



Analytical Laboratory Report

Report ID: S24296.01(01)
Generated on 05/26/2021

Report to

Attention: Don Popma
Biotech Agronomics, Inc.
1651 Bevlah Highway
Bevlah, MI 49617

Phone: 616-835-0100 FAX:
Email: dpopma@biotechag.com

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S24296.01
Project: Lakeview Estates East Pond
Collected Date(s): 05/18/2021
Submitted Date/Time: 05/18/2021 13:48
Sampled by: Don Popma
P.O. #:

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Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples

for acrolein and acrylonitrile need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the

FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



Analytical Laboratory Report

Method Summary

Method	Version
ASTM D7968-17M	ASTM Method D7968 - 17 Modified (Isotopic Dilution)
SM2540B	Standard Method 2540 B 2011

Parameter Summary

Parameter	Synonym	Cas #
PFBA	Perfluorobutanoic Acid	375-22-4
PFPeA	Perfluoropentanoic Acid	2706-90-3
4:2 FTSA	4:2 Fluorotelomer Sulfonic Acid	757124-72-4
PFHxA	Perfluorohexanoic Acid	307-24-4
PFBS	Perfluorobutane sulfonic Acid	375-73-5
PFHpA	Perfluoroheptanoic Acid	375-85-9
PFPeS	Perfluoropentane Sulfonic Acid	2706-91-4
6:2 FTSA	6:2 Fluorotelomer Sulfonic Acid	27619-97-2
PFOA	Perfluorooctanoic Acid	335-67-1
PFHxS	Perfluorohexane Sulfonic Acid	355-46-4
PFHxS-LN	Perfluorohexane Sulfonic Acid - LN	355-46-4-LN
PFHxS-BR	Perfluorohexane Sulfonic Acid - BR	355-46-4-BR
PFNA	Perfluorononanoic Acid	375-95-1
8:2 FTSA	8:2 Fluorotelomer Sulfonic Acid	39108-34-4
PFHpS	Perfluoroheptane Sulfonic Acid	375-92-8
PFDA	Perfluorodecanoic Acid	335-76-2
N-MeFOSAA	N-methyl perfluorooctanesulfonamidoacetic acid	2355-31-9
EtFOSAA	N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	2991-50-6
PFOS	Perfluorooctane Sulfonic Acid	1763-23-1
PFOS-LN	Perfluorooctane Sulfonic Acid - LN	1763-23-1-LN
PFOS-BR	Perfluorooctane Sulfonic Acid - BR	1763-23-1-BR
PFUnDA	Perfluoroundecanoic Acid	2058-94-8
PFNS	Perfluorononane Sulfonic Acid	68259-12-1
PFDoDA	Perfluorododecanoic Acid	307-55-1
PFDS	Perfluorodecane Sulfonic Acid	335-77-3
PFTTrDA	Perfluorotridecanoic Acid	72629-94-8
FOSA	Perfluorooctane Sulfonamide	754-91-6
PFTeDA	Perfluorotetradecanoic Acid	376-06-7
11Cl-PF3OUdS	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	763051-92-9
9Cl-PF3ONS	9-chlorohexadecafluoro-3-oxanone1-sulfonic acid	756426-58-1
ADONA	4,8-dioxa-3H-perfluorononanoic acid	919005-14-4
HFPO-DA	Hexafluoropropylene oxide dimer	13252-13-6



Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S24296.01	Biosolids	Sludge	05/18/21 11:15



Analytical Laboratory Report

Lab Sample ID: S24296.01

Sample Tag: Biosolids

Collected Date/Time: 05/18/2021 11:15

Matrix: Sludge

COC Reference: 137663

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	2.8	IR
1	250ml Plastic	None	Yes	2.8	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	13.52/6.82/10	ASTM D7968-17M	05/21/21 11:00	KCV	

