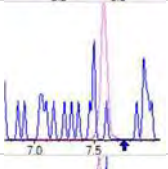
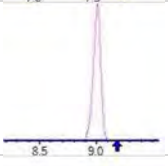
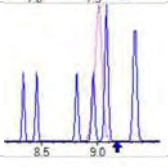
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(212.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFPeA	(262.9 / 219.0) 3464 (262.9 / 69.0) 24	(5.07 , 1.00) (0.00 , N/A , -1.2)	46.4 3.5	0.0068 58.4 66.4	0.0353	N/A			
PFHxA	(313.0 / 269.0) 4997 (313.0 / 119.0) 516	(6.20 , 1.00) (0.00 , N/A , 0.0)	31.5 8.5	0.1032 114.8 106.2	0.0312	N/A			
PFHpA	(363.0 / 319.0) 2138 (363.0 / 169.0) 1502	(7.11 , 1.00) (-0.02 , N/A , -1.1)	8.9 100.7	0.7024 244.8 225.4	0.0150	N/A			IR2,
PFOA	(413.0 / 369.0) 8137 (413.0 / 169.0) 3145	(7.94 , 1.00) (0.00 , N/A , -0.3)	35.5 41.7	0.3866 119.5 116.6	0.0508	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) 365 (663.0 / 169.0) N/A	(10.28 , 1.04) (N/A , 0.24 , #Value!)	9.5 N/A	N/A 0.0 0.0	0.0017	N/A			IR1,
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.: 22L0005-11
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (32)
Acquired: 2022/12/09 - 19:17

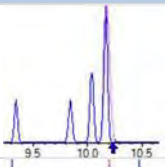
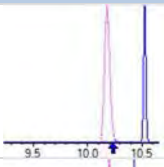
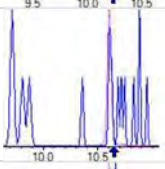
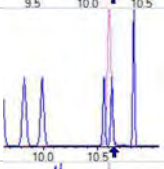
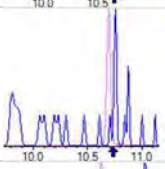
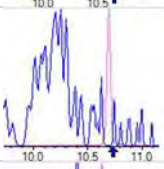
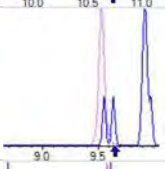
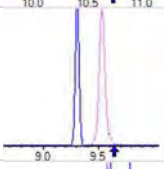
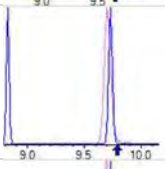
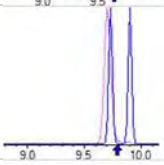
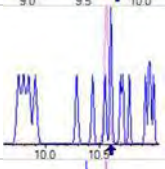
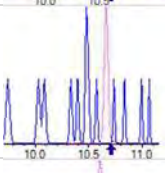
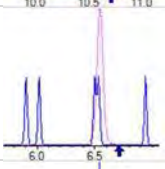
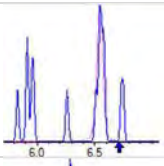
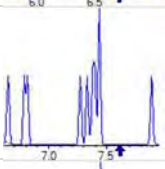
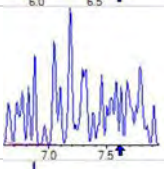
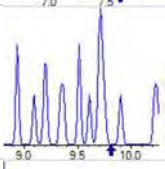
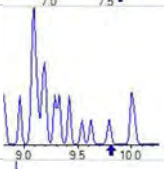
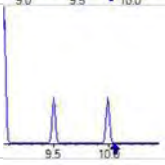
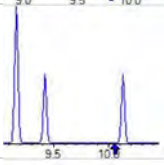
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) N/A (298.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	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) 8809 (499.0 / 99.0) 2686	(9.50 , 1.00) (0.01 , N/A , -9.0)	30.4 17.8	0.3049 118.4 132.0	0.0198	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.: 22L0005-11
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (32)
Acquired: 2022/12/09 - 19:17

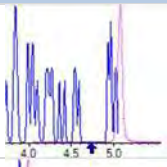
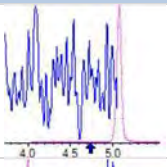
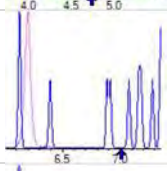
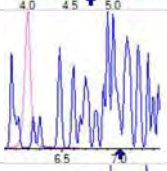
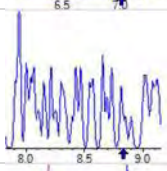
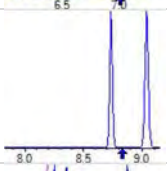
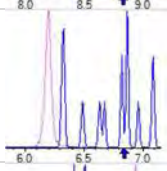
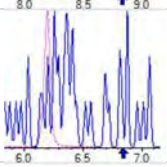
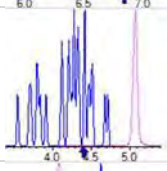
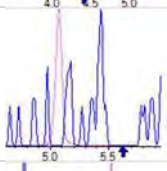
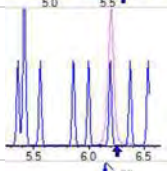
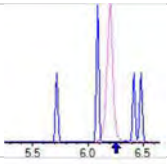
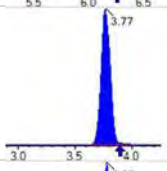
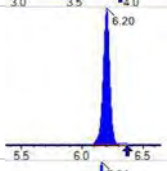
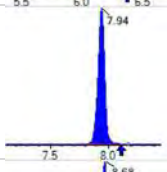
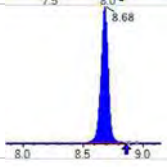
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) N/A (498.0 / 478.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	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

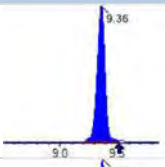
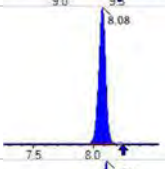
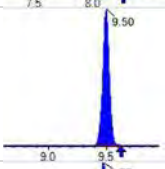
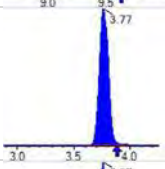
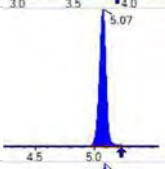
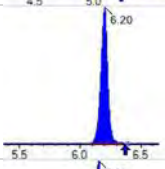
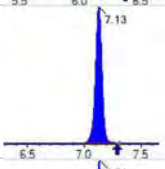
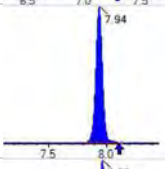
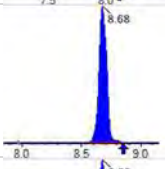
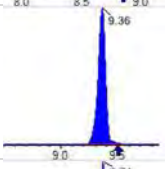
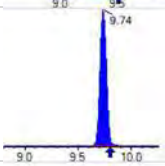
Sample I.D.: 22L0005-11
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (32)
Acquired: 2022/12/09 - 19:17

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) 93798	(3.77 , N/A) (N/A , 0.03 , N/A)	878.2	N/A	0.9758 [1.0000]	97.6% { 117.2% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 138803	(6.20 , N/A) (N/A , 0.00 , N/A)	884.8	N/A	1.1241 [1.0000]	112.4% { 118.4% }			
13C4_PFOA_IIS	(417.0 / 372.0) 142392	(7.94 , N/A) (N/A , -0.01 , N/A)	686.8	N/A	1.2011 [1.0000]	120.1% { 129.7% }			
13C5_PFNA_IIS	(468.0 / 423.0) 101887	(8.68 , N/A) (N/A , -0.01 , N/A)	371.7	N/A	1.0698 [1.0000]	107.0% { 104.1% }			

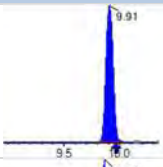
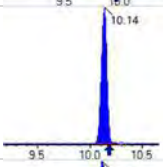
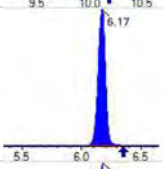
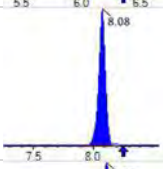
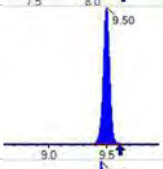
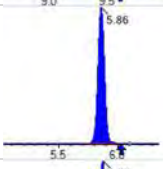
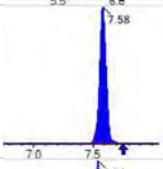
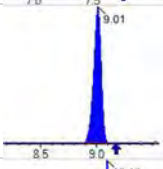
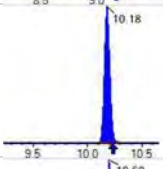
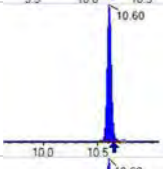
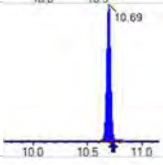
APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0005-11 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09A (32)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/09 - 19:17

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) 102557	(9.36 , N/A) (N/A , -0.01 , N/A)	187.4	N/A	1.2449 [1.0000]	124.5% { 117.6% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 243455	(8.08 , N/A) (N/A , -0.01 , N/A)	880.4	N/A	1.1343 [1.0000]	113.4% { 109.2% }			
13C4_PFOS_IIS	(502.8 / 79.9) 221994	(9.50 , N/A) (N/A , -0.02 , N/A)	692.1	N/A	1.1927 [1.0000]	119.3% { 104.5% }			
13C4_PFBA_EIS	(217.0 / 172.0) 802581	(3.77 , N/A) (N/A , 0.03 , N/A)	893.8	N/A	9.1266 [8.0000]	114.1% { 133.8% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 408333	(5.07 , N/A) (N/A , 0.01 , N/A)	911.1	N/A	4.0329 [4.0000]	100.8% { 120.9% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 317692	(6.20 , N/A) (N/A , 0.00 , N/A)	327.6	N/A	2.2439 [2.0000]	112.2% { 130.8% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 281216	(7.13 , N/A) (N/A , -0.01 , N/A)	619.2	N/A	2.2005 [2.0000]	110.0% { 120.6% }			
13C8_PFOA_EIS	(421.0 / 376.0) 310983	(7.94 , N/A) (N/A , -0.01 , N/A)	514.3	N/A	2.1472 [2.0000]	107.4% { 134.2% }			
13C9_PFNA_EIS	(472.0 / 427.0) 128651	(8.68 , N/A) (N/A , -0.01 , N/A)	547.2	N/A	1.2795 [1.0000]	128.0% { 138.0% }			
13C6_PFDA_EIS	(519.0 / 474.0) 163992	(9.36 , N/A) (N/A , -0.01 , N/A)	1788.6	N/A	1.1009 [1.0000]	110.1% { 129.5% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 229141	(9.74 , N/A) (N/A , 0.00 , N/A)	620.0	N/A	1.1459 [1.0000]	114.6% { 127.6% }			

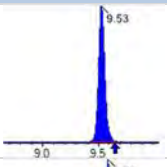
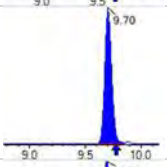
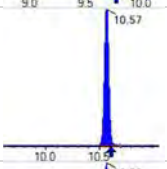
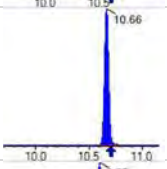
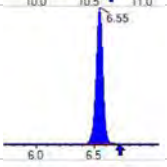
APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0005-11 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09A (32)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/09 - 19:17

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) 261413	(9.91 , N/A) (N/A , 0.00 , N/A)	256.2	N/A	1.0772 [1.0000]	107.7% { 137.3% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 203925	(10.14 , N/A) (N/A , 0.00 , N/A)	487.0	N/A	1.1447 [1.0000]	114.5% { 134.7% }			
13C3_PFBS_EIS	(302.0 / 80.0) 793720	(6.17 , N/A) (N/A , 0.00 , N/A)	847.1	N/A	2.2183 [2.0000]	110.9% { 121.5% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 480186	(8.08 , N/A) (N/A , -0.01 , N/A)	1067.2	N/A	2.3577 [2.0000]	117.9% { 127.5% }			
13C8_PFOS_EIS	(507.0 / 80.0) 792298	(9.50 , N/A) (N/A , -0.01 , N/A)	745.9	N/A	2.3412 [2.0000]	117.1% { 145.1% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 107309	(5.86 , N/A) (N/A , 0.00 , N/A)	732.7	N/A	5.3178 [4.0000]	132.9% { 172.8% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 125932	(7.58 , N/A) (N/A , -0.01 , N/A)	770.1	N/A	4.6516 [4.0000]	116.3% { 151.0% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 105177	(9.01 , N/A) (N/A , -0.02 , N/A)	853.0	N/A	4.4759 [4.0000]	111.9% { 130.8% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 1052372	(10.18 , N/A) (N/A , 0.00 , N/A)	921.0	N/A	2.0370 [2.0000]	101.8% { 127.0% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 248716	(10.60 , N/A) (N/A , 0.00 , N/A)	612.9	N/A	1.6269 [2.0000]	81.3% { 124.5% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 238056	(10.69 , N/A) (N/A , 0.00 , N/A)	679.5	N/A	1.7173 [2.0000]	85.9% { 119.5% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0005-11 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09A (32)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/09 - 19:17

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) 322376	(9.53 , N/A) (N/A , 0.00 , N/A)	418.7	N/A	4.2817 [4.0000]	107.0% { 125.9% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 329037	(9.70 , N/A) (N/A , 0.00 , N/A)	548.1	N/A	5.0847 [4.0000]	127.1% { 135.4% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 524183	(10.57 , N/A) (N/A , 0.00 , N/A)	1217.2	N/A	20.0742 [20.0000]	100.4% { 128.4% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 272136	(10.66 , N/A) (N/A , 0.00 , N/A)	1154.1	N/A	20.4538 [20.0000]	102.3% { 129.7% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 825433	(6.55 , N/A) (N/A , 0.00 , N/A)	936.0	N/A	8.8523 [8.0000]	110.7% { 130.7% }			

FORM IR
ANALYSIS DATA SHEETR

SB-6-0.5-113022-

Laboratory:-	APPL, LLC-			Work Order:-	22L0005-
Client:-	Tidewater, Inc.-			Project:-	NASA JPL-
Matrix:-	Solid-	Laboratory ID:-	22L0005-12-	File ID:	S2022-12-09A (34)-
Sampled:-	11/30/22 11:35-	Prepared:-	12/01/22 14:45-	Analyzed:-	12/09/22 19:43
Solids:-	79.39-	Preparation:-	Table B-15-	Dilution:-	1-
Initial/Final:-	1.02 g / 2 mL-			Instrument:-	Saphira-
Batch:-	BBL0032-	Sequence:-	SB03754-	Calibration:-	2250016

COMPOUNDR	CONC. (ng/g dry)R	LOQ	LODR	DL	Q
PFBA-	0.49 U-	1.2-	0.49	0.12	
PFPEA-	0.49 U-	1.2-	0.49	0.19	
PFHXA-	0.49 U-	1.2-	0.49	0.12	
PFHPA-	0.49 U-	1.2-	0.49	0.12	
PFOA-	0.49 U-	1.2-	0.49	0.19	
PFNA-	0.49 U-	1.2-	0.49	0.12	
PFDA-	0.27 J-	1.2-	0.49	0.19	
PFUnA-	0.17 J-	1.2-	0.49	0.12	
PFDOA-	0.20 J-	1.2-	0.49	0.19	
PFTRDA-	0.12 J-	1.2-	0.49	0.12	
PFTEDA-	0.49 U-	1.2-	0.49	0.25	
PFBS-	0.49 U-	1.2-	0.49	0.12	
PFPES-	1.1 U-	1.2-	1.1	0.51	
PFHXS-	0.90 J-	1.2-	0.49	0.19	
PFHPS-	0.49 U-	1.2-	0.49	0.19	
PFOS-	22-	1.2-	0.49	0.12	
PFNS-	2.0-	1.2-	0.99	0.48	
PFDS-	1.5-	1.2-	0.49	0.25	
4:2FTS-	0.49 U-	1.2-	0.49	0.25	
6:2FTS-	0.49 U-	1.2-	0.49	0.25	
8:2FTS-	0.49 U-	1.2-	0.49	0.19	
PFOSA-	0.49 U-	1.2-	0.49	0.12	
NMeFOSA-	1.1 U-	1.2-	1.1	0.61	
NEtFOSA-	1.1 U-	1.2-	1.1	0.61	
NMeFOSAA-	0.49 U-	1.2-	0.49	0.25	
NEtFOSAA-	0.49 U-	1.2-	0.49	0.25	
NMeFOSE-	1.0 U-	1.2-	1.0	0.50	
NEtFOSE-	0.80 U-	1.2-	0.80	0.38	
HFPO-DA-	0.49 U-	1.2-	0.49	0.25	
ADONA-	0.49 U-	1.2-	0.49	0.25	

FORM IR
ANALYSIS DATA SHEETR

SB-6-0.5-113022-

Laboratory:-	APPL, LLC-			Work Order:-	22L0005-
Client:-	Tidewater, Inc.-			Project:-	NASA JPL-
Matrix:-	Solid-	Laboratory ID:-	22L0005-12-	File ID:	S2022-12-09A (34)-
Sampled:-	11/30/22 11:35-	Prepared:-	12/01/22 14:45-	Analyzed:-	12/09/22 19:43
Solids:-	79.39-	Preparation:-	Table B-15-	Dilution:-	1-
Initial/Final:-	1.02 g / 2 mL-			Instrument:-	Saphira-
Batch:-	BBL0032-	Sequence:-	SB03754-	Calibration:-	2250016

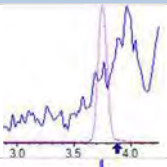
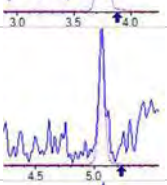
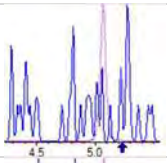
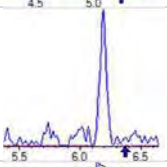
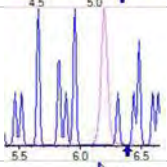
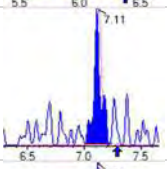
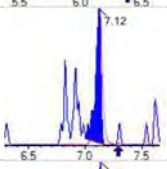
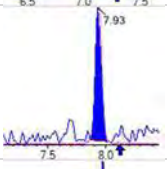
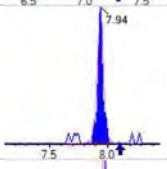
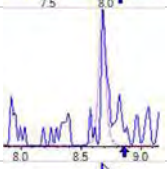
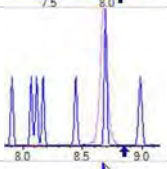
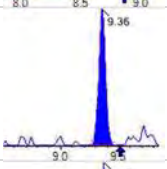
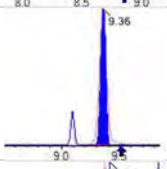
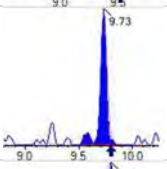
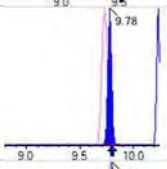
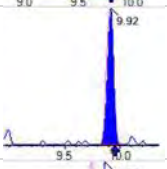
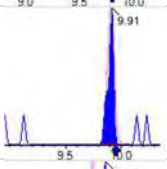
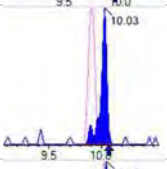
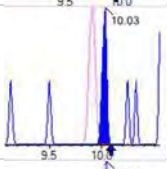
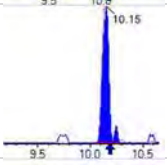
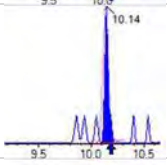
COMPOUNDR	CONC. (ng/g dry)R	LOQ	LODR	DL	Q
9CL-PF3ONS-	0.49 U-	1.2-	0.49	0.25	
11CL-PF3OUDS-	0.49 U-	1.2-	0.49	0.25	

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-12
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (34)
Acquired: 2022/12/09 - 19:43

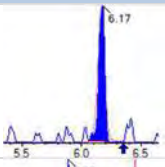
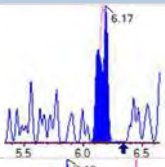
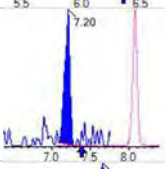
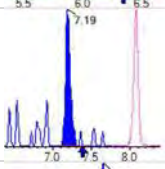
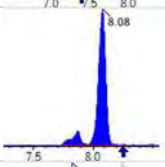
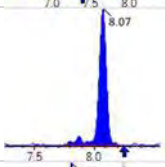
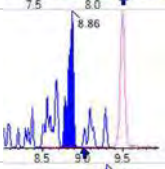
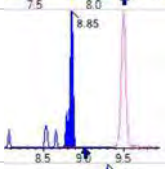
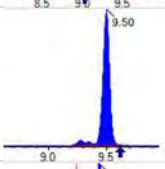
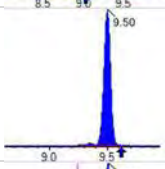
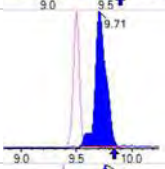
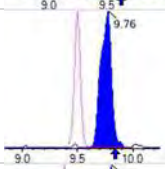
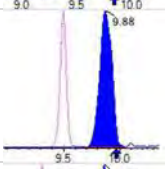
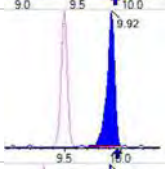
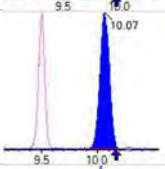
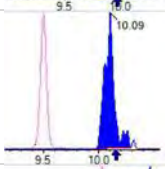
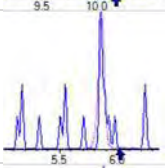
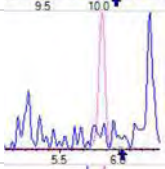
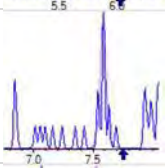
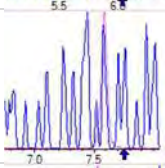
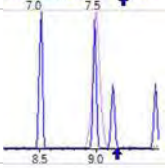
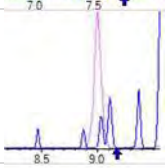
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(212.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	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) 3374 (363.0 / 169.0) 1241	(7.11 , 1.00) (-0.01 , N/A , -0.5)	24.9 24.1	0.3678 128.2 118.0	0.0317	N/A			
PFOA	(413.0 / 369.0) 8826 (413.0 / 169.0) 2139	(7.93 , 1.00) (-0.01 , N/A , -0.4)	38.5 139.8	0.2423 74.9 73.1	0.0648	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) 16171 (513.0 / 169.0) 1617	(9.36 , 1.00) (0.00 , N/A , 0.1)	53.2 92355.4	0.1000 112.6 100.6	0.1090	N/A			
PFUnA	(563.0 / 519.0) 13062 (563.0 / 169.0) 316	(9.73 , 1.00) (0.00 , N/A , -2.9)	544.1 61.6	0.0242 22.5 25.3	0.0695	N/A			IR1,
PFDoA	(613.0 / 569.0) 17316 (613.0 / 169.0) 2100	(9.92 , 1.00) (0.01 , N/A , 0.1)	84.3 56.0	0.1213 101.8 85.0	0.0824	N/A			
PFTrDA	(663.0 / 619.0) 9333 (663.0 / 169.0) 843	(10.03 , 1.01) (N/A , 0.00 , 0.3)	49.3 26.6	0.0903 48.5 42.5	0.0506	N/A			IR1,
PFTeDA	(713.0 / 669.0) 8408 (713.0 / 169.0) 1578	(10.15 , 1.00) (0.01 , N/A , 0.3)	77.8 49.9	0.1876 95.3 88.9	0.0601	N/A			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-12
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (34)
Acquired: 2022/12/09 - 19:43

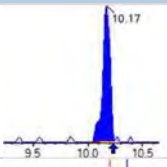
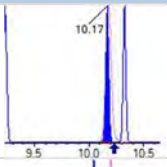
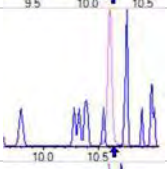
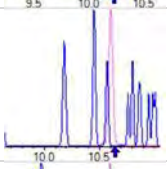
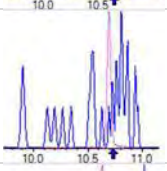
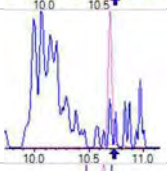
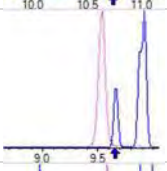
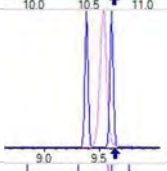
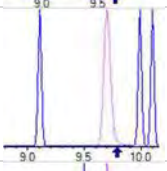
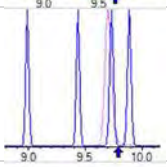
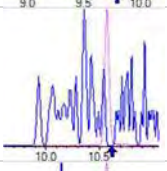
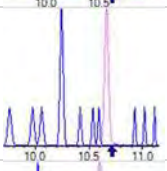
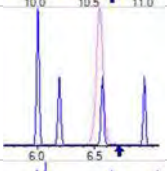
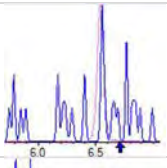
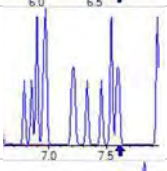
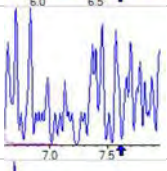
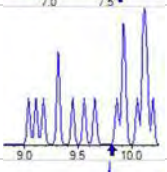
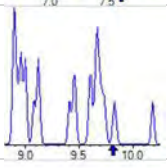
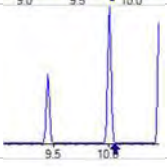
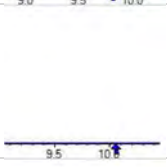
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) 2667 (298.9 / 99.0) 1913	(6.17 , 1.00) (0.00 , N/A , 0.0)	42.3 13.5	0.7172 105.9 115.0	0.0110	N/A			
PFPeS	(349.0 / 80.0) 4770 (349.0 / 99.0) 2494	(7.20 , 0.89) (N/A , -0.01 , 0.8)	27.6 27.6	0.5228 143.4 136.0	0.0099	N/A			
PFHxS	(399.0 / 80.0) 155682 (399.0 / 99.0) 50548	(8.08 , 1.00) (0.00 , N/A , 0.2)	1987.7 193363.0	0.3247 94.2 99.8	0.3638	N/A			
PFHpS	(449.0 / 80.0) 4075 (449.0 / 99.0) 3113	(8.86 , 0.93) (N/A , 0.00 , 0.5)	15.3 151.9	0.7638 268.7 278.9	0.0102	N/A			IR2,
PFOS	(499.0 / 80.0) 4318596 (499.0 / 99.0) 1101371	(9.50 , 1.00) (0.00 , N/A , 0.1)	282.4 462.5	0.2550 99.0 110.4	8.7632	N/A			
PFNS	(549.0 / 80.0) 459893 (549.0 / 99.0) 57072	(9.71 , 1.02) (N/A , -0.07 , -2.8)	240.8 189.2	0.1241 51.9 49.0	0.7947	N/A			IR1,
PFDS	(599.0 / 80.0) 444771 (599.0 / 99.0) 43653	(9.88 , 1.04) (N/A , -0.05 , -2.3)	188.1 204.9	0.0981 42.2 43.2	0.6137	N/A			IR1,
PFDoS	(698.9 / 80.0) 178353 (698.9 / 99.0) 11091	(10.07 , 1.06) (N/A , -0.06 , -1.6)	425.9 64.9	0.0622 26.8 31.1	0.4150	N/A			IR1,
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

