

Tuesday, June 27, 2023

Fibertec Project Number: A15503
Project Identification: 194688.24 /194688.24
Submittal Date: 06/05/2023

Ms. Annika Whitcomb
BLDI, Inc.
150 Fountain Street NE
Grand Rapids, MI 49503

Dear Ms. Whitcomb,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note TO-15 samples will be disposed of 7 calendar days after the reporting date. All other samples will be disposed of 30 days after the reporting date.

Please note the PFAS test was subcontracted to APPL Labs. The report is attached in this email.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,



By Bailey Welch at 10:21 AM, Jun 27, 2023

For Heather L. Smith
Director of Laboratory Operations

Enclosures

1914 Holloway Drive
11766 E. Grand River
8660 S. Mackinaw Trail

Holt, MI 48842
Brighton, MI 48116
Cadillac, MI 49601

T: (517) 699-0345
T: (810) 220-3300
T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584



AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES

A METIRI GROUP COMPANY

908 N. Temperance Ave., Clovis, CA 93611 - Phone 559-275-2175 - www.applinc.com

NELAP Certification Number: CA00046

DoD-ELAP Certification Number: 4064.01

State Certification Number:

June 23, 2023

Stacy Kotecki
Fibertec Environmental Services
1914 Holloway Drive
Holt, MI 48842

RE: PFAS Testing
23F0053

Enclosed are the results of analyses for samples received by our laboratory on 6/6/2023. If you have any questions concerning this report, please feel free to contact me.

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

Sincerely,

Chue Moua
Project Manager

cmoua@applinc.com
559-862-2155

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Fibertec Environmental Services
1914 Holloway Drive
Holt, MI 48842

Project: PFAS Testing
Project Number: A15503
Project Manager: Stacy Kotecki

Reported: 06/23/2023 12:42

Work Order Case Narrative

Samples have been processed using methodologies compliant with DoD QSM Table B-15, which is an equivalent to EPA 537.1 Modified.

Analysis Case Narrative

PFAS: Manual integrations were performed for this method in accordance with APPL's SOP. Chromatograms after manual integration are enclosed for specific samples and analytes. Abbreviated flags for technical justification are listed on the chromatogram.

Some extracted internal standards recovered outside of control limits in some samples; these samples were diluted and recovered in control, unless stated otherwise.

The extracted internal standards 13C2-6:2FTS recovered above the upper control limit in sample 02 - PFAS Free Decon Water.

The extracted internal standards 13C2-6:2FTS recovered above the upper control limit in the BCF0123-BLK1.

The analytes PFOA and PFOS recovered above the upper control limit in the BCF0123-BS1. The analyte PFOS recovered above the upper control limit in the BCF0123-BSD1. The analyte PFOA recovered with high RPD between this BS and BSD.

The analytes PFOA and PFOS recovered above the upper control limit in the BCF0123-MRL1.

Samples in this Report

Lab ID	Sample	Matrix	Date Sampled	Date Received
23F0053-01	PFAS Free DI Water	Water	06/01/2023 12:51	06/06/2023
23F0053-02	PFAS Free Decon Water	Water	06/01/2023 12:55	06/06/2023

Fibertec Environmental Services
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Holt, MI 48842

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Sample Results

Sample: PFAS Free DI Water
23F0053-01 (Water)

Analyte	Result /Qual	PQL	MDL	Units	Date Analyzed	DF	Method	Prep Batch
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Per- and Polyfluoroalkyl Substances