Inorganics

Method: SM2540B, Run Date: 05/18/21 16:30, Analyst: ELR

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	5.4	1		%	1		

Organics

28 PFAs, Method: ASTM D7968-17M, Run Date: 05/22/21 14:56, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	0.55		ug/kg	27.6	375-22-4	
PFPeA*	Not detected	0.28		ug/kg	27.6	2706-90-3	
4:2 FTSA*	Not detected	0.28		ug/kg	27.6	757124-72-4	I
PFHxA*	Not detected	0.28		ug/kg	27.6	307-24-4	
PFBS*	Not detected	0.28		ug/kg	27.6	375-73-5	
PFHpA*	Not detected	0.28		ug/kg	27.6	375-85-9	
PFPeS*	Not detected	0.28		ug/kg	27.6	2706-91-4	
6:2 FTSA*	Not detected	0.28		ug/kg	27.6	27619-97-2	I
PFOA*	0.33	0.28		ug/kg	27.6	335-67-1	
PFHxS*	Not detected	0.28		ug/kg	27.6	355-46-4	
PFHxS-LN*	Not detected	0.28		ug/kg	27.6	355-46-4-LN	
PFHxS-BR*	Not detected	0.28		ug/kg	27.6	355-46-4-BR	
PFNA*	Not detected	0.28		ug/kg	27.6	375-95-1	
8:2 FTSA*	Not detected	0.28		ug/kg	27.6	39108-34-4	I
PFHpS*	Not detected	0.28		ug/kg	27.6	375-92-8	
PFDA*	0.9	0.28		ug/kg	27.6	335-76-2	
N-MeFOSAA*	22	0.28		ug/kg	27.6	2355-31-9	
EtFOSAA*	19	0.28		ug/kg	27.6	2991-50-6	
PFOS*	14	0.28		ug/kg	27.6	1763-23-1	
PFOS-LN*	13	0.28		ug/kg	27.6	1763-23-1-LN	
PFOS-BR*	1	0.28		ug/kg	27.6	1763-23-1-BR	
PFUnDA*	0.44	0.28		ug/kg	27.6	2058-94-8	I
PFNS*	Not detected	0.28		ug/kg	27.6	68259-12-1	
PFDoDA*	0.86	0.28		ug/kg	27.6	307-55-1	I
PFDS*	1.5	0.28		ug/kg	27.6	335-77-3	
PFTTrDA*	Not detected	0.28		ug/kg	27.6	72629-94-8	I
FOSA*	1.9	0.28		ug/kg	27.6	754-91-6	
PFTeDA*	Not detected	0.28		ug/kg	27.6	376-06-7	I1
11CI-PF3OUdS*	Not detected	0.28		ug/kg	27.6	763051-92-9	

I-Matrix interference with internal standard

1-IS recovery <10%



Analytical Laboratory Report

Lab Sample ID: S24296.01 (continued)

Sample Tag: Biosolids

28 PFAs, Method: ASTM D7968-17M, Run Date: 05/22/21 14:56, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
9CI-PF3ONS*	Not detected	0.28		ug/kg	27.6	756426-58-1	
ADONA*	Not detected	0.28		ug/kg	27.6	919005-14-4	
HFPO-DA*	Not detected	0.28		ug/kg	27.6	13252-13-6	I

I-Matrix interference with internal standard

Merit Laboratories Login Checklist

Lab Set ID:S24296

Client:BIOTECHAGRO (Biotech Agronomics, Inc.)

Project: Lakeview Estates East Pond

Submitted:05/18/2021 13:48 Login User: MMC

Attention: Don Popma

Address: Biotech Agronomics, Inc.
1651 Beulah Highway
Beulah, MI 49617

Phone: 616-835-0100 FAX:
Email: dpopma@biotechag.com

Selection	Description	Note
Sample Receiving		
01.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples are received at 4C +/- 2C Thermometer # IR 2.8
02.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Received on ice/ cooling process begun
03.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples shipped
04.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples left in 24 hr. drop box
05.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Are there custody seals/tape or is the drop box locked
Chain of Custody		
06.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC adequately filled out
07.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC signed and relinquished to the lab
08.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sample tag on bottles match COC
09.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Subcontracting needed? Subcontracted to:
Preservation		
10.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Do sample have correct chemical preservation
11.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Completed pH checks on preserved samples? (no VOAs)
12.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Did any samples need to be preserved in the lab?
Bottle Conditions		
13.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	All bottles intact
14.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Appropriate analytical bottles are used
15.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Merit bottles used
16.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sufficient sample volume received
17.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples require laboratory filtration
18.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples submitted within holding time
19.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Do water VOC or TOX bottles contain headspace

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____



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Attention: Don Popma
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2680 East Lansing Drive
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Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:

John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S24295.01
Project: Lakeview Estates West Pond
Collected Date(s): 05/18/2021
Submitted Date/Time: 05/18/2021 13:48
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A handwritten signature in black ink, appearing to read "Maya Murshak".

Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

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Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884

Qualifier Descriptions

Qualifier	Description
I	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



Analytical Laboratory Report

Method Summary

Method	Version
ASTM D7968-17M	ASTM Method D7968 - 17 Modified (Isotopic Dilution)
SM2540B	Standard Method 2540 B 2011