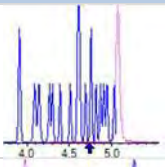
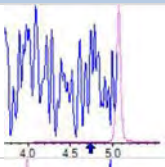
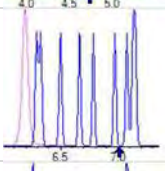
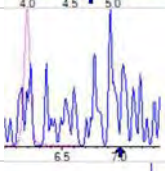
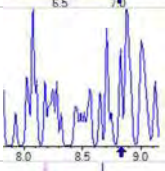
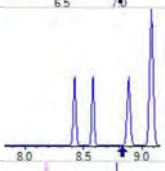
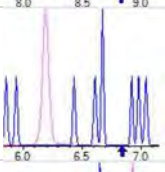
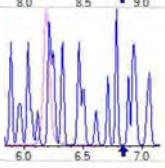
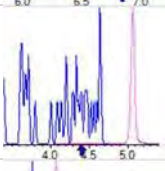
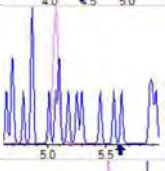
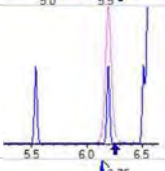
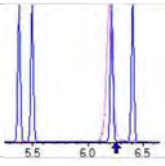
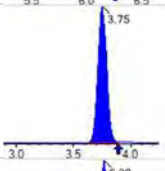
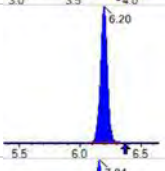
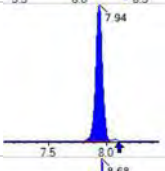
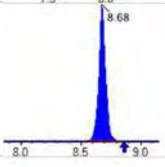
Sample I.D.: 22L0005-12
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (34)
Acquired: 2022/12/09 - 19:43

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) 15127 (498.0 / 478.0) 257	(10.17 , 1.00) (-0.01 , N/A , 0.2)	111.4 310.3	0.0170 71.3 67.7	0.0455	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			

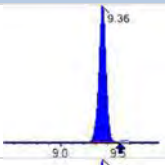
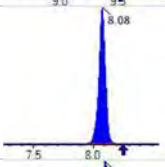
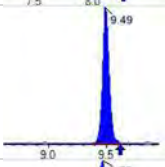
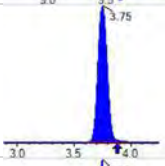
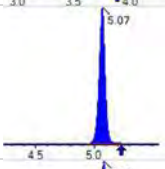
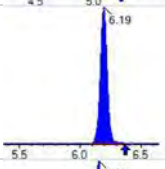
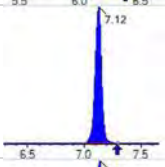
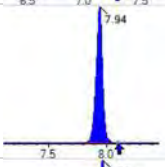
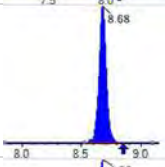
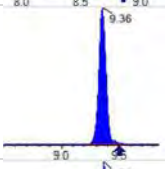
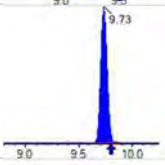
APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0005-12 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09A (34)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/09 - 19:43

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) 83746	(3.75 , N/A) (N/A , 0.02 , N/A)	543.0	N/A	0.8712 [1.0000]	87.1% { 104.6% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 131519	(6.20 , N/A) (N/A , -0.01 , N/A)	895.5	N/A	1.0651 [1.0000]	106.5% { 112.2% }			
13C4_PFOA_IIS	(417.0 / 372.0) 140901	(7.94 , N/A) (N/A , -0.01 , N/A)	837.7	N/A	1.1885 [1.0000]	118.9% { 128.4% }			
13C5_PFNA_IIS	(468.0 / 423.0) 117970	(8.68 , N/A) (N/A , -0.02 , N/A)	748.6	N/A	1.2387 [1.0000]	123.9% { 120.5% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0005-12 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09A (34)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/09 - 19:43

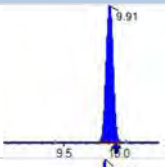
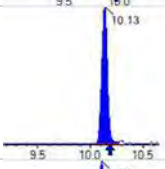
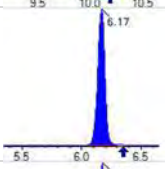
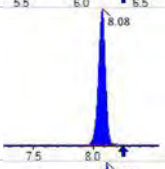
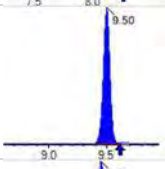
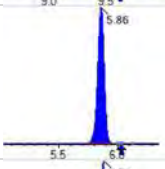
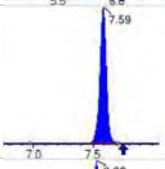
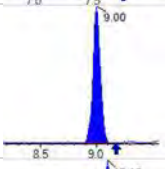
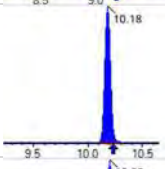
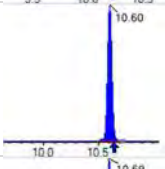
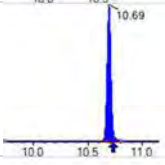
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDA_IIS	(515.1 / 470.1) 105864	(9.36 , N/A) (N/A , -0.01 , N/A)	304.9	N/A	1.2850 [1.0000]	128.5% { 121.4% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 255527	(8.08 , N/A) (N/A , -0.01 , N/A)	779.2	N/A	1.1905 [1.0000]	119.1% { 114.6% }			
13C4_PFOS_IIS	(502.8 / 79.9) 233554	(9.49 , N/A) (N/A , -0.02 , N/A)	385.4	N/A	1.2548 [1.0000]	125.5% { 109.9% }			
13C4_PFBA_EIS	(217.0 / 172.0) 479450	(3.75 , N/A) (N/A , 0.01 , N/A)	1028.4	N/A	6.1065 [8.0000]	76.3% { 79.9% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 288130	(5.07 , N/A) (N/A , 0.00 , N/A)	1047.8	N/A	3.0033 [4.0000]	75.1% { 85.3% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 228369	(6.19 , N/A) (N/A , -0.01 , N/A)	560.3	N/A	1.7023 [2.0000]	85.1% { 94.0% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 209913	(7.12 , N/A) (N/A , -0.01 , N/A)	748.4	N/A	1.7336 [2.0000]	86.7% { 90.0% }			
13C8_PFOA_EIS	(421.0 / 376.0) 264191	(7.94 , N/A) (N/A , -0.01 , N/A)	906.2	N/A	1.8434 [2.0000]	92.2% { 114.0% }			
13C9_PFNA_EIS	(472.0 / 427.0) 108566	(8.68 , N/A) (N/A , -0.01 , N/A)	461.8	N/A	0.9325 [1.0000]	93.3% { 116.5% }			
13C6_PFDA_EIS	(519.0 / 474.0) 146301	(9.36 , N/A) (N/A , -0.01 , N/A)	597.7	N/A	0.9514 [1.0000]	95.1% { 115.5% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 213490	(9.73 , N/A) (N/A , -0.01 , N/A)	1030.5	N/A	1.0343 [1.0000]	103.4% { 118.9% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

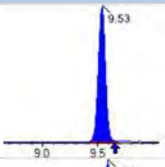
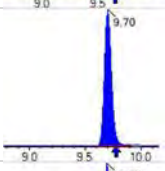
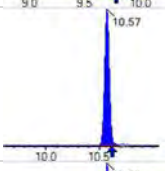
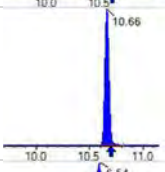
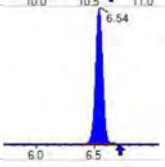
Sample I.D.: 22L0005-12
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (34)
Acquired: 2022/12/09 - 19:43

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) 228260	(9.91 , N/A) (N/A , 0.00 , N/A)	390.5	N/A	0.9112 [1.0000]	91.1% { 119.9% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 142025	(10.13 , N/A) (N/A , 0.00 , N/A)	195.5	N/A	0.7723 [1.0000]	77.2% { 93.8% }			
13C3_PFBS_EIS	(302.0 / 80.0) 793474	(6.17 , N/A) (N/A , 0.00 , N/A)	910.0	N/A	2.1129 [2.0000]	105.6% { 121.5% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 510536	(8.08 , N/A) (N/A , -0.01 , N/A)	1048.9	N/A	2.3883 [2.0000]	119.4% { 135.5% }			
13C8_PFOS_EIS	(507.0 / 80.0) 877924	(9.50 , N/A) (N/A , -0.01 , N/A)	544.9	N/A	2.4658 [2.0000]	123.3% { 160.8% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 103881	(5.86 , N/A) (N/A , 0.00 , N/A)	585.4	N/A	4.9046 [4.0000]	122.6% { 167.2% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 133189	(7.59 , N/A) (N/A , -0.01 , N/A)	566.8	N/A	4.6872 [4.0000]	117.2% { 159.7% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 116605	(9.00 , N/A) (N/A , -0.03 , N/A)	407.9	N/A	4.7278 [4.0000]	118.2% { 145.1% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 598110	(10.18 , N/A) (N/A , -0.01 , N/A)	841.0	N/A	1.1004 [2.0000]	55.0% { 72.2% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 130928	(10.60 , N/A) (N/A , 0.00 , N/A)	500.7	N/A	0.8140 [2.0000]	40.7% { 65.6% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 121928	(10.69 , N/A) (N/A , 0.00 , N/A)	600.6	N/A	0.8361 [2.0000]	41.8% { 61.2% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0005-12 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09A (34)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/09 - 19:43

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) 261217	(9.53 , N/A) (N/A , 0.00 , N/A)	219.8	N/A	3.2977 [4.0000]	82.4% { 102.0% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 300046	(9.70 , N/A) (N/A , 0.00 , N/A)	462.4	N/A	4.4072 [4.0000]	110.2% { 123.4% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 267395	(10.57 , N/A) (N/A , 0.00 , N/A)	614.9	N/A	9.7334 [20.0000]	48.7% { 65.5% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 143193	(10.66 , N/A) (N/A , 0.00 , N/A)	1009.0	N/A	10.2297 [20.0000]	51.1% { 68.3% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 553448	(6.54 , N/A) (N/A , -0.01 , N/A)	846.6	N/A	6.2642 [8.0000]	78.3% { 87.6% }			

FORM IR
ANALYSIS DATA SHEETR

SB-6-0.5-113022-

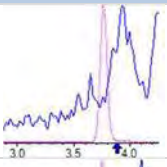
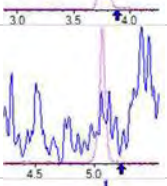
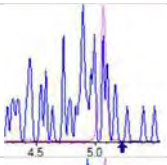
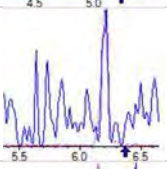
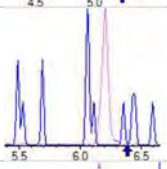
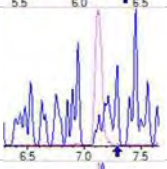
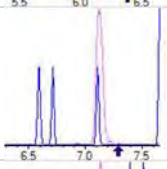
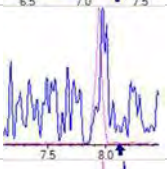
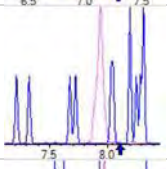
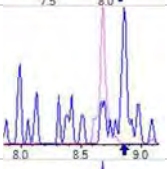
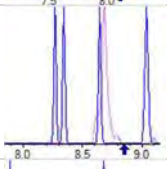
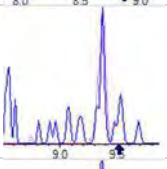
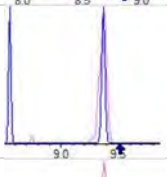
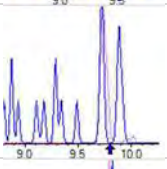
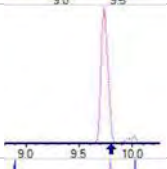
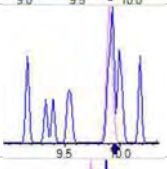
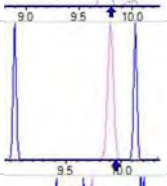
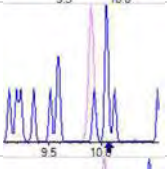
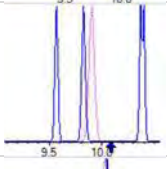
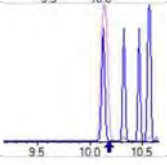
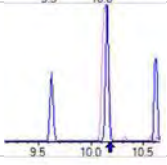
Laboratory:-	APPL, LLC-			Work Order:-	22L0005-
Client:-	Tidewater, Inc.-			Project:-	NASA JPL-
Matrix:-	Solid-	Laboratory ID:-	22L0005-12RE1-	File ID:-	S2022-12-09A (35)-
Sampled:-	11/30/22 11:35-	Prepared:-	12/01/22 14:45-	Analyzed:-	12/09/22 19:55-
Solids:-	79.39-	Preparation:-	Table B-15-	Dilution:-	10-
Initial/Final:-	1.02 g / 2 mL-			Instrument:-	Saphira-
Batch:-	BBL0032-	Sequence:-	SB03754-	Calibration:-	2250016-

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-12RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (35)
Acquired: 2022/12/09 - 19:55

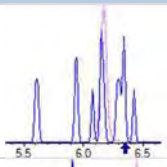
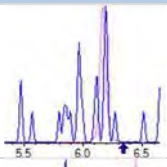
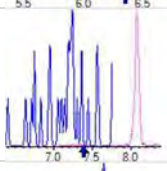
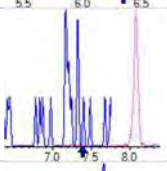
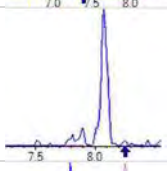
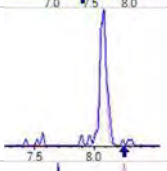
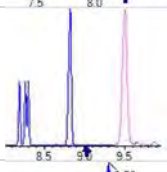
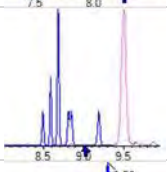
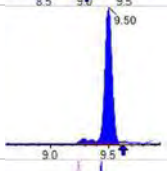
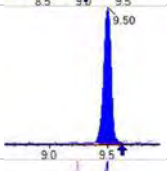
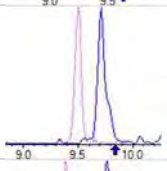
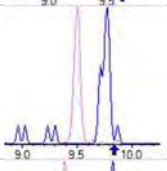
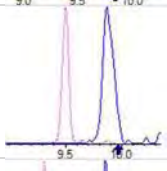
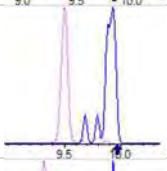
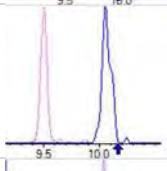
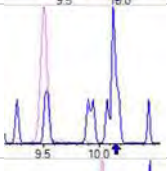
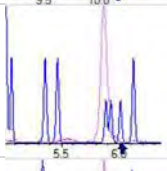
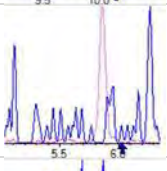
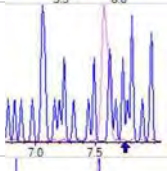
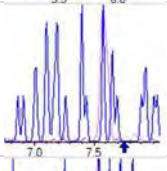
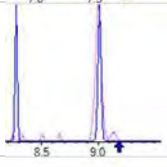
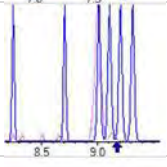
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(212.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	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.: 22L0005-12RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (35)
Acquired: 2022/12/09 - 19:55

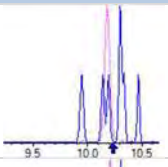
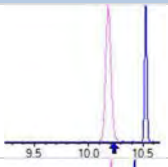
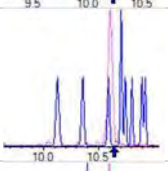
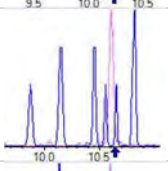
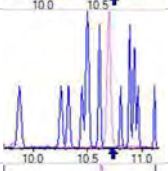
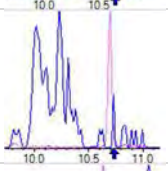
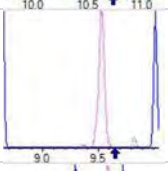
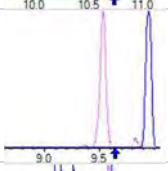
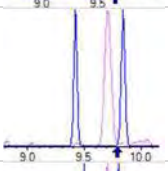
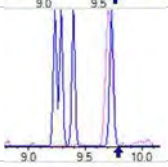
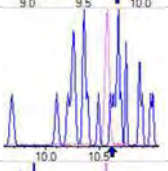
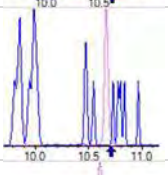
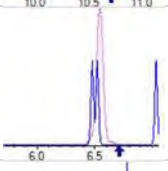
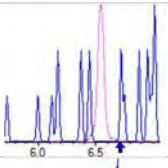
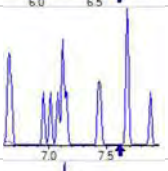
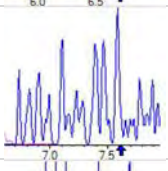
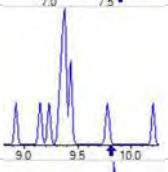
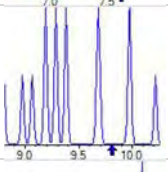
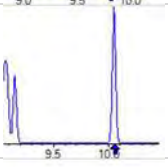
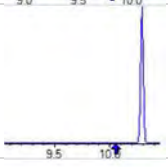
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) N/A (298.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	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) 385024 (499.0 / 99.0) 97762	(9.50 , 1.00) (0.00 , N/A , -0.1)	222.6 269.2	0.2539 98.6 109.9	0.8080	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.: 22L0005-12RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (35)
Acquired: 2022/12/09 - 19:55

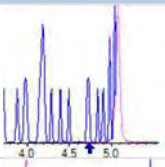
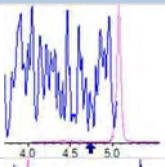
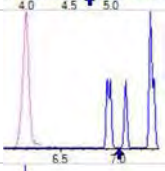
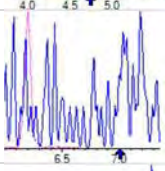
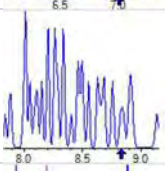
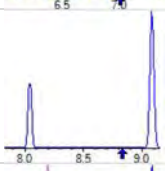
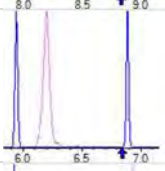
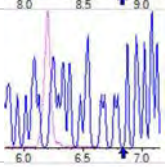
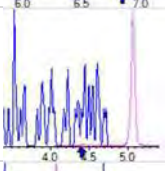
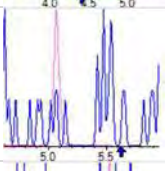
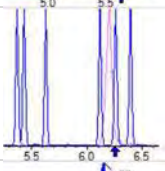
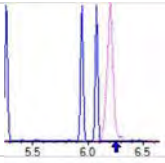
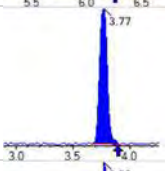
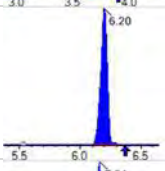
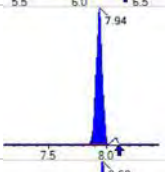
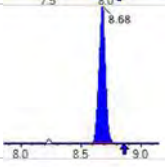
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) N/A (498.0 / 478.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	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.: 22L0005-12RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (35)
Acquired: 2022/12/09 - 19:55

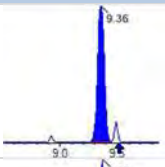
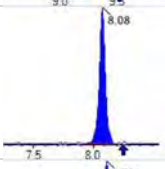
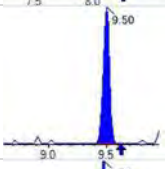
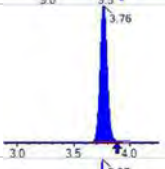
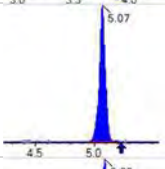
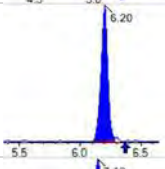
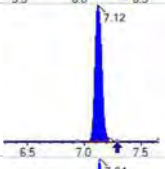
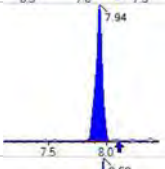
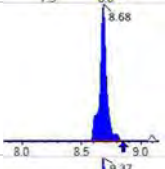
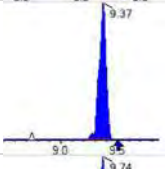
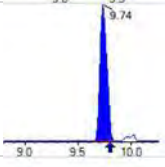
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
3:3FTCA	(241.0 / 177.0) N/A (241.0 / 117.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
5:3FTCA	(341.0 / 236.7) 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) 8630	(3.77 , N/A) (N/A , 0.03 , N/A)	256.4	N/A	0.8978 [1.0000]	89.8% { 10.8% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 9512	(6.20 , N/A) (N/A , -0.01 , N/A)	436.3	N/A	0.7703 [1.0000]	77.0% { 8.1% }			
13C4_PFOA_IIS	(417.0 / 372.0) 14114	(7.94 , N/A) (N/A , -0.01 , N/A)	6792.5	N/A	1.1905 [1.0000]	119.1% { 12.9% }			
13C5_PFNA_IIS	(468.0 / 423.0) 11241	(8.68 , N/A) (N/A , -0.01 , N/A)	6538.3	N/A	1.1803 [1.0000]	118.0% { 11.5% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-12RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (35)
Acquired: 2022/12/09 - 19:55

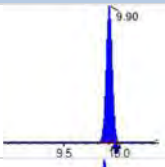
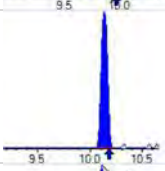
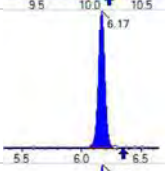
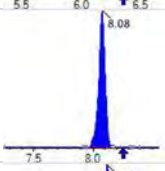
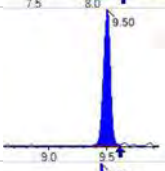
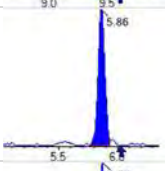
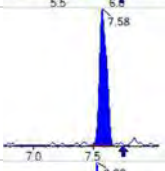
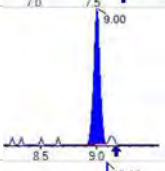
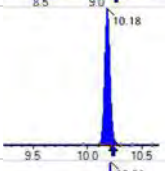
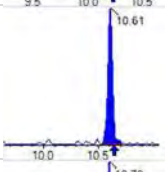
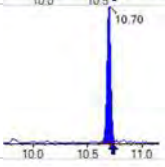
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDA_IIS	(515.1 / 470.1) 11057	(9.36 , N/A) (N/A , -0.02 , N/A)	321.1	N/A	1.3421 [1.0000]	134.2% { 12.7% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 23735	(8.08 , N/A) (N/A , -0.01 , N/A)	308.3	N/A	1.1058 [1.0000]	110.6% { 10.6% }			
13C4_PFOS_IIS	(502.8 / 79.9) 19659	(9.50 , N/A) (N/A , -0.01 , N/A)	136.4	N/A	1.0562 [1.0000]	105.6% { 9.3% }			
13C4_PFBA_EIS	(217.0 / 172.0) 48895	(3.76 , N/A) (N/A , 0.02 , N/A)	721.3	N/A	0.6043 [0.8000]	75.5% { 8.1% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 26224	(5.07 , N/A) (N/A , 0.01 , N/A)	411.9	N/A	0.3779 [0.4000]	94.5% { 7.8% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 23145	(6.20 , N/A) (N/A , 0.00 , N/A)	385.7	N/A	0.2386 [0.2000]	119.3% { 9.5% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 20861	(7.12 , N/A) (N/A , -0.01 , N/A)	322.0	N/A	0.2382 [0.2000]	119.1% { 8.9% }			
13C8_PFOA_EIS	(421.0 / 376.0) 20859	(7.94 , N/A) (N/A , -0.01 , N/A)	321.6	N/A	0.1453 [0.2000]	72.7% { 9.0% }			
13C9_PFNA_EIS	(472.0 / 427.0) 8970	(8.68 , N/A) (N/A , -0.01 , N/A)	357.3	N/A	0.0809 [0.1000]	80.9% { 9.6% }			
13C6_PFDA_EIS	(519.0 / 474.0) 11278	(9.37 , N/A) (N/A , 0.00 , N/A)	2962.0	N/A	0.0702 [0.1000]	70.2% { 8.9% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 23996	(9.74 , N/A) (N/A , 0.00 , N/A)	733.3	N/A	0.1113 [0.1000]	111.3% { 13.4% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-12RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (35)
Acquired: 2022/12/09 - 19:55