PFBA	ND	4.0		ng/L	06/18/23	1	Table B-15	BCF0123
PFPeA	ND	1.6		ng/L	06/18/23	1	Table B-15	BCF0123
PFHxA	ND	1.6		ng/L	06/18/23	1	Table B-15	BCF0123
PFHpA	ND	1.6		ng/L	06/18/23	1	Table B-15	BCF0123
PFOA	ND	1.6		ng/L	06/18/23	1	Table B-15	BCF0123
PFNA	ND	1.6		ng/L	06/18/23	1	Table B-15	BCF0123
PFDA	ND	1.6		ng/L	06/18/23	1	Table B-15	BCF0123
PFUnA	ND	1.6		ng/L	06/18/23	1	Table B-15	BCF0123
PFDoA	ND	1.6		ng/L	06/18/23	1	Table B-15	BCF0123
PFTTrDA	ND	1.6		ng/L	06/18/23	1	Table B-15	BCF0123
PFTeDA	ND	1.6		ng/L	06/18/23	1	Table B-15	BCF0123
PFBS	ND	1.6		ng/L	06/18/23	1	Table B-15	BCF0123
PFPeS	ND	1.6		ng/L	06/18/23	1	Table B-15	BCF0123
PFHxS	ND MI6,	1.6		ng/L	06/18/23	1	Table B-15	BCF0123
PFHpS	ND	1.6		ng/L	06/18/23	1	Table B-15	BCF0123
PFOS	ND MI2,	1.6		ng/L	06/18/23	1	Table B-15	BCF0123
PFNS	ND	1.6		ng/L	06/18/23	1	Table B-15	BCF0123
PFDS	ND	1.6		ng/L	06/18/23	1	Table B-15	BCF0123
4:2FTS	ND	2.7		ng/L	06/18/23	1	Table B-15	BCF0123
6:2FTS	ND	4.0		ng/L	06/18/23	1	Table B-15	BCF0123
8:2FTS	ND	2.7		ng/L	06/18/23	1	Table B-15	BCF0123
PFOSA	ND	2.7		ng/L	06/18/23	1	Table B-15	BCF0123
NMeFOSAA	ND	1.6		ng/L	06/18/23	1	Table B-15	BCF0123
NEtFOSAA	ND	2.4		ng/L	06/18/23	1	Table B-15	BCF0123
HFPO-DA	ND	1.3		ng/L	06/18/23	1	Table B-15	BCF0123
ADONA	ND	1.3		ng/L	06/18/23	1	Table B-15	BCF0123
9CI-PF3ONS	ND	1.3		ng/L	06/18/23	1	Table B-15	BCF0123
11CI-PF3OUDS	ND	1.3		ng/L	06/18/23	1	Table B-15	BCF0123
<hr/>								
Surrogate: 13C4-PFBA	106%	50-150			06/18/23	1	Table B-15	
Surrogate: 13C5-PFPEA	144%	50-150			06/18/23	1	Table B-15	
Surrogate: 13C5-PFHXA	128%	50-150			06/18/23	1	Table B-15	
Surrogate: 13C4-PFHFA	131%	50-150			06/18/23	1	Table B-15	
Surrogate: 13C8-PFOA	120%	50-150			06/18/23	1	Table B-15	
Surrogate: 13C9-PFNA	110%	50-150			06/18/23	1	Table B-15	
Surrogate: 13C6-PFDA	102%	50-150			06/18/23	1	Table B-15	
Surrogate: 13C7-PFUnA	110%	50-150			06/18/23	1	Table B-15	
Surrogate: 13C2-PFDOA	91.1%	50-150			06/18/23	1	Table B-15	
Surrogate: 13C2-PFTEDA	91.0%	50-150			06/18/23	1	Table B-15	
Surrogate: 13C3-PFBS	108%	50-150			06/18/23	1	Table B-15	
Surrogate: 13C3-PFHXS	107%	50-150			06/18/23	1	Table B-15	
Surrogate: 13C8-PFOS	108%	50-150			06/18/23	1	Table B-15	
Surrogate: 13C2-4:2FTS	127%	50-150			06/18/23	1	Table B-15	
Surrogate: 13C2-6:2FTS	162%	50-150	S2		06/18/23	1	Table B-15	
Surrogate: 13C2-6:2FTS	148%	50-150			06/18/23	10	Table B-15	
Surrogate: 13C2-8:2FTS	126%	50-150			06/18/23	1	Table B-15	
Surrogate: 13C8-PFOSA	93.1%	50-150			06/18/23	1	Table B-15	

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Project Manager: Stacy Kotecki

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Sample Results (Continued)

Sample: PFAS Free DI Water (Continued) 23F0053-01 (Water)

Analyte	Result/Qual	PQL	MDL	Units	Date Analyzed	DF	Method	Prep Batch
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Per- and Polyfluoroalkyl Substances (Continued)

Surrogate: D3-NMEFOSAA	111%	50-150			06/18/23	1	Table B-15	
Surrogate: D5-NETFOSAA	104%	50-150			06/18/23	1	Table B-15	
Surrogate: 13C3-HFPO-DA	105%	50-150			06/18/23	1	Table B-15	

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Sample Results (Continued)

**Sample: PFAS Free Decon Water
23F0053-02 (Water)**

Analyte	Result /Qual	PQL	MDL	Units	Date Analyzed	DF	Method	Prep Batch
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Per- and Polyfluoroalkyl Substances

PFBA	ND	MI3,	4.0	ng/L	06/18/23	1	Table B-15	BCF0123
PFPeA	ND		1.6	ng/L	06/18/23	1	Table B-15	BCF0123
PFHxA	ND		1.6	ng/L	06/18/23	1	Table B-15	BCF0123
PFHpA	ND		1.6	ng/L	06/18/23	1	Table B-15	BCF0123
PFOA	2.5		1.6	ng/L	06/18/23	1	Table B-15	BCF0123
PFNA	ND		1.6	ng/L	06/18/23	1	Table B-15	BCF0123
PFDA	ND		1.6	ng/L	06/18/23	1	Table B-15	BCF0123
PFUnA	ND		1.6	ng/L	06/18/23	1	Table B-15	BCF0123
PFDoA	ND		1.6	ng/L	06/18/23	1	Table B-15	BCF0123
PFTTrDA	ND		1.6	ng/L	06/18/23	1	Table B-15	BCF0123
PFTeDA	ND		1.6	ng/L	06/18/23	1	Table B-15	BCF0123
PFBS	ND		1.6	ng/L	06/18/23	1	Table B-15	BCF0123
PFPeS	ND		1.6	ng/L	06/18/23	1	Table B-15	BCF0123
PFHxS	ND		1.6	ng/L	06/18/23	1	Table B-15	BCF0123
PFHpS	ND		1.6	ng/L	06/18/23	1	Table B-15	BCF0123
PFOS	2.4		1.6	ng/L	06/18/23	1	Table B-15	BCF0123
PFNS	ND		1.6	ng/L	06/18/23	1	Table B-15	BCF0123
PFDS	ND		1.6	ng/L	06/18/23	1	Table B-15	BCF0123
4:2FTS	ND		2.6	ng/L	06/18/23	1	Table B-15	BCF0123
6:2FTS	ND		4.0	ng/L	06/18/23	1	Table B-15	BCF0123
8:2FTS	ND		2.6	ng/L	06/18/23	1	Table B-15	BCF0123
PFOSA	ND		2.6	ng/L	06/18/23	1	Table B-15	BCF0123
NMeFOSAA	ND		1.6	ng/L	06/18/23	1	Table B-15	BCF0123
NEtFOSAA	ND		2.4	ng/L	06/18/23	1	Table B-15	BCF0123
HFPO-DA	ND		1.3	ng/L	06/18/23	1	Table B-15	BCF0123
ADONA	ND		1.3	ng/L	06/18/23	1	Table B-15	BCF0123
9CI-PF3ONS	ND		1.3	ng/L	06/18/23	1	Table B-15	BCF0123
11CI-PF3OUDS	ND		1.3	ng/L	06/18/23	1	Table B-15	BCF0123