Parameter Summary

Parameter	Synonym	Cas #
PFBA	Perfluorobutanoic Acid	375-22-4
PFPeA	Perfluoropentanoic Acid	2706-90-3
4:2 FTSA	4:2 Fluorotelomer Sulfonic Acid	757124-72-4
PFHxA	Perfluorohexanoic Acid	307-24-4
PFBS	Perfluorobutane sulfonic Acid	375-73-5
PFHpA	Perfluoroheptanoic Acid	375-85-9
PFPeS	Perfluoropentane Sulfonic Acid	2706-91-4
6:2 FTSA	6:2 Fluorotelomer Sulfonic Acid	27619-97-2
PFOA	Perfluorooctanoic Acid	335-67-1
PFHxS	Perfluorohexane Sulfonic Acid	355-46-4
PFHxS-LN	Perfluorohexane Sulfonic Acid - LN	355-46-4-LN
PFHxS-BR	Perfluorohexane Sulfonic Acid - BR	355-46-4-BR
PFNA	Perfluorononanoic Acid	375-95-1
8:2 FTSA	8:2 Fluorotelomer Sulfonic Acid	39108-34-4
PFHpS	Perfluoroheptane Sulfonic Acid	375-92-8
PFDA	Perfluorodecanoic Acid	335-76-2
N-MeFOSAA	N-methyl perfluorooctanesulfonamidoacetic acid	2355-31-9
EtFOSAA	N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	2991-50-6
PFOS	Perfluorooctane Sulfonic Acid	1763-23-1
PFOS-LN	Perfluorooctane Sulfonic Acid - LN	1763-23-1-LN
PFOS-BR	Perfluorooctane Sulfonic Acid - BR	1763-23-1-BR
PFUnDA	Perfluoroundecanoic Acid	2058-94-8
PFNS	Perfluorononane Sulfonic Acid	68259-12-1
PFDoDA	Perfluorododecanoic Acid	307-55-1
PFDS	Perfluorodecane Sulfonic Acid	335-77-3
PFTTrDA	Perfluorotridecanoic Acid	72629-94-8
FOSA	Perfluorooctane Sulfonamide	754-91-6
PFTeDA	Perfluorotetradecanoic Acid	376-06-7
11Cl-PF3OUdS	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	763051-92-9
9Cl-PF3ONS	9-chlorohexadecafluoro-3-oxanone1-sulfonic acid	756426-58-1
ADONA	4,8-dioxa-3H-perfluorononanoic acid	919005-14-4
HFPO-DA	Hexafluoropropylene oxide dimer	13252-13-6



Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S24295.01	Biosolids	Sludge	05/18/21 11:00



Analytical Laboratory Report

Lab Sample ID: S24295.01

Sample Tag: Biosolids

Collected Date/Time: 05/18/2021 11:00

Matrix: Sludge

COC Reference: 137664

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	2.8	IR
1	250ml Plastic	None	Yes	2.8	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	13.74/6.92/10	ASTM D7968-17M	05/21/21 11:00	KCV	

Inorganics

Method: SM2540B, Run Date: 05/18/21 16:30, Analyst: ELR

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	3.7	1		%	1		

Organics

28 PFAs, Method: ASTM D7968-17M, Run Date: 05/22/21 14:36, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	0.79		ug/kg	39.6	375-22-4	I
PFPeA*	Not detected	0.4		ug/kg	39.6	2706-90-3	
4:2 FTSA*	Not detected	0.4		ug/kg	39.6	757124-72-4	I
PFHxA*	Not detected	0.4		ug/kg	39.6	307-24-4	
PFBS*	Not detected	0.4		ug/kg	39.6	375-73-5	
PFHpA*	Not detected	0.4		ug/kg	39.6	375-85-9	
PFPeS*	Not detected	0.4		ug/kg	39.6	2706-91-4	
6:2 FTSA*	Not detected	0.4		ug/kg	39.6	27619-97-2	I
PFOA*	Not detected	0.4		ug/kg	39.6	335-67-1	
PFHxS*	Not detected	0.4		ug/kg	39.6	355-46-4	
PFHxS-LN*	Not detected	0.4		ug/kg	39.6	355-46-4-LN	
PFHxS-BR*	Not detected	0.4		ug/kg	39.6	355-46-4-BR	
PFNA*	Not detected	0.4		ug/kg	39.6	375-95-1	
8:2 FTSA*	Not detected	0.4		ug/kg	39.6	39108-34-4	I
PFHpS*	Not detected	0.4		ug/kg	39.6	375-92-8	
PFDA*	0.51	0.4		ug/kg	39.6	335-76-2	
N-MeFOSAA*	28	0.4		ug/kg	39.6	2355-31-9	
EtFOSAA*	21	0.4		ug/kg	39.6	2991-50-6	
PFOS*	4.6	0.4		ug/kg	39.6	1763-23-1	
PFOS-LN*	4.2	0.4		ug/kg	39.6	1763-23-1-LN	
PFOS-BR*	Not detected	0.4		ug/kg	39.6	1763-23-1-BR	
PFUnDA*	0.55	0.4		ug/kg	39.6	2058-94-8	I
PFNS*	Not detected	0.4		ug/kg	39.6	68259-12-1	
PFDoDA*	1.2	0.4		ug/kg	39.6	307-55-1	
PFDS*	1.7	0.4		ug/kg	39.6	335-77-3	
PFTTrDA*	Not detected	0.4		ug/kg	39.6	72629-94-8	I
FOSA*	2	0.4		ug/kg	39.6	754-91-6	
PFTeDA*	1.2	0.4		ug/kg	39.6	376-06-7	I1
11CI-PF3OUdS*	Not detected	0.4		ug/kg	39.6	763051-92-9	

I-Matrix interference with internal standard

1-IS recovery <10%



Analytical Laboratory Report

Lab Sample ID: S24295.01 (continued)

Sample Tag: Biosolids

28 PFAs, Method: ASTM D7968-17M, Run Date: 05/22/21 14:36, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
9CI-PF3ONS*	Not detected	0.4		ug/kg	39.6	756426-58-1	
ADONA*	Not detected	0.4		ug/kg	39.6	919005-14-4	
HFPO-DA*	Not detected	0.4		ug/kg	39.6	13252-13-6	

I-Matrix interference with internal standard

Merit Laboratories Login Checklist

Lab Set ID: S24295

Client: BIOTECHAGRO (Biotech Agronomics, Inc.)

