

Thursday, August 24, 2023

Fibertec Project Number: A16292  
Project Identification: Lowell Landfill (194688.24) /194688.24  
Submittal Date: 07/20/2023

Ms. Leslie DeBoer  
BLDI, Inc.  
150 Fountain Street NE  
Grand Rapids, MI 49503

Dear Ms. DeBoer,

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 that the PFAS test was performed by Metiri Group, Clovis, CA. These results are attached.

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 Rikki Lott at 11:50 AM, Aug 24, 2023

For Heather L. Smith  
Director of Laboratory Operations

Enclosures

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

Holt, MI 48842  
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August 23, 2023

Jacob Sutherland  
Fibertec Environmental Services  
1914 Holloway Drive  
Holt, MI 48842

RE: PFAS Testing  
23G0254

Enclosed are the results of analyses for samples received by our laboratory on 7/26/2023. 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](mailto:cmoua@applinc.com)  
559-862-2155

# Table of Contents

Cover Letter	1
Case Narratives Analyses	3
Sample Results	4
Quality Assurance Results	19
Qualifiers and Definitions	24
Login Summary	25
Chain of Custody	27

Fibertec Environmental Services  
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Project: PFAS Testing  
Project Number: A16292  
Project Manager: Jacob Sutherlund

Reported: 08/23/2023 07:04

## Analysis Case Narrative

**537M:** 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-PFTeDA recovered below the lower control limit in sample 03 - MW-16D.

The extracted internal standards 13C2-PFTeDA and D3-NMeFOSAA recovered below the lower control limit in sample 04 - MW-16DD.

The analyte PFOS recovered above the upper control limit in the BCG0844-MRL1.

## Samples in this Report

Lab ID	Sample	Matrix	Date Sampled	Date Received
23G0254-01	MW-5D	Water	07/19/2023 13:10	07/26/2023
23G0254-02	MW-5DD	Water	07/19/2023 16:15	07/26/2023
23G0254-03	MW-16D	Water	07/19/2023 10:35	07/26/2023
23G0254-04	MW-16DD	Water	07/19/2023 11:45	07/26/2023
23G0254-05	PUMP BLANK	Water	07/19/2023 12:15	07/26/2023
23G0254-06	BAILER BLANK	Water	07/19/2023 15:50	07/26/2023
23G0254-07	WLT BLANK	Water	07/19/2023 16:40	07/26/2023

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## Sample Results

**Sample: MW-5D**  
**23G0254-01 (Water)**

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

PFBA	6.8		3.0	ng/L	08/18/23	1	537M	BCG0844
PFPeA	13		1.5	ng/L	08/18/23	1	537M	BCG0844
PFHxA	13		0.75	ng/L	08/18/23	1	537M	BCG0844
PFHpA	3.2	MI5	0.75	ng/L	08/18/23	1	537M	BCG0844
PFOA	2.2	MI5	0.75	ng/L	08/18/23	1	537M	BCG0844
PFNA	ND		0.75	ng/L	08/18/23	1	537M	BCG0844
PFDA	ND		0.75	ng/L	08/18/23	1	537M	BCG0844
PFUnA	ND		0.75	ng/L	08/18/23	1	537M	BCG0844
PFDoA	ND		0.75	ng/L	08/18/23	1	537M	BCG0844
PFTTrDA	ND		0.75	ng/L	08/18/23	1	537M	BCG0844
PFTeDA	ND		0.75	ng/L	08/18/23	1	537M	BCG0844
PFBS	2.5		0.75	ng/L	08/18/23	1	537M	BCG0844
PFPeS	2.1		0.75	ng/L	08/18/23	1	537M	BCG0844
PFHxS	5.7	MI5	0.75	ng/L	08/18/23	1	537M	BCG0844
PFHpS	ND		0.75	ng/L	08/18/23	1	537M	BCG0844
PFOS	ND	IR1, MI3,	0.75	ng/L	08/18/23	1	537M	BCG0844
PFNS	ND		0.75	ng/L	08/18/23	1	537M	BCG0844
PFDS	ND		0.75	ng/L	08/18/23	1	537M	BCG0844
4:2FTS	ND		3.0	ng/L	08/18/23	1	537M	BCG0844
6:2FTS	ND		3.0	ng/L	08/18/23	1	537M	BCG0844
8:2FTS	ND		3.0	ng/L	08/18/23	1	537M	BCG0844
PFOSA	ND		3.0	ng/L	08/18/23	1	537M	BCG0844
NMeFOSAA	ND		0.75	ng/L	08/18/23	1	537M	BCG0844
NEtFOSAA	ND		0.75	ng/L	08/18/23	1	537M	BCG0844
HFPO-DA	ND		1.5	ng/L	08/18/23	1	537M	BCG0844
ADONA	ND		1.5	ng/L	08/18/23	1	537M	BCG0844
9Cl-PF3ONS	ND		1.5	ng/L	08/18/23	1	537M	BCG0844
11Cl-PF3OUDS	ND		1.5	ng/L	08/18/23	1	537M	BCG0844

Surrogate: 13C4-PFBA	84.7%		50-150		08/18/23	1	537M	
Surrogate: 13C5-PFPEA	95.2%		50-150		08/18/23	1	537M	
Surrogate: 13C5-PFHXA	95.0%		50-150		08/18/23	1	537M	
Surrogate: 13C4-PFHFA	93.6%		50-150		08/18/23	1	537M	
Surrogate: 13C8-PFOA	97.8%		50-150		08/18/23	1	537M	
Surrogate: 13C9-PFNA	98.7%		50-150		08/18/23	1	537M	
Surrogate: 13C6-PFDA	99.9%		50-150		08/18/23	1	537M	
Surrogate: 13C7-PFUnA	95.1%		50-150		08/18/23	1	537M	
Surrogate: 13C2-PFDOA	80.4%		50-150		08/18/23	1	537M	
Surrogate: 13C2-PFTEDA	74.3%		50-150		08/18/23	1	537M	
Surrogate: 13C3-PFBS	89.2%		50-150		08/18/23	1	537M	
Surrogate: 13C3-PFHXS	96.5%		50-150		08/18/23	1	537M	
Surrogate: 13C8-PFOS	97.4%		50-150		08/18/23	1	537M	
Surrogate: 13C2-4:2FTS	91.5%		50-150		08/18/23	1	537M	
Surrogate: 13C2-6:2FTS	88.2%		50-150		08/18/23	1	537M	
Surrogate: 13C2-8:2FTS	83.0%		50-150		08/18/23	1	537M	
Surrogate: 13C8-PFOSA	53.1%		50-150		08/18/23	1	537M	

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## Sample Results (Continued)

**Sample: MW-5D (Continued)**  
**23G0254-01 (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	85.0%	50-150			08/18/23	1	537M	
Surrogate: D5-NETFOSAA	80.0%	50-150			08/18/23	1	537M	
Surrogate: 13C3-HFPO-DA	99.9%	50-150			08/18/23	1	537M	

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## Sample Results (Continued)