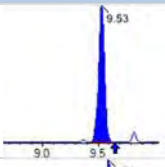
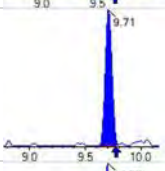
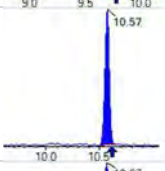
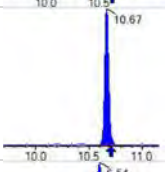
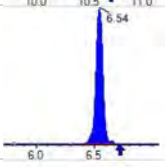
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDoA_EIS	(615.0 / 570.0) 26301	(9.90 , N/A) (N/A , -0.01 , N/A)	36731.7	N/A	0.1005 [0.1000]	100.5% { 13.8% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 17985	(10.14 , N/A) (N/A , 0.00 , N/A)	213.9	N/A	0.0936 [0.1000]	93.6% { 11.9% }			
13C3_PFBS_EIS	(302.0 / 80.0) 81003	(6.17 , N/A) (N/A , 0.00 , N/A)	500.4	N/A	0.2322 [0.2000]	116.1% { 12.4% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 42095	(8.08 , N/A) (N/A , -0.01 , N/A)	386.3	N/A	0.2120 [0.2000]	106.0% { 11.2% }			
13C8_PFOS_EIS	(507.0 / 80.0) 84894	(9.50 , N/A) (N/A , -0.01 , N/A)	276.5	N/A	0.2833 [0.2000]	141.6% { 15.5% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 9019	(5.86 , N/A) (N/A , 0.00 , N/A)	159.2	N/A	0.4584 [0.4000]	114.6% { 14.5% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 11622	(7.58 , N/A) (N/A , -0.01 , N/A)	140.0	N/A	0.4403 [0.4000]	110.1% { 13.9% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 9489	(9.00 , N/A) (N/A , -0.02 , N/A)	92.9	N/A	0.4142 [0.4000]	103.6% { 11.8% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 60990	(10.18 , N/A) (N/A , 0.00 , N/A)	314.6	N/A	0.1333 [0.2000]	66.7% { 7.4% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 13844	(10.61 , N/A) (N/A , 0.00 , N/A)	123.7	N/A	0.1023 [0.2000]	51.1% { 6.9% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 13463	(10.70 , N/A) (N/A , 0.00 , N/A)	248.8	N/A	0.1097 [0.2000]	54.8% { 6.8% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-12RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (35)
Acquired: 2022/12/09 - 19:55

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) 27891	(9.53 , N/A) (N/A , 0.00 , N/A)	261.5	N/A	0.4183 [0.4000]	104.6% { 10.9% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 26004	(9.71 , N/A) (N/A , 0.00 , N/A)	127.3	N/A	0.4538 [0.4000]	113.4% { 10.7% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 32139	(10.57 , N/A) (N/A , 0.00 , N/A)	272.3	N/A	1.3898 [2.0000]	69.5% { 7.9% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 15676	(10.67 , N/A) (N/A , 0.00 , N/A)	405.2	N/A	1.3305 [2.0000]	66.5% { 7.5% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 57432	(6.54 , N/A) (N/A , -0.01 , N/A)	554.1	N/A	0.8988 [0.8000]	112.4% { 9.1% }			

FORM IR
ANALYSIS DATA SHEETR

DUP-2-113022P

Laboratory:	AP L, LLCP			Work Order:	22L0005P
Client:	Tidewater, Inc.P			roject:	NASA JPLP
Matrix:	SolidP	Laboratory ID:	22L0005-13P	File ID:	S2022-12-09A (36)P
Sampled:	11/30/22 11:35P	repared:	12/01/22 14:45P	Analyzed:	12/09/22 20:08P
Solids:	77.76P	reparation:	Table B-15P	Dilution:	1P
Initial/Final:	1.09 g / 2 mLP			Instrument:	SaphiraP
Batch:	BBL0032P	Sequence:	SB03754P	Calibration:	2250016P

COMPOUNDR	CONC. (ng/g dry)R	LOQ	LODR	DL	Q
FBAP	0.47 UP	1.2	0.47	0.12	
FPEAP	0.47 UP	1.2	0.47	0.18	
FHXAP	0.47 UP	1.2	0.47	0.12	
PFHPAP	0.47 UP	1.2	0.47	0.12	
FOAP	0.28 JP	1.2	0.47	0.18	
FNAP	0.19 JP	1.2	0.47	0.12	
FDAP	0.38 JP	1.2	0.47	0.18	
FUnAP	0.25 JP	1.2	0.47	0.12	
FDOAP	0.47 UP	1.2	0.47	0.18	
FTRDAP	0.47 UP	1.2	0.47	0.12	
FTEDAP	0.47 UP	1.2	0.47	0.24	
FBSP	0.47 UP	1.2	0.47	0.12	
FPESP	1.1 UP	1.2	1.1	0.49	
FHXSP	1.5P	1.2	0.47	0.18	
FHPSP	0.47 UP	1.2	0.47	0.18	
FOSP	48P	1.2	0.47	0.12	
FNSP	5.3P	1.2	0.94	0.46	
FDSP	2.5P	1.2	0.47	0.24	
4:2FTSP	0.47 UP	1.2P	0.47	0.24	
6:2FTSP	0.47 UP	1.2P	0.47	0.24	
8:2FTSP	0.47 UP	1.2P	0.47	0.18	
FOSAP	0.15 JP	1.2	0.47	0.12	
NMeFOSAP	1.1 UP	1.2P	1.1	0.58	
NEtFOSAP	1.1 UP	1.2P	1.1	0.58	
NMeFOSAAP	0.47 UP	1.2P	0.47	0.24	
NEtFOSAAP	0.47 UP	1.2P	0.47	0.24	
NMeFOSEP	0.97 UP	1.2P	0.97	0.48	
NEtFOSEP	0.77 UP	1.2P	0.77	0.37	
HFPO-DAP	0.47 UP	1.2P	0.47	0.24	
ADONAP	0.47 UP	1.2P	0.47	0.24	

FORM IR
ANALYSIS DATA SHEETR

DUP-2-113022P

Laboratory:	AP L, LLCP			Work Order:	22L0005P
Client:	Tidewater, Inc.P			roject:	NASA JPLP
Matrix:	SolidP	Laboratory ID:	22L0005-13P	File ID:	S2022-12-09A (36)P
Sampled:	11/30/22 11:35P	repared:	12/01/22 14:45P	Analyzed:	12/09/22 20:08
Solids:	77.76P	reparation:	Table B-15P	Dilution:	1P
Initial/Final:	1.09 g / 2 mLP			Instrument:	SaphiraP
Batch:	BBL0032P	Sequence:	SB03754P	Calibration:	2250016

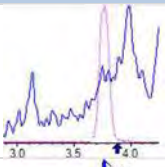
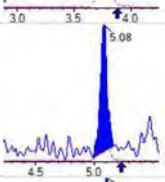
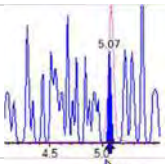
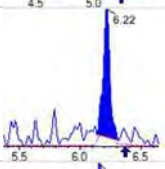
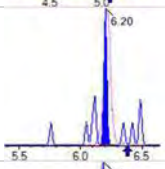
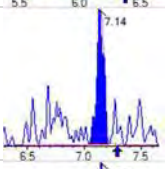
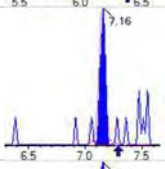
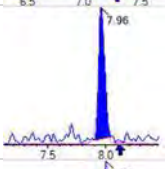
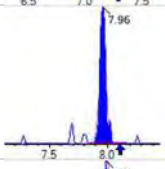
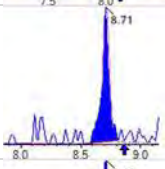
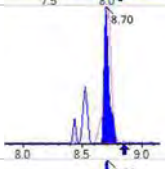
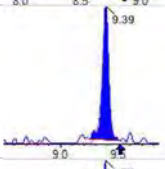
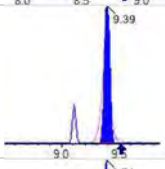
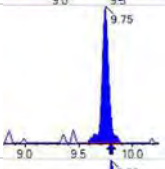
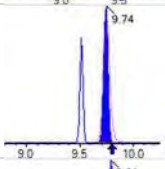
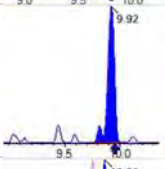
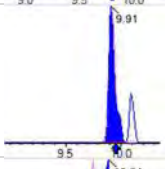
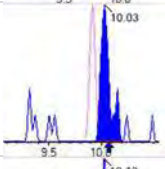
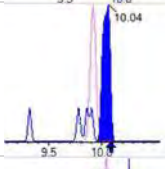
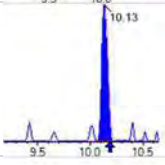
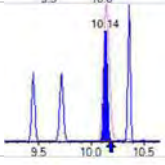
COMPOUNDR	CONC. (ng/g dry)R	LOQ	LODR	DL	Q
9CL-PF3ONSP	0.47 UP	1.2P	0.47	0.24	
11CL-PF3OUDSP	0.47 UP	1.2P	0.47	0.24	

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-13
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (36)
Acquired: 2022/12/09 - 20:08

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) 2394 (262.9 / 69.0) 56	(5.08 , 1.00) (0.00 , N/A , 0.6)	26.5 4.5	0.0233 199.7 226.9	0.0391	N/A			
PFHxA	(313.0 / 269.0) 4611 (313.0 / 119.0) 515	(6.22 , 1.00) (0.00 , N/A , 1.0)	26.5 18.7	0.1117 124.3 115.0	0.0483	N/A			
PFHpA	(363.0 / 319.0) 3679 (363.0 / 169.0) 921	(7.14 , 1.00) (-0.01 , N/A , -0.8)	23.7 23.1	0.2503 87.2 80.3	0.0374	N/A			
PFOA	(413.0 / 369.0) 12950 (413.0 / 169.0) 3607	(7.96 , 1.00) (0.00 , N/A , 0.1)	59.9 130.5	0.2785 86.1 84.0	0.1197	N/A			
PFNA	(463.0 / 419.0) 7008 (463.0 / 169.0) 1473	(8.71 , 1.00) (0.00 , N/A , 0.6)	33.2 23.7	0.2102 104.4 108.2	0.0818	N/A			
PFDA	(513.0 / 469.0) 22945 (513.0 / 169.0) 1596	(9.39 , 1.00) (0.00 , N/A , -0.2)	62.5 10153.8	0.0695 78.3 70.0	0.1624	N/A			
PFUnA	(563.0 / 519.0) 18216 (563.0 / 169.0) 947	(9.75 , 1.00) (0.00 , N/A , 0.3)	74.2 5630.0	0.0520 48.4 54.5	0.1057	N/A			IR1,
PFDoA	(613.0 / 569.0) 16168 (613.0 / 169.0) 2949	(9.92 , 1.00) (0.01 , N/A , 0.7)	62.9 20.5	0.1824 153.2 127.9	0.0729	N/A			IR2,
PFTrDA	(663.0 / 619.0) 4127 (663.0 / 169.0) 2767	(10.03 , 1.01) (N/A , 0.00 , -0.8)	23.4 51.0	0.6705 360.0 315.3	0.0212	N/A			IR2,
PFTeDA	(713.0 / 669.0) 6892 (713.0 / 169.0) 533	(10.13 , 1.00) (-0.01 , N/A , -0.2)	53.6 74.6	0.0774 39.3 36.6	0.0443	N/A			IR1,

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
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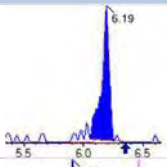
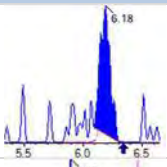
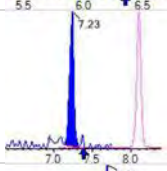
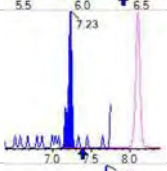
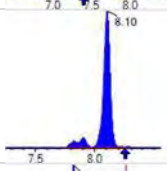
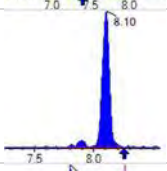
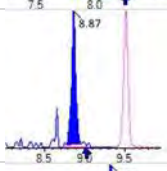
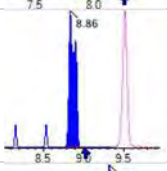
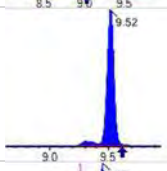
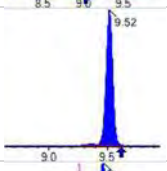
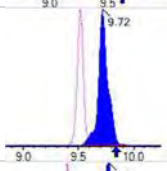
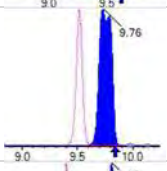
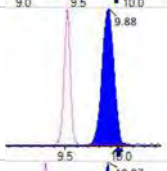
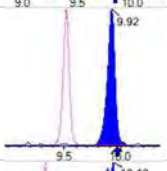
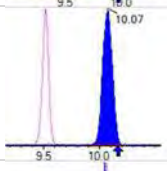
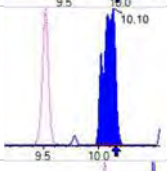
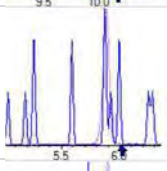
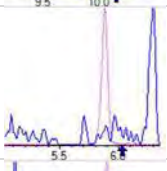
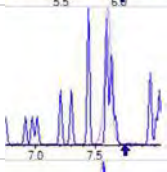
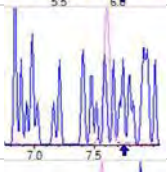
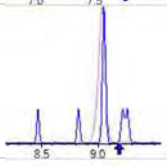
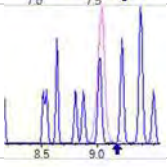
Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-13
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (36)
Acquired: 2022/12/09 - 20:08

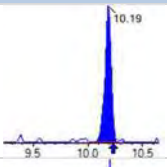
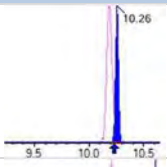
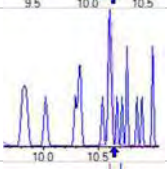
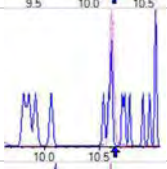
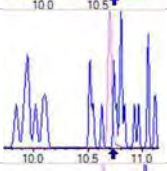
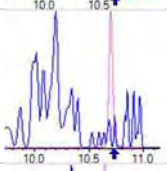
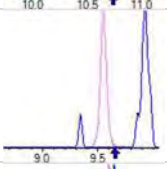
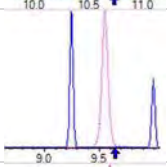
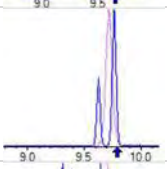
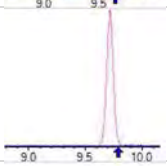
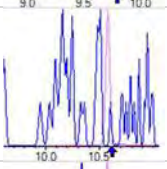
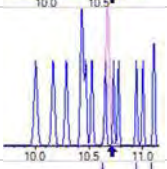
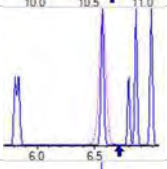
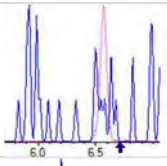
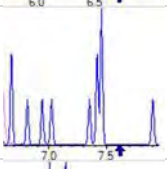
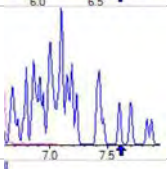
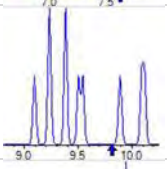
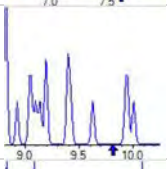
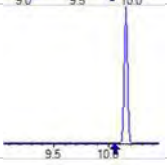
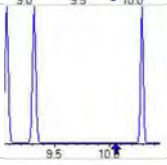
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) 4009 (298.9 / 99.0) 2406	(6.19 , 1.00) (0.00 , N/A , 0.5)	59.2 14.4	0.6002 88.6 96.3	0.0163	N/A			
PFPeS	(349.0 / 80.0) 8301 (349.0 / 99.0) 2227	(7.23 , 0.89) (N/A , 0.02 , 0.4)	57.6 39.4	0.2682 73.6 69.8	0.0188	N/A			
PFHxS	(399.0 / 80.0) 252028 (399.0 / 99.0) 78254	(8.10 , 1.00) (0.00 , N/A , 0.1)	10176.1 16665.0	0.3105 90.0 95.4	0.6421	N/A			
PFHpS	(449.0 / 80.0) 14079 (449.0 / 99.0) 4117	(8.87 , 0.93) (N/A , 0.00 , 0.2)	63.8 94.9	0.2924 102.9 106.8	0.0393	N/A			
PFOS	(499.0 / 80.0) 9005608 (499.0 / 99.0) 2346797	(9.52 , 1.00) (0.00 , N/A , 0.1)	241.2 351.2	0.2606 101.2 112.8	20.2852	N/A			
PFNS	(549.0 / 80.0) 1168984 (549.0 / 99.0) 108819	(9.72 , 1.02) (N/A , -0.07 , -2.2)	406.4 239.3	0.0931 38.9 36.8	2.2425	N/A			IR1,
PFDS	(599.0 / 80.0) 701920 (599.0 / 99.0) 60030	(9.88 , 1.04) (N/A , -0.05 , -2.4)	322.1 216.5	0.0855 36.8 37.6	1.0752	N/A			IR1,
PFDoS	(698.9 / 80.0) 175182 (698.9 / 99.0) 15180	(10.07 , 1.06) (N/A , -0.05 , -1.6)	536.7 146.0	0.0867 37.4 43.3	0.4524	N/A			IR1,
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

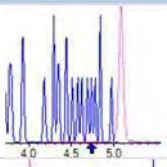
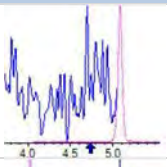
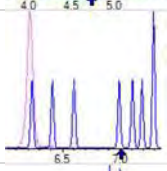
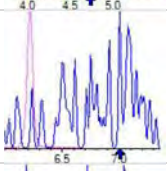
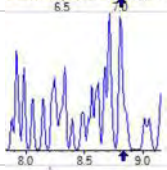
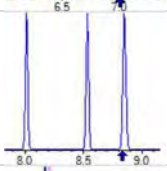
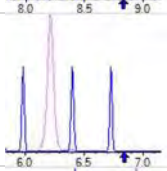
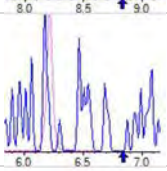
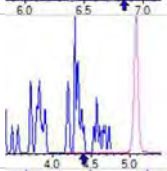
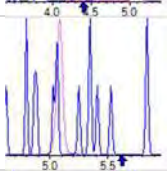
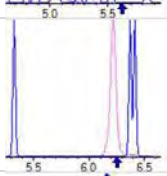
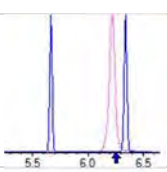
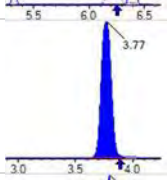
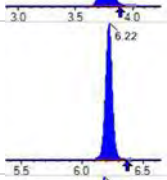
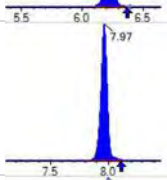
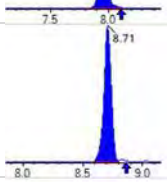
Sample I.D.: 22L0005-13
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (36)
Acquired: 2022/12/09 - 20:08

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) 19044 (498.0 / 478.0) 240	(10.19 , 1.00) (0.00 , N/A , -4.3)	108.5 55462.2	0.0126 52.8 50.1	0.0618	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			

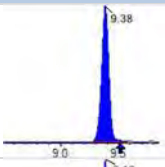
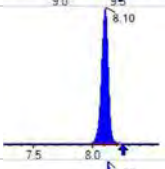
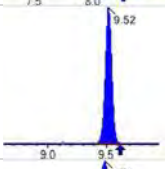
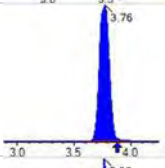
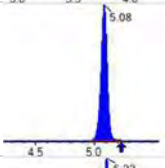
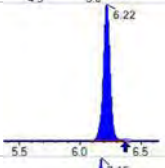
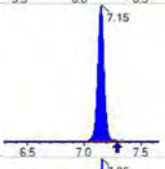
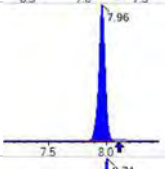
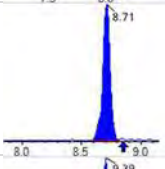
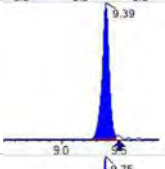
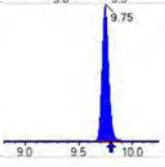
APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0005-13 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09A (36)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/09 - 20:08

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) 83444	(3.77 , N/A) (N/A , 0.03 , N/A)	661.4	N/A	0.8681 [1.0000]	86.8% { 104.2% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 129522	(6.22 , N/A) (N/A , 0.01 , N/A)	1047.0	N/A	1.0489 [1.0000]	104.9% { 110.5% }			
13C4_PFOA_IIS	(417.0 / 372.0) 131174	(7.97 , N/A) (N/A , 0.02 , N/A)	668.0	N/A	1.1065 [1.0000]	110.6% { 119.5% }			
13C5_PFNA_IIS	(468.0 / 423.0) 112125	(8.71 , N/A) (N/A , 0.01 , N/A)	348.7	N/A	1.1773 [1.0000]	117.7% { 114.5% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0005-13 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09A (36)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/09 - 20:08

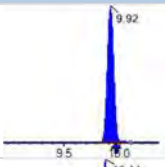
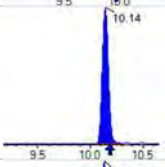
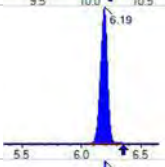
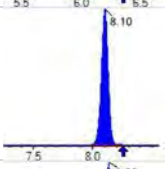
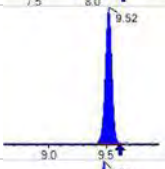
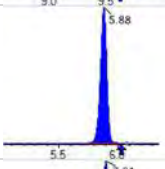
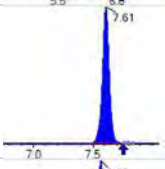
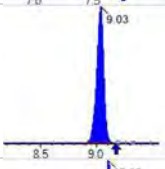
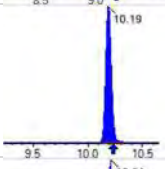
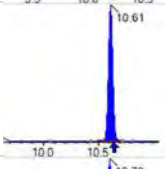
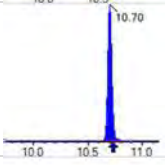
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDA_IIS	(515.1 / 470.1) 111901	(9.38 , N/A) (N/A , 0.01 , N/A)	176.8	N/A	1.3583 [1.0000]	135.8% { 128.3% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 249231	(8.10 , N/A) (N/A , 0.01 , N/A)	847.2	N/A	1.1612 [1.0000]	116.1% { 111.7% }			
13C4_PFOS_IIS	(502.8 / 79.9) 249222	(9.52 , N/A) (N/A , 0.01 , N/A)	600.1	N/A	1.3390 [1.0000]	133.9% { 117.3% }			
13C4_PFBA_EIS	(217.0 / 172.0) 459234	(3.76 , N/A) (N/A , 0.02 , N/A)	868.2	N/A	5.8702 [8.0000]	73.4% { 76.5% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 255071	(5.08 , N/A) (N/A , 0.02 , N/A)	1046.7	N/A	2.6997 [4.0000]	67.5% { 75.5% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 189266	(6.22 , N/A) (N/A , 0.01 , N/A)	647.2	N/A	1.4326 [2.0000]	71.6% { 77.9% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 194474	(7.15 , N/A) (N/A , 0.01 , N/A)	381.0	N/A	1.6308 [2.0000]	81.5% { 83.4% }			
13C8_PFOA_EIS	(421.0 / 376.0) 209900	(7.96 , N/A) (N/A , 0.01 , N/A)	527.3	N/A	1.5732 [2.0000]	78.7% { 90.6% }			
13C9_PFNA_EIS	(472.0 / 427.0) 88833	(8.71 , N/A) (N/A , 0.02 , N/A)	243.8	N/A	0.8028 [1.0000]	80.3% { 95.3% }			
13C6_PFDA_EIS	(519.0 / 474.0) 139263	(9.39 , N/A) (N/A , 0.02 , N/A)	253.4	N/A	0.8568 [1.0000]	85.7% { 110.0% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 195789	(9.75 , N/A) (N/A , 0.01 , N/A)	553.0	N/A	0.8974 [1.0000]	89.7% { 109.0% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-13
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (36)
Acquired: 2022/12/09 - 20:08

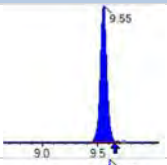
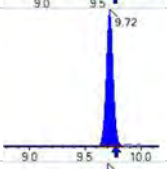
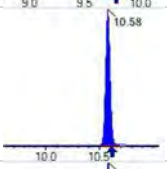
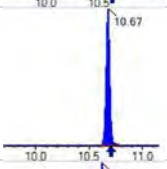
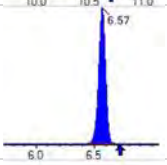
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDoA_EIS	(615.0 / 570.0) 241158	(9.92 , N/A) (N/A , 0.01 , N/A)	567.3	N/A	0.9107 [1.0000]	91.1% { 126.7% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 157768	(10.14 , N/A) (N/A , 0.00 , N/A)	304.0	N/A	0.8116 [1.0000]	81.2% { 104.2% }			
13C3_PFBS_EIS	(302.0 / 80.0) 803543	(6.19 , N/A) (N/A , 0.02 , N/A)	942.2	N/A	2.1937 [2.0000]	109.7% { 123.0% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 468236	(8.10 , N/A) (N/A , 0.01 , N/A)	992.7	N/A	2.2457 [2.0000]	112.3% { 124.3% }			
13C8_PFOS_EIS	(507.0 / 80.0) 790879	(9.52 , N/A) (N/A , 0.01 , N/A)	479.2	N/A	2.0817 [2.0000]	104.1% { 144.9% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 101418	(5.88 , N/A) (N/A , 0.02 , N/A)	630.9	N/A	4.9093 [4.0000]	122.7% { 163.3% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 126743	(7.61 , N/A) (N/A , 0.01 , N/A)	522.0	N/A	4.5730 [4.0000]	114.3% { 151.9% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 118890	(9.03 , N/A) (N/A , 0.01 , N/A)	387.5	N/A	4.9422 [4.0000]	123.6% { 147.9% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 554614	(10.19 , N/A) (N/A , 0.00 , N/A)	766.0	N/A	0.9562 [2.0000]	47.8% { 66.9% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 105755	(10.61 , N/A) (N/A , 0.01 , N/A)	417.4	N/A	0.6162 [2.0000]	30.8% { 53.0% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 98565	(10.70 , N/A) (N/A , 0.00 , N/A)	574.2	N/A	0.6334 [2.0000]	31.7% { 49.5% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-13
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (36)
Acquired: 2022/12/09 - 20:08