Project: Lakeview Estates West Pond

Submitted: 05/18/2021 13:48 Login User: MMC

Attention: Don Popma

Address: Biotech Agronomics, Inc.
1651 Bevlah Highway
Bevlah, MI 49617

Phone: 616-835-0100 FAX:
Email: dpopma@biotechag.com

Selection	Description	Note
Sample Receiving		
01. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples are received at 4C +/- 2C Thermometer #	IR 2.8
02. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Received on ice/ cooling process begun	
03. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples shipped	
04. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples left in 24 hr. drop box	
05. <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Are there custody seals/tape or is the drop box locked	
Chain of Custody		
06. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC adequately filled out	
07. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC signed and relinquished to the lab	
08. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sample tag on bottles match COC	
09. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Subcontracting needed? Subcontracted to:	
Preservation		
10. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Do sample have correct chemical preservation	
11. <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Completed pH checks on preserved samples? (no VOAs)	
12. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Did any samples need to be preserved in the lab?	
Bottle Conditions		
13. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	All bottles intact	
14. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Appropriate analytical bottles are used	
15. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Merit bottles used	
16. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sufficient sample volume received	
17. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples require laboratory filtration	
18. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples submitted within holding time	
19. <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Do water VOC or TOX bottles contain headspace	

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____

C.O.C. PAGE # _____ OF _____ 137664

REPORT TO

CONTACT NAME

Don Popma

COMPANY

Biotech Agronomics, Inc.

ADDRESS

1651 Beulah Hwy

CITY

Beulah

PHONE NO.

616-835-0140

FAX NO.

E-MAIL ADDRESS

dpopma@biotechag.com

STATE

MI

ZIP CODE

49617

QUOTE NO.

CONTACT NAME

COMPANY

ADDRESS

CITY

PHONE NO.

E-MAIL ADDRESS

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

PROJECT NO./NAME

Lakeview Estates West Pond

SAMPLER(S) - PLEASE PRINT/TYPE NAME

Don Popma

TURNAROUND TIME REQUIRED

☐ 1 DAY
☐ 2 DAYS
☐ 3 DAYS
☒ STANDARD
☐ OTHER

DELIVERABLES REQUIRED

☒ STD
☐ LEVEL II
☐ LEVEL III
☐ LEVEL IV
☐ EDD
☐ OTHER

MATRIX CODE:

GW=GROUNDWATER

WW=WASTEWATER

S=SOIL

L=LIQUID

SD=SOLID

SL=SLUDGE

DW=DRINKING WATER

O=OIL

WP=WIPE

A=AIR

W=WASTE

Containers & Preservatives

MERIT LAB NO.

FOR LAB USE ONLY

YEAR 21

DATE

TIME

SAMPLE TAG IDENTIFICATION-DESCRIPTION

Bio Solids

MATRIX

OF

BOTTLES

NONE

NO

HNO

H2SO

H3PO

MAOH

OTHER

PFAS D7968

RELINQUISHED BY:

SIGNATURE/ORGANIZATION

RECEIVED BY:

SIGNATURE/ORGANIZATION

RELINQUISHED BY:

SIGNATURE/ORGANIZATION

RECEIVED BY:

SIGNATURE/ORGANIZATION

RELINQUISHED BY:

SIGNATURE/ORGANIZATION

RECEIVED BY:

SIGNATURE/ORGANIZATION

RELINQUISHED BY:

SIGNATURE/ORGANIZATION

RECEIVED BY:

SIGNATURE/ORGANIZATION

DATE

5/18/21

TIME

1:48pm

DATE

5/18/21

TIME

1:48

DATE

TIME

DATE

TIME

RELINQUISHED BY:

SIGNATURE/ORGANIZATION

RECEIVED BY:

SIGNATURE/ORGANIZATION

RELINQUISHED BY:

SIGNATURE/ORGANIZATION

RECEIVED BY:

SIGNATURE/ORGANIZATION

SEAL INTACT

YES ☐

NO ☐

INITIALS

NOTES:

TEMP. ON ARRIVAL

SEAL INTACT

YES ☐

NO ☐

INITIALS

2.8

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE



Quality Control Report

Report ID: QC-S24296-01
Generated on 05/27/2021

Report to

Attention: Don Popma
Biotech Agronomics, Inc.
1651 Beulah Highway
Beulah, MI 49617

Phone: 616-835-0100 FAX:

Report Produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S24296.01
Project: Lakeview Estates East Pond
Submitted Date/Time: 05/18/2021 13:48
Sampled by: Don Popma
P.O. #:

QC Report Sections

Cover Page (Page 1)
Analysis Summary (Page 2)
Prep Batch Summary (Page 3)
Internal Standards per Lab Sample (Page 4)
Internal Standards per QC Sample (Pages 5-7)
Batch QC Results (Pages 8-12)

Report Flag Descriptions

*: QC result is outside of indicated control limits
W: Surrogate result not applicable due to sample dilution

I certify that this data package is in compliance with the terms and conditions of the program, and project, and contractual requirements both technically and for completeness. Release of the data contained in this hardcopy data package and its computer-readable data submitted has been authorized by the Quality Assurance Manager and his/her designee, as verified by the following signature.