Surrogate: 13C4-PFBA	99.6%		50-150		06/18/23	1	Table B-15	
Surrogate: 13C5-PFPEA	115%		50-150		06/18/23	1	Table B-15	
Surrogate: 13C5-PFHXA	104%		50-150		06/18/23	1	Table B-15	
Surrogate: 13C4-PFHFA	105%		50-150		06/18/23	1	Table B-15	
Surrogate: 13C8-PFOA	109%		50-150		06/18/23	1	Table B-15	
Surrogate: 13C9-PFNA	105%		50-150		06/18/23	1	Table B-15	
Surrogate: 13C6-PFDA	106%		50-150		06/18/23	1	Table B-15	
Surrogate: 13C7-PFUnA	105%		50-150		06/18/23	1	Table B-15	
Surrogate: 13C2-PFDOA	98.4%		50-150		06/18/23	1	Table B-15	
Surrogate: 13C2-PFTEDA	85.3%		50-150		06/18/23	1	Table B-15	
Surrogate: 13C3-PFBS	105%		50-150		06/18/23	1	Table B-15	
Surrogate: 13C3-PFHXS	106%		50-150		06/18/23	1	Table B-15	
Surrogate: 13C8-PFOS	103%		50-150		06/18/23	1	Table B-15	
Surrogate: 13C2-4:2FTS	141%		50-150		06/18/23	1	Table B-15	
Surrogate: 13C2-6:2FTS	153%	S2	50-150		06/18/23	1	Table B-15	
Surrogate: 13C2-6:2FTS	163%	S2	50-150		06/18/23	10	Table B-15	
Surrogate: 13C2-8:2FTS	134%		50-150		06/18/23	1	Table B-15	
Surrogate: 13C8-PFOSA	103%		50-150		06/18/23	1	Table B-15	

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Sample Results (Continued)

Sample: PFAS Free Decon Water (Continued) 23F0053-02 (Water)

Analyte	Result/Qual	PQL	MDL	Units	Date Analyzed	DF	Method	Prep Batch
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Per- and Polyfluoroalkyl Substances (Continued)

Surrogate: D3-NMEFOSAA	109%	50-150			06/18/23	1	Table B-15	
Surrogate: D5-NETFOSAA	108%	50-150			06/18/23	1	Table B-15	
Surrogate: 13C3-HFPO-DA	95.3%	50-150			06/18/23	1	Table B-15	

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PREPARATION BATCH SUMMARY

Table B-15

Laboratory: APPL, LLC

Client: Fibertec Environmental Services

Batch: BCF0123 Batch Matrix: Water Preparation: Table B-15

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT mL	FINAL VOL. mL
PFAS Free DI Water	23F0053-01	06/08/23 14:10	299.25	2.00
PFAS Free DI Water	23F0053-01RE1	06/08/23 14:10	299.25	2.00
PFAS Free Decon Water	23F0053-02	06/08/23 14:10	303.11	2.00
PFAS Free Decon Water	23F0053-02RE1	06/08/23 14:10	303.11	2.00
Blank	BCF0123-BLK1	06/12/23 14:10	250.00	2.00
LCS	BCF0123-BS1	06/12/23 14:10	250.00	2.00
LCS Dup	BCF0123-BSD1	06/12/23 14:10	250.00	2.00
MRL Check	BCF0123-MRL1	06/12/23 14:10	250.00	2.00

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Quality Control

Per- and Polyfluoroalkyl Substances

Analyte	Result/ Qual	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Method: Table B-15

Batch: BCF0123 - Table B-15

Blank (BCF0123-BLK1)