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) 281484	(9.55 , N/A) (N/A , 0.01 , N/A)	369.7	N/A	3.3302 [4.0000]	83.3% { 109.9% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 263721	(9.72 , N/A) (N/A , 0.01 , N/A)	413.8	N/A	3.6301 [4.0000]	90.8% { 108.5% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 246842	(10.58 , N/A) (N/A , 0.01 , N/A)	807.1	N/A	8.4203 [20.0000]	42.1% { 60.4% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 135196	(10.67 , N/A) (N/A , 0.01 , N/A)	950.3	N/A	9.0512 [20.0000]	45.3% { 64.4% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 461802	(6.57 , N/A) (N/A , 0.02 , N/A)	942.0	N/A	5.3075 [8.0000]	66.3% { 73.1% }			

FORM IR
ANALYSIS DATA SHEETR

DUP-2-113022P

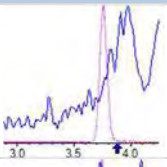
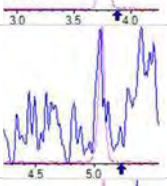
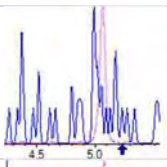
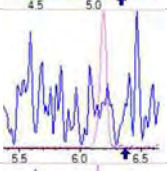
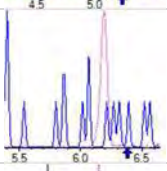
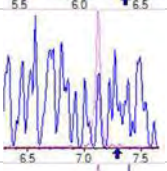
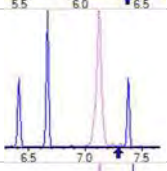
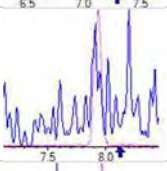
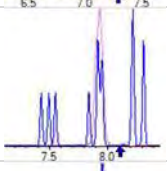
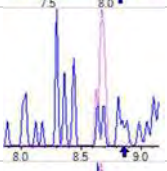
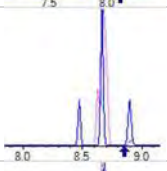
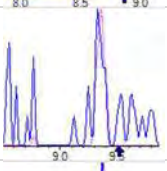
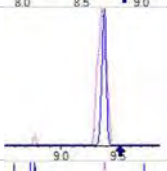
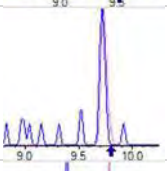
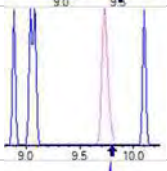
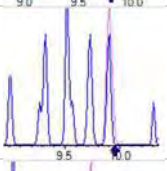
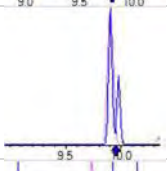
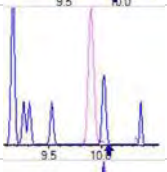
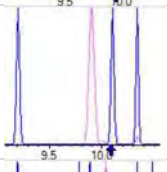
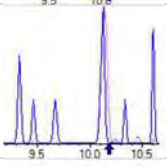
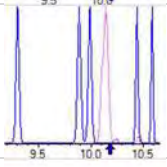
Laboratory:	AP L, LLCP			Work Order:	22L0005P
Client:	Tidewater, Inc.P			roject:	NASA JPLP
Matrix:	SolidP	Laboratory ID:	22L0005-13RE1P	File ID:	S2022-12-09A (37)P
Sampled:	11/30/22 11:35P	repared:	12/01/22 14:45P	Analyzed:	12/09/22 20:21P
Solids:	77.76P	reparation:	Table B-15P	Dilution:	10P
Initial/Final:	1.09 g / 2 mLP			Instrument:	SaphiraP
Batch:	BBL0032P	Sequence:	SB03754P	Calibration:	2250016P

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-13RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (37)
Acquired: 2022/12/09 - 20:21

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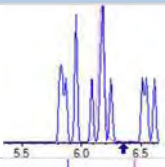
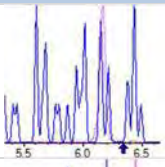
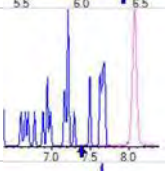
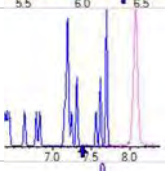
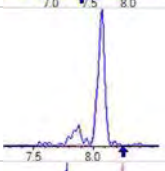
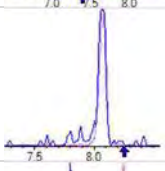
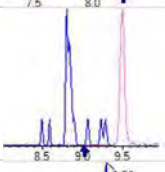
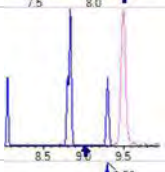
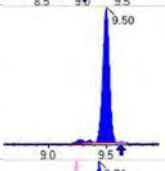
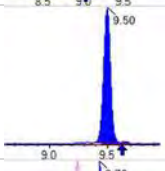
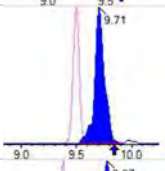
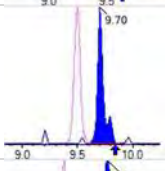
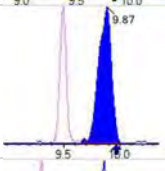
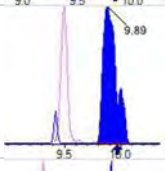
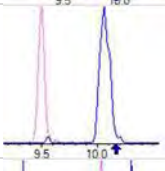
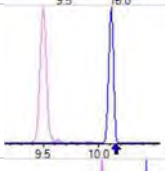
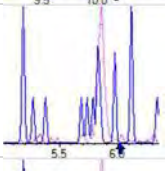
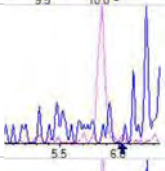
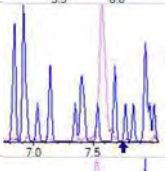
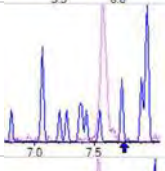
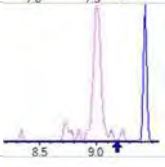
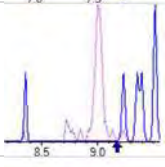
Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-13RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (37)
Acquired: 2022/12/09 - 20:21

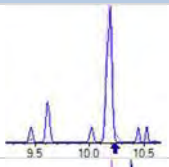
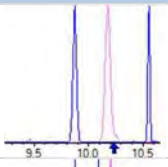
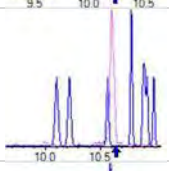
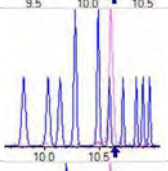
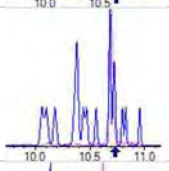
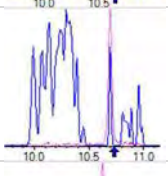
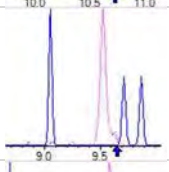
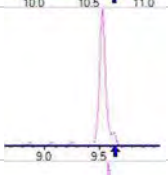
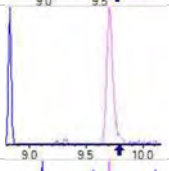
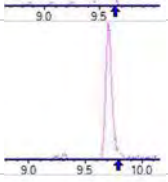
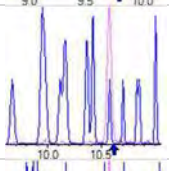
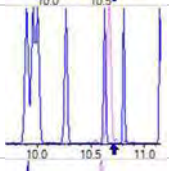
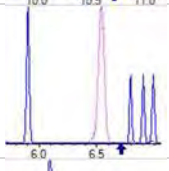
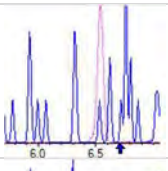
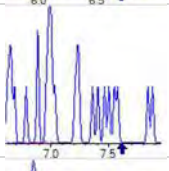
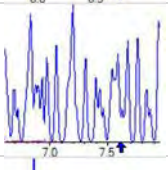
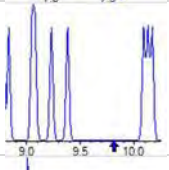
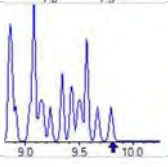
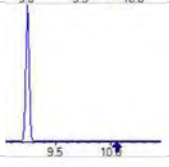
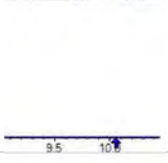
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) N/A (298.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	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) 677860 (499.0 / 99.0) 172344	(9.50 , 1.00) (0.00 , N/A , 0.1)	316.8 268.4	0.2542 98.7 110.1	1.8393	N/A			
PFNS	(549.0 / 80.0) 117584 (549.0 / 99.0) 10404	(9.71 , 1.02) (N/A , -0.08 , 0.1)	181.5 72.6	0.0885 37.0 34.9	0.2717	N/A			IR1,
PFDS	(599.0 / 80.0) 61378 (599.0 / 99.0) 4763	(9.87 , 1.04) (N/A , -0.06 , -1.2)	162.7 61.9	0.0776 33.4 34.1	0.1132	N/A			IR1,
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.: 22L0005-13RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (37)
Acquired: 2022/12/09 - 20:21

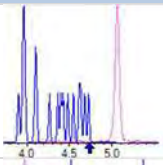
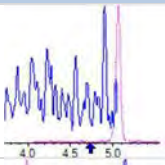
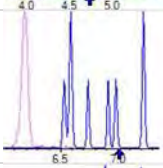
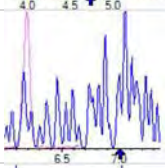
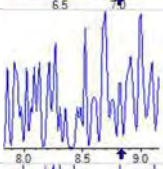
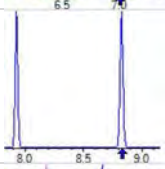
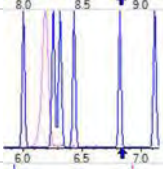
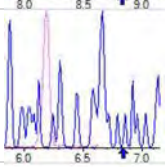
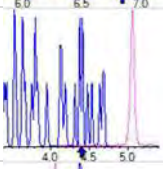
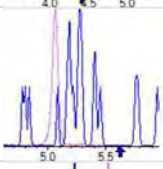
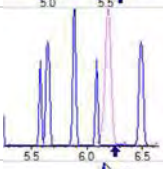
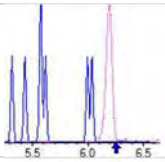
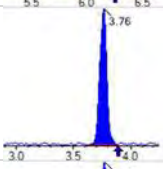
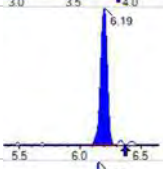
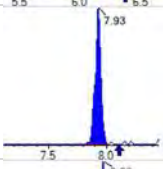
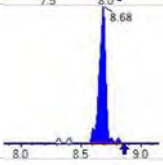
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) N/A (498.0 / 478.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	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.: 22L0005-13RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (37)
Acquired: 2022/12/09 - 20:21

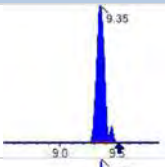
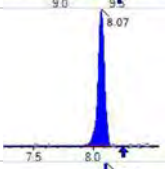
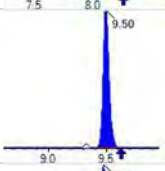
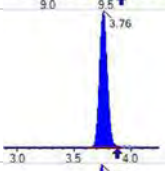
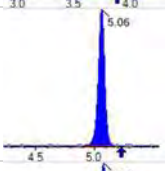
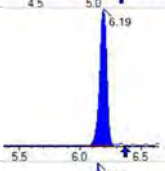
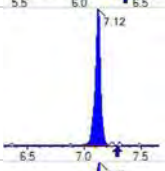
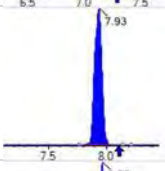
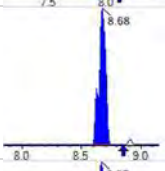
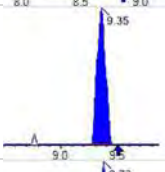
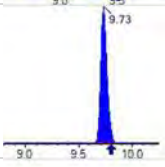
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
3:3FTCA	(241.0 / 177.0) N/A (241.0 / 117.0) N/A	(N/A , N/A) (N/A , N/A , 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) 7667	(3.76 , N/A) (N/A , 0.02 , N/A)	259.6	N/A	0.7976 [1.0000]	79.8% { 9.6% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 9772	(6.19 , N/A) (N/A , -0.01 , N/A)	199.3	N/A	0.7913 [1.0000]	79.1% { 8.3% }			
13C4_PFOA_IIS	(417.0 / 372.0) 9625	(7.93 , N/A) (N/A , -0.02 , N/A)	317.1	N/A	0.8119 [1.0000]	81.2% { 8.8% }			
13C5_PFNA_IIS	(468.0 / 423.0) 8952	(8.68 , N/A) (N/A , -0.01 , N/A)	223.8	N/A	0.9400 [1.0000]	94.0% { 9.1% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-13RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (37)
Acquired: 2022/12/09 - 20:21

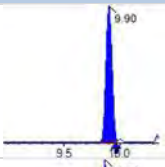
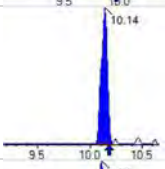
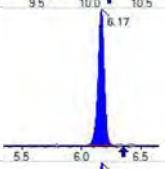
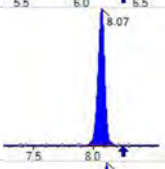
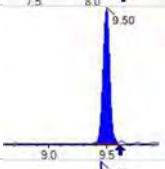
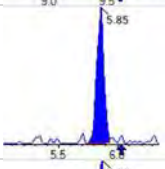
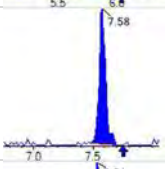
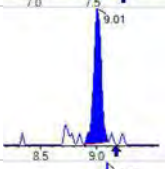
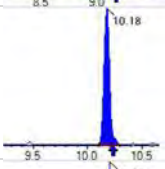
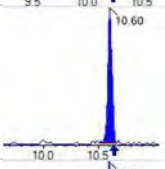
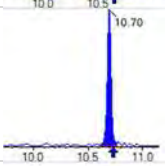
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDA_IIS	(515.1 / 470.1) 10805	(9.35 , N/A) (N/A , -0.02 , N/A)	47.5	N/A	1.3116 [1.0000]	131.2% { 12.4% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 21207	(8.07 , N/A) (N/A , -0.02 , N/A)	272.1	N/A	0.9880 [1.0000]	98.8% { 9.5% }			
13C4_PFOS_IIS	(502.8 / 79.9) 15421	(9.50 , N/A) (N/A , -0.02 , N/A)	577.0	N/A	0.8285 [1.0000]	82.9% { 7.3% }			
13C4_PFBA_EIS	(217.0 / 172.0) 42809	(3.76 , N/A) (N/A , 0.01 , N/A)	892.6	N/A	0.5956 [0.8000]	74.4% { 7.1% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 20387	(5.06 , N/A) (N/A , 0.00 , N/A)	384.8	N/A	0.2860 [0.4000]	71.5% { 6.0% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 20510	(6.19 , N/A) (N/A , -0.01 , N/A)	261.4	N/A	0.2058 [0.2000]	102.9% { 8.4% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 15437	(7.12 , N/A) (N/A , -0.01 , N/A)	254.5	N/A	0.1716 [0.2000]	85.8% { 6.6% }			
13C8_PFOA_EIS	(421.0 / 376.0) 20332	(7.93 , N/A) (N/A , -0.02 , N/A)	283.5	N/A	0.2077 [0.2000]	103.8% { 8.8% }			
13C9_PFNA_EIS	(472.0 / 427.0) 9028	(8.68 , N/A) (N/A , -0.01 , N/A)	35762.0	N/A	0.1022 [0.1000]	102.2% { 9.7% }			
13C6_PFDA_EIS	(519.0 / 474.0) 9174	(9.35 , N/A) (N/A , -0.02 , N/A)	4058.9	N/A	0.0585 [0.1000]	58.5% { 7.2% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 19896	(9.73 , N/A) (N/A , -0.01 , N/A)	126.1	N/A	0.0944 [0.1000]	94.4% { 11.1% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-13RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (37)
Acquired: 2022/12/09 - 20:21

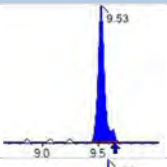
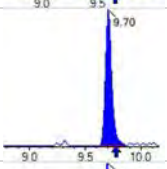
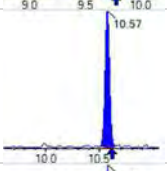
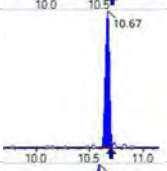
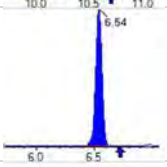
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDoA_EIS	(615.0 / 570.0) 19139	(9.90 , N/A) (N/A , -0.01 , N/A)	3146.6	N/A	0.0749 [0.1000]	74.9% { 10.1% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 14836	(10.14 , N/A) (N/A , 0.00 , N/A)	209.7	N/A	0.0790 [0.1000]	79.0% { 9.8% }			
13C3_PFBS_EIS	(302.0 / 80.0) 73366	(6.17 , N/A) (N/A , -0.01 , N/A)	496.2	N/A	0.2354 [0.2000]	117.7% { 11.2% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 35714	(8.07 , N/A) (N/A , -0.02 , N/A)	384.0	N/A	0.2013 [0.2000]	100.7% { 9.5% }			
13C8_PFOS_EIS	(507.0 / 80.0) 65656	(9.50 , N/A) (N/A , -0.01 , N/A)	283.7	N/A	0.2793 [0.2000]	139.6% { 12.0% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 7020	(5.85 , N/A) (N/A , -0.01 , N/A)	83.0	N/A	0.3994 [0.4000]	99.8% { 11.3% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 9357	(7.58 , N/A) (N/A , -0.02 , N/A)	117.2	N/A	0.3968 [0.4000]	99.2% { 11.2% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 7026	(9.01 , N/A) (N/A , -0.02 , N/A)	57.3	N/A	0.3433 [0.4000]	85.8% { 8.7% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 46713	(10.18 , N/A) (N/A , -0.01 , N/A)	321.6	N/A	0.1302 [0.2000]	65.1% { 5.6% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 10475	(10.60 , N/A) (N/A , 0.00 , N/A)	144.5	N/A	0.0986 [0.2000]	49.3% { 5.2% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 9583	(10.70 , N/A) (N/A , 0.00 , N/A)	154.6	N/A	0.0995 [0.2000]	49.8% { 4.8% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-13RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (37)
Acquired: 2022/12/09 - 20:21

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) 20453	(9.53 , N/A) (N/A , -0.01 , N/A)	137.9	N/A	0.3911 [0.4000]	97.8% { 8.0% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 25094	(9.70 , N/A) (N/A , 0.00 , N/A)	113.6	N/A	0.5582 [0.4000]	139.6% { 10.3% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 24665	(10.57 , N/A) (N/A , 0.00 , N/A)	201.6	N/A	1.3598 [2.0000]	68.0% { 6.0% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 12015	(10.67 , N/A) (N/A , 0.00 , N/A)	253.9	N/A	1.3000 [2.0000]	65.0% { 5.7% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 47172	(6.54 , N/A) (N/A , -0.01 , N/A)	541.6	N/A	0.7186 [0.8000]	89.8% { 7.5% }			

FORM IR
ANALYSIS DATA SHEETR

SB-6-2.0-113022-

Laboratory:-	APPL, LLC-			Work Order:-	22L0005-
Client:-	Tidewater, Inc.-			Project:-	NASA JPL-
Matrix:-	Solid-	Laboratory ID:-	22L0005-14-	File ID:	S2022-12-09A (38)-
Sampled:-	11/30/22 11:45-	Prepared:-	12/01/22 14:45-	Analyzed:-	12/09/22 20:34
Solids:-	89.95-	Preparation:-	Table B-15-	Dilution:-	1-
Initial/Final:-	1.11 g / 2 mL-			Instrument:-	Saphira-
Batch:-	BBL0032-	Sequence:-	SB03754-	Calibration:-	2250016

COMPOUNDR	CONC. (ng/g dry)R	LOQ	LODR	DL	Q
PFBA-	0.40 U-	1.0-	0.40	0.10	
PFPEA-	0.40 U-	1.0-	0.40	0.15	
PFHXA-	0.24 J-	1.0-	0.40	0.10	
PFHPA-	0.40 U-	1.0-	0.40	0.10	
PFOA-	0.16 J-	1.0-	0.40	0.15	
PFNA-	0.40 U-	1.0-	0.40	0.10	
PFDA-	0.40 U-	1.0-	0.40	0.15	
PFUnA-	0.40 U-	1.0-	0.40	0.10	
PFDOA-	0.40 U-	1.0-	0.40	0.15	
PFTRDA-	0.40 U-	1.0-	0.40	0.10	
PFTEDA-	0.40 U-	1.0-	0.40	0.20	
PFBS-	0.40 U-	1.0-	0.40	0.10	
PFPES-	0.90 U-	1.0-	0.90	0.41	
PFHXS-	2.4-	1.0-	0.40	0.15	
PFHPS-	0.40 U-	1.0-	0.40	0.15	
PFNS-	1.5-	1.0-	0.80	0.39	
PFDS-	0.40 U-	1.0-	0.40	0.20	
4:2FTS-	0.40 U-	1.0-	0.40	0.20	
6:2FTS-	0.40 U-	1.0-	0.40	0.20	
8:2FTS-	0.40 U-	1.0-	0.40	0.15	
PFOSA-	0.40 U-	1.0-	0.40	0.10	
NMeFOSA-	0.90 U-	1.0-	0.90	0.49	
NEtFOSA-	0.90 U-	1.0-	0.90	0.49	
NMeFOSAA-	0.40 U-	1.0-	0.40	0.20	
NEtFOSAA-	0.40 U-	1.0-	0.40	0.20	
NMeFOSE-	0.82 U-	1.0-	0.82	0.41	
NEtFOSE-	0.65 U-	1.0-	0.65	0.31	
HFPO-DA-	0.40 U-	1.0-	0.40	0.20	
ADONA-	0.40 U-	1.0-	0.40	0.20	
9CL-PF3ONS-	0.40 U-	1.0-	0.40	0.20	

FORM IR
ANALYSIS DATA SHEETR

SB-6-2.0-113022-

Laboratory:-	APPL, LLC-			Work Order:-	22L0005-
Client:-	Tidewater, Inc.-			Project:-	NASA JPL-
Matrix:-	Solid-	Laboratory ID:-	22L0005-14-	File ID:	S2022-12-09A (38)-
Sampled:-	11/30/22 11:45-	Prepared:-	12/01/22 14:45-	Analyzed:-	12/09/22 20:34
Solids:-	89.95-	Preparation:-	Table B-15-	Dilution:-	1-
Initial/Final:-	1.11 g / 2 mL-			Instrument:-	Saphira-
Batch:-	BBL0032-	Sequence:-	SB03754-	Calibration:-	2250016

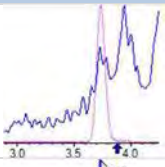
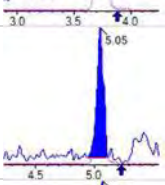
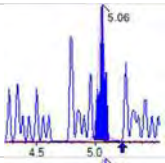
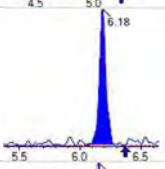
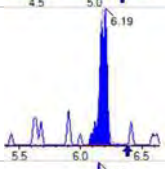
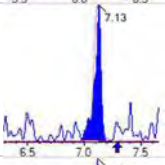
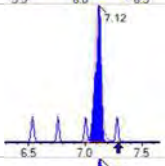
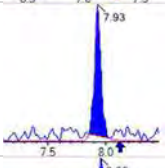
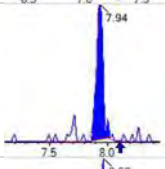
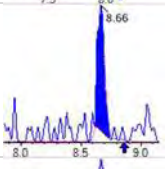
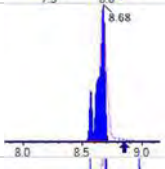
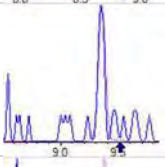
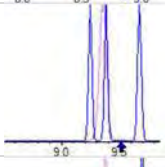
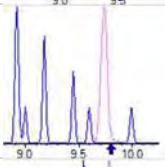
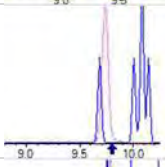
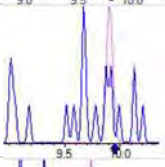
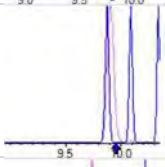
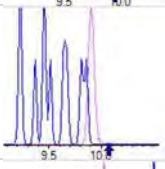
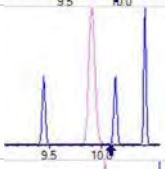
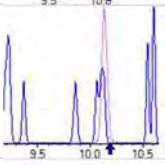
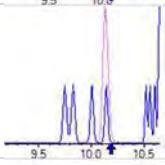
COMPOUNDR	CONC. (ng/g dry)R	LOQ	LODR	DL	Q
11CL-PF3OUDS-	0.40 U-	1.0-	0.40	0.20	

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-14
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (38)
Acquired: 2022/12/09 - 20:34