**Sample: MW-5DD**  
**23G0254-02 (Water)**

Analyte	Result /Qual		PQL	MDL	Units	Date Analyzed	DF	Method	Prep Batch
Per- and Polyfluoroalkyl Substances									
PFBA	5.2	MI2	2.7		ng/L	08/18/23	1	537M	BCG0844
PFPeA	9.8		1.4		ng/L	08/18/23	1	537M	BCG0844
PFHxA	7.7		0.69		ng/L	08/18/23	1	537M	BCG0844
PFHpA	5.7	MI5	0.69		ng/L	08/18/23	1	537M	BCG0844
PFOA	3.5	MI5	0.69		ng/L	08/18/23	1	537M	BCG0844
PFNA	ND		0.69		ng/L	08/18/23	1	537M	BCG0844
PFDA	ND		0.69		ng/L	08/18/23	1	537M	BCG0844
PFUnA	ND		0.69		ng/L	08/18/23	1	537M	BCG0844
PFDoA	ND		0.69		ng/L	08/18/23	1	537M	BCG0844
PFTrDA	ND		0.69		ng/L	08/18/23	1	537M	BCG0844
PFTeDA	ND		0.69		ng/L	08/18/23	1	537M	BCG0844
PFBS	1.7		0.69		ng/L	08/18/23	1	537M	BCG0844
PFPeS	0.78		0.69		ng/L	08/18/23	1	537M	BCG0844
PFHxS	1.4		0.69		ng/L	08/18/23	1	537M	BCG0844
PFHpS	ND		0.69		ng/L	08/18/23	1	537M	BCG0844
PFOS	3.7	IR1, MI3	0.69		ng/L	08/18/23	1	537M	BCG0844
PFNS	ND		0.69		ng/L	08/18/23	1	537M	BCG0844
PFDS	ND		0.69		ng/L	08/18/23	1	537M	BCG0844
4:2FTS	ND		2.7		ng/L	08/18/23	1	537M	BCG0844
6:2FTS	200		2.7		ng/L	08/18/23	1	537M	BCG0844
8:2FTS	ND		2.7		ng/L	08/18/23	1	537M	BCG0844
PFOSA	5.2		2.7		ng/L	08/18/23	1	537M	BCG0844
NMeFOSAA	1.1	MI5	0.69		ng/L	08/18/23	1	537M	BCG0844
NEtFOSAA	ND		0.69		ng/L	08/18/23	1	537M	BCG0844
HFPO-DA	ND		1.4		ng/L	08/18/23	1	537M	BCG0844
ADONA	ND		1.4		ng/L	08/18/23	1	537M	BCG0844
9Cl-PF3ONS	ND		1.4		ng/L	08/18/23	1	537M	BCG0844
11Cl-PF3OUDS	ND		1.4		ng/L	08/18/23	1	537M	BCG0844
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Surrogate: 13C4-PFBA	74.5%		50-150			08/18/23	1	537M	
Surrogate: 13C5-PFPEA	92.7%		50-150			08/18/23	1	537M	
Surrogate: 13C5-PFHXA	97.6%		50-150			08/18/23	1	537M	
Surrogate: 13C4-PFHFA	99.7%		50-150			08/18/23	1	537M	
Surrogate: 13C8-PFOA	95.4%		50-150			08/18/23	1	537M	
Surrogate: 13C9-PFNA	96.0%		50-150			08/18/23	1	537M	
Surrogate: 13C6-PFDA	90.1%		50-150			08/18/23	1	537M	
Surrogate: 13C7-PFUnA	80.4%		50-150			08/18/23	1	537M	
Surrogate: 13C2-PFDOA	64.8%		50-150			08/18/23	1	537M	
Surrogate: 13C2-PFTEDA	57.4%		50-150			08/18/23	1	537M	
Surrogate: 13C3-PFBS	88.0%		50-150			08/18/23	1	537M	
Surrogate: 13C3-PFHXS	92.2%		50-150			08/18/23	1	537M	
Surrogate: 13C8-PFOS	88.3%		50-150			08/18/23	1	537M	
Surrogate: 13C2-4:2FTS	88.9%		50-150			08/18/23	1	537M	
Surrogate: 13C2-6:2FTS	83.6%		50-150			08/18/23	1	537M	
Surrogate: 13C2-8:2FTS	75.2%		50-150			08/18/23	1	537M	
Surrogate: 13C8-PFOSA	57.9%		50-150			08/18/23	1	537M	
Surrogate: D3-NMEFOSAA	72.9%		50-150			08/18/23	1	537M	

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## Sample Results (Continued)

**Sample: MW-5DD (Continued)**  
**23G0254-02 (Water)**

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

Surrogate: D5-NETFOSAA	68.1%	50-150	08/18/23	1	537M
Surrogate: 13C3-HFPO-DA	101%	50-150	08/18/23	1	537M



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Project Manager: Jacob Sutherland

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## Sample Results (Continued)

**Sample: MW-16D**  
**23G0254-03 (Water)**

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

PFBA	5.7		2.7	ng/L	08/18/23	1	537M	BCG0844
PFPeA	2.9		1.3	ng/L	08/18/23	1	537M	BCG0844
PFHxA	6.1	MI5	0.67	ng/L	08/18/23	1	537M	BCG0844
PFHpA	9.1	MI5	0.67	ng/L	08/18/23	1	537M	BCG0844
PFOA	7.7	MI5	0.67	ng/L	08/18/23	1	537M	BCG0844
PFNA	ND		0.67	ng/L	08/18/23	1	537M	BCG0844
PFDA	ND		0.67	ng/L	08/18/23	1	537M	BCG0844
PFUnA	ND		0.67	ng/L	08/18/23	1	537M	BCG0844
PFDoA	ND		0.67	ng/L	08/18/23	1	537M	BCG0844
PFTTrDA	ND		0.67	ng/L	08/18/23	1	537M	BCG0844
PFTeDA	ND		0.67	ng/L	08/18/23	1	537M	BCG0844
PFBS	7.6		0.67	ng/L	08/18/23	1	537M	BCG0844
PFPeS	7.7		0.67	ng/L	08/18/23	1	537M	BCG0844
PFHxS	13	MI5	0.67	ng/L	08/18/23	1	537M	BCG0844
PFHpS	ND		0.67	ng/L	08/18/23	1	537M	BCG0844
PFOS	ND	IR1, MI3,	0.67	ng/L	08/18/23	1	537M	BCG0844
PFNS	ND		0.67	ng/L	08/18/23	1	537M	BCG0844
PFDS	ND		0.67	ng/L	08/18/23	1	537M	BCG0844
4:2FTS	ND		2.7	ng/L	08/18/23	1	537M	BCG0844
6:2FTS	ND		2.7	ng/L	08/18/23	1	537M	BCG0844
8:2FTS	ND		2.7	ng/L	08/18/23	1	537M	BCG0844
PFOSA	ND		2.7	ng/L	08/18/23	1	537M	BCG0844
NMeFOSAA	ND		0.67	ng/L	08/18/23	1	537M	BCG0844
NEtFOSAA	ND		0.67	ng/L	08/18/23	1	537M	BCG0844
HFPO-DA	ND		1.3	ng/L	08/18/23	1	537M	BCG0844
ADONA	ND		1.3	ng/L	08/18/23	1	537M	BCG0844
9CI-PF3ONS	ND		1.3	ng/L	08/18/23	1	537M	BCG0844
11CI-PF3OUDS	ND		1.3	ng/L	08/18/23	1	537M	BCG0844