Prepared: 06/12/23 14:10 Analyzed: 06/18/23 01:23

PFBA	ND	4.0	ng/L
PFPeA	ND	1.6	ng/L
PFHxA	ND	1.6	ng/L
PFFHpA	ND	1.6	ng/L
PFOA	ND	1.6	ng/L
PFNA	ND	1.6	ng/L
PFDA	ND	1.6	ng/L
PFOA	ND	1.6	ng/L
PFTeDA	ND	1.6	ng/L
PFBs	ND	1.6	ng/L
PFPeS	ND	1.6	ng/L
PFHxS	ND	1.6	ng/L
PFFHpS	ND	1.6	ng/L
PFOS	ND MI2,	1.6	ng/L
PFNS	ND	1.6	ng/L
PFDS	ND	1.6	ng/L
4:2FTS	ND	3.2	ng/L
6:2FTS	ND	4.0	ng/L
8:2FTS	ND	3.2	ng/L
PFOSA	ND	3.2	ng/L
NMeFOSAA	ND	1.6	ng/L
NEtFOSAA	ND	2.4	ng/L
HFPO-DA	ND	1.6	ng/L
ADONA	ND	1.6	ng/L
9CI-PF3ONS	ND	1.6	ng/L
11CI-PF3OUDS	ND	1.6	ng/L

Surrogate: 13C4-PFBA	67.1	ng/L	64.0	105	50-150
Surrogate: 13C5-PFPEA	43.6	ng/L	32.0	136	50-150
Surrogate: 13C5-PFHXA	19.2	ng/L	16.0	120	50-150
Surrogate: 13C4-PFHXA	19.7	ng/L	16.0	123	50-150
Surrogate: 13C8-PFOA	18.6	ng/L	16.0	117	50-150
Surrogate: 13C9-PFNA	9.74	ng/L	8.00	122	50-150
Surrogate: 13C6-PFDA	9.39	ng/L	8.00	117	50-150
Surrogate: 13C7-PFUnA	8.90	ng/L	8.00	111	50-150
Surrogate: 13C2-PFDOA	8.48	ng/L	8.00	106	50-150
Surrogate: 13C2-PFTEDA	7.62	ng/L	8.00	95.2	50-150
Surrogate: 13C3-PFBs	16.6	ng/L	16.0	104	50-150
Surrogate: 13C3-PFHXS	16.6	ng/L	16.0	104	50-150
Surrogate: 13C8-PFOS	17.0	ng/L	16.0	106	50-150
Surrogate: 13C2-4:2FTS	40.1	ng/L	32.0	125	50-150
Surrogate: 13C2-6:2FTS	50.7 S2	ng/L	32.0	158	50-150
Surrogate: 13C2-8:2FTS	42.2	ng/L	32.0	132	50-150
Surrogate: 13C8-PFOSA	13.7	ng/L	16.0	85.5	50-150
Surrogate: D3-NMeFOSAA	35.9	ng/L	32.0	112	50-150
Surrogate: D5-NETFOSAA	34.1	ng/L	32.0	107	50-150

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Quality Control (Continued)

Per- and Polyfluoroalkyl Substances (Continued)

Analyte	Result/ Qual	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Blank (BCF0123-BLK1)					Prepared: 06/12/23 14:10		Analyzed: 06/18/23 01:23			
Surrogate: 13C3-HFPO-DA	71.4			ng/L	64.0		112	50-150		
LCS (BCF0123-BS1)					Prepared: 06/12/23 14:10		Analyzed: 06/18/23 01:36			
PFBA	34.2			ng/L	32.0		107	73-129		
PFPeA	17.3			ng/L	16.0		108	72-129		
PFHxA	8.12			ng/L	8.00		102	72-129		
PFHpA	8.39			ng/L	8.00		105	72-130		
PFOA	17.7 BS2			ng/L	8.00		221	71-133		
PFNA	8.09			ng/L	8.00		101	69-130		
PFDA	8.38			ng/L	8.00		105	71-129		
PFUnA	9.31			ng/L	8.00		116	69-133		
PFDaA	8.85			ng/L	8.00		111	72-134		
PFTTrDA	8.69			ng/L	8.00		109	65-144		
PFTeDA	7.33			ng/L	8.00		91.7	71-132		
PFBS	7.53			ng/L	7.08		106	72-130		
PFPeS	7.36			ng/L	7.52		97.8	71-127		
PFHxS	7.70			ng/L	7.32		105	68-131		
PFHpS	8.55			ng/L	7.64		112	69-134		
PFOS	13.0 BS2, MI2			ng/L	7.44		175	65-140		
PFNS	8.29			ng/L	7.68		108	69-127		
PFDS	8.11			ng/L	7.72		105	53-142		
4:2FTS	34.9			ng/L	30.0		116	63-143		
6:2FTS	32.8			ng/L	30.4		108	64-140		
8:2FTS	32.8			ng/L	30.7		107	67-138		
PFOSA	8.39			ng/L	8.00		105	67-137		
NMeFOSAA	7.89			ng/L	8.00		98.7	65-136		
NEtFOSAA	8.01			ng/L	8.00		100	61-135		
HFPO-DA	9.09			ng/L	8.00		114	44-175		
ADONA	8.69			ng/L	7.56		115	61-169		
9CI-PF3ONS	8.44			ng/L	7.48		113	62-140		
11CI-PF3OUDS	7.99			ng/L	7.56		106	54-138		
Surrogate: 13C4-PFBA	65.9			ng/L	64.0		103	50-150		
Surrogate: 13C5-PFPEA	34.0			ng/L	32.0		106	50-150		
Surrogate: 13C5-PFHXA	17.9			ng/L	16.0		112	50-150		
Surrogate: 13C4-PFHFA	18.3			ng/L	16.0		115	50-150		
Surrogate: 13C8-PFOA	16.9			ng/L	16.0		106	50-150		
Surrogate: 13C9-PFNA	8.73			ng/L	8.00		109	50-150		
Surrogate: 13C6-PFDA	7.77			ng/L	8.00		97.2	50-150		
Surrogate: 13C7-PFUnA	7.71			ng/L	8.00		96.4	50-150		
Surrogate: 13C2-PFDOA	7.35			ng/L	8.00		91.8	50-150		
Surrogate: 13C2-PFTEDA	7.38			ng/L	8.00		92.2	50-150		
Surrogate: 13C3-PFBS	15.5			ng/L	16.0		96.8	50-150		
Surrogate: 13C3-PFHXS	16.1			ng/L	16.0		101	50-150		
Surrogate: 13C8-PFOS	16.4			ng/L	16.0		102	50-150		
Surrogate: 13C2-4:2FTS	34.1			ng/L	32.0		107	50-150		
Surrogate: 13C2-6:2FTS	40.0			ng/L	32.0		125	50-150		
Surrogate: 13C2-8:2FTS	40.5			ng/L	32.0		126	50-150		
Surrogate: 13C8-PFOA	15.6			ng/L	16.0		97.2	50-150		
Surrogate: D3-NMEFOSAA	36.5			ng/L	32.0		114	50-150		
Surrogate: D5-NETFOSAA	34.7			ng/L	32.0		109	50-150		