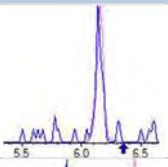
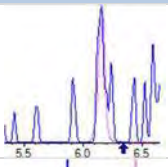
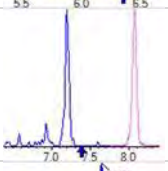
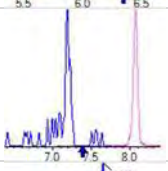
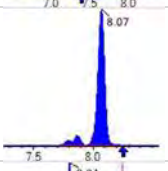
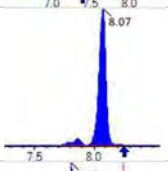
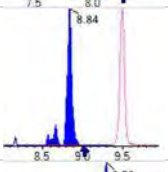
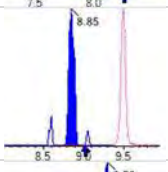
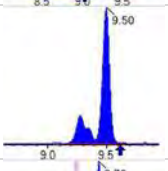
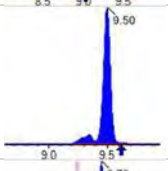
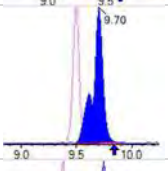
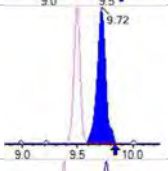
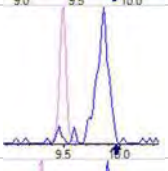
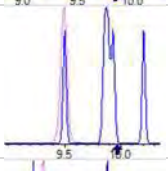
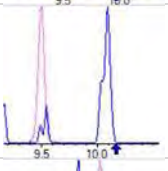
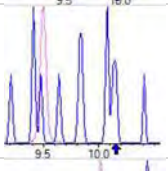
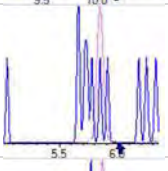
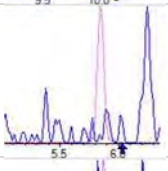
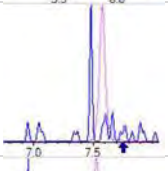
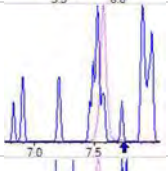
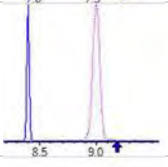
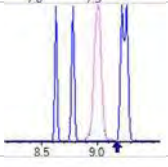
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(212.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFPeA	(262.9 / 219.0) 3801 (262.9 / 69.0) 210	(5.05 , 1.00) (0.00 , N/A , -0.5)	43.8 10.7	0.0553 475.2 539.9	0.0498	N/A			
PFHxA	(313.0 / 269.0) 17359 (313.0 / 119.0) 2467	(6.18 , 1.00) (0.00 , N/A , -0.3)	78.9 36.9	0.1421 158.1 146.3	0.1209	N/A			IR2,
PFHpA	(363.0 / 319.0) 5990 (363.0 / 169.0) 1033	(7.13 , 1.00) (0.01 , N/A , 0.4)	28.0 73.9	0.1724 60.1 55.3	0.0498	N/A			
PFOA	(413.0 / 369.0) 11017 (413.0 / 169.0) 4197	(7.93 , 1.00) (0.00 , N/A , -0.5)	49.9 53.0	0.3809 117.7 114.9	0.0823	N/A			
PFNA	(463.0 / 419.0) 3364 (463.0 / 169.0) 988	(8.66 , 1.00) (-0.01 , N/A , -0.7)	17.0 46.8	0.2936 145.9 151.2	0.0361	N/A			IR2,
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.: 22L0005-14
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (38)
Acquired: 2022/12/09 - 20:34

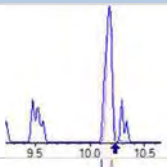
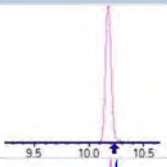
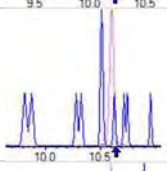
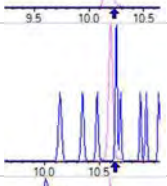
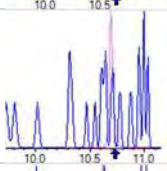
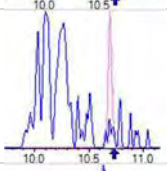
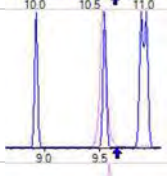
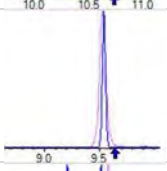
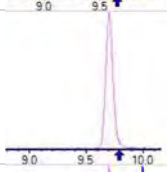
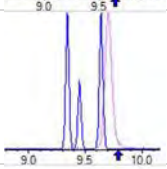
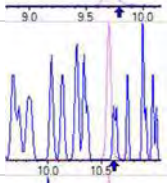
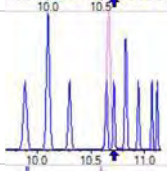
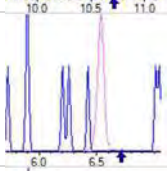
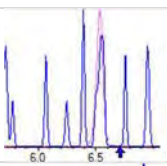
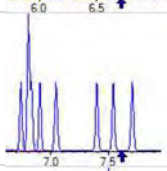
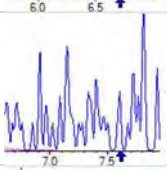
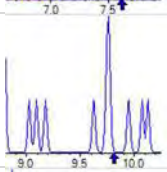
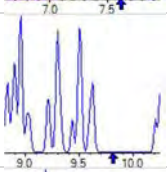
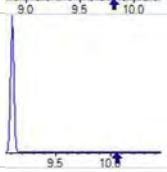
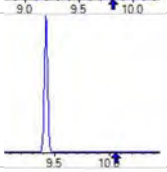
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) N/A (298.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	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) 416885 (399.0 / 99.0) 146193	(8.07 , 1.00) (0.00 , N/A , -0.1)	9464.8 45799.8	0.3507 101.7 107.8	1.1926	N/A			
PFHpS	(449.0 / 80.0) 19723 (449.0 / 99.0) 5759	(8.84 , 0.93) (N/A , -0.02 , -0.5)	38006.8 118.7	0.2920 102.7 106.6	0.0607	N/A			
PFOS	(499.0 / 80.0) 25093221 (499.0 / 99.0) 6081807	(9.50 , 1.00) (0.00 , N/A , 0.1)	136.1 243.2	0.2424 94.1 104.9	62.3380	N/A			E,
PFNS	(549.0 / 80.0) 356938 (549.0 / 99.0) 28194	(9.70 , 1.02) (N/A , -0.08 , -0.9)	213.8 152.9	0.0790 33.0 31.2	0.7552	N/A			IR1,
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.: 22L0005-14
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (38)
Acquired: 2022/12/09 - 20:34

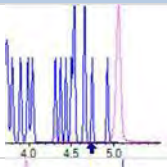
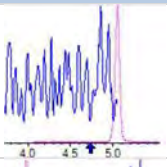
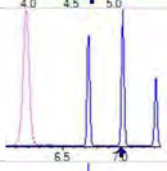
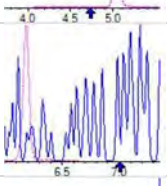
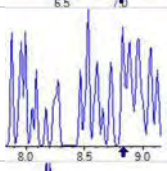
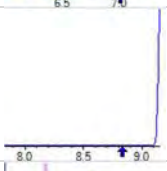
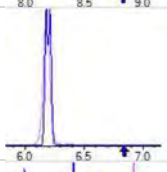
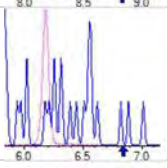
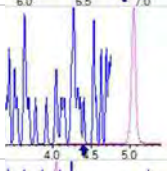
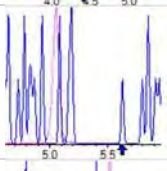
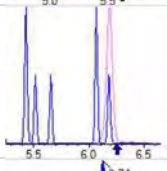
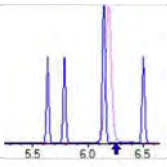
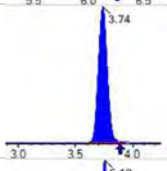
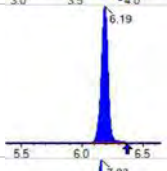
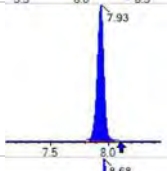
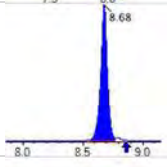
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) N/A (498.0 / 478.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	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

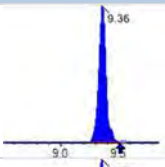
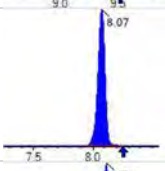
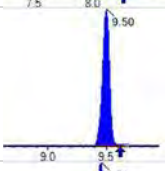
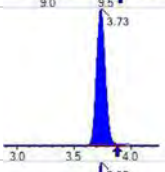
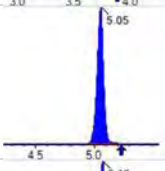
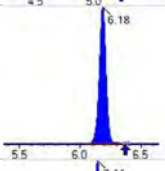
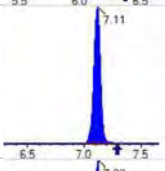
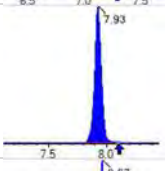
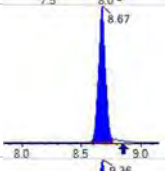
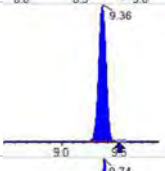
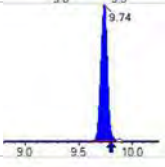
Sample I.D.: 22L0005-14
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (38)
Acquired: 2022/12/09 - 20:34

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) 80790	(3.74 , N/A) (N/A , 0.00 , N/A)	804.0	N/A	0.8405 [1.0000]	84.0% { 100.9% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 140663	(6.19 , N/A) (N/A , -0.02 , N/A)	716.0	N/A	1.1391 [1.0000]	113.9% { 120.0% }			
13C4_PFOA_IIS	(417.0 / 372.0) 128740	(7.93 , N/A) (N/A , -0.02 , N/A)	706.9	N/A	1.0860 [1.0000]	108.6% { 117.3% }			
13C5_PFNA_IIS	(468.0 / 423.0) 98091	(8.68 , N/A) (N/A , -0.02 , N/A)	299.4	N/A	1.0299 [1.0000]	103.0% { 100.2% }			

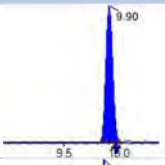
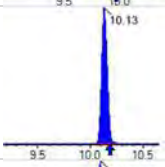
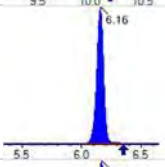
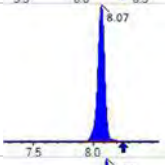
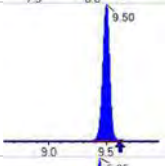
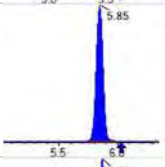
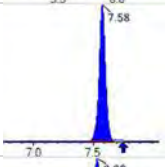
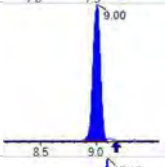
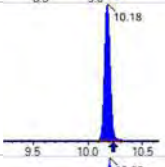
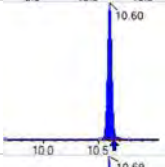
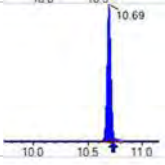
APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0005-14 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09A (38)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/09 - 20:34

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) 88372	(9.36 , N/A) (N/A , -0.01 , N/A)	451.5	N/A	1.0727 [1.0000]	107.3% { 101.4% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 199971	(8.07 , N/A) (N/A , -0.02 , N/A)	767.5	N/A	0.9317 [1.0000]	93.2% { 89.7% }			
13C4_PFOS_IIS	(502.8 / 79.9) 172540	(9.50 , N/A) (N/A , -0.01 , N/A)	406.1	N/A	0.9270 [1.0000]	92.7% { 81.2% }			
13C4_PFBA_EIS	(217.0 / 172.0) 615330	(3.73 , N/A) (N/A , -0.01 , N/A)	806.6	N/A	8.1239 [8.0000]	101.5% { 102.6% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 317893	(5.05 , N/A) (N/A , -0.01 , N/A)	1012.0	N/A	3.0981 [4.0000]	77.5% { 94.1% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 284946	(6.18 , N/A) (N/A , -0.02 , N/A)	433.1	N/A	1.9860 [2.0000]	99.3% { 117.3% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 237453	(7.11 , N/A) (N/A , -0.02 , N/A)	717.4	N/A	1.8335 [2.0000]	91.7% { 101.8% }			
13C8_PFOA_EIS	(421.0 / 376.0) 259631	(7.93 , N/A) (N/A , -0.02 , N/A)	496.1	N/A	1.9828 [2.0000]	99.1% { 112.0% }			
13C9_PFNA_EIS	(472.0 / 427.0) 96744	(8.67 , N/A) (N/A , -0.02 , N/A)	609.1	N/A	0.9994 [1.0000]	99.9% { 103.8% }			
13C6_PFDA_EIS	(519.0 / 474.0) 145759	(9.36 , N/A) (N/A , -0.01 , N/A)	465.8	N/A	1.1355 [1.0000]	113.6% { 115.1% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 215951	(9.74 , N/A) (N/A , 0.00 , N/A)	257.8	N/A	1.2533 [1.0000]	125.3% { 120.2% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0005-14 | Quant Method: 1633 - S2022-12-07A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-09A (38)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-07.dam | Acquired: 2022/12/09 - 20:34

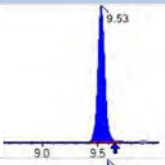
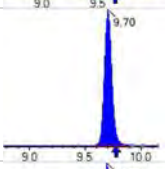
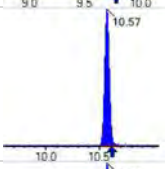
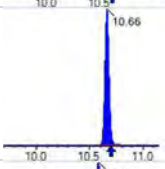
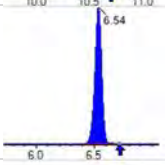
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDoA_EIS	(615.0 / 570.0) 244399	(9.90 , N/A) (N/A , -0.01 , N/A)	595.3	N/A	1.1687 [1.0000]	116.9% { 128.4% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 181016	(10.13 , N/A) (N/A , -0.01 , N/A)	2760.8	N/A	1.1792 [1.0000]	117.9% { 119.6% }			
13C3_PFBS_EIS	(302.0 / 80.0) 748600	(6.16 , N/A) (N/A , -0.01 , N/A)	820.9	N/A	2.5472 [2.0000]	127.4% { 114.6% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 417001	(8.07 , N/A) (N/A , -0.02 , N/A)	831.3	N/A	2.4927 [2.0000]	124.6% { 110.7% }			
13C8_PFOS_EIS	(507.0 / 80.0) 717099	(9.50 , N/A) (N/A , -0.01 , N/A)	677.0	N/A	2.7263 [2.0000]	136.3% { 131.3% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 88027	(5.85 , N/A) (N/A , -0.01 , N/A)	775.4	N/A	5.3108 [4.0000]	132.8% { 141.7% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 107048	(7.58 , N/A) (N/A , -0.02 , N/A)	540.2	N/A	4.8138 [4.0000]	120.3% { 128.3% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 105336	(9.00 , N/A) (N/A , -0.02 , N/A)	645.6	N/A	5.4574 [4.0000]	136.4% { 131.0% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 798296	(10.18 , N/A) (N/A , -0.01 , N/A)	794.9	N/A	1.9881 [2.0000]	99.4% { 96.3% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 186119	(10.60 , N/A) (N/A , 0.00 , N/A)	557.9	N/A	1.5664 [2.0000]	78.3% { 93.2% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 201504	(10.69 , N/A) (N/A , 0.00 , N/A)	738.7	N/A	1.8703 [2.0000]	93.5% { 101.1% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-14
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (38)
Acquired: 2022/12/09 - 20:34

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) 247290	(9.53 , N/A) (N/A , -0.01 , N/A)	223.0	N/A	4.2259 [4.0000]	105.6% { 96.6% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 244100	(9.70 , N/A) (N/A , 0.00 , N/A)	327.7	N/A	4.8533 [4.0000]	121.3% { 100.4% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 379606	(10.57 , N/A) (N/A , 0.00 , N/A)	747.6	N/A	18.7042 [20.0000]	93.5% { 93.0% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 203047	(10.66 , N/A) (N/A , 0.00 , N/A)	974.1	N/A	19.6352 [20.0000]	98.2% { 96.8% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 667571	(6.54 , N/A) (N/A , -0.02 , N/A)	809.4	N/A	7.0647 [8.0000]	88.3% { 105.7% }			

FORM IR
ANALYSIS DATA SHEETR

SB-6-2.0-113022-

Laboratory:-	APPL, LLC-			Work Order:-	22L0005-
Client:-	Tidewater, Inc.-			Project:-	NASA JPL-
Matrix:-	Solid-	Laboratory ID:-	22L0005-14RE1-	File ID:	S2022-12-09A (39)-
Sampled:-	11/30/22 11:45-	Prepared:-	12/01/22 14:45-	Analyzed:-	12/09/22 20:46
Solids:-	89.95-	Preparation:-	Table B-15-	Dilution:-	10-
Initial/Final:-	1.11 g / 2 mL-			Instrument:-	Saphira-
Batch:-	BBL0032-	Sequence:-	SB03754-	Calibration:-	2250016

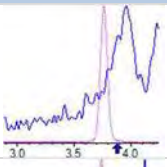
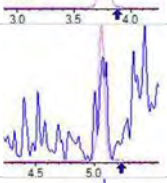
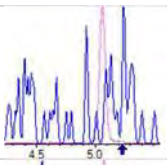
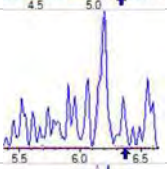
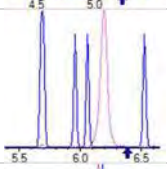
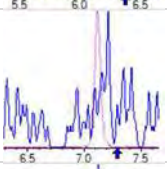
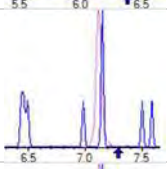
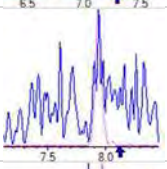
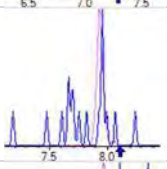
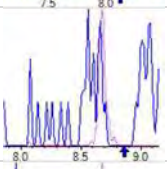
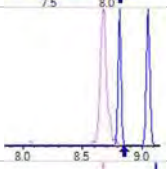
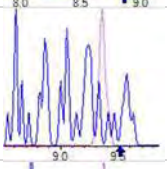
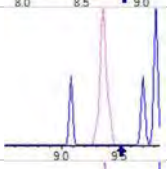
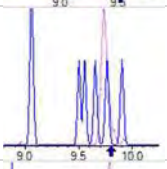
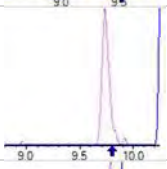
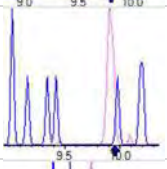
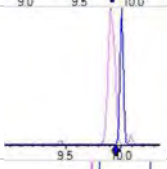
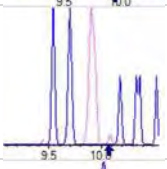
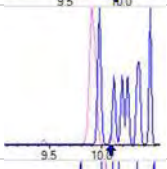
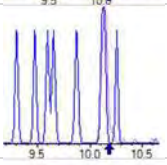
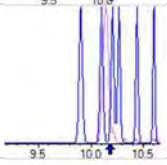
COMPOUNDR	CONC. (ng/g dry)R	LOQ	LODR	DL	Q
PFOS-	140-	10-	4.0	1.0	

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-14RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (39)
Acquired: 2022/12/09 - 20:46

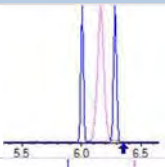
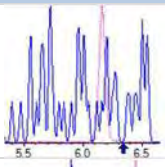
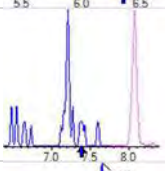
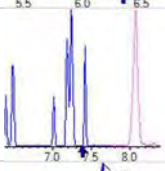
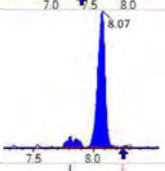
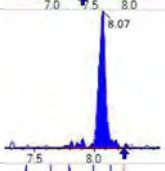
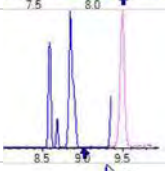
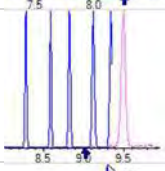
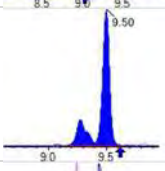
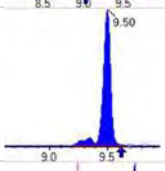
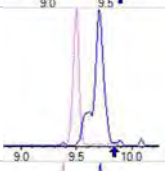
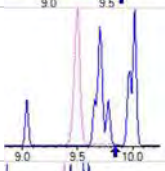
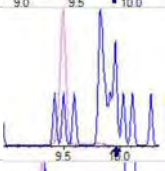
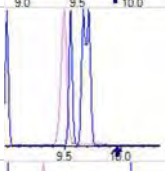
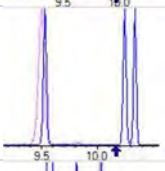
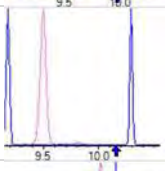
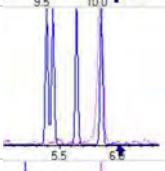
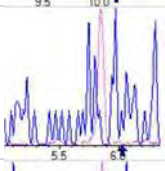
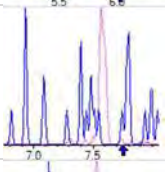
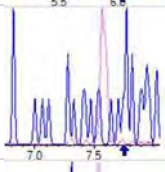
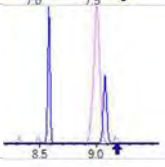
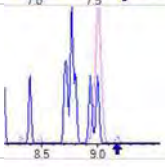
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(212.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	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.: 22L0005-14RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (39)
Acquired: 2022/12/09 - 20:46

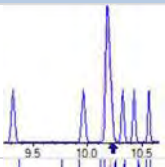
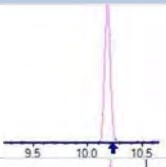
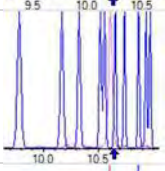
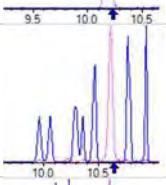
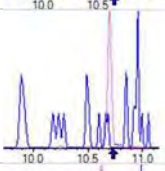
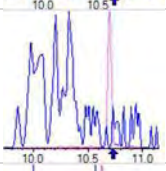
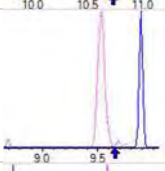
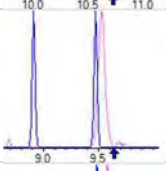
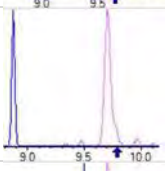
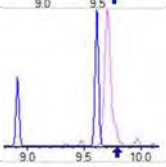
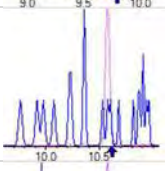
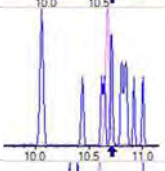
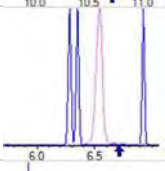
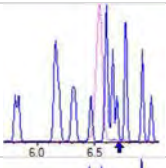
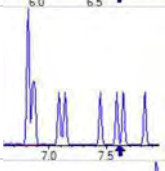
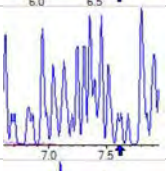
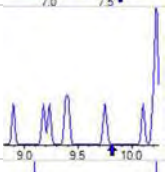
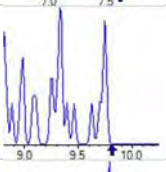
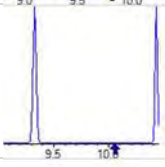
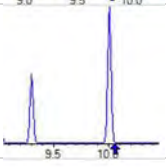
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) N/A (298.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	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) 41064 (399.0 / 99.0) 15636	(8.07 , 1.00) (0.00 , N/A , 0.2)	88368.7 1219031.8	0.3808 110.4 117.0	0.1226	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) 2788955 (499.0 / 99.0) 648107	(9.50 , 1.00) (0.00 , N/A , 0.0)	131.3 194.5	0.2324 90.2 100.6	6.8120	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.: 22L0005-14RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (39)
Acquired: 2022/12/09 - 20:46

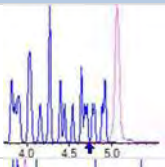
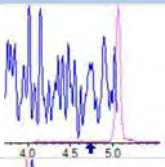
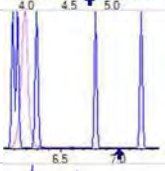
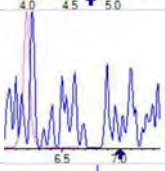
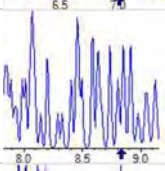
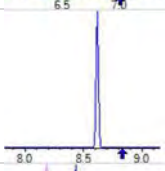
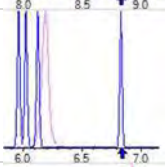
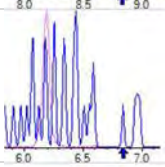
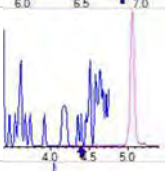
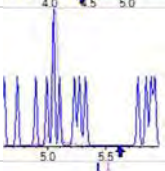
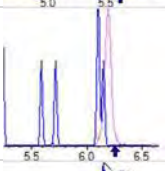
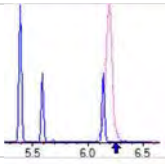
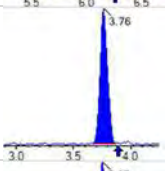
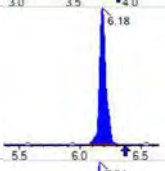
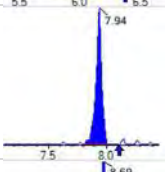
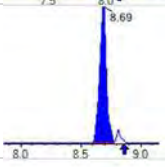
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) N/A (498.0 / 478.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	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.: 22L0005-14RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (39)
Acquired: 2022/12/09 - 20:46