Barbara Ball
Quality Assurance Manager

QC Report - Analysis Summary

Lab Sample ID: S24296.01

Sample Tag: Biosolids

Collected Date/Time: 05/18/2021 11:15

Matrix: Sludge

COC Reference: 137663

Analysis	Method	Run Date/Time	Batch ID	Prep ID	Surr	QC Types
Inorganics						
Total Solids	SM2540B	05/18/21 16:30	TS210518E	TS210518E	No	BLK/LCS/DUP
Organics - Volatiles						
28 PFAs	ASTM D7968-17M	05/22/21 14:56	AK210521BIO	PF210521S2	Yes	BLK/LCS/LCSD/MS/DU

QC Report - Prep Batch Summary

Inorganics, Prep Batch ID: TS210518E

Surrogates: No, QC Types: BLK/LCS/DUP

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S24296.01	Total Solids	SM2540B	05/18/21 16:30	TS210518E

Organics - Volatiles, Prep Batch ID: PF210521S2

Surrogates: Yes, QC Types: BLK/LCS/LCSD/MS/DUP

Sample ID	Analysis	Method	Run Date/Time	Batch ID
S24296.01	28 PFAs	ASTM D7968-17M	05/22/21 14:56	AK210521BIO

QC Report - Internal Standards per Lab Sample

Lab Sample ID: S24296.01

Sample Tag: Biosolids

Collected Date/Time: 05/18/2021 11:15

Matrix: Sludge

COC Reference: 137663

Organics - Volatiles, Analysis: 28 PFAs

Run in Batch: AK210521BIO, Run Date: 05/22/2021 14:56, Matrix: SO, Dilution: 27.6

Internal Standard	Flags	%Rec	LCL	UCL
M2-4:2FTSA	*	251.1	50.0	150.0
M2-6:2FTSA	*	316.4	50.0	150.0
M2-8:2FTSA	*	344.1	50.0	150.0
M2PFTeDA	*	1.1	12.0	218.0
M3PFBS		68.1	50.0	150.0
M3PFHxS		59.5	50.0	150.0
M4PFHpA		59.8	50.0	150.0
M5PFHxA		66.4	50.0	150.0
M5PFPeA		69.3	50.0	150.0
M6PFDA		51.8	50.0	150.0
M7PFUnDA	*	33.0	50.0	150.0
M8FOSA		72.5	50.0	150.0
M8PFOA		67.5	50.0	150.0
M8PFOS		60.3	50.0	150.0
M9-PFNA		67.1	50.0	150.0
MPFBA		61.1	50.0	150.0
MPFDoDA	*	16.5	50.0	150.0
d3N-MeFOSAA		88.2	50.0	150.0
d5EtFOSAA		87.5	50.0	150.0

QC Report - Internal Standards per QC Sample

Organics - Volatiles, Prep Batch ID: PF210521S2

QC Types: BLK/LCS/LCSD/MS/DUP

Blank (BLK)

Lab Sample ID: AK210521BIO.BLK210521S2

Run in Batch: AK210521BIO, Run Date: 05/22/2021 07:26, Prep Date: 05/21/2021, Matrix: SO, Dilution: 1

Internal Standard	Flags	%Rec	LCL	UCL
M2-4:2FTSA		111.1	50.0	150.0
M2-6:2FTSA		102.5	50.0	150.0
M2-8:2FTSA		111.8	50.0	150.0
M2PFTeDA		165.4	12.0	218.0
M3PFBS		112.7	50.0	150.0
M3PFHxS		100.5	50.0	150.0
M4PFHpA		93.3	50.0	150.0
M5PFHxA		101.1	50.0	150.0
M5PFPeA		105.3	50.0	150.0
M6PFDA		95.7	50.0	150.0
M7PFUnDA		108.0	50.0	150.0
M8FOSA		107.1	50.0	150.0
M8PFOA		101.6	50.0	150.0
M8PFOS		109.1	50.0	150.0
M9-PFNA		103.4	50.0	150.0
MPFBA		105.5	50.0	150.0
MPFDoDA		136.3	50.0	150.0
d3N-MeFOSAA		118.6	50.0	150.0
d5EtFOSAA		106.2	50.0	150.0

Laboratory Control Sample (LCS)

Lab Sample ID: AK210521BIO.LCS210521S2

Run in Batch: AK210521BIO, Run Date: 05/22/2021 06:47, Prep Date: 05/21/2021, Matrix: SO, Dilution: 1