Fibertec Environmental Services
1914 Holloway Drive
Holt, MI 48842

Project: PFAS Testing
Project Number: A15503
Project Manager: Stacy Kotecki

Reported: 06/23/2023 12:42

Quality Control (Continued)

Per- and Polyfluoroalkyl Substances (Continued)

Analyte	Result/ Qual	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
LCS (BCF0123-BS1)					Prepared: 06/12/23 14:10 Analyzed: 06/18/23 01:36					
Surrogate: 13C3-HFPO-DA	66.1			ng/L	64.0		103	50-150		
LCS Dup (BCF0123-BS1)					Prepared: 06/12/23 14:10 Analyzed: 06/18/23 01:36					
PFBA	34.3			ng/L	32.0		107	73-129	0.181	30
PFPeA	17.0			ng/L	16.0		106	72-129	1.62	30
PFHxA	8.06			ng/L	8.00		101	72-129	0.715	30
PFHpA	8.40			ng/L	8.00		105	72-130	0.121	30
PFOA	10.4 BS3			ng/L	8.00		130	71-133	52.0	30
PFNA	8.60			ng/L	8.00		107	69-130	6.12	30
PFDA	8.29			ng/L	8.00		104	71-129	1.05	30
PFUnA	8.18			ng/L	8.00		102	69-133	12.9	30
PFDaA	8.57			ng/L	8.00		107	72-134	3.15	30
PFTTrDA	8.29			ng/L	8.00		104	65-144	4.77	30
PFTeDA	9.06			ng/L	8.00		113	71-132	21.1	30
PFBS	7.61			ng/L	7.08		107	72-130	0.985	30
PFPeS	7.92			ng/L	7.52		105	71-127	7.34	30
PFHxS	8.03			ng/L	7.32		110	68-131	4.28	30
PFHpS	8.31			ng/L	7.64		109	69-134	2.94	30
PFOS	10.5 BS2			ng/L	7.44		141	65-140	21.0	30
PFNS	8.41			ng/L	7.68		110	69-127	1.46	30
PFDS	8.07			ng/L	7.72		105	53-142	0.510	30
4:2FTS	33.9			ng/L	30.0		113	63-143	2.98	30
6:2FTS	31.2			ng/L	30.4		103	64-140	4.84	30
8:2FTS	35.2			ng/L	30.7		115	67-138	7.17	30
PFOSA	8.40			ng/L	8.00		105	67-137	0.203	30
NMeFOSAA	8.10			ng/L	8.00		101	65-136	2.58	30
NEtFOSAA	8.34			ng/L	8.00		104	61-135	4.10	30
HFPO-DA	9.20			ng/L	8.00		115	44-175	1.21	30
ADONA	8.65			ng/L	7.56		114	61-169	0.398	30
9CI-PF3ONS	8.61			ng/L	7.48		115	62-140	2.00	30
11CI-PF3OUDS	7.71			ng/L	7.56		102	54-138	3.54	30
Surrogate: 13C4-PFBA	67.1			ng/L	64.0		105	50-150		
Surrogate: 13C5-PFPEA	34.4			ng/L	32.0		107	50-150		
Surrogate: 13C5-PFHXA	17.4			ng/L	16.0		109	50-150		
Surrogate: 13C4-PFHFA	17.4			ng/L	16.0		109	50-150		
Surrogate: 13C8-PFOA	17.9			ng/L	16.0		112	50-150		
Surrogate: 13C9-PFNA	7.93			ng/L	8.00		99.1	50-150		
Surrogate: 13C6-PFDA	8.56			ng/L	8.00		107	50-150		
Surrogate: 13C7-PFUnA	8.29			ng/L	8.00		104	50-150		
Surrogate: 13C2-PFDOA	7.26			ng/L	8.00		90.8	50-150		
Surrogate: 13C2-PFTEDA	6.31			ng/L	8.00		78.9	50-150		
Surrogate: 13C3-PFBS	15.9			ng/L	16.0		99.2	50-150		
Surrogate: 13C3-PFHXS	16.0			ng/L	16.0		99.7	50-150		
Surrogate: 13C8-PFOS	15.9			ng/L	16.0		99.4	50-150		
Surrogate: 13C2-4:2FTS	33.9			ng/L	32.0		106	50-150		
Surrogate: 13C2-6:2FTS	41.9			ng/L	32.0		131	50-150		
Surrogate: 13C2-8:2FTS	37.7			ng/L	32.0		118	50-150		
Surrogate: 13C8-PFOSA	14.8			ng/L	16.0		92.3	50-150		
Surrogate: D3-NMEFOSAA	34.3			ng/L	32.0		107	50-150		
Surrogate: D5-NETFOSAA	33.3			ng/L	32.0		104	50-150		