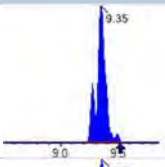
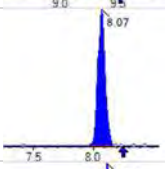
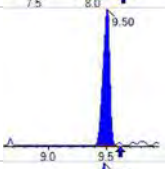
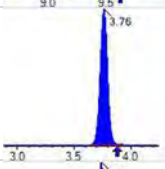
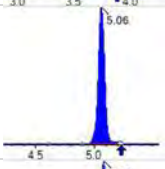
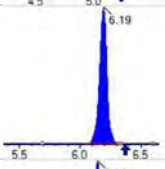
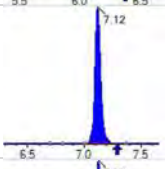
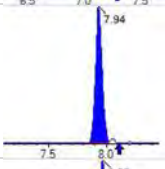
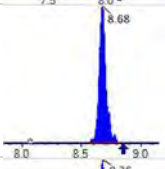
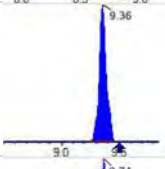
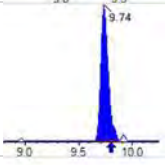
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
3:3FTCA	(241.0 / 177.0) N/A (241.0 / 117.0) N/A	(N/A , N/A) (N/A , N/A , 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) 8041	(3.76 , N/A) (N/A , 0.03 , N/A)	279.9	N/A	0.8365 [1.0000]	83.6% { 10.0% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 11481	(6.18 , N/A) (N/A , -0.02 , N/A)	271.9	N/A	0.9298 [1.0000]	93.0% { 9.8% }			
13C4_PFOA_IIS	(417.0 / 372.0) 12248	(7.94 , N/A) (N/A , -0.01 , N/A)	198.3	N/A	1.0332 [1.0000]	103.3% { 11.2% }			
13C5_PFNA_IIS	(468.0 / 423.0) 11727	(8.69 , N/A) (N/A , -0.01 , N/A)	4485.7	N/A	1.2313 [1.0000]	123.1% { 12.0% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-14RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (39)
Acquired: 2022/12/09 - 20:46

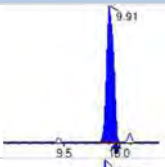
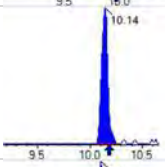
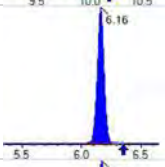
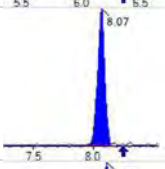
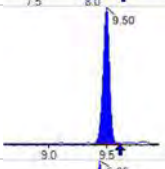
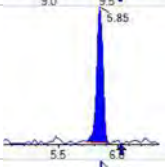
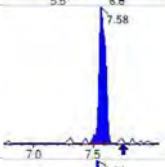
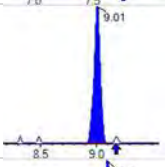
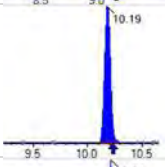
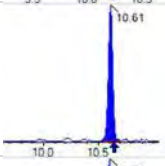
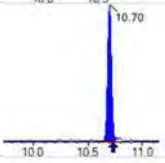
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDA_IIS	(515.1 / 470.1) 10281	(9.35 , N/A) (N/A , -0.02 , N/A)	2699.0	N/A	1.2480 [1.0000]	124.8% { 11.8% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 19259	(8.07 , N/A) (N/A , -0.02 , N/A)	298.2	N/A	0.8973 [1.0000]	89.7% { 8.6% }			
13C4_PFOS_IIS	(502.8 / 79.9) 19281	(9.50 , N/A) (N/A , -0.01 , N/A)	123.7	N/A	1.0359 [1.0000]	103.6% { 9.1% }			
13C4_PFBA_EIS	(217.0 / 172.0) 58518	(3.76 , N/A) (N/A , 0.02 , N/A)	869.3	N/A	0.7763 [0.8000]	97.0% { 9.8% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 32707	(5.06 , N/A) (N/A , 0.00 , N/A)	433.9	N/A	0.3905 [0.4000]	97.6% { 9.7% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 25049	(6.19 , N/A) (N/A , -0.01 , N/A)	311.6	N/A	0.2139 [0.2000]	106.9% { 10.3% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 21961	(7.12 , N/A) (N/A , -0.02 , N/A)	276.7	N/A	0.2078 [0.2000]	103.9% { 9.4% }			
13C8_PFOA_EIS	(421.0 / 376.0) 25115	(7.94 , N/A) (N/A , -0.02 , N/A)	1828.9	N/A	0.2016 [0.2000]	100.8% { 10.8% }			
13C9_PFNA_EIS	(472.0 / 427.0) 12315	(8.68 , N/A) (N/A , -0.02 , N/A)	1007.5	N/A	0.1064 [0.1000]	106.4% { 13.2% }			
13C6_PFDA_EIS	(519.0 / 474.0) 7544	(9.36 , N/A) (N/A , -0.01 , N/A)	103.3	N/A	0.0505 [0.1000]	50.5% { 6.0% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 25257	(9.74 , N/A) (N/A , 0.00 , N/A)	287.1	N/A	0.1260 [0.1000]	126.0% { 14.1% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-14RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (39)
Acquired: 2022/12/09 - 20:46

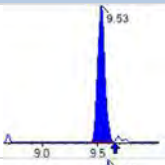
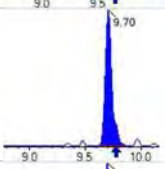
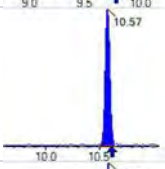
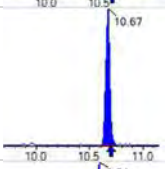
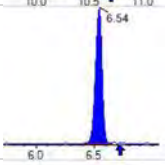
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDoA_EIS	(615.0 / 570.0) 16708	(9.91 , N/A) (N/A , 0.00 , N/A)	576.0	N/A	0.0687 [0.1000]	68.7% { 8.8% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 16374	(10.14 , N/A) (N/A , 0.00 , N/A)	100.2	N/A	0.0917 [0.1000]	91.7% { 10.8% }			
13C3_PFBS_EIS	(302.0 / 80.0) 76088	(6.16 , N/A) (N/A , -0.01 , N/A)	582.7	N/A	0.2688 [0.2000]	134.4% { 11.6% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 39962	(8.07 , N/A) (N/A , -0.02 , N/A)	369.5	N/A	0.2480 [0.2000]	124.0% { 10.6% }			
13C8_PFOS_EIS	(507.0 / 80.0) 72936	(9.50 , N/A) (N/A , -0.01 , N/A)	248.2	N/A	0.2482 [0.2000]	124.1% { 13.4% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 7843	(5.85 , N/A) (N/A , -0.01 , N/A)	119.3	N/A	0.4913 [0.4000]	122.8% { 12.6% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 11723	(7.58 , N/A) (N/A , -0.02 , N/A)	124.7	N/A	0.5474 [0.4000]	136.8% { 14.1% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 10377	(9.01 , N/A) (N/A , -0.02 , N/A)	238.3	N/A	0.5582 [0.4000]	139.6% { 12.9% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 80469	(10.19 , N/A) (N/A , 0.00 , N/A)	427.2	N/A	0.1793 [0.2000]	89.7% { 9.7% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 17712	(10.61 , N/A) (N/A , 0.01 , N/A)	226.1	N/A	0.1334 [0.2000]	66.7% { 8.9% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 20361	(10.70 , N/A) (N/A , 0.00 , N/A)	465.9	N/A	0.1691 [0.2000]	84.6% { 10.2% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-14RE1@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-07.dam

Quant Method: 1633 - S2022-12-07A
Path: S2022-12-09A (39)
Acquired: 2022/12/09 - 20:46

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) 25743	(9.53 , N/A) (N/A , -0.01 , N/A)	136.6	N/A	0.3937 [0.4000]	98.4% { 10.1% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 27125	(9.70 , N/A) (N/A , 0.00 , N/A)	112.6	N/A	0.4826 [0.4000]	120.7% { 11.2% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 40684	(10.57 , N/A) (N/A , 0.00 , N/A)	382.5	N/A	1.7939 [2.0000]	89.7% { 10.0% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 21818	(10.67 , N/A) (N/A , 0.01 , N/A)	388.4	N/A	1.8880 [2.0000]	94.4% { 10.4% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 70110	(6.54 , N/A) (N/A , -0.01 , N/A)	422.8	N/A	0.9090 [0.8000]	113.6% { 11.1% }			

FORM IR
ANALYSIS DATA SHEETR

Field Blanke

Laboratory:e	APPL, LLCe			Work Order:e	22L0005e
Client:e	Tidewater, Inc.e			Project:	NASA JPLe
Matrix:e	Watere	Laboratory ID:e	22L0005-15e	File ID:	S2022-12-15C (17)e
Sampled:e	11/30/22 12:10e	Prepared:e	12/13/22 09:44	Analyzed:e	12/16/22 03:23
Solids:e		Preparation:e	Table B-15e	Dilution:e	1e
Initial/Final:e	47.29 mL / 2 mLe			Instrument:e	Saphira
Batch:e	BBL0249e	Sequence:e	SB03860	Calibration:e	2251019

COMPOUNDR	CONC. (ng/L)R	LOQ	LODR	DL	Q
PFBAe	1.1 Ue	17e	1.1	0.26	
PFPEAe	1.1 Ue	8.5e	1.1	0.33	
PFHXAe	1.1 Ue	4.2e	1.1	0.34	
PFHPAe	1.1 Ue	4.2e	1.1	0.26	
PFOAe	1.1 Ue	4.2e	1.1	0.43	
PFNAe	1.1 Ue	4.2e	1.1	0.26	
PFDAe	1.1 Ue	4.2e	1.1	0.26	
PFUnAe	1.1 Ue	4.2e	1.1	0.42	
PFDOAe	1.1 Ue	4.2e	1.1	0.26	
PFTRDAe	1.1 Ue	4.2e	1.1	0.31	
PFTEDAe	1.1 Ue	4.2e	1.1	0.45	
PFBSe	1.1 Ue	4.2e	1.1	0.26	
PFPESe	1.1 Ue	4.2e	1.1	0.31	
PFHXSe	1.1 Ue	4.2e	1.1	0.26	
PFHPSe	1.1 Ue	4.2e	1.1	0.30	
PFOSe	1.1 Ue	4.2e	1.1	0.26	
PFNSe	2.1 Ue	4.2e	2.1	1.3	
PFDSe	1.1 Ue	4.2e	1.1	0.34	
4:2FTSe	2.1 Ue	17e	2.1	0.57	
6:2FTSe	1.1 Ue	17e	1.1	0.48	
8:2FTSe	3.2 Ue	17e	3.2	1.1	
PFOSAe	1.1 Ue	17e	1.1	0.26	
NMeFOSAe	11 Ue	17e	11e	5.2	
NEtFOSAe	11 Ue	17e	11e	5.2	
NMeFOSAAe	1.1 Ue	4.2e	1.1	0.38	
NEtFOSAAe	1.1 Ue	4.2e	1.1	0.26	
NMeFOSEe	6.3 Ue	17e	6.3	3.2	
NEtFOSEe	6.3 Ue	17e	6.3	3.2	
HFPO-DAe	5.3 Ue	8.5e	5.3	2.6	
ADONAe	3.2 Ue	8.5e	3.2	1.4	

FORM IR
ANALYSIS DATA SHEETR

Field Blanke

Laboratory:e	APPL, LLCe			Work Order:e	22L0005e
Client:e	Tidewater, Inc.e			Project:e	NASA JPLe
Matrix:e	Watere	Laboratory ID:e	22L0005-15e	File ID:e	S2022-12-15C (17)e
Sampled:e	11/30/22 12:10e	Prepared:e	12/13/22 09:44e	Analyzed:e	12/16/22 03:23e
Solids:e		Preparation:e	Table B-15e	Dilution:e	1e
Initial/Final:e	47.29 mL / 2 mLe			Instrument:e	Saphirae
Batch:e	BBL0249e	Sequence:e	SB03860e	Calibration:e	2251019e

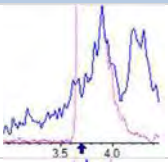
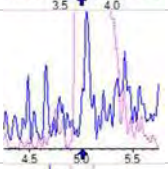
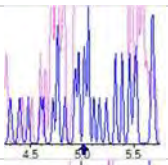
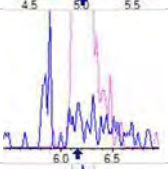
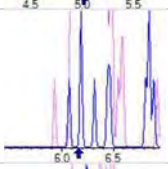
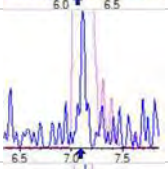
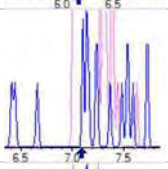
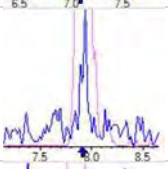
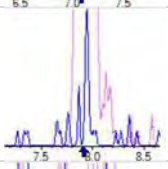
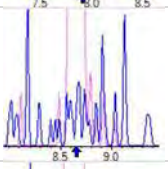
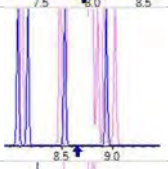
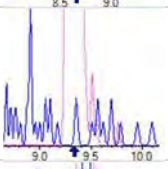
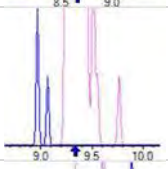
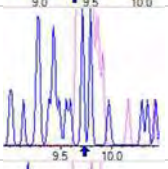
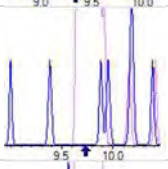
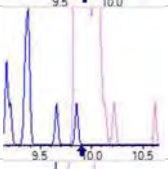
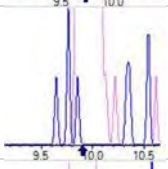
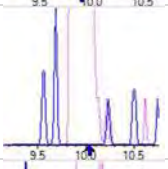
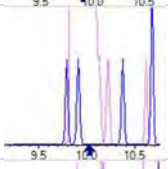
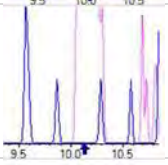
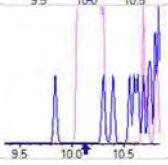
COMPOUNDR	CONC. (ng/L)R	LOQ	LODR	DLR	Q
9CL-PF3ONSe	3.2 Ue	8.5e	3.2e	1.2 e	
11CL-PF3OUDSe	3.2 Ue	8.5e	3.2e	1.3 e	

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-15
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-13.dam

Quant Method: 1633 - S2022-12-15A
Path: S2022-12-15C (17)
Acquired: 2022/12/16 - 03:23

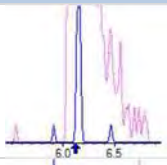
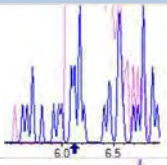
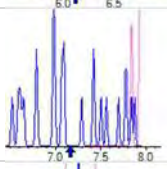
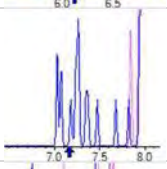
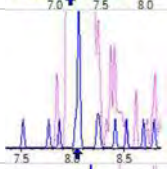
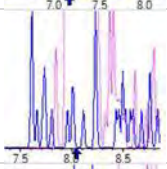
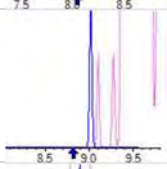
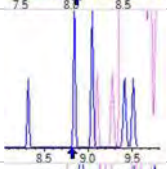
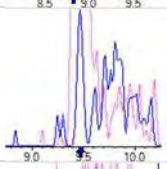
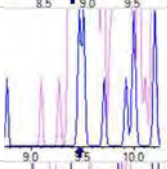
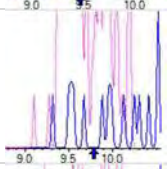
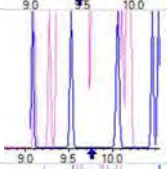
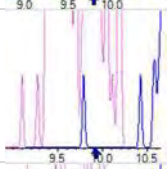
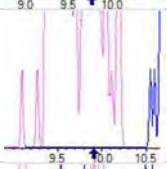
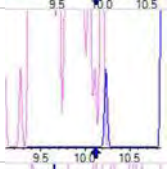
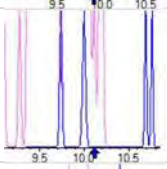
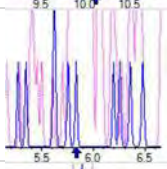
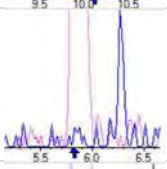
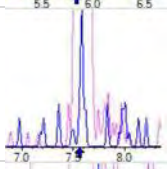
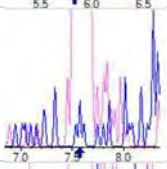
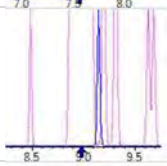
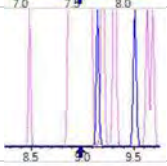
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(212.9 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	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.: 22L0005-15
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-13.dam

Quant Method: 1633 - S2022-12-15A
Path: S2022-12-15C (17)
Acquired: 2022/12/16 - 03:23

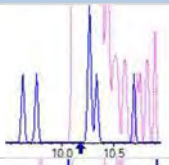
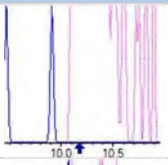
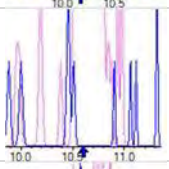
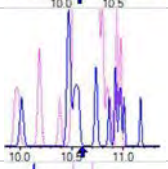
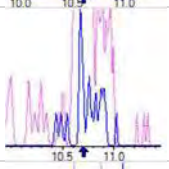
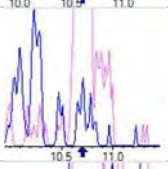
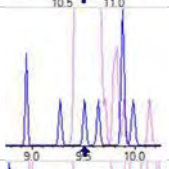
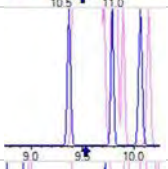
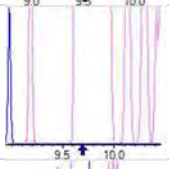
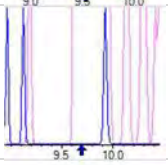
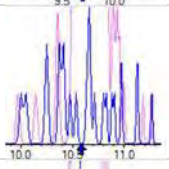
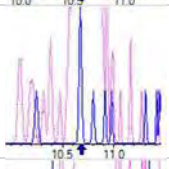
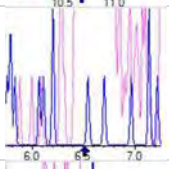
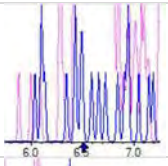
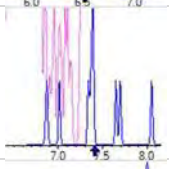
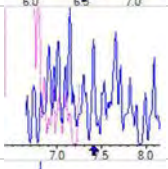
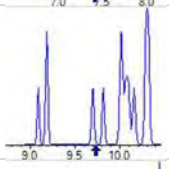
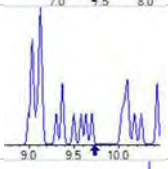
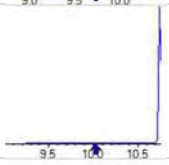
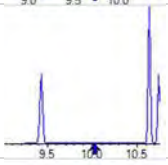
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(298.9 / 80.0) N/A (298.9 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	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.: 22L0005-15
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-13.dam

Quant Method: 1633 - S2022-12-15A
Path: S2022-12-15C (17)
Acquired: 2022/12/16 - 03:23

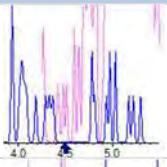
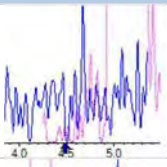
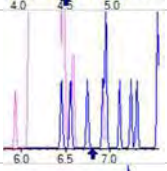
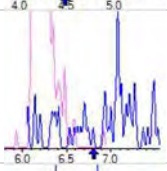
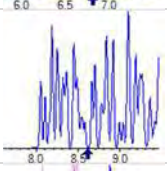
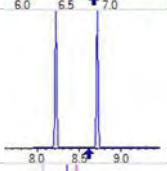
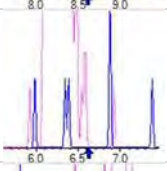
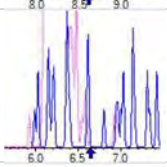
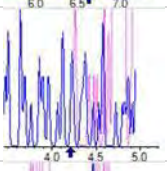
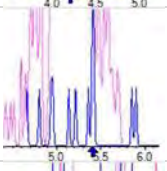
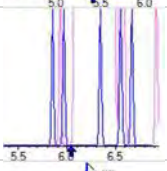
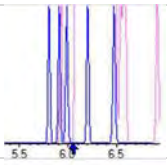
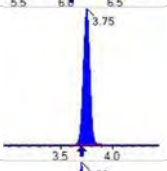
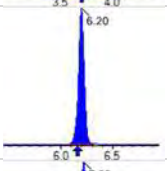
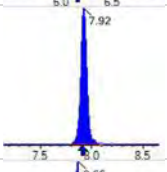
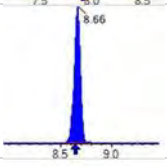
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) N/A (498.0 / 478.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	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.: 22L0005-15
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-13.dam

Quant Method: 1633 - S2022-12-15A
Path: S2022-12-15C (17)
Acquired: 2022/12/16 - 03:23

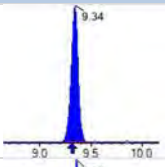
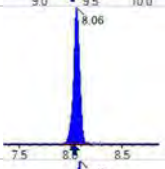
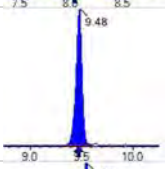
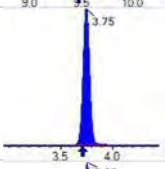
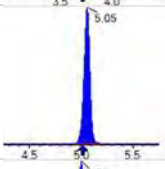
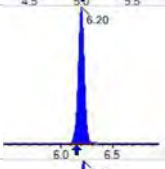
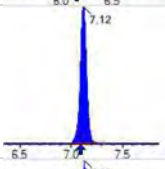
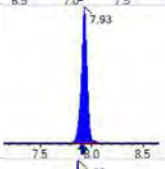
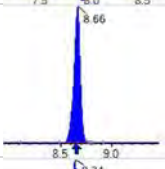
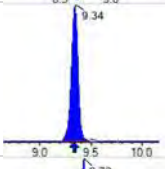
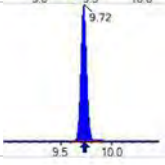
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
3:3FTCA	(241.0 / 177.0) N/A (241.0 / 117.0) N/A	(N/A , N/A) (N/A , N/A , 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) 86999	(3.75 , N/A) (N/A , 0.07 , N/A)	905.8	N/A	0.9951 [1.0000]	99.5% { 104.6% }			
13C2_PFHxA_IIS	(315.1 / 270.0) 140434	(6.20 , N/A) (N/A , 0.06 , N/A)	574.6	N/A	1.0673 [1.0000]	106.7% { 106.3% }			
13C4_PFOA_IIS	(417.0 / 372.0) 117858	(7.92 , N/A) (N/A , 0.05 , N/A)	443.1	N/A	0.9416 [1.0000]	94.2% { 96.2% }			
13C5_PFNA_IIS	(468.0 / 423.0) 96675	(8.66 , N/A) (N/A , 0.05 , N/A)	456.2	N/A	0.9685 [1.0000]	96.9% { 100.5% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK
Instrument: Saphira
Type: Sciex Q3 5500

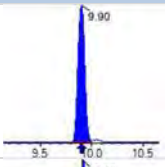
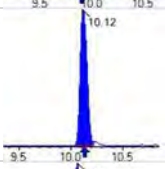
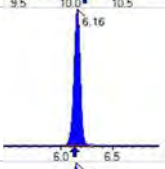
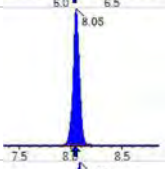
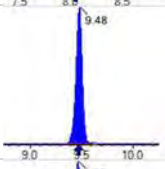
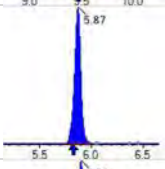
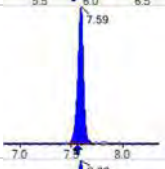
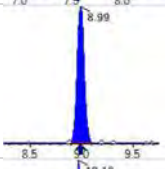
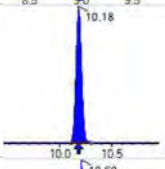
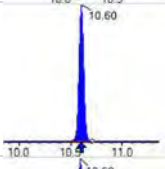
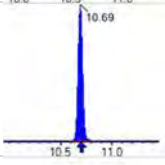
Sample I.D.: 22L0005-15
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-13.dam

Quant Method: 1633 - S2022-12-15A
Path: S2022-12-15C (17)
Acquired: 2022/12/16 - 03:23

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) 96221	(9.34 , N/A) (N/A , 0.05 , N/A)	615.8	N/A	0.9278 [1.0000]	92.8% { 96.4% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 195268	(8.06 , N/A) (N/A , 0.05 , N/A)	659.4	N/A	0.8254 [1.0000]	82.5% { 87.9% }			
13C4_PFOS_IIS	(502.8 / 79.9) 190631	(9.48 , N/A) (N/A , 0.04 , N/A)	349.2	N/A	0.9502 [1.0000]	95.0% { 96.4% }			
13C4_PFBA_EIS	(217.0 / 172.0) 680282	(3.75 , N/A) (N/A , 0.06 , N/A)	858.2	N/A	7.5526 [8.0000]	94.4% { 101.3% }			
13C5_PFPeA_EIS	(267.9 / 223.0) 379654	(5.05 , N/A) (N/A , 0.07 , N/A)	994.8	N/A	3.6721 [4.0000]	91.8% { 99.7% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 286452	(6.20 , N/A) (N/A , 0.06 , N/A)	672.9	N/A	1.7327 [2.0000]	86.6% { 100.5% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 256065	(7.12 , N/A) (N/A , 0.06 , N/A)	581.4	N/A	1.7532 [2.0000]	87.7% { 97.9% }			
13C8_PFOA_EIS	(421.0 / 376.0) 263627	(7.93 , N/A) (N/A , 0.06 , N/A)	655.5	N/A	2.0243 [2.0000]	101.2% { 104.6% }			
13C9_PFNA_EIS	(472.0 / 427.0) 104608	(8.66 , N/A) (N/A , 0.05 , N/A)	420.1	N/A	0.9906 [1.0000]	99.1% { 111.0% }			
13C6_PFDA_EIS	(519.0 / 474.0) 120896	(9.34 , N/A) (N/A , 0.05 , N/A)	296.1	N/A	0.9272 [1.0000]	92.7% { 92.6% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 189071	(9.72 , N/A) (N/A , 0.02 , N/A)	343.8	N/A	1.0071 [1.0000]	100.7% { 126.4% }			