Surrogate: 13C4-PFBA	79.1%		50-150		08/18/23	1	537M	
Surrogate: 13C5-PFPEA	97.2%		50-150		08/18/23	1	537M	
Surrogate: 13C5-PFHXA	103%		50-150		08/18/23	1	537M	
Surrogate: 13C4-PFHPA	96.8%		50-150		08/18/23	1	537M	
Surrogate: 13C8-PFOA	97.4%		50-150		08/18/23	1	537M	
Surrogate: 13C9-PFNA	95.5%		50-150		08/18/23	1	537M	
Surrogate: 13C6-PFDA	89.5%		50-150		08/18/23	1	537M	
Surrogate: 13C7-PFUnA	72.9%		50-150		08/18/23	1	537M	
Surrogate: 13C2-PFDOA	50.3%		50-150		08/18/23	1	537M	
Surrogate: 13C2-PFTEDA	37.9%	S1	50-150		08/18/23	1	537M	
Surrogate: 13C2-PFTEDA	34.0%	S1	50-150		08/18/23	10	537M	
Surrogate: 13C3-PFBS	100%		50-150		08/18/23	1	537M	
Surrogate: 13C3-PFHXS	98.7%		50-150		08/18/23	1	537M	
Surrogate: 13C8-PFOS	98.1%		50-150		08/18/23	1	537M	
Surrogate: 13C2-4:2FTS	95.3%		50-150		08/18/23	1	537M	
Surrogate: 13C2-6:2FTS	87.3%		50-150		08/18/23	1	537M	
Surrogate: 13C2-8:2FTS	79.9%		50-150		08/18/23	1	537M	

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Reported: 08/23/2023 07:04

## Sample Results (Continued)

**Sample: MW-16D (Continued)**  
**23G0254-03 (Water)**

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

Surrogate: 13C8-PFOA	65.2%	50-150			08/18/23	1	537M	
Surrogate: D3-NMEFOSAA	78.2%	50-150			08/18/23	1	537M	
Surrogate: D5-NETFOA	64.8%	50-150			08/18/23	1	537M	
Surrogate: 13C3-HFPO-DA	103%	50-150			08/18/23	1	537M	

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## Sample Results (Continued)

**Sample: MW-16DD**  
**23G0254-04 (Water)**

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

PFBA	7.0	MI2	2.7	ng/L	08/18/23	1	537M	BCG0844
PFPeA	9.5		1.4	ng/L	08/18/23	1	537M	BCG0844
PFHxA	12		0.69	ng/L	08/18/23	1	537M	BCG0844
PFHpA	14	MI5	0.69	ng/L	08/18/23	1	537M	BCG0844
PFOA	26	MI5	0.69	ng/L	08/18/23	1	537M	BCG0844
PFNA	ND		0.69	ng/L	08/18/23	1	537M	BCG0844
PFDA	ND		0.69	ng/L	08/18/23	1	537M	BCG0844
PFUnA	ND		0.69	ng/L	08/18/23	1	537M	BCG0844
PFDoA	ND		0.69	ng/L	08/18/23	1	537M	BCG0844
PFTTrDA	ND		0.69	ng/L	08/18/23	1	537M	BCG0844
PFTeDA	ND		0.69	ng/L	08/18/23	1	537M	BCG0844
PFBS	9.7		0.69	ng/L	08/18/23	1	537M	BCG0844
PFPeS	9.4		0.69	ng/L	08/18/23	1	537M	BCG0844
PFHxS	12	MI5	0.69	ng/L	08/18/23	1	537M	BCG0844
PFHpS	ND	MI6,	0.69	ng/L	08/18/23	1	537M	BCG0844
PFOS	18	IR1, MI3	0.69	ng/L	08/18/23	1	537M	BCG0844
PFNS	ND		0.69	ng/L	08/18/23	1	537M	BCG0844
PFDS	ND		0.69	ng/L	08/18/23	1	537M	BCG0844
4:2FTS	ND		2.7	ng/L	08/18/23	1	537M	BCG0844
6:2FTS	ND		2.7	ng/L	08/18/23	1	537M	BCG0844
8:2FTS	ND		2.7	ng/L	08/18/23	1	537M	BCG0844
PFOSA	ND		2.7	ng/L	08/18/23	1	537M	BCG0844
NMeFOSAA	ND		0.69	ng/L	08/18/23	1	537M	BCG0844
NEtFOSAA	ND		0.69	ng/L	08/18/23	1	537M	BCG0844
HFPO-DA	ND		1.4	ng/L	08/18/23	1	537M	BCG0844
ADONA	ND		1.4	ng/L	08/18/23	1	537M	BCG0844
9CI-PF3ONS	ND		1.4	ng/L	08/18/23	1	537M	BCG0844
11CI-PF3OUDS	ND		1.4	ng/L	08/18/23	1	537M	BCG0844

Surrogate: 13C4-PFBA	83.5%		50-150		08/18/23	1	537M	
Surrogate: 13C5-PFPEA	99.7%		50-150		08/18/23	1	537M	
Surrogate: 13C5-PFHXA	109%		50-150		08/18/23	1	537M	
Surrogate: 13C4-PFHFA	106%		50-150		08/18/23	1	537M	
Surrogate: 13C8-PFOA	110%		50-150		08/18/23	1	537M	
Surrogate: 13C9-PFNA	103%		50-150		08/18/23	1	537M	
Surrogate: 13C6-PFDA	90.0%		50-150		08/18/23	1	537M	
Surrogate: 13C7-PFUnA	76.3%		50-150		08/18/23	1	537M	
Surrogate: 13C2-PFDOA	50.3%		50-150		08/18/23	1	537M	
Surrogate: 13C2-PFTEDA	38.0%	S1	50-150		08/18/23	1	537M	
Surrogate: 13C2-PFTEDA	34.7%	S1	50-150		08/18/23	10	537M	
Surrogate: 13C3-PFBS	117%		50-150		08/18/23	1	537M	
Surrogate: 13C3-PFHXS	105%		50-150		08/18/23	1	537M	
Surrogate: 13C8-PFOS	97.4%		50-150		08/18/23	1	537M	
Surrogate: 13C2-4:2FTS	114%		50-150		08/18/23	1	537M	
Surrogate: 13C2-6:2FTS	102%		50-150		08/18/23	1	537M	
Surrogate: 13C2-8:2FTS	86.8%		50-150		08/18/23	1	537M	
Surrogate: 13C8-PFOSA	71.8%		50-150		08/18/23	1	537M	

Fibertec Environmental Services  
1914 Holloway Drive  
Holt, MI 48842

Project: PFAS Testing  
Project Number: A16292  
Project Manager: Jacob Sutherland

Reported: 08/23/2023 07:04

## Sample Results (Continued)

**Sample: MW-16DD (Continued)**  
**23G0254-04 (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	60.3%		50-150		08/18/23	1	537M	
Surrogate: D5-NETFOSAA	47.0%	S1	50-150		08/18/23	1	537M	
Surrogate: D5-NETFOSAA	46.7%	S1	50-150		08/18/23	10	537M	
Surrogate: 13C3-HFPO-DA	103%		50-150		08/18/23	1	537M	

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1914 Holloway Drive  
Holt, MI 48842