Internal Standard	Flags	%Rec	LCL	UCL
M2-4:2FTSA		108.1	50.0	150.0
M2-6:2FTSA		96.2	50.0	150.0
M2-8:2FTSA		102.7	50.0	150.0
M2PFTeDA		175.1	12.0	218.0
M3PFBS		104.2	50.0	150.0
M3PFHxS		96.0	50.0	150.0
M4PFHpA		98.3	50.0	150.0
M5PFHxA		106.3	50.0	150.0
M5PFPeA		101.0	50.0	150.0
M6PFDA		94.0	50.0	150.0
M7PFUnDA		105.9	50.0	150.0
M8FOSA		102.3	50.0	150.0
M8PFOA		105.3	50.0	150.0
M8PFOS		114.1	50.0	150.0
M9-PFNA		90.5	50.0	150.0
MPFBA		102.1	50.0	150.0
MPFDoDA		120.4	50.0	150.0
d3N-MeFOSAA		96.2	50.0	150.0
d5EtFOSAA		103.5	50.0	150.0

QC Report - Internal Standards per QC Sample

Laboratory Control Sample Duplicate (LCSD)

Lab Sample ID: AK210521BIO.LCSD210521S2, Parent Sample ID: AK210521BIO.LCS210521S2

Run in Batch: AK210521BIO, Run Date: 05/22/2021 07:07, Prep Date: 05/21/2021, Matrix: SO, Dilution: 1

Internal Standard	Flags	%Rec	LCL	UCL
M2-4:2FTSA		99.1	50.0	150.0
M2-6:2FTSA		96.9	50.0	150.0
M2-8:2FTSA		114.9	50.0	150.0
M2PFTeDA		216.6	12.0	218.0
M3PFBS		102.4	50.0	150.0
M3PFHxS		89.2	50.0	150.0
M4PFHpA		96.1	50.0	150.0
M5PFHxA		104.6	50.0	150.0
M5PFPeA		102.9	50.0	150.0
M6PFDA		90.9	50.0	150.0
M7PFUnDA		106.2	50.0	150.0
M8FOSA		99.7	50.0	150.0
M8PFOA		99.0	50.0	150.0
M8PFOS		112.2	50.0	150.0
M9-PFNA		92.8	50.0	150.0
MPFBA		98.7	50.0	150.0
MPFDoDA		126.9	50.0	150.0
d3N-MeFOSAA		108.5	50.0	150.0
d5EtFOSAA		107.9	50.0	150.0

Matrix Spike (MS)

Lab Sample ID: AK210521BIO.2387901M, Parent Sample ID: S23879.01

Run in Batch: AK210521BIO, Run Date: 05/22/2021 10:03, Prep Date: 05/21/2021, Matrix: SO, Dilution: 54.1

Internal Standard	Flags	%Rec	LCL	UCL
M2-4:2FTSA	*	365.1	50.0	150.0
M2-6:2FTSA	*	355.3	50.0	150.0
M2-8:2FTSA	*	380.1	50.0	150.0
M2PFTeDA		29.5	12.0	218.0
M3PFBS		73.8	50.0	150.0
M3PFHxS		73.5	50.0	150.0
M4PFHpA		66.9	50.0	150.0
M5PFHxA		64.7	50.0	150.0
M5PFPeA		66.4	50.0	150.0
M6PFDA		54.6	50.0	150.0
M7PFUnDA	*	30.3	50.0	150.0
M8FOSA		88.8	50.0	150.0
M8PFOA		72.3	50.0	150.0
M8PFOS		68.6	50.0	150.0
M9-PFNA		72.0	50.0	150.0
MPFBA	*	42.5	50.0	150.0
MPFDoDA	*	23.0	50.0	150.0
d3N-MeFOSAA		94.2	50.0	150.0
d5EtFOSAA		83.0	50.0	150.0

QC Report - Internal Standards per QC Sample

Duplicate (DUP)

Lab Sample ID: AK210521BIO.2383304D, Parent Sample ID: S23833.04

Run in Batch: AK210521BIO, Run Date: 05/22/2021 08:45, Prep Date: 05/21/2021, Matrix: SO, Dilution: 43.2

Internal Standard	Flags	%Rec	LCL	UCL
M2-4:2FTSA	*	250.8	50.0	150.0
M2-6:2FTSA	*	278.4	50.0	150.0
M2-8:2FTSA	*	281.9	50.0	150.0
M2PFTeDA	*	1.0	12.0	218.0
M3PFBS		61.7	50.0	150.0
M3PFHxS		57.8	50.0	150.0
M4PFHpA		54.2	50.0	150.0
M5PFHxA	*	47.5	50.0	150.0
M5PFPeA	*	47.7	50.0	150.0
M6PFDA		53.4	50.0	150.0
M7PFUnDA		50.6	50.0	150.0
M8FOSA		98.2	50.0	150.0
M8PFOA		67.1	50.0	150.0
M8PFOS		61.8	50.0	150.0
M9-PFNA		63.2	50.0	150.0
MPFBA	*	20.1	50.0	150.0
MPFDoDA	*	31.0	50.0	150.0
d3N-MeFOSAA		84.4	50.0	150.0
d5EtFOSAA		93.1	50.0	150.0