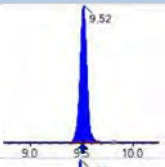
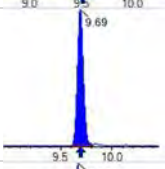
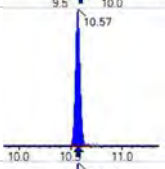
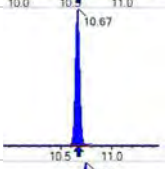
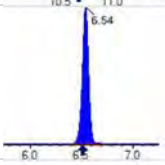
APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0005-15 | Quant Method: 1633 - S2022-12-15A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-15C (17)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-13.dam | Acquired: 2022/12/16 - 03:23

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) 196796	(9.90 , N/A) (N/A , 0.02 , N/A)	389.8	N/A	0.9295 [1.0000]	93.0% { 81.4% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 139190	(10.12 , N/A) (N/A , 0.01 , N/A)	292.6	N/A	1.0817 [1.0000]	108.2% { 105.0% }			
13C3_PFBS_EIS	(302.0 / 80.0) 725215	(6.16 , N/A) (N/A , 0.07 , N/A)	753.5	N/A	2.2740 [2.0000]	113.7% { 97.4% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 317728	(8.05 , N/A) (N/A , 0.05 , N/A)	626.9	N/A	1.9211 [2.0000]	96.1% { 88.2% }			
13C8_PFOS_EIS	(507.0 / 80.0) 552968	(9.48 , N/A) (N/A , 0.04 , N/A)	452.2	N/A	1.7658 [2.0000]	88.3% { 89.2% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 80969	(5.87 , N/A) (N/A , 0.07 , N/A)	528.8	N/A	4.5027 [4.0000]	112.6% { 88.8% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 109151	(7.59 , N/A) (N/A , 0.06 , N/A)	520.3	N/A	4.7364 [4.0000]	118.4% { 98.4% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 85556	(8.99 , N/A) (N/A , 0.05 , N/A)	307.2	N/A	4.1410 [4.0000]	103.5% { 80.2% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 889237	(10.18 , N/A) (N/A , 0.01 , N/A)	921.0	N/A	1.9512 [2.0000]	97.6% { 97.2% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 160359	(10.60 , N/A) (N/A , 0.01 , N/A)	695.8	N/A	1.4124 [2.0000]	70.6% { 66.5% }			
D5_NEtFOSA_EIS	(531.1 / 169.0) 166008	(10.69 , N/A) (N/A , 0.01 , N/A)	890.0	N/A	1.5658 [2.0000]	78.3% { 70.7% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: ABK | Sample I.D.: 22L0005-15 | Quant Method: 1633 - S2022-12-15A
Instrument: Saphira | DF , IV: 1 , 10.0µL | Path: S2022-12-15C (17)
Type: Sciex Q3 5500 | Acquisition Method: 1633 2022-12-13.dam | Acquired: 2022/12/16 - 03:23

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) 261118	(9.52 , N/A) (N/A , 0.04 , N/A)	334.1	N/A	3.5548 [4.0000]	88.9% { 95.1% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 248921	(9.69 , N/A) (N/A , 0.02 , N/A)	417.1	N/A	4.0774 [4.0000]	101.9% { 102.7% }			
D7_NMeFOSE_EIS	(623.2 / 58.9) 427098	(10.57 , N/A) (N/A , 0.01 , N/A)	1337.2	N/A	19.5563 [20.0000]	97.8% { 92.8% }			
D9_NEtFOSE_EIS	(639.2 / 58.9) 228936	(10.67 , N/A) (N/A , 0.01 , N/A)	1343.3	N/A	19.4667 [20.0000]	97.3% { 84.4% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 706501	(6.54 , N/A) (N/A , 0.07 , N/A)	819.0	N/A	7.0190 [8.0000]	87.7% { 99.0% }			

FORM IR
ANALYSIS DATA SHEETR

EQP-1-SOILP

Laboratory:	AP L, LLCP			Work Order:	22L0005P
Client:	Tidewater, Inc.P			roject:	NASA JPLP
Matrix:	WaterP	Laboratory ID:	22L0005-16RE2P	File ID:	S2022-12-29C (15)P
Sampled:	11/30/22 09:50P	repared:	12/19/22 12:17P	Analyzed:	12/30/22 07:03P
Solids:		reparation:	Table B-15P	Dilution:	1P
Initial/Final:	311.42 mL / 2 mLP			Instrument:	SaphiraP
Batch:	BBL0371P	Sequence:	SB04003	Calibration:	2253011P

COMPOUNDR	CONC. (ng/L)R	LOQ	LODR	DL	Q
FBAP	0.16 UP	2.6	0.16	0.040	
FPEAP	0.16 UP	1.3	0.16	0.050	
FHXAP	0.16 UP	0.64	0.16	0.051	
PFHPAP	0.16 UP	0.64	0.16	0.040	
FOAP	0.16 UP	0.64	0.16	0.066	
FNAP	0.16 UP	0.64	0.16	0.040	
FDAP	0.16 UP	0.64	0.16	0.040	
FUnAP	0.16 UP	0.64	0.16	0.064	
FDOAP	0.16 UP	0.64	0.16	0.040	
FTRDAP	0.16 UP	0.64	0.16	0.047	
FTEDAP	0.16 UP	0.64	0.16	0.069	
FBSP	0.16 UP	0.64	0.16	0.040	
FPESP	0.16 UP	0.64	0.16	0.047	
FHXSP	0.16 UP	0.64	0.16	0.040	
FHPSP	0.16 UP	0.64	0.16	0.045	
FOSP	0.16 UP	0.64	0.16	0.040	
FNSP	0.32 UP	0.64	0.32	0.20	
FDSP	0.16 UP	0.64	0.16	0.051	
4:2FTSP	0.32 UP	2.6P	0.32	0.087	
6:2FTSP	0.16 UP	2.6P	0.16	0.072	
8:2FTSP	0.48 UP	2.6P	0.48	0.16	
FOSAP	0.16 UP	2.6	0.16	0.040	
NMeFOSAP	1.6 UP	2.6P	1.6	0.79	
NEtFOSAP	1.6 UP	2.6P	1.6	0.79	
NMeFOSAAP	0.16 UP	0.64P	0.16	0.058	
NEtFOSAAP	0.16 UP	0.64P	0.16	0.040	
NMeFOSEP	0.96 UP	2.6P	0.96	0.48	
NEtFOSEP	0.96 UP	2.6P	0.96	0.48	
HFPO-DAP	0.80 UP	1.3P	0.80	0.39	
ADONAP	0.48 UP	1.3P	0.48	0.21	

FORM IR
ANALYSIS DATA SHEETR

EQP-1-SOILP

Laboratory:	AP L, LLCP			Work Order:	22L0005P
Client:	Tidewater, Inc.P			roject:	NASA JPLP
Matrix:	WaterP	Laboratory ID:	22L0005-16RE2P	File ID:	S2022-12-29C (15)P
Sampled:	11/30/22 09:50P	repared:	12/19/22 12:17P	Analyzed:	12/30/22 07:03P
Solids:		reparation:	Table B-15P	Dilution:	1P
Initial/Final:	311.42 mL / 2 mLP			Instrument:	SaphiraP
Batch:	BBL0371P	Sequence:	SB04003P	Calibration:	2253011P

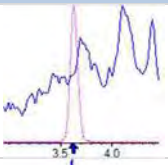
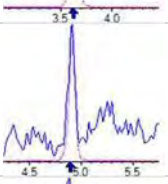
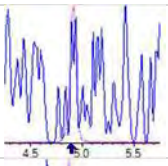
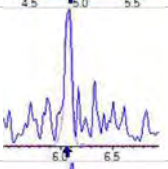
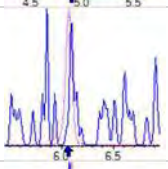
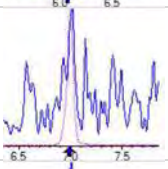
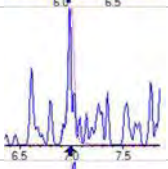
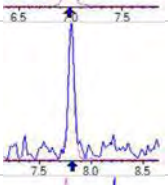
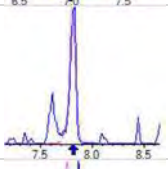
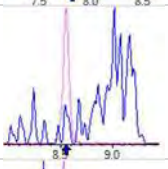
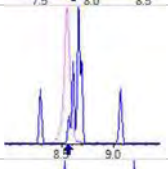
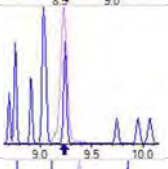
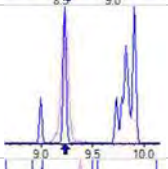
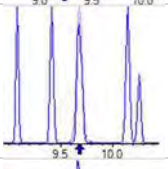
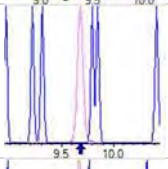
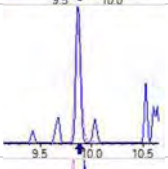
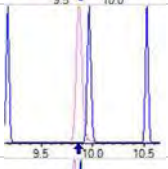
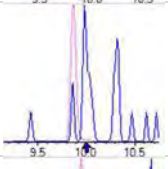
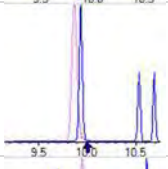
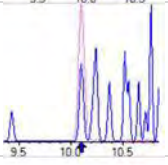
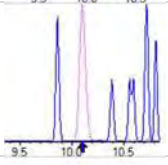
COMPOUNDR	CONC. (ng/L)R	LOQ	LODR	DLR	Q
9CL-PF3ONSP	0.48 UP	1.3P	0.48P	0.19P	
11CL-PF3OUDSP	0.48 UP	1.3P	0.48P	0.19P	

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: HGH
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-16RE2
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-27.dam

Quant Method: 1633 - S2022-12-29A
Path: S2022-12-30A (15)
Acquired: 2022/12/30 - 07:03

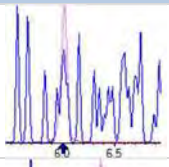
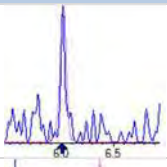
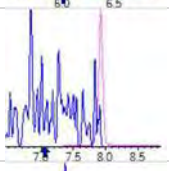
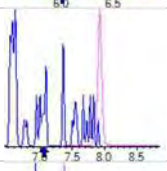
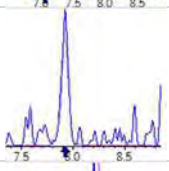
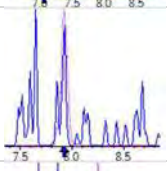
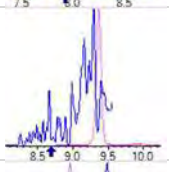
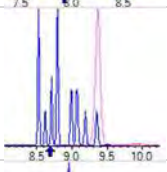
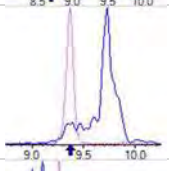
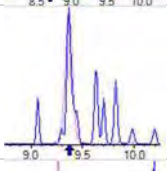
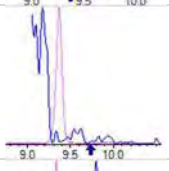
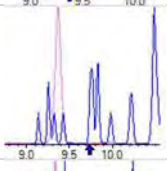
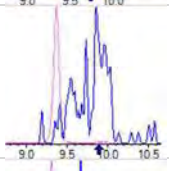
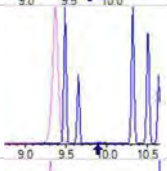
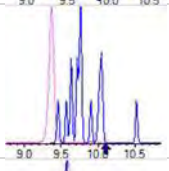
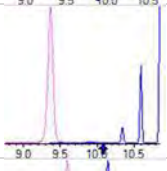
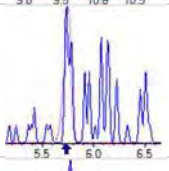
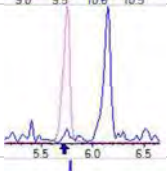
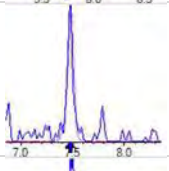
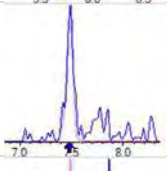
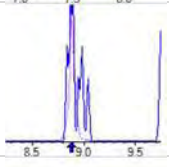
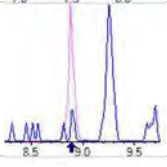
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(213.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFPeA	(263.0 / 219.0) N/A (263.0 / 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: HGH
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-16RE2
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-27.dam

Quant Method: 1633 - S2022-12-29A
Path: S2022-12-30A (15)
Acquired: 2022/12/30 - 07:03

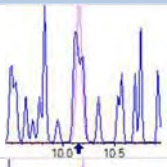
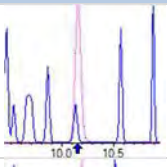
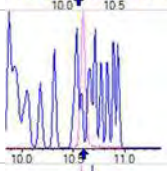
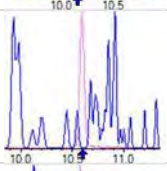
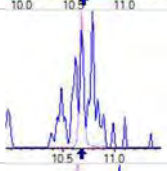
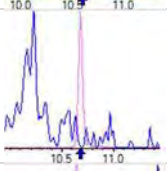
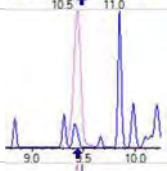
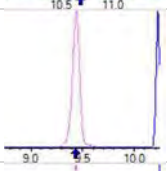
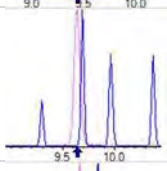
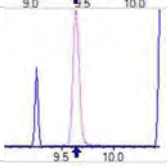
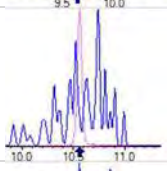
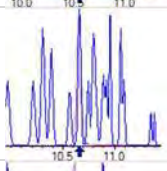
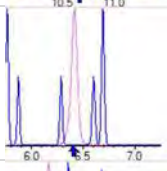
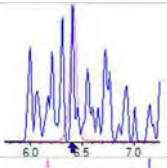
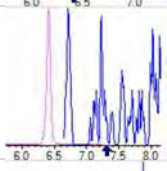
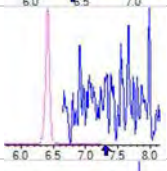
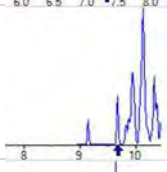
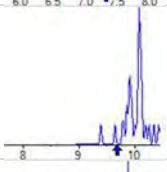
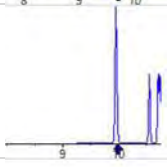
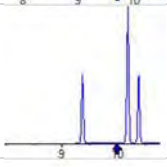
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(299.0 / 80.0) N/A (299.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
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	(699.0 / 80.0) N/A (699.0 / 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			
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: HGH
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-16RE2
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-27.dam

Quant Method: 1633 - S2022-12-29A
Path: S2022-12-30A (15)
Acquired: 2022/12/30 - 07:03

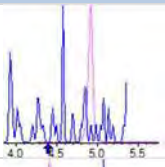
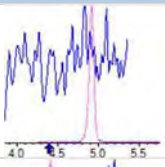
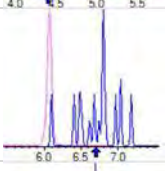
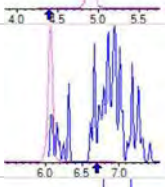
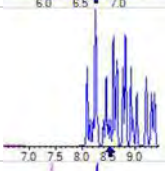
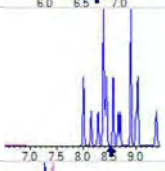
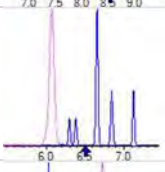
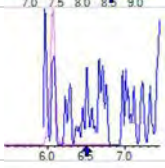
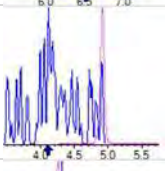
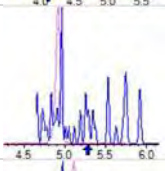
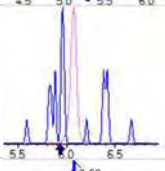
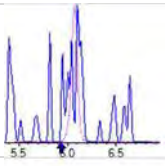
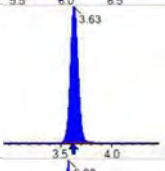
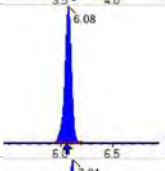
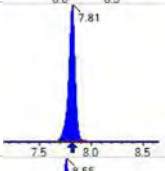
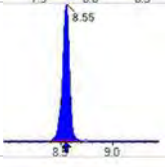
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) N/A (498.0 / 478.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSA	(512.0 / 219.0) N/A (512.0 / 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			
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	(616.0 / 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			
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: HGH
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-16RE2
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-27.dam

Quant Method: 1633 - S2022-12-29A
Path: S2022-12-30A (15)
Acquired: 2022/12/30 - 07:03

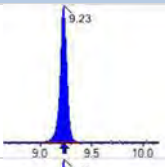
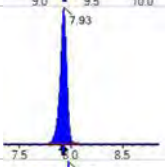
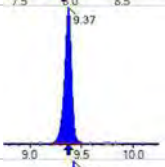
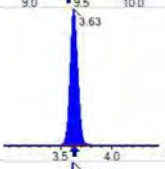
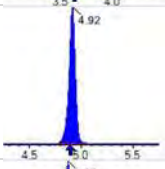
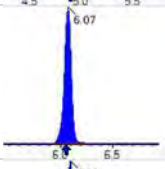
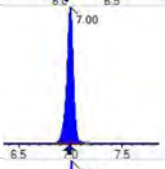
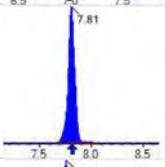
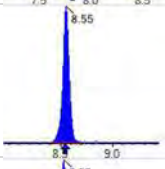
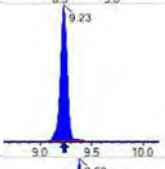
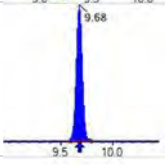
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
3:3FTCA	(241.0 / 177.0) N/A (241.0 / 117.0) N/A	(N/A , N/A) (N/A , N/A , 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	(295.0 / 201.0) N/A (295.0 / 85.0) N/A	(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) 272355	(3.63 , N/A) (N/A , 0.01 , N/A)	660.9	N/A	1.2647 [1.0000]	126.5% { 115.5% }			
13C2_PFHxA_IIS	(315.0 / 270.0) 529748	(6.08 , N/A) (N/A , 0.02 , N/A)	582.5	N/A	1.3955 [1.0000]	139.5% { 128.3% }			
13C4_PFOA_IIS	(417.0 / 372.0) 501960	(7.81 , N/A) (N/A , 0.00 , N/A)	591.1	N/A	1.3906 [1.0000]	139.1% { 127.6% }			
13C5_PFNA_IIS	(468.0 / 423.0) 404814	(8.55 , N/A) (N/A , 0.00 , N/A)	436.8	N/A	1.3766 [1.0000]	137.7% { 126.2% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: HGH
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-16RE2
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-27.dam

Quant Method: 1633 - S2022-12-29A
Path: S2022-12-30A (15)
Acquired: 2022/12/30 - 07:03

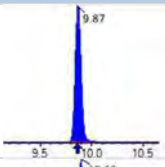
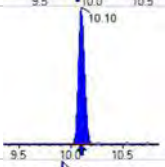
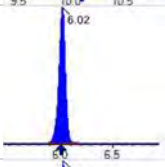
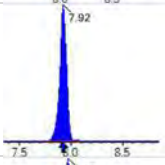
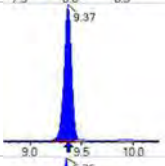
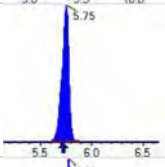
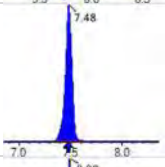
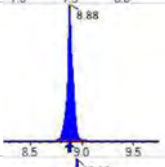
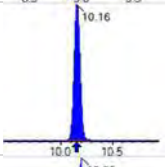
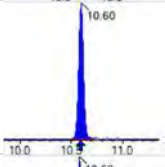
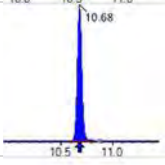
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDA_IIS	(515.0 / 470.1) 513127	(9.23 , N/A) (N/A , 0.00 , N/A)	403.7	N/A	1.5063 [1.0000]	150.6% { 145.6% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 758916	(7.93 , N/A) (N/A , 0.00 , N/A)	671.3	N/A	1.2542 [1.0000]	125.4% { 120.5% }			
13C4_PFOS_IIS	(503.0 / 79.9) 867123	(9.37 , N/A) (N/A , 0.00 , N/A)	321.9	N/A	1.3448 [1.0000]	134.5% { 132.6% }			
13C4_PFBA_EIS	(217.0 / 172.0) 1987985	(3.63 , N/A) (N/A , 0.01 , N/A)	889.9	N/A	7.2703 [8.0000]	90.9% { 106.8% }			
13C5_PFPeA_EIS	(268.0 / 223.0) 1456053	(4.92 , N/A) (N/A , 0.03 , N/A)	592.2	N/A	3.6432 [4.0000]	91.1% { 111.7% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 974407	(6.07 , N/A) (N/A , 0.02 , N/A)	594.3	N/A	1.7975 [2.0000]	89.9% { 120.2% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 839175	(7.00 , N/A) (N/A , 0.01 , N/A)	532.4	N/A	1.7820 [2.0000]	89.1% { 112.5% }			
13C8_PFOA_EIS	(421.0 / 376.0) 859802	(7.81 , N/A) (N/A , 0.00 , N/A)	643.0	N/A	1.6741 [2.0000]	83.7% { 108.7% }			
13C9_PFNA_EIS	(472.0 / 427.0) 368385	(8.55 , N/A) (N/A , 0.00 , N/A)	551.3	N/A	0.8758 [1.0000]	87.6% { 112.2% }			
13C6_PFDA_EIS	(519.0 / 474.0) 553866	(9.23 , N/A) (N/A , 0.00 , N/A)	396.9	N/A	0.8936 [1.0000]	89.4% { 124.8% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 590532	(9.68 , N/A) (N/A , 0.00 , N/A)	403.1	N/A	0.7747 [1.0000]	77.5% { 122.8% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: HGH
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-16RE2
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-27.dam

Quant Method: 1633 - S2022-12-29A
Path: S2022-12-30A (15)
Acquired: 2022/12/30 - 07:03

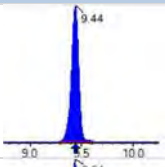
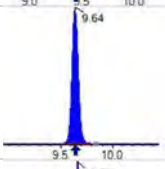
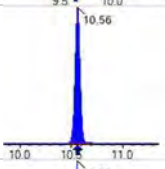
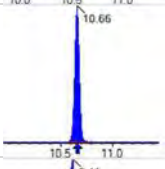
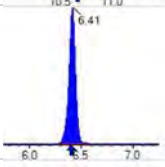
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDoA_EIS	(615.0 / 570.0) 558541	(9.87 , N/A) (N/A , 0.00 , N/A)	497.8	N/A	0.7343 [1.0000]	73.4% { 97.2% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 373476	(10.10 , N/A) (N/A , 0.00 , N/A)	884.8	N/A	0.7749 [1.0000]	77.5% { 91.7% }			
13C3_PFBS_EIS	(302.0 / 80.0) 2316545	(6.02 , N/A) (N/A , 0.02 , N/A)	599.9	N/A	2.0169 [2.0000]	100.8% { 114.0% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 1054833	(7.92 , N/A) (N/A , 0.00 , N/A)	629.6	N/A	1.6961 [2.0000]	84.8% { 106.0% }			
13C8_PFOS_EIS	(507.0 / 80.0) 1844871	(9.37 , N/A) (N/A , -0.01 , N/A)	377.2	N/A	1.7655 [2.0000]	88.3% { 122.4% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 714595	(5.75 , N/A) (N/A , 0.03 , N/A)	640.6	N/A	5.5068 [4.0000]	137.7% { 137.6% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 853205	(7.48 , N/A) (N/A , 0.01 , N/A)	739.3	N/A	4.9693 [4.0000]	124.2% { 120.1% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 913842	(8.88 , N/A) (N/A , -0.01 , N/A)	516.8	N/A	4.2223 [4.0000]	105.6% { 149.3% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 2175784	(10.16 , N/A) (N/A , 0.00 , N/A)	880.0	N/A	1.7839 [2.0000]	89.2% { 106.2% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 243874	(10.60 , N/A) (N/A , 0.00 , N/A)	633.7	N/A	1.0574 [2.0000]	52.9% { 61.4% }			
D5_NEtFOSA_EIS	(531.0 / 169.0) 200619	(10.68 , N/A) (N/A , 0.00 , N/A)	783.3	N/A	0.9497 [2.0000]	47.5% { 54.3% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: HGH
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-16RE2
DF , IV: 1 , 10.0µL
Acquisition Method: 1633 2022-12-27.dam

Quant Method: 1633 - S2022-12-29A
Path: S2022-12-30A (15)
Acquired: 2022/12/30 - 07:03

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) 1120109	(9.44 , N/A) (N/A , 0.00 , N/A)	400.6	N/A	3.4068 [4.0000]	85.2% { 112.3% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 815533	(9.64 , N/A) (N/A , 0.00 , N/A)	130.4	N/A	3.1197 [4.0000]	78.0% { 94.5% }			
D7_NMeFOSE_EIS	(623.0 / 58.9) 854577	(10.56 , N/A) (N/A , 0.00 , N/A)	1262.7	N/A	16.9591 [20.0000]	84.8% { 93.0% }			
D9_NEtFOSE_EIS	(639.0 / 58.9) 406608	(10.66 , N/A) (N/A , 0.00 , N/A)	1562.5	N/A	17.4986 [20.0000]	87.5% { 85.4% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 2195850	(6.41 , N/A) (N/A , 0.01 , N/A)	611.5	N/A	7.2409 [8.0000]	90.5% { 120.5% }			