Project: PFAS Testing  
Project Number: A16292  
Project Manager: Jacob Sutherland

Reported: 08/23/2023 07:04

## Sample Results (Continued)

**Sample: PUMP BLANK**  
**23G0254-05 (Water)**

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

PFBA	ND	2.8		ng/L	08/18/23	1	537M	BCG0844
PFPeA	ND	1.4		ng/L	08/18/23	1	537M	BCG0844
PFHxA	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
PFHpA	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
PFOA	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
PFNA	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
PFDA	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
PFUnA	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
PFDoA	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
PFTTrDA	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
PFTeDA	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
PFBS	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
PFPeS	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
PFHxS	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
PFHpS	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
PFOS	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
	IR1, MI3,							
PFNS	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
PFDS	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
4:2FTS	ND	2.8		ng/L	08/18/23	1	537M	BCG0844
6:2FTS	ND	2.8		ng/L	08/18/23	1	537M	BCG0844
8:2FTS	ND	2.8		ng/L	08/18/23	1	537M	BCG0844
PFOSA	ND	2.8		ng/L	08/18/23	1	537M	BCG0844
NMeFOSAA	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
NEtFOSAA	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
HFPO-DA	ND	1.4		ng/L	08/18/23	1	537M	BCG0844
ADONA	ND	1.4		ng/L	08/18/23	1	537M	BCG0844
9CI-PF3ONS	ND	1.4		ng/L	08/18/23	1	537M	BCG0844
11CI-PF3OUDS	ND	1.4		ng/L	08/18/23	1	537M	BCG0844

Surrogate: 13C4-PFBA	104%	50-150			08/18/23	1	537M	
Surrogate: 13C5-PFPEA	104%	50-150			08/18/23	1	537M	
Surrogate: 13C5-PFHXA	108%	50-150			08/18/23	1	537M	
Surrogate: 13C4-PFHPA	105%	50-150			08/18/23	1	537M	
Surrogate: 13C8-PFOA	104%	50-150			08/18/23	1	537M	
Surrogate: 13C9-PFNA	108%	50-150			08/18/23	1	537M	
Surrogate: 13C6-PFDA	107%	50-150			08/18/23	1	537M	
Surrogate: 13C7-PFUnA	98.2%	50-150			08/18/23	1	537M	
Surrogate: 13C2-PFDOA	90.2%	50-150			08/18/23	1	537M	
Surrogate: 13C2-PFTEDA	90.0%	50-150			08/18/23	1	537M	
Surrogate: 13C3-PFBS	111%	50-150			08/18/23	1	537M	
Surrogate: 13C3-PFHXS	108%	50-150			08/18/23	1	537M	
Surrogate: 13C8-PFOS	107%	50-150			08/18/23	1	537M	
Surrogate: 13C2-4:2FTS	112%	50-150			08/18/23	1	537M	
Surrogate: 13C2-6:2FTS	107%	50-150			08/18/23	1	537M	
Surrogate: 13C2-8:2FTS	105%	50-150			08/18/23	1	537M	
Surrogate: 13C8-PFOSA	57.0%	50-150			08/18/23	1	537M	

Fibertec Environmental Services  
1914 Holloway Drive  
Holt, MI 48842

Project: PFAS Testing  
Project Number: A16292  
Project Manager: Jacob Sutherland

Reported: 08/23/2023 07:04

## Sample Results (Continued)

**Sample: PUMP BLANK (Continued)**  
**23G0254-05 (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	97.5%	50-150			08/18/23	1	537M	
Surrogate: D5-NETFOSAA	94.3%	50-150			08/18/23	1	537M	
Surrogate: 13C3-HFPO-DA	107%	50-150			08/18/23	1	537M	

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Project: PFAS Testing  
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Project Manager: Jacob Sutherland

Reported: 08/23/2023 07:04

## Sample Results (Continued)

**Sample: BAILER BLANK**  
**23G0254-06 (Water)**

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

PFBA	ND	2.8		ng/L	08/18/23	1	537M	BCG0844
PFPeA	ND	1.4		ng/L	08/18/23	1	537M	BCG0844
PFHxA	ND	0.69		ng/L	08/18/23	1	537M	BCG0844
PFHpA	ND	0.69		ng/L	08/18/23	1	537M	BCG0844
PFOA	ND	0.69		ng/L	08/18/23	1	537M	BCG0844
PFNA	ND	0.69		ng/L	08/18/23	1	537M	BCG0844
PFDA	ND	0.69		ng/L	08/18/23	1	537M	BCG0844
PFUnA	ND	0.69		ng/L	08/18/23	1	537M	BCG0844
PFDoA	ND	0.69		ng/L	08/18/23	1	537M	BCG0844
PFTTrDA	ND	0.69		ng/L	08/18/23	1	537M	BCG0844
PFTeDA	ND	0.69		ng/L	08/18/23	1	537M	BCG0844
PFBS	ND	0.69		ng/L	08/18/23	1	537M	BCG0844
PFPeS	ND	0.69		ng/L	08/18/23	1	537M	BCG0844
PFHxS	ND	0.69		ng/L	08/18/23	1	537M	BCG0844
PFHpS	ND	0.69		ng/L	08/18/23	1	537M	BCG0844
PFOS	0.77 IR1, MI3	0.69		ng/L	08/18/23	1	537M	BCG0844
PFNS	ND	0.69		ng/L	08/18/23	1	537M	BCG0844
PFDS	ND	0.69		ng/L	08/18/23	1	537M	BCG0844
4:2FTS	ND	2.8		ng/L	08/18/23	1	537M	BCG0844
6:2FTS	ND	2.8		ng/L	08/18/23	1	537M	BCG0844
8:2FTS	ND	2.8		ng/L	08/18/23	1	537M	BCG0844
PFOSA	ND	2.8		ng/L	08/18/23	1	537M	BCG0844
NMeFOSAA	ND	0.69		ng/L	08/18/23	1	537M	BCG0844
NEtFOSAA	ND	0.69		ng/L	08/18/23	1	537M	BCG0844
HFPO-DA	ND	1.4		ng/L	08/18/23	1	537M	BCG0844
ADONA	ND	1.4		ng/L	08/18/23	1	537M	BCG0844
9CI-PF3ONS	ND	1.4		ng/L	08/18/23	1	537M	BCG0844
11CI-PF3OUDS	ND	1.4		ng/L	08/18/23	1	537M	BCG0844

Surrogate: 13C4-PFBA	109%	50-150			08/18/23	1	537M	
Surrogate: 13C5-PFPEA	107%	50-150			08/18/23	1	537M	
Surrogate: 13C5-PFHXA	111%	50-150			08/18/23	1	537M	
Surrogate: 13C4-PFHFA	106%	50-150			08/18/23	1	537M	
Surrogate: 13C8-PFOA	107%	50-150			08/18/23	1	537M	
Surrogate: 13C9-PFNA	113%	50-150			08/18/23	1	537M	
Surrogate: 13C6-PFDA	115%	50-150			08/18/23	1	537M	
Surrogate: 13C7-PFUnA	104%	50-150			08/18/23	1	537M	
Surrogate: 13C2-PFDOA	96.1%	50-150			08/18/23	1	537M	
Surrogate: 13C2-PFTEDA	82.1%	50-150			08/18/23	1	537M	
Surrogate: 13C3-PFBS	112%	50-150			08/18/23	1	537M	
Surrogate: 13C3-PFHXS	114%	50-150			08/18/23	1	537M	
Surrogate: 13C8-PFOS	112%	50-150			08/18/23	1	537M	
Surrogate: 13C2-4:2FTS	111%	50-150			08/18/23	1	537M	
Surrogate: 13C2-6:2FTS	106%	50-150			08/18/23	1	537M	
Surrogate: 13C2-8:2FTS	101%	50-150			08/18/23	1	537M	
Surrogate: 13C8-PFOSA	52.8%	50-150			08/18/23	1	537M	
Surrogate: D3-NMEFOSAA	89.9%	50-150			08/18/23	1	537M	