Fibertec Environmental Services
1914 Holloway Drive
Holt, MI 48842

Project: PFAS Testing
Project Number: A15503
Project Manager: Stacy Kotecki

Reported: 06/23/2023 12:42

Quality Control (Continued)

Per- and Polyfluoroalkyl Substances (Continued)

Analyte	Result/ Qual	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
LCS Dup (BCF0123-BSD1)					Prepared: 06/12/23 14:10		Analyzed: 06/18/23 01:49			
Surrogate: 13C3-HFPO-DA	64.9			ng/L	64.0		101	50-150		
MRL Check (BCF0123-MRL1)					Prepared: 06/12/23 14:10		Analyzed: 06/18/23 02:02			
PFBA	6.42			ng/L	6.40		100	73-129		
PFPeA	3.31			ng/L	3.20		103	72-129		
PFHxA	1.58			ng/L	1.60		98.7	72-129		
PFFHpA	1.59			ng/L	1.60		99.4	72-130		
PFOA	3.07 BS2			ng/L	1.60		192	71-133		
PFNA	1.59			ng/L	1.60		99.2	69-130		
PFDA	1.53			ng/L	1.60		95.4	71-129		
PFUnA	1.70			ng/L	1.60		106	69-133		
PFDaA	1.54			ng/L	1.60		96.5	72-134		
PFTTrDA	1.36			ng/L	1.60		85.1	65-144		
PFTeDA	1.74			ng/L	1.60		109	71-132		
PFBS	1.44			ng/L	1.42		102	72-130		
PFPeS	1.53			ng/L	1.50		102	71-127		
PFHxS	1.59			ng/L	1.46		108	68-131		
PFFHpS	1.42			ng/L	1.53		93.2	69-134		
PFOS	2.55 BS2, MI2			ng/L	1.49		172	65-140		
PFNS	1.45			ng/L	1.54		94.3	69-127		
PFDS	1.31			ng/L	1.54		84.9	53-142		
4:2FTS	6.46			ng/L	6.00		108	63-143		
6:2FTS	6.24			ng/L	6.08		103	64-140		
8:2FTS	6.66			ng/L	6.14		108	67-138		
PFOSA	1.59 , J			ng/L	1.60		99.5	67-137		
NMeFOSAA	1.58			ng/L	1.60		98.7	65-136		
NEtFOSAA	1.69			ng/L	1.60		105	61-135		
HFPO-DA	1.20 , J			ng/L	1.60		74.8	44-175		
ADONA	1.60			ng/L	1.51		106	61-169		
9CI-PF3ONS	1.66			ng/L	1.50		111	62-140		
11CI-PF3OUDS	1.39 , J			ng/L	1.51		91.7	54-138		
Surrogate: 13C4-PFBA	68.3			ng/L	64.0		107	50-150		
Surrogate: 13C5-PFPEA	34.9			ng/L	32.0		109	50-150		
Surrogate: 13C5-PFHXA	17.3			ng/L	16.0		108	50-150		
Surrogate: 13C4-PFHFA	17.5			ng/L	16.0		109	50-150		
Surrogate: 13C8-PFOA	17.4			ng/L	16.0		109	50-150		
Surrogate: 13C9-PFNA	9.08			ng/L	8.00		114	50-150		
Surrogate: 13C6-PFDA	8.34			ng/L	8.00		104	50-150		
Surrogate: 13C7-PFUnA	7.69			ng/L	8.00		96.1	50-150		
Surrogate: 13C2-PFDOA	7.41			ng/L	8.00		92.6	50-150		
Surrogate: 13C2-PFTEDA	6.44			ng/L	8.00		80.5	50-150		
Surrogate: 13C3-PFBS	16.8			ng/L	16.0		105	50-150		
Surrogate: 13C3-PFHXS	16.1			ng/L	16.0		101	50-150		
Surrogate: 13C8-PFOS	16.6			ng/L	16.0		104	50-150		
Surrogate: 13C2-4:2FTS	36.6			ng/L	32.0		114	50-150		
Surrogate: 13C2-6:2FTS	42.4			ng/L	32.0		133	50-150		
Surrogate: 13C2-8:2FTS	37.1			ng/L	32.0		116	50-150		
Surrogate: 13C8-PFOA	13.4			ng/L	16.0		83.9	50-150		
Surrogate: D3-NMEFOSAA	35.5			ng/L	32.0		111	50-150		
Surrogate: D5-NETFOSAA	31.7			ng/L	32.0		99.2	50-150		