QC Report - Batch QC Results

Inorganics, Prep Batch ID: TS210518E

Surrogates: No, QC Types: BLK/LCS/DUP

Blank (BLK)

Lab Sample ID: TS210518E.LRB1

Run in Batch: TS210518E, Run Date: 05/18/2021 16:30, Prep Date: 05/18/2021, Matrix: Liquid, Dilution: 1

Analyte	Flags	Conc	RDL	Units
Total Solids		ND	1	%

Laboratory Control Sample (LCS)

Lab Sample ID: TS210518E.LCS1

Run in Batch: TS210518E, Run Date: 05/18/2021 16:30, Prep Date: 05/18/2021, Matrix: Liquid, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
Total Solids		100	90	110

Duplicate (DUP)

Lab Sample ID: TS210518E.DP1, Parent Sample ID: S24284.07

Run in Batch: TS210518E, Run Date: 05/18/2021 16:30, Prep Date: 05/18/2021, Matrix: Soil, Dilution: 1

Analyte	Flags	RPD	RPD CL
Total Solids		0	5

Duplicate (DUP)

Lab Sample ID: TS210518E.DP2, Parent Sample ID: S24293.01

Run in Batch: TS210518E, Run Date: 05/18/2021 16:30, Prep Date: 05/18/2021, Matrix: Soil, Dilution: 1

Analyte	Flags	RPD	RPD CL
Total Solids		0	5

QC Report - Batch QC Results

Organics - Volatiles, Prep Batch ID: PF210521S2

Surrogates: Yes, QC Types: BLK/LCS/LCSD/MS/DUP

Blank (BLK)

Lab Sample ID: AK210521BIO.BLK210521S2

Run in Batch: AK210521BIO, Run Date: 05/22/2021 07:26, Prep Date: 05/21/2021, Matrix: SO, Dilution: 1

Analyte	Flags	Conc	RDL	Units
PFBA		ND	10	ng/kg
PFPeA		ND	4	ng/kg
4:2 FTSA		ND	2	ng/kg
PFHxA	*	2.36	2	ng/kg
PFBS		ND	2	ng/kg
HFPO-DA	*	5.74	2	ng/kg
PFHpA		ND	2	ng/kg
PFPeS		ND	2	ng/kg
ADONA		ND	2	ng/kg
6:2 FTSA		ND	2	ng/kg
PFOA		ND	2	ng/kg
PFHxS-BR		ND	2	ng/kg
PFHxS		ND	2	ng/kg
PFHxS-LN		ND	2	ng/kg
PFNA		ND	2	ng/kg
8:2 FTSA		ND	2	ng/kg
PFHpS		ND	2	ng/kg
N-MeFOSAA		ND	2	ng/kg
PFDA		ND	2	ng/kg
PFOS-BR		ND	2	ng/kg
EtFOSAA		ND	4	ng/kg
PFOS		ND	2	ng/kg
PFOS-LN		ND	2	ng/kg
PFUnDA		ND	2	ng/kg
9CL-PF3ONS		ND	2	ng/kg
PFNS		ND	2	ng/kg
PFDoDA		ND	2	ng/kg
PFDS		ND	2	ng/kg
PFTTrDA		ND	2	ng/kg
11CL-PF3OUdS		ND	2	ng/kg
FOSA		ND	2	ng/kg
PFTeDA		ND	4	ng/kg

Laboratory Control Sample (LCS)

Lab Sample ID: AK210521BIO.LCS210521S2

Run in Batch: AK210521BIO, Run Date: 05/22/2021 06:47, Prep Date: 05/21/2021, Matrix: SO, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
PFBA		105.0	70.0	130.0
PFPeA		99.9	70.0	130.0
4:2 FTSA		102.0	70.0	130.0
PFHxA		92.9	70.0	130.0
PFBS		106.0	70.0	130.0
HFPO-DA		122.0	70.0	130.0
PFHpA		99.2	70.0	130.0
PFPeS		97.7	70.0	130.0
ADONA		92.4	70.0	130.0

QC Report - Batch QC Results

Organics - Volatiles, Prep Batch ID: PF210521S2 (continued)

Surrogates: Yes, QC Types: BLK/LCS/LCSD/MS/DUP

Laboratory Control Sample (LCS) (continued)