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Holt, MI 48842

Project: PFAS Testing  
Project Number: A16292  
Project Manager: Jacob Sutherland

Reported: 08/23/2023 07:04

## Sample Results (Continued)

**Sample: BAILER BLANK (Continued)**  
**23G0254-06 (Water)**

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

Surrogate: D5-NETFOSAA	85.0%	50-150	08/18/23	1	537M
Surrogate: 13C3-HFPO-DA	108%	50-150	08/18/23	1	537M



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Project: PFAS Testing  
Project Number: A16292  
Project Manager: Jacob Sutherland

Reported: 08/23/2023 07:04

## Sample Results (Continued)

**Sample: WLT BLANK**  
**23G0254-07 (Water)**

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

PFBA	ND	2.8		ng/L	08/18/23	1	537M	BCG0844
PFPeA	ND	1.4		ng/L	08/18/23	1	537M	BCG0844
PFHxA	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
PFHpA	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
PFOA	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
PFNA	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
PFDA	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
PFUnA	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
PFDoA	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
PFTTrDA	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
PFTeDA	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
PFBS	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
PFPeS	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
PFHxS	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
PFHpS	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
PFOS	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
	IR1, MI3,							
PFNS	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
PFDS	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
4:2FTS	ND	2.8		ng/L	08/18/23	1	537M	BCG0844
6:2FTS	ND	2.8		ng/L	08/18/23	1	537M	BCG0844
8:2FTS	ND	2.8		ng/L	08/18/23	1	537M	BCG0844
PFOSA	ND	2.8		ng/L	08/18/23	1	537M	BCG0844
NMeFOSAA	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
NEtFOSAA	ND	0.70		ng/L	08/18/23	1	537M	BCG0844
HFPO-DA	ND	1.4		ng/L	08/18/23	1	537M	BCG0844
ADONA	ND	1.4		ng/L	08/18/23	1	537M	BCG0844
9CI-PF3ONS	ND	1.4		ng/L	08/18/23	1	537M	BCG0844
11CI-PF3OUDS	ND	1.4		ng/L	08/18/23	1	537M	BCG0844

Surrogate: 13C4-PFBA	101%	50-150			08/18/23	1	537M	
Surrogate: 13C5-PFPEA	99.8%	50-150			08/18/23	1	537M	
Surrogate: 13C5-PFHXA	105%	50-150			08/18/23	1	537M	
Surrogate: 13C4-PFHPA	97.7%	50-150			08/18/23	1	537M	
Surrogate: 13C8-PFOA	96.4%	50-150			08/18/23	1	537M	
Surrogate: 13C9-PFNA	102%	50-150			08/18/23	1	537M	
Surrogate: 13C6-PFDA	103%	50-150			08/18/23	1	537M	
Surrogate: 13C7-PFUnA	98.7%	50-150			08/18/23	1	537M	
Surrogate: 13C2-PFDOA	94.5%	50-150			08/18/23	1	537M	
Surrogate: 13C2-PFTEDA	85.4%	50-150			08/18/23	1	537M	
Surrogate: 13C3-PFBS	102%	50-150			08/18/23	1	537M	
Surrogate: 13C3-PFHXS	108%	50-150			08/18/23	1	537M	
Surrogate: 13C8-PFOS	102%	50-150			08/18/23	1	537M	
Surrogate: 13C2-4:2FTS	111%	50-150			08/18/23	1	537M	
Surrogate: 13C2-6:2FTS	99.3%	50-150			08/18/23	1	537M	
Surrogate: 13C2-8:2FTS	102%	50-150			08/18/23	1	537M	
Surrogate: 13C8-PFOSA	54.1%	50-150			08/18/23	1	537M	

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1914 Holloway Drive  
Holt, MI 48842

Project: PFAS Testing  
Project Number: A16292  
Project Manager: Jacob Sutherland

Reported: 08/23/2023 07:04

## Sample Results (Continued)

**Sample: WLT BLANK (Continued)**  
**23G0254-07 (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	91.0%	50-150			08/18/23	1	537M	
Surrogate: D5-NETFOSAA	83.6%	50-150			08/18/23	1	537M	
Surrogate: 13C3-HFPO-DA	99.7%	50-150			08/18/23	1	537M	

Fibertec Environmental Services  
1914 Holloway Drive  
Holt, MI 48842

Project: PFAS Testing  
Project Number: A16292  
Project Manager: Jacob Sutherland

Reported: 08/23/2023 07:04

## PREPARATION BATCH SUMMARY

537M

Laboratory: APPL, LLC

Client: Fibertec Environmental Services

Batch: BCG0844 Batch Matrix: Water Preparation: Table B-15

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT mL	FINAL VOL. mL
MW-5D	23G0254-01	08/15/23 08:32	265.53	2.00
MW-5DD	23G0254-02	08/15/23 08:32	290.98	2.00
MW-16D	23G0254-03	08/15/23 08:32	297.94	2.00
MW-16D	23G0254-03RE1	08/15/23 08:32	297.94	2.00
MW-16DD	23G0254-04	08/15/23 08:32	291.85	2.00
MW-16DD	23G0254-04RE1	08/15/23 08:32	291.85	2.00
PUMP BLANK	23G0254-05	08/15/23 08:32	286.80	2.00
BAILER BLANK	23G0254-06	08/15/23 08:32	290.85	2.00
WLT BLANK	23G0254-07	08/15/23 08:32	285.71	2.00
Blank	BCG0844-BLK1	08/15/23 08:32	250.00	2.00
LCS	BCG0844-BS1	08/15/23 08:32	250.00	2.00
LCS Dup	BCG0844-BSD1	08/15/23 08:32	250.00	2.00
MRL Check	BCG0844-MRL1	08/15/23 08:32	250.00	2.00

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Project: PFAS Testing  
Project Number: A16292  
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Reported: 08/23/2023 07:04