Fibertec Environmental Services
1914 Holloway Drive
Holt, MI 48842

Project: PFAS Testing
Project Number: A15503
Project Manager: Stacy Kotecki

Reported: 06/23/2023 12:42

Quality Control (Continued)

Per- and Polyfluoroalkyl Substances (Continued)

Analyte	Result/ Qual	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MRL Check (BCF0123-MRL1)					Prepared: 06/12/23 14:10 Analyzed: 06/18/23 02:02					
Surrogate: 13C3-HFPO-DA	61.8			ng/L	64.0		96.5	50-150		

Fibertec Environmental Services
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Project: PFAS Testing
Project Number: A15503
Project Manager: Stacy Kotecki

Reported: 06/23/2023 12:42

Notes and Definitions

Item	Definition
BS2	Blank spike recovered above the upper control limit
BS3	BS/BSD recovered with high RPD
J	Estimated value
MI2	Manual integration, non-target peak interference
MI3	Manual integration, peaks split
MI6	Manual integration, wrong peak integrated
S2	Surrogate recovered above the upper control limit
U	Not detected
Dry	Sample results reported on a dry weight basis.
MDL	Method Detection Limit (only displays if reported to the MDL)
ND	Analyte NOT DETECTED at or above the reporting limit.
DF	Dilution Factor
DL	Detection Limit
RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was matrix spiked or duplicated.
PQL, Practical Quantitation Limit = Method Reporting Limit (MRL).	

Fibertec Environmental Services
1914 Holloway Drive
Holt, MI 48842

Project: PFAS Testing
Project Number: A15503
Project Manager: Stacy Kotecki

Reported: 06/23/2023 12:42



AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES

 A METIRI GROUP COMPANY

WORK ORDER

23F0053

Printed: 06/23/2023 12:42 pm

Project: PFAS Testing
Project Number: A15503
Project Manager: Chue Moua
PO Number: NA

Report To:

Fibertec Environmental Services
Stacy Kotecki
1914 Holloway Drive
Holt, MI 48842
Phone: (517) 699-0345
Fax: (517) 699-0388

Invoice To:

Fibertec Environmental Services
Kathy Jones
1914 Holloway Drive
Holt, MI 48842
Phone: (517) 699-0345
Fax: (517) 699-0388

Date Received: 06/06/2023 10:10 AM
Date Due: 06/20/2023 (10.00 day TAT)

Logged In By: Megan Salata
Received By: Megan Salata

Analysis

Comments

23F0053-01 PFAS Free DI Water [Water] Sampled 6/1/2023 12:51:00PM

B-15 DOD 28-compound list

23F0053-02 PFAS Free Decon Water [Water] Sampled 6/1/2023 12:55:00PM

B-15 DOD 28-compound list

23F0053

Sample Receipt Log

Default Cooler

Samples Received at: **5.7°C**

Custody Seals	No	Were all containers sealed in separate bags?	Yes
Containers Intact	Yes	Did all containers arrive in good condition?	Yes
COC/Labels Agree	Yes	Correct containers/preserv. for tests indicated?	Yes
Preservation Confirmed	Yes	Sufficient volume sent for tests requested?	Yes
Received On Ice	Yes	Were bubbles absent in volatile samples?	No
Was a chain of custody received?	Yes	Sufficient remaining holding time for analyses?	Yes
COCs complete/signed in the appropriate places?	Yes	pH of non-VOA preserved containers documented?	No
Sample labels complete? Sample ID, date/time, etc.	Yes	Unpreserved vials received for VOA analysis?	No
Did all container labels agree with COCs?	Yes	If "yes", are unpreserved VOA vials noted on Work	No

**Analytical Laboratory**

1914 Holloway Drive
Holt, MI 48842
Phone: 517 699 0345
Fax: 517 699 0388
email: lab@fibertec.us

8660 S. Mackinaw Trail
Cadillac, MI 49601
Phone: 231 775 8368
Fax: 231 775 8584

Industrial Hygiene Services, Inc.

1914 Holloway Drive
Holt, MI 48842
Phone: 517 699 0345
Fax: 517 699 0382
email: asbestos@fibertecihs.com

Geoprobe

11766 E. Grand River Rd.
Brighton, MI 48116
Phone: 810 220 3300
Fax: 810 220 3311

23F0053
Chain of Custody #
216705-S
PAGE 1 of 1

Client Name: Fibertec				MATRIX (SEE RIGHT CORNER FOR CODE)	# OF CONTAINERS	PFAS 537M	PARAMETERS												Matrix Code		Deliverables
Contact Person: Stacy Kotecki							HOLD SAMPLE	S	Soil	GW	Ground Water		Level 2								
Project Name/ Number: A15503								A	Air	SW	Surface Water		Level 3								
Email distribution list: skotecki@fibertec.us, lab@fibertec.us								O	Oil	WW	Waste Water		Level 4								
Quote#								P	Wipe	X	Other: Specify		EDD								
Purchase Order#								W= DI Water See attached list for RL's													
Date	Time	Sample #	Client Sample Descriptor														Remarks:				
6/1/23	1251		PFAS Free DI Water	W	3		✓														
6/1/23	1255		PFAS Free Decon Water	W	3		✓														
Comments:																					
Sampled/Relinquished By: Fibertec/				Date/ Time 6/5/23				Received By: FedEx													
Relinquished By:				Date/ Time				Received By:													
Relinquished By:				Date/ Time 6/6/23 1010				Received By Laboratory:													
Turnaround Time ALL RESULTS WILL BE SENT BY THE END OF THE BUSINESS DAY														LAB USE ONLY							
_____ 1 bus. day _____ 2 bus. days _____ 3 bus. days _____ 4 bus. days														Fibertec project number:							
_____ 5-7 bus. days (standard) Other (specify time/date requirement): Standard														Temperature upon receipt at Lab: 1RB8.3/5.7°C							
Please see back for terms and conditions																					