FORM IR
ANALYSIS DATA SHEETR

EQP-1-SOILP

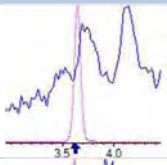
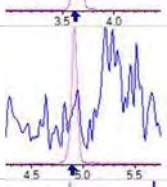
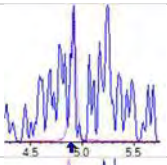
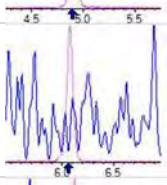
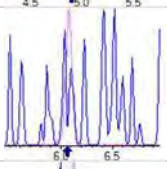
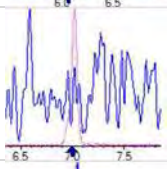
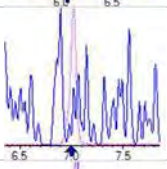
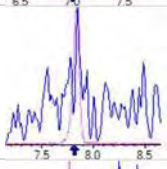
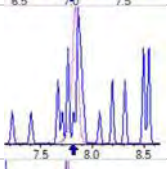
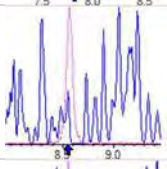
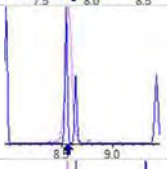
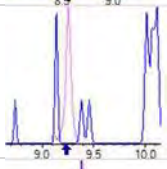
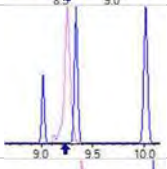
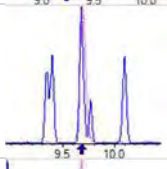
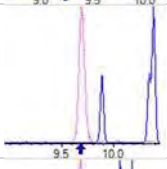
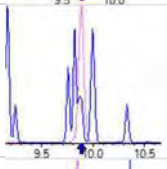
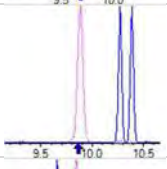
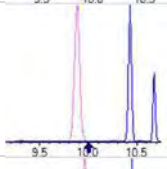
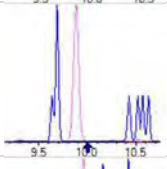
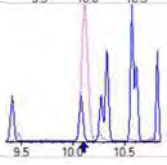
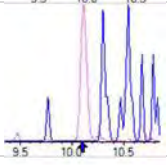
Laboratory:	AP L, LLCP			Work Order:	22L0005P
Client:	Tidewater, Inc.P			roject:	NASA JPLP
Matrix:	WaterP	Laboratory ID:	22L0005-16RE3P	File ID:	S2022-12-29C (16)P
Sampled:	11/30/22 09:50P	repared:	12/19/22 12:17P	Analyzed:	12/30/22 07:15P
Solids:		reparation:	Table B-15P	Dilution:	10P
Initial/Final:	311.42 mL / 2 mLP			Instrument:	SaphiraP
Batch:	BBL0371P	Sequence:	SB04003	Calibration:	2253011P

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: HGH
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-16RE3@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-27.dam

Quant Method: 1633 - S2022-12-29A
Path: S2022-12-30A (16)
Acquired: 2022/12/30 - 07:15

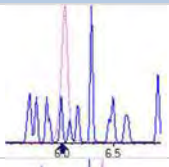
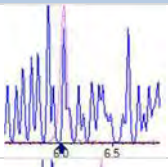
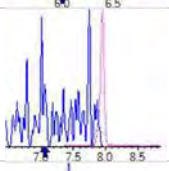
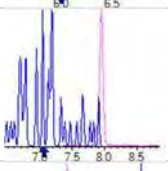
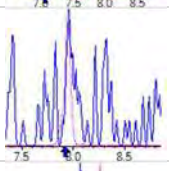
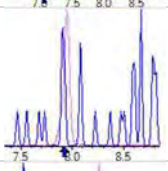
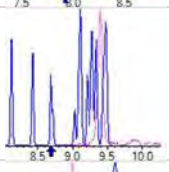
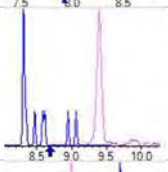
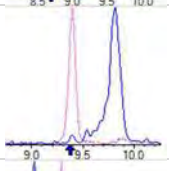
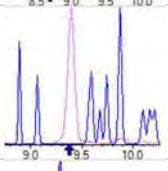
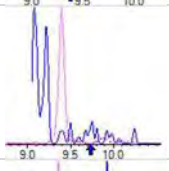
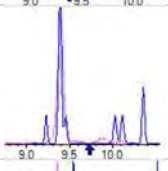
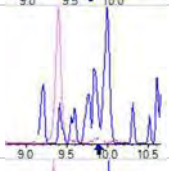
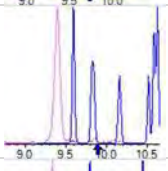
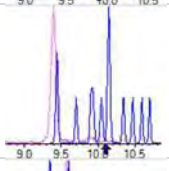
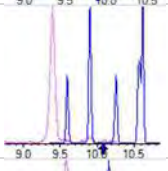
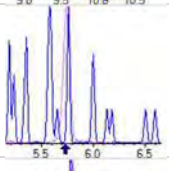
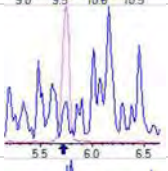
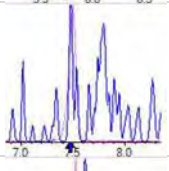
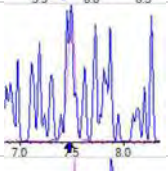
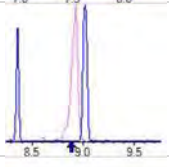
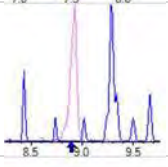
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBA	(213.0 / 169.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A	N/A 0.0 0.0	0.0000	N/A			
PFPeA	(263.0 / 219.0) N/A (263.0 / 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: HGH
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-16RE3@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-27.dam

Quant Method: 1633 - S2022-12-29A
Path: S2022-12-30A (16)
Acquired: 2022/12/30 - 07:15

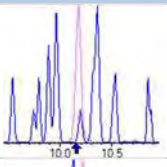
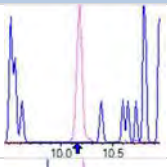
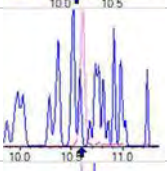
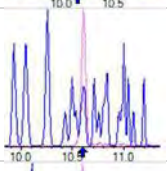
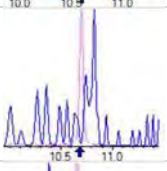
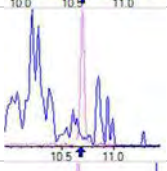
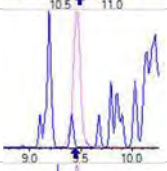
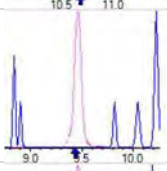
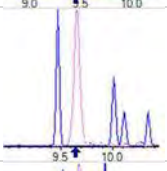
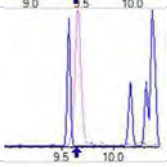
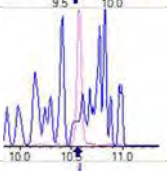
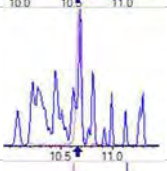
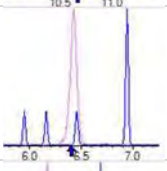
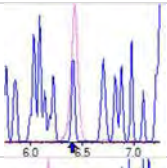
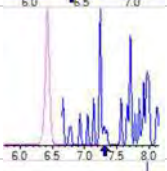
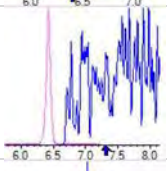
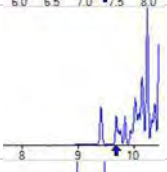
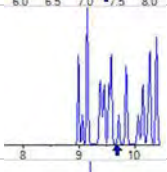
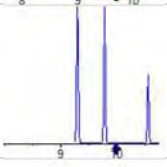
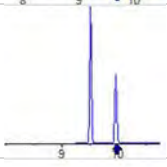
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFBS	(299.0 / 80.0) N/A (299.0 / 99.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
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	(699.0 / 80.0) N/A (699.0 / 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			
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: HGH
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-16RE3@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-27.dam

Quant Method: 1633 - S2022-12-29A
Path: S2022-12-30A (16)
Acquired: 2022/12/30 - 07:15

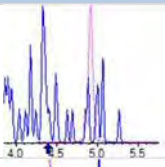
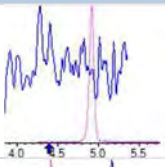
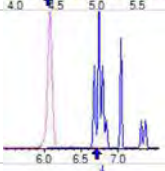
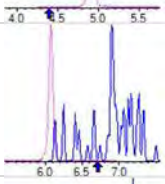
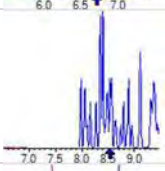
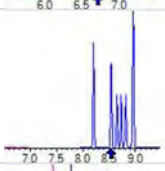
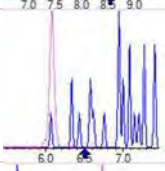
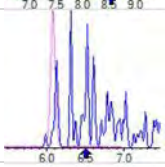
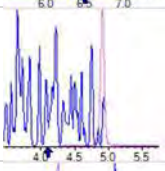
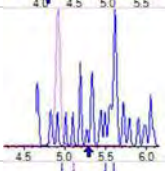
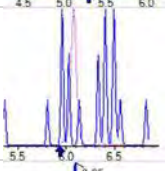
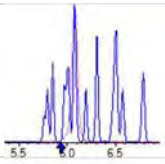
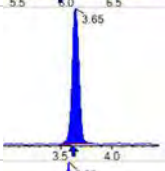
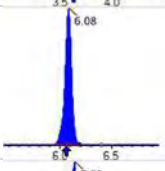
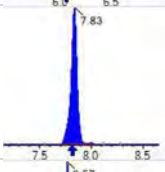
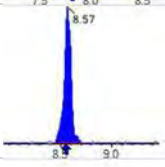
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
PFOSA	(498.0 / 78.0) N/A (498.0 / 478.0) N/A	(N/A , N/A) (N/A , N/A , N/A)	N/A N/A	N/A 0.0 0.0	0.0000	N/A			
NMeFOSA	(512.0 / 219.0) N/A (512.0 / 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			
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	(616.0 / 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			
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: HGH
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-16RE3@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-27.dam

Quant Method: 1633 - S2022-12-29A
Path: S2022-12-30A (16)
Acquired: 2022/12/30 - 07:15

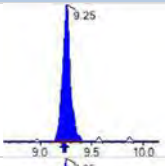
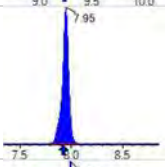
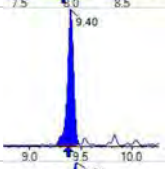
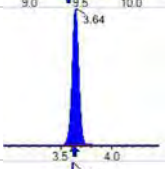
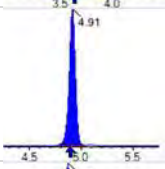
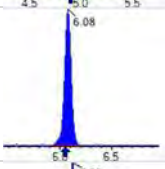
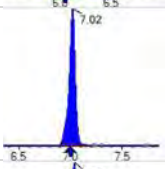
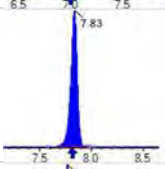
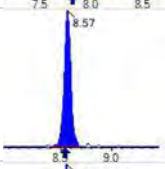
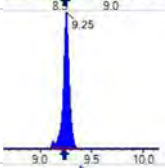
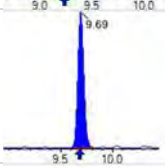
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
3:3FTCA	(241.0 / 177.0) N/A (241.0 / 117.0) N/A	(N/A , N/A) (N/A , N/A , 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	(295.0 / 201.0) N/A (295.0 / 85.0) N/A	(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) 29618	(3.65 , N/A) (N/A , 0.03 , N/A)	339.4	N/A	1.3753 [1.0000]	137.5% { 12.6% }			
13C2_PFHxA_IIS	(315.0 / 270.0) 51840	(6.08 , N/A) (N/A , 0.02 , N/A)	406.1	N/A	1.3656 [1.0000]	136.6% { 12.6% }			
13C4_PFOA_IIS	(417.0 / 372.0) 53320	(7.83 , N/A) (N/A , 0.02 , N/A)	340.1	N/A	1.4771 [1.0000]	147.7% { 13.6% }			
13C5_PFNA_IIS	(468.0 / 423.0) 36866	(8.57 , N/A) (N/A , 0.02 , N/A)	378.4	N/A	1.2537 [1.0000]	125.4% { 11.5% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: HGH
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-16RE3@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-27.dam

Quant Method: 1633 - S2022-12-29A
Path: S2022-12-30A (16)
Acquired: 2022/12/30 - 07:15

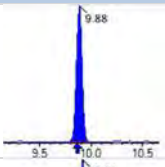
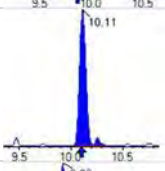
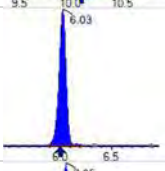
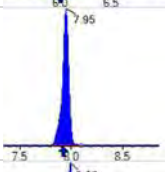
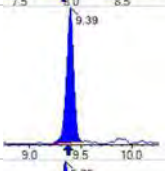
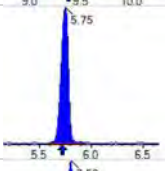
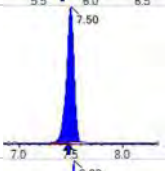
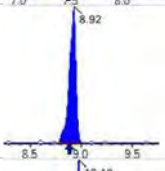
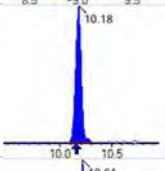
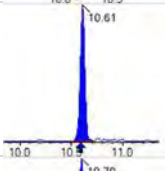
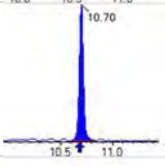
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDA_IIS	(515.0 / 470.1) 43069	(9.25 , N/A) (N/A , 0.03 , N/A)	154.8	N/A	1.2643 [1.0000]	126.4% { 12.2% }			
18O2_PFHxS_IIS	(403.0 / 83.9) 81285	(7.95 , N/A) (N/A , 0.02 , N/A)	573.9	N/A	1.3434 [1.0000]	134.3% { 12.9% }			
13C4_PFOS_IIS	(503.0 / 79.9) 71683	(9.40 , N/A) (N/A , 0.03 , N/A)	91.8	N/A	1.1117 [1.0000]	111.2% { 11.0% }			
13C4_PFBA_EIS	(217.0 / 172.0) 212981	(3.64 , N/A) (N/A , 0.03 , N/A)	661.4	N/A	0.7163 [0.8000]	89.5% { 11.4% }			
13C5_PFPeA_EIS	(268.0 / 223.0) 137844	(4.91 , N/A) (N/A , 0.03 , N/A)	586.3	N/A	0.3524 [0.4000]	88.1% { 10.6% }			
13C5_PFHxA_EIS	(318.0 / 273.0) 95343	(6.08 , N/A) (N/A , 0.02 , N/A)	460.8	N/A	0.1797 [0.2000]	89.9% { 11.8% }			
13C4_PFHpA_EIS	(367.0 / 322.0) 75305	(7.02 , N/A) (N/A , 0.03 , N/A)	364.3	N/A	0.1634 [0.2000]	81.7% { 10.1% }			
13C8_PFOA_EIS	(421.0 / 376.0) 93323	(7.83 , N/A) (N/A , 0.02 , N/A)	424.4	N/A	0.1711 [0.2000]	85.5% { 11.8% }			
13C9_PFNA_EIS	(472.0 / 427.0) 37522	(8.57 , N/A) (N/A , 0.02 , N/A)	204.3	N/A	0.0980 [0.1000]	98.0% { 11.4% }			
13C6_PFDA_EIS	(519.0 / 474.0) 48440	(9.25 , N/A) (N/A , 0.03 , N/A)	5211.9	N/A	0.0931 [0.1000]	93.1% { 10.9% }			
13C7_PFUnA_EIS	(570.0 / 525.0) 64030	(9.69 , N/A) (N/A , 0.01 , N/A)	253.9	N/A	0.1001 [0.1000]	100.1% { 13.3% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: HGH
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-16RE3@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-27.dam

Quant Method: 1633 - S2022-12-29A
Path: S2022-12-30A (16)
Acquired: 2022/12/30 - 07:15

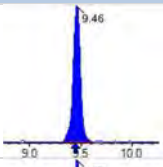
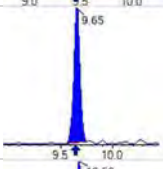
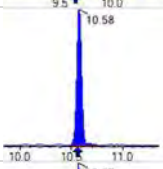
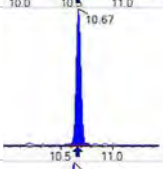
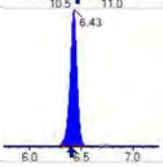
Analyte	(Q1 / Q3) Area Counts*min	R.T. (R.T [min] , R.R.T.) (ΔRT-I[min], ΔRT-CV[min], ΔRT ion[s])	S / N	Ion Ratio IR Vs MP% IR Vs CV%	Concentration [True] ng/mL	Q.C. Rec. {Area%CV}	Primary Transition	Confirmation Transition	Flag
13C2_PFDoA_EIS	(615.0 / 570.0) 86494	(9.88 , N/A) (N/A , 0.02 , N/A)	278.0	N/A	0.1355 [0.1000]	135.5% { 15.0% }			
13C2_PFTeDA_EIS	(715.0 / 670.0) 37832	(10.11 , N/A) (N/A , 0.01 , N/A)	714.9	N/A	0.0935 [0.1000]	93.5% { 9.3% }			
13C3_PFBS_EIS	(302.0 / 80.0) 218132	(6.03 , N/A) (N/A , 0.03 , N/A)	312.6	N/A	0.1773 [0.2000]	88.7% { 10.7% }			
13C3_PFHxS_EIS	(402.0 / 80.0) 121379	(7.95 , N/A) (N/A , 0.02 , N/A)	587.3	N/A	0.1822 [0.2000]	91.1% { 12.2% }			
13C8_PFOS_EIS	(507.0 / 80.0) 168376	(9.39 , N/A) (N/A , 0.02 , N/A)	150.7	N/A	0.1949 [0.2000]	97.5% { 11.2% }			
13C2_4:2FTS_EIS	(329.0 / 81.0) 62538	(5.75 , N/A) (N/A , 0.02 , N/A)	340.0	N/A	0.4500 [0.4000]	112.5% { 12.0% }			
13C2_6:2FTS_EIS	(429.0 / 81.0) 73405	(7.50 , N/A) (N/A , 0.02 , N/A)	331.8	N/A	0.3992 [0.4000]	99.8% { 10.3% }			
13C2_8:2FTS_EIS	(529.0 / 81.0) 76773	(8.92 , N/A) (N/A , 0.03 , N/A)	266.9	N/A	0.3312 [0.4000]	82.8% { 12.5% }			
13C8_PFOSA_EIS	(506.0 / 78.0) 198239	(10.18 , N/A) (N/A , 0.02 , N/A)	387.2	N/A	0.1966 [0.2000]	98.3% { 9.7% }			
D3_NMeFOSA_EIS	(515.0 / 169.0) 24291	(10.61 , N/A) (N/A , 0.02 , N/A)	249.1	N/A	0.1274 [0.2000]	63.7% { 6.1% }			
D5_NEtFOSA_EIS	(531.0 / 169.0) 22413	(10.70 , N/A) (N/A , 0.01 , N/A)	258.3	N/A	0.1283 [0.2000]	64.2% { 6.1% }			

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

Chemist: HGH
Instrument: Saphira
Type: Sciex Q3 5500

Sample I.D.: 22L0005-16RE3@10
DF , IV: 1 , 1.0µL
Acquisition Method: 1633 2022-12-27.dam

Quant Method: 1633 - S2022-12-29A
Path: S2022-12-30A (16)
Acquired: 2022/12/30 - 07:15

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) 119901	(9.46 , N/A) (N/A , 0.02 , N/A)	291.7	N/A	0.4411 [0.4000]	110.3% { 12.0% }			
D5_EtFOSAA_EIS	(589.0 / 419.0) 104072	(9.65 , N/A) (N/A , 0.02 , N/A)	81.2	N/A	0.4816 [0.4000]	120.4% { 12.1% }			
D7_NMeFOSE_EIS	(623.0 / 58.9) 90480	(10.58 , N/A) (N/A , 0.02 , N/A)	352.7	N/A	2.1720 [2.0000]	108.6% { 9.8% }			
D9_NEtFOSE_EIS	(639.0 / 58.9) 35636	(10.67 , N/A) (N/A , 0.01 , N/A)	330.1	N/A	1.8552 [2.0000]	92.8% { 7.5% }			
13C3_HFPODA_EIS	(287.0 / 169.0) 208894	(6.43 , N/A) (N/A , 0.02 , N/A)	528.6	N/A	0.7039 [0.8000]	88.0% { 11.5% }			

QUALITY CONTROLA

SURROGATE SUMMARY SHEETR

Table B-15R

Client:R Tidewater, Inc.R
Work Order:R 22L0005R
Project:R NASA JPLR

Surrogate CompoundR	Spike levelR	% Recovery	RecoveryR LimitsR	QR
SB-1-0.5-113022 (22L0005-01) ng/g dryR	Lab File ID: S2022-12-09A (10)R			Analyzed: 12/09/22 14:38R
13C4-PFBAR	18.6R	99.5R	50 - 150R	
13C5-PFPEAR	9.28R	93.6R	50 - 150R	
13C5-PFHXAR	4.64R	113R	50 - 150R	
13C4-PFHPAR	4.64R	98.8R	50 - 150R	
13C8-PFOAR	4.64R	99.7R	50 - 150R	
13C9-PFNAR	2.32R	99.8R	50 - 150R	
13C6-PFDAR	2.32R	101R	50 - 150R	
13C7-PFUnAR	2.32R	106R	50 - 150R	
13C2-PFDOAR	2.32R	88.2R	50 - 150R	
13C2-PFTEDAR	2.32R	91.9R	50 - 150R	
13C3-PFBSR	4.64R	97.9R	50 - 150R	
13C3-PFHXSR	4.64R	99.1R	50 - 150R	
13C8-PFOSR	4.64R	89.3R	50 - 150R	
13C2-4:2FTSR	9.28R	102R	50 - 150R	
13C2-6:2FTSR	9.28R	82.5R	50 - 150R	
13C2-8:2FTSR	9.28R	98.0R	50 - 150R	
13C8-PFOSAR	4.64R	78.8R	50 - 150R	
D3-NMEFOSAR	4.64R	44.5R	50 - 150R	*R
D5-NETFOSAR	4.64R	45.6R	50 - 150R	*R
D3-NMEFOSAAR	9.28R	91.2R	50 - 150R	
D5-NETFOSAAR	9.28R	110R	50 - 150R	
D7-NMEFOSER	46.4R	47.6R	50 - 150R	*R
D9-NETFOSER	46.4R	51.0R	50 - 150R	
13C3-HFPO-DAR	18.6R	94.7R	50 - 150R	

SURROGATE SUMMARY SHEET

Table B-15

Client: Tidewater, Inc.
Work Order: 22L0005
Project: NASA JPL

Surrogate Compound	Spike level	% Recovery	Recovery Limits	QR
SB-1-2.0-113022 (22L0005-02) ng/g dry	Lab File ID: S2022-12-09A (12)			Analyzed: 12/09/22 15:03
13C4-PFBA	16.0	112	50 - 150	
13C5-PFPEA	7.98	95.2	50 - 150	
13C5-PFHXA	3.99	106	50 - 150	
13C4-PFHPA	3.99	103	50 - 150	
13C8-PFOA	3.99	103	50 - 150	
13C9-PFNA	1.99	105	50 - 150	
13C6-PFDA	1.99	103	50 - 150	
13C7-PFUnA	1.99	134	50 - 150	
13C2-PFDOA	1.99	100	50 - 150	
13C2-PFTEDA	1.99	94.4	50 - 150	
13C3-PFBS	3.99	101	50 - 150	
13C3-PFHXS	3.99	97.0	50 - 150	
13C8-PFOS	3.99	115	50 - 150	
13C2-4:2FTS	7.98	110	50 - 150	
13C2-6:2FTS	7.98	96.0	50 - 150	
13C2-8:2FTS	7.98	109	50 - 150	
13C8-PFOSA	3.99	74.4	50 - 150	
D3-NMEFOSA	3.99	49.2	50 - 150	*R
D5-NETFOSA	3.99	51.1	50 - 150	
D3-NMEFOSAA	7.98	78.6	50 - 150	
D5-NETFOSAA	7.98	92.7	50 - 150	
D7-NMEFOSE	39.9	47.5	50 - 150	*R
D9-NETFOSE	39.9	48.2	50 - 150	*R
13C3-HFPO-DA	16.0	96.1	50 - 150	
SB-1-2.0-113022 (22L0005-02RE1) ng/g dry	Lab File ID: S2022-12-09A (13)			Analyzed: 12/09/22 15:16
D3-NMEFOSA	3.99	58.1	50 - 150	
D7-NMEFOSE	39.9	66.0	50 - 150	
D9-NETFOSE	39.9	53.2	50 - 150	

SURROGATE SUMMARY SHEET

Table B-15

Client: Tidewater, Inc.
Work Order: 22L0005
Project: NASA JPL

Surrogate Compound	Spike level	% Recovery	Recovery Limits	QR
SB-2-0.5-113022 (22L0005-03) ng/g dry	Lab File ID: S2022-12-09A (14)			Analyzed: 12/09/22 15:29
13C4-PFBA	17.6	119	50 - 150	
13C5-PFPEA	8.80	91.8	50 - 150	
13C5-PFHXA	4.40	114	50 - 150	
13C4-PFHPA	4.40	106	50 - 150	
13C8-PFOA	4.40	116	50 - 150	
13C9-PFNA	2.20	108	50 - 150	
13C6-PFDA	2.20	111	50 - 150	
13C7-PFUnA	2.20	115	50 - 150	
13C2-PFDOA	2.20	114	50 - 150	
13C2-PFTEDA	2.20	92.2	50 - 150	
13C3-PFBS	4.40	100	50 - 150	
13C3-PFHXS	4.40	108	50 - 150	
13C8-PFOS	4.40	120	50 - 150	
13C2-4:2FTS	8.80	112	50 - 150	
13C2-6:2FTS	8.80	103	50 - 150	
13C2-8:2FTS	8.80	109	50 - 150	
13C8-PFOSA	4.40	116	50 - 150	
D3-NMEFOSA	4.40	72.4	50 - 150	
D5-NETFOSA	4.40	72.8	50 - 150	
D3-NMEFOSAA	8.80	113	50 - 150	
D5-NETFOSAA	8.80	132	50 - 150	
D7-NMEFOSE	44.0	73.2	50 - 150	
D9-NETFOSE	44.0	70.2	50 - 150	
13C3-HFPO-DA	17.6	101	50 - 150	