## 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: 537M**

**Batch: BCG0844 - Table B-15**

**Blank (BCG0844-BLK1)**

Prepared: 08/15/23 08:32 Analyzed: 08/17/23 21:39

PFBA	ND	3.2		ng/L						
PFPeA	ND	1.6		ng/L						
PFHxA	ND	0.80		ng/L						
PFFpA	ND	0.80		ng/L						
PFOA	ND	0.80		ng/L						
PFNA	ND	0.80		ng/L						
PFDA	ND	0.80		ng/L						
PFOA	ND	0.80		ng/L						
PFTrDA	ND	0.80		ng/L						
PFTeDA	ND	0.80		ng/L						
PFBS	ND	0.80		ng/L						
PFPeS	ND	0.80		ng/L						
PFHxS	ND	0.80		ng/L						
PFFpS	ND	0.80		ng/L						
PFOS	ND IR1, MI3,	0.80		ng/L						
PFNS	ND	0.80		ng/L						
PFDS	ND	0.80		ng/L						
4:2FTS	ND	3.2		ng/L						
6:2FTS	ND	3.2		ng/L						
8:2FTS	ND	3.2		ng/L						
PFOSA	ND	3.2		ng/L						
NMeFOSAA	ND	0.80		ng/L						
NEtFOSAA	ND	0.80		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						
<hr/>										
Surrogate: 13C4-PFBA	66.0			ng/L	64.0		103	50-150		
Surrogate: 13C5-PFPEA	33.1			ng/L	32.0		103	50-150		
Surrogate: 13C5-PFHXA	17.5			ng/L	16.0		109	50-150		
Surrogate: 13C4-PFHPA	16.7			ng/L	16.0		104	50-150		
Surrogate: 13C8-PFOA	16.6			ng/L	16.0		104	50-150		
Surrogate: 13C9-PFNA	8.63			ng/L	8.00		108	50-150		
Surrogate: 13C6-PFDA	8.43			ng/L	8.00		105	50-150		
Surrogate: 13C7-PFUnA	8.69			ng/L	8.00		109	50-150		
Surrogate: 13C2-PFDOA	8.52			ng/L	8.00		106	50-150		
Surrogate: 13C2-PFTEDA	8.62			ng/L	8.00		108	50-150		
Surrogate: 13C3-PFBS	16.1			ng/L	16.0		101	50-150		
Surrogate: 13C3-PFHXS	16.8			ng/L	16.0		105	50-150		
Surrogate: 13C8-PFOS	17.3			ng/L	16.0		108	50-150		
Surrogate: 13C2-4:2FTS	32.7			ng/L	32.0		102	50-150		
Surrogate: 13C2-6:2FTS	31.6			ng/L	32.0		98.8	50-150		
Surrogate: 13C2-8:2FTS	31.1			ng/L	32.0		97.3	50-150		
Surrogate: 13C8-PFOSA	10.7			ng/L	16.0		67.0	50-150		
Surrogate: D3-NMeFOSAA	32.3			ng/L	32.0		101	50-150		
Surrogate: D5-NETFOSAA	32.2			ng/L	32.0		101	50-150		

Fibertec Environmental Services  
1914 Holloway Drive  
Holt, MI 48842

Project: PFAS Testing  
Project Number: A16292  
Project Manager: Jacob Sutherland

Reported: 08/23/2023 07:04

## Quality Control (Continued)

### Per- and Polyfluoroalkyl Substances (Continued)

Analyte	Result/ Qual	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Blank (BCG0844-BLK1)</b>					Prepared: 08/15/23 08:32		Analyzed: 08/17/23 21:39			
Surrogate: 13C3-HFPO-DA	66.4			ng/L	64.0		104	50-150		
<b>LCS (BCG0844-BS1)</b>					Prepared: 08/15/23 08:32		Analyzed: 08/17/23 22:00			
PFBA	35.8			ng/L	32.0		112	70-140		
PFPeA	17.3			ng/L	16.0		108	65-135		
PFFhxA	8.91			ng/L	8.00		111	70-145		
PFFHpA	8.76			ng/L	8.00		109	70-150		
PFOA	8.83			ng/L	8.00		110	70-150		
PFNA	8.82			ng/L	8.00		110	70-150		
PFDA	8.91			ng/L	8.00		111	70-140		
PFUnA	8.54			ng/L	8.00		107	70-145		
PFDaA	8.84			ng/L	8.00		110	70-140		
PFTTrDA	8.51			ng/L	8.00		106	65-140		
PFTeDA	8.24			ng/L	8.00		103	60-140		
PFBS	7.61			ng/L	7.08		107	60-145		
PFPeS	7.86			ng/L	7.52		105	65-140		
PFFhS	7.75			ng/L	7.32		106	65-145		
PFFHpS	8.48			ng/L	7.64		111	70-150		
PFOS	9.17 MI4			ng/L	7.44		123	55-150		
PFNS	8.45			ng/L	7.68		110	65-145		
PFDS	8.29			ng/L	7.72		107	60-145		
4:2FTS	33.0			ng/L	30.0		110	70-145		
6:2FTS	37.2			ng/L	30.4		122	65-155		
8:2FTS	37.4			ng/L	30.7		122	60-150		
PFOSA	8.54			ng/L	8.00		107	70-145		
NMeFOSAA	8.42			ng/L	8.00		105	50-140		
NEtFOSAA	8.69			ng/L	8.00		109	70-145		
HFPO-DA	8.36			ng/L	8.00		105	70-140		
ADONA	8.25			ng/L	7.56		109	70-145		
9CI-PF3ONS	7.88			ng/L	7.48		105	70-155		
11CI-PF3OUDS	7.91			ng/L	7.56		105	55-160		
Surrogate: 13C4-PFBA	65.8			ng/L	64.0		103	50-150		
Surrogate: 13C5-PFPEA	36.1			ng/L	32.0		113	50-150		
Surrogate: 13C5-PFFHXA	17.3			ng/L	16.0		108	50-150		
Surrogate: 13C4-PFFHPA	17.2			ng/L	16.0		107	50-150		
Surrogate: 13C8-PFOA	16.3			ng/L	16.0		102	50-150		
Surrogate: 13C9-PFNA	8.49			ng/L	8.00		106	50-150		
Surrogate: 13C6-PFDA	8.26			ng/L	8.00		103	50-150		
Surrogate: 13C7-PFUnA	8.50			ng/L	8.00		106	50-150		
Surrogate: 13C2-PFDOA	8.22			ng/L	8.00		103	50-150		
Surrogate: 13C2-PFTEDA	8.12			ng/L	8.00		102	50-150		
Surrogate: 13C3-PFBS	16.5			ng/L	16.0		103	50-150		
Surrogate: 13C3-PFFHXS	17.2			ng/L	16.0		108	50-150		
Surrogate: 13C8-PFOS	16.9			ng/L	16.0		106	50-150		
Surrogate: 13C2-4:2FTS	34.3			ng/L	32.0		107	50-150		
Surrogate: 13C2-6:2FTS	30.8			ng/L	32.0		96.1	50-150		
Surrogate: 13C2-8:2FTS	30.0			ng/L	32.0		93.8	50-150		
Surrogate: 13C8-PFOA	10.5			ng/L	16.0		65.5	50-150		
Surrogate: D3-NMEFOSAA	31.5			ng/L	32.0		98.5	50-150		
Surrogate: D5-NETFOSAA	31.7			ng/L	32.0		99.0	50-150		

Fibertec Environmental Services  
1914 Holloway Drive  
Holt, MI 48842

Project: PFAS Testing  
Project Number: A16292  
Project Manager: Jacob Sutherland