APPL: Please reference 537.1 Moc


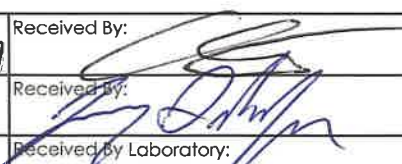

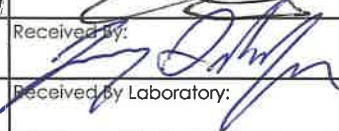

Verbiage: Samples have been pro
QSM Table B-15, which is an equi

Fibertec's LIMS test name is: CLO-

*We have also requested APPL's 250
for a client who wants 537.1M. The h
days to extractions / 90 days after ext
to Method 1633. and not need B-15 ;

Fibertec			Appl		
Foam & Non-Potable Water			Non-Potable Water		
EPA 537.1 M (Modified)			B-15 / 537.1 Modified		
Test Name PFAS-TZM			Test Name: PFAS		
Parameter	RDL ng/L		Parameter	RDL ng/L	
1 11Cl-PF3OUdS	1		1 11Cl-PF3OUdS	1.6	
2 9Cl-PF3ONS	1		2 9Cl-PF3ONS	1.6	
3 ADONA	1		3 ADONA	1.6	
4 FTS 4:2	1		4 FTS 4:2	3.2	
5 FTS 6:2	1		5 FTS 6:2	3.2	
6 FTS 8:2	1		6 FTS 8:2	3.2	
7 HFPO-DA	1		7 HFPO-DA	1.6	
8 N-ETFSOAA	1		8 N-ETFSOAA	0.8	
9 N-MeFSOAA	1		9 N-MeFSOAA	0.8	
10 PFBA	1		10 PFBA	3.2	
11 PFBS	1		11 PFBS	0.8	
12 PFDA	1		12 PFDA	0.8	
13 PFDoA	1		13 PFDoA	0.8	
14 PFDS	1		14 PFDS	0.8	
15 PFHpA	1		15 PFHpA	0.8	
16 PFHpS	1		16 PFHpS	0.8	
17 PFHxA	1		17 PFHxA	0.8	
18 PFHxS-Total	1		18 PFHxS-Total	0.8	
19 PFNA	1		19 PFNA	0.8	
20 PFNS	1		20 PFNS	0.8	
21 PFOA	1		21 PFOA	0.8	
22 PFOS-Total	1		22 PFOS-Total	0.8	
23 PFOSA	1		23 PFOSA	0.8	
24 PFPeA	1		24 PFPeA	1.6	
25 PFPeS	1		25 PFPeS	0.8	
26 PFTeA (PFTeDA)	1		26 PFTeA (PFTeDA)	0.8	
27 PFTriA (PFTriDA)	1		27 PFTriA (PFTriDA)	0.8	
28 PFUnA	1		28 PFUnA	0.8	
Total: 28			Total: 28		

No Custody Seal

Client Name: BCPI				MATRIX (SEE RIGHT CORNER FOR CODE)	# OF CONTAINERS	PFAS (EPA 537.1 Modified)	PARAMETERS												Matrix Code				Deliverables	
Contact Person: Annika Whitcomb/ Leslie DeBoer																			S Soil	GW Ground Water	HOLD SAMPLE	Level 2		
Project Name/ Number: 194688-24							A Air	SW Surface Water	Level 3															
Email distribution list: AnnikaW/Ldeboer/nrians.ehdi.com							O Oil	WW Waste Water		Level 4														
Quote#							P Wipe	X Other: Specify			EDD													
Purchase Order#				Remarks: VAS																				
Date	Time	Sample #	Client Sample Descriptor																					
6/11/23	01251		pfas free DI water	X	3	X																		
6/11/23	01255		pfas free deion water	X	3	X																		
Received By Lab																								
JUN 05 2023																								
Initials: JS																								
Comments:																								
Sampled/Relinquished By: 				Date/ Time: 6-5-23 10:09				Received By: 																
Relinquished By: 				Date/ Time: 6-5-23 12:46				Received By: 																
Relinquished By:				Date/ Time:				Received By Laboratory:																
Turnaround Time ALL RESULTS WILL BE SENT BY THE END OF THE BUSINESS DAY _____ 1 bus. day _____ 2 bus. days _____ 3 bus. days _____ 4 bus. days X _____ 5-7 bus. days (standard) Other (specify time/date requirement): _____												LAB USE ONLY Fibertec project number: A15503 Temperature upon receipt at Lab: 47°C <div style="border: 1px solid red; padding: 5px; display: inline-block;">Received On Ice</div> 												
Please see back for terms and conditions																								