Reported: 08/23/2023 07:04

## Quality Control (Continued)

### Per- and Polyfluoroalkyl Substances (Continued)

Analyte	Result/ Qual	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>LCS (BCG0844-BS1)</b>					Prepared: 08/15/23 08:32		Analyzed: 08/17/23 22:00			
Surrogate: 13C3-HFPO-DA	70.1			ng/L	64.0		110	50-150		
<b>LCS Dup (BCG0844-BSD1)</b>					Prepared: 08/15/23 08:32		Analyzed: 08/17/23 22:00			
PFBA	35.7			ng/L	32.0		112	70-140	0.193	30
PFPeA	17.5			ng/L	16.0		110	65-135	1.65	30
PFHxA	8.71			ng/L	8.00		109	70-145	2.30	30
PFHpA	8.74			ng/L	8.00		109	70-150	0.174	30
PFOA	8.37			ng/L	8.00		105	70-150	5.45	30
PFNA	8.50			ng/L	8.00		106	70-150	3.69	30
PFDA	8.79			ng/L	8.00		110	70-140	1.34	30
PFUnA	8.55			ng/L	8.00		107	70-145	0.180	30
PFDaA	9.48			ng/L	8.00		119	70-140	7.06	30
PFTTrDA	9.43			ng/L	8.00		118	65-140	10.2	30
PFTeDA	8.68			ng/L	8.00		109	60-140	5.30	30
PFBS	7.94			ng/L	7.08		112	60-145	4.32	30
PFPeS	8.33			ng/L	7.52		111	65-140	5.71	30
PFHxS	7.92			ng/L	7.32		108	65-145	2.20	30
PFHpS	8.46			ng/L	7.64		111	70-150	0.227	30
PFOS	9.21 MI4			ng/L	7.44		124	55-150	0.512	30
PFNS	8.52			ng/L	7.68		111	65-145	0.868	30
PFDS	8.30			ng/L	7.72		107	60-145	0.0666	30
4:2FTS	32.5			ng/L	30.0		108	70-145	1.37	30
6:2FTS	36.4			ng/L	30.4		120	65-155	2.08	30
8:2FTS	34.1			ng/L	30.7		111	60-150	9.24	30
PFOSA	8.55			ng/L	8.00		107	70-145	0.162	30
NMeFOSAA	8.43 MI4			ng/L	8.00		105	50-140	0.172	30
NEtFOSAA	8.71			ng/L	8.00		109	70-145	0.232	30
HFPO-DA	8.96			ng/L	8.00		112	70-140	6.95	30
ADONA	8.19			ng/L	7.56		108	70-145	0.770	30
9CI-PF3ONS	8.05			ng/L	7.48		108	70-155	2.20	30
11CI-PF3OUDS	7.52			ng/L	7.56		99.5	55-160	5.01	30
Surrogate: 13C4-PFBA	65.4			ng/L	64.0		102	50-150		
Surrogate: 13C5-PFPEA	35.4			ng/L	32.0		111	50-150		
Surrogate: 13C5-PFHXA	17.8			ng/L	16.0		111	50-150		
Surrogate: 13C4-PFHFA	17.5			ng/L	16.0		109	50-150		
Surrogate: 13C8-PFOA	16.8			ng/L	16.0		105	50-150		
Surrogate: 13C9-PFNA	8.60			ng/L	8.00		107	50-150		
Surrogate: 13C6-PFDA	8.65			ng/L	8.00		108	50-150		
Surrogate: 13C7-PFUnA	8.67			ng/L	8.00		108	50-150		
Surrogate: 13C2-PFDOA	7.57			ng/L	8.00		94.6	50-150		
Surrogate: 13C2-PFTEDA	8.22			ng/L	8.00		103	50-150		
Surrogate: 13C3-PFBS	16.2			ng/L	16.0		101	50-150		
Surrogate: 13C3-PFHXS	16.6			ng/L	16.0		104	50-150		
Surrogate: 13C8-PFOS	16.1			ng/L	16.0		101	50-150		
Surrogate: 13C2-4:2FTS	36.2			ng/L	32.0		113	50-150		
Surrogate: 13C2-6:2FTS	33.0			ng/L	32.0		103	50-150		
Surrogate: 13C2-8:2FTS	32.9			ng/L	32.0		103	50-150		
Surrogate: 13C8-PFOSA	10.4			ng/L	16.0		65.2	50-150		
Surrogate: D3-NMEFOSAA	31.0			ng/L	32.0		96.8	50-150		
Surrogate: D5-NETFOSAA	30.0			ng/L	32.0		93.9	50-150		

Fibertec Environmental Services  
1914 Holloway Drive  
Holt, MI 48842

Project: PFAS Testing  
Project Number: A16292  
Project Manager: Jacob Sutherland

Reported: 08/23/2023 07:04

## Quality Control (Continued)

### Per- and Polyfluoroalkyl Substances (Continued)

Analyte	Result/ Qual	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>LCS Dup (BCG0844-BSD1)</b>					Prepared: 08/15/23 08:32		Analyzed: 08/17/23 22:20			
Surrogate: 13C3-HFPO-DA	71.9			ng/L	64.0		112	50-150		
<b>MRL Check (BCG0844-MRL1)</b>					Prepared: 08/15/23 08:32		Analyzed: 08/17/23 22:41			
PFBA	6.50			ng/L	6.40		102	70-140		
PFPeA	3.25			ng/L	3.20		101	65-135		
PFHxA	1.71			ng/L	1.60		107	70-145		
PFHpA	1.56			ng/L	1.60		97.7	70-150		
PFOA	1.63			ng/L	1.60		102	70-150		
PFNA	1.61			ng/L	1.60		100	70-150		
PFDA	1.60			ng/L	1.60		99.9	70-140		
PFUnA	1.53			ng/L	1.60		95.3	70-145		
PFDaA	1.66			ng/L	1.60		104	70-140		
PFTTrDA	1.67			ng/L	1.60		104	65-140		
PFTeDA	1.66			ng/L	1.60		104	60-140		
PFBS	1.49			ng/L	1.42		106	60-145		
PFPeS	1.45			ng/L	1.50		96.3	65-140		
PFHxS	1.42			ng/L	1.46		97.1	65-145		
PFHpS	1.50			ng/L	1.53		98.1	70-150		
PFOS	3.18 BS2			ng/L	1.49		214	55-150		
PFNS	1.50			ng/L	1.54		97.9	65-145		
PFDS	1.53			ng/L	1.54		99.3	60-145		
4:2FTS	5.86			ng/L	6.00		97.7	70-145		
6:2FTS	6.64			ng/L	6.08		109	65-155		
8:2FTS	6.30			ng/L	6.14		102	60-150		
PFOSA	1.57 , J			ng/L	1.60		98.4	70-145		
NMeFOSAA	1.62			ng/L	1.60		102	50-140		
NEtFOSAA	1.58			ng/L	1.60		98.9	70-145		
HFPO-DA	1.60			ng/L	1.60		99.7	70-140		
ADONA	1.57 , J			ng/L	1.51		104	70-145		
9CI-PF3ONS	1.50 , J			ng/L	1.50		100	70-155		
11CI-PF3OUDS	1.47 , J			ng/L	1.51		97.4	55-160		
Surrogate: 13C4-PFBA	62.3			ng/L	64.0		97.3	50-150		
Surrogate: 13C5-PFPEA	31.9			ng/L	32.0		99.6	50-150		
Surrogate: 13C5-PFHXA	16.3			ng/L	16.0		102	50-150		
Surrogate: 13C4-PFHFA	15.8			ng/L	16.0		98.5	50-150		
Surrogate: 13C8-PFOA	15.7			ng/L	16.0		98.0	50-150		
Surrogate: 13C9-PFNA	8.08			ng/L	8.00		101	50-150		
Surrogate: 13C6-PFDA	7.92			ng/L	8.00		99.0	50-150		
Surrogate: 13C7-PFUnA	7.99			ng/L	8.00		99.8	50-150		
Surrogate: 13C2-PFDOA	7.42			ng/L	8.00		92.7	50-150		
Surrogate: 13C2-PFTEDA	7.27			ng/L	8.00		90.9	50-150		
Surrogate: 13C3-PFBS	16.1			ng/L	16.0		101	50-150		
Surrogate: 13C3-PFHXS	16.5			ng/L	16.0		103	50-150		
Surrogate: 13C8-PFOS	16.0			ng/L	16.0		99.8	50-150		
Surrogate: 13C2-4:2FTS	33.8			ng/L	32.0		106	50-150		
Surrogate: 13C2-6:2FTS	32.4			ng/L	32.0		101	50-150		
Surrogate: 13C2-8:2FTS	30.7			ng/L	32.0		95.8	50-150		
Surrogate: 13C8-PFOA	11.1			ng/L	16.0		69.2	50-150		
Surrogate: D3-NMEFOSAA	29.5			ng/L	32.0		92.3	50-150		
Surrogate: D5-NETFOSAA	29.3			ng/L	32.0		91.6	50-150		

Fibertec Environmental Services  
1914 Holloway Drive  
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Project: PFAS Testing  
Project Number: A16292  
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Reported: 08/23/2023 07:04

### Quality Control (Continued)

#### Per- and Polyfluoroalkyl Substances (Continued)

Analyte	Result/ Qual	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>MRL Check (BCG0844-MRL1)</b>					Prepared: 08/15/23 08:32 Analyzed: 08/17/23 22:41					
Surrogate: 13C3-HFPO-DA	61.9			ng/L	64.0		96.7	50-150		



Fibertec Environmental Services  
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Reported: 08/23/2023 07:04

## Notes and Definitions

Item	Definition
BS2	Blank spike recovered above the upper control limit
IR1	Ion ratio below the lower control limit
J	Estimated value
MI2	Manual integration, non-target peak interference
MI3	Manual integration, peaks split
MI4	Manual integration, peak unsplit
MI5	Manual integration, whole peak was not integrated
MI6	Manual integration, wrong peak integrated
S1	Surrogate recovered below the lower 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: A16292  
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Reported: 08/23/2023 07:04



AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES

 A METIRI GROUP COMPANY

## WORK ORDER

**23G0254**

Printed: 08/23/2023 7:04 am

**Project:** PFAS Testing  
**Project Number:** A16292  
**Project Manager:** Chue Moua  
**PO Number:** NA

### Report To:

Fibertec Environmental Services  
Jacob Sutherlund  
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: 07/26/2023 09:40 AM  
Date Due: 08/09/2023 (10.00 day TAT)

Logged In By: Sophia Herrera  
Received By: Yuriko Rodriguez

Analysis	Comments
<b>23G0254-01 MW-5D [Water] Sampled 7/19/2023 1:10:00PM</b> 537M 28-compound list	
<b>23G0254-02 MW-5DD [Water] Sampled 7/19/2023 4:15:00PM</b> 537M 28-compound list	
<b>23G0254-03 MW-16D [Water] Sampled 7/19/2023 10:35:00AM</b> 537M 28-compound list	
<b>23G0254-04 MW-16DD [Water] Sampled 7/19/2023 11:45:00AM</b> 537M 28-compound list	
<b>23G0254-05 PUMP BLANK [Water] Sampled 7/19/2023 12:15:00PM</b> 537M 28-compound list	
<b>23G0254-06 BAILER BLANK [Water] Sampled 7/19/2023 3:50:00PM</b> 537M 28-compound list	
<b>23G0254-07 WLT BLANK [Water] Sampled 7/19/2023 4:40:00PM</b> 537M 28-compound list	

Fibertec Environmental Services  
1914 Holloway Drive  
Holt, MI 48842

Project: PFAS Testing  
Project Number: A16292  
Project Manager: Jacob Sutherlund

Reported: 08/23/2023 07:04

**23G0254**

### Sample Receipt Log

#### Default Cooler

Samples Received at: **5.0°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?	No
Preservation Confirmed	Yes	Sufficient volume sent for tests requested?	No
Received On Ice	Yes	Were bubbles absent in volatile samples?	No
Was a chain of custody received?	Yes	Sufficient remaining holding time for analyses?	No
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



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

**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](mailto:asbestos@fibertecihs.com)

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

Temp  
1RB  
River Rd.  
16  
3300  
1  
7.6  
5.0

Chain of Custody #  
**212880-S**  
PAGE 1 of 1

Client Name: <b>Metiri Holt</b>				MATRIX (SEE RIGHT CORNER FOR CODE)	# OF CONTAINERS	PFAS 537.1 Mod*	PARAMETERS												Matrix Code			Deliverables	
Contact Person: <b>Rikki Lott</b>							S Soil	A Air	O Oil	P Wipe	GW	SW	WW	X	Ground Water	Surface Water	Waste Water	Other: Specify	<input type="checkbox"/>	Level 2			
Project Name/ Number: <b>A16292</b>																			<input type="checkbox"/>	Level 3			
Email distribution list: <b>lab.holt@metirigroup.com</b>																			<input type="checkbox"/>	Level 4			
Quote#																			<input checked="" type="checkbox"/>	EDD			
Purchase Order#				* See attached COmpound List																			
Date	Time	Sample #	Client Sample Descriptor															Remarks:					
7/19/23	13:10	1	MW-5D	GW	3	✓																	
7/19/23	16:15	2	MW-5DD	GW	3	✓																	
7/19/23	10:35	3	MW-16D	GW	3	✓																	
7/19/23	11:45	4	MW-16DD	GW	3	✓																	
7/19/23	12:15	5	PUMP BLANK	GW	3	✓																	
7/19/23	15:50	6	BAILER BLANK	GW	3	✓																	
7/19/23	16:40	7	WLT BLANK	GW	3	✓																	
Comments:																							
Sampled/Relinquished By:				Date/ Time				Received By:															
Relinquished By:				Date/ Time				Received By:															
Relinquished By:				Date/ Time				Received By Laboratory:															
				7/26/23 9:40am				Yunko Rodriguez															
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)      Std (3 Week)															Temperature upon receipt at Lab:								
Other (specify time/date requirement): _____																							
Please see back for terms and conditions																							



Analytical Laboratory

**1914 Holloway Drive**

Holt, MI 48842

**Phone: 517 699 0345**

**Fax: 517 699 0388**

email: [lab@fibertec.us](mailto:lab@fibertec.us)

**8660 S. Mackinaw Trail**

**Cadillac, MI 49601**

**Phone: 231 775 8368**

**Fax: 231 775 8584**

## Geoprobe

11766 E. Grand River Rd.

Brighton, MI 48116

**Phone: 810 220 3300**

**Fax: 810 220 3311**

Chain of Custody #

212880

PAGE 1 of 1

[illegible]