Lab Sample ID: AK210521BIO.LCS210521S2

Run in Batch: AK210521BIO, Run Date: 05/22/2021 06:47, Prep Date: 05/21/2021, Matrix: SO, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL
6:2 FTSA		110.0	70.0	130.0
PFOA		100.0	70.0	130.0
PFHxS		106.0	70.0	130.0
PFNA		111.0	70.0	130.0
8:2 FTSA		120.0	70.0	130.0
PFHpS		97.0	70.0	130.0
N-MeFOSAA		117.0	70.0	130.0
PFDA		102.0	70.0	130.0
EtFOSAA		103.0	70.0	130.0
PFOS		79.4	70.0	130.0
PFUnDA		107.0	70.0	130.0
9CL-PF3ONS		93.3	70.0	130.0
PFNS		91.5	70.0	130.0
PFDoDA		110.0	70.0	130.0
PFDS		89.0	70.0	130.0
PFTTrDA		119.0	70.0	130.0
11CL-PF3OUdS		97.7	70.0	130.0
FOSA		102.0	70.0	130.0
PFTeDA		97.5	70.0	130.0

Laboratory Control Sample Duplicate (LCSD)

Lab Sample ID: AK210521BIO.LCSD210521S2, Parent Sample ID: AK210521BIO.LCS210521S2

Run in Batch: AK210521BIO, Run Date: 05/22/2021 07:07, Prep Date: 05/21/2021, Matrix: SO, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
PFBA		106.0	70.0	130.0	0.9	30.0
PFPeA		99.5	70.0	130.0	0.4	30.0
4:2 FTSA		104.0	70.0	130.0	1.9	30.0
PFHxA		93.3	70.0	130.0	0.4	30.0
PFBS		110.0	70.0	130.0	3.7	30.0
HFPO-DA		118.0	70.0	130.0	3.3	30.0
PFHpA		108.0	70.0	130.0	8.5	30.0
PFPeS		107.0	70.0	130.0	9.1	30.0
ADONA		99.4	70.0	130.0	7.3	30.0
6:2 FTSA		107.0	70.0	130.0	2.8	30.0
PFOA		104.0	70.0	130.0	3.9	30.0
PFHxS		106.0	70.0	130.0	0.0	30.0
PFNA		106.0	70.0	130.0	4.6	30.0
8:2 FTSA		103.0	70.0	130.0	15.2	30.0
PFHpS		111.0	70.0	130.0	13.5	30.0
N-MeFOSAA		93.2	70.0	130.0	22.6	30.0
PFDA		110.0	70.0	130.0	7.5	30.0
EtFOSAA		99.2	70.0	130.0	3.8	30.0
PFOS		81.3	70.0	130.0	2.4	30.0
PFUnDA		118.0	70.0	130.0	9.8	30.0
9CL-PF3ONS		92.0	70.0	130.0	1.4	30.0
PFNS		100.0	70.0	130.0	8.9	30.0

QC Report - Batch QC Results

Organics - Volatiles, Prep Batch ID: PF210521S2 (continued)

Surrogates: Yes, QC Types: BLK/LCS/LCSD/MS/DUP

Laboratory Control Sample Duplicate (LCSD) (continued)

Lab Sample ID: AK210521BIO.LCSD210521S2, Parent Sample ID: AK210521BIO.LCS210521S2

Run in Batch: AK210521BIO, Run Date: 05/22/2021 07:07, Prep Date: 05/21/2021, Matrix: SO, Dilution: 1

Analyte	Flags	% Rec	LCL	UCL	RPD	RPD CL
PFDODA		106.0	70.0	130.0	3.7	30.0
PFDS		96.3	70.0	130.0	7.9	30.0
PFTTrDA		110.0	70.0	130.0	7.9	30.0
11CL-PF3OUdS		110.0	70.0	130.0	11.8	30.0
FOSA		107.0	70.0	130.0	4.8	30.0
PFTeDA		93.9	70.0	130.0	3.8	30.0

Matrix Spike (MS)

Lab Sample ID: AK210521BIO.2387901M, Parent Sample ID: S23879.01

Run in Batch: AK210521BIO, Run Date: 05/22/2021 10:03, Prep Date: 05/21/2021, Matrix: SO, Dilution: 54.1

Analyte	Flags	% Rec	LCL	UCL
PFBA	*	158.7	70.0	130.0
PFPeA	*	136.5	70.0	130.0
4:2 FTSA		107.0	70.0	130.0
PFHxA	*	258.3	70.0	130.0
PFBS	*	143.9	70.0	130.0
PFHpA		121.8	70.0	130.0
PFPeS		121.8	70.0	130.0
6:2 FTSA		121.8	70.0	130.0
PFOA	*	158.7	70.0	130.0
PFHxS		125.5	70.0	130.0
PFNA		119.9	70.0	130.0
8:2 FTSA	*	157.2	70.0	130.0
PFHpS		114.4	70.0	130.0
PFDA	*	136.5	70.0	130.0
N-MeFOSAA	*	774.9	70.0	130.0
EtFOSAA	*	409.6	70.0	130.0
PFOS	*	402.2	70.0	130.0
PFUnDA	*	155.0	70.0	130.0
PFNS		88.6	70.0	130.0
PFDODA	*	188.2	70.0	130.0
PFDS	*	225.1	70.0	130.0
PFTTrDA		92.3	70.0	130.0
FOSA	*	184.5	70.0	130.0
PFTeDA		118.1	70.0	130.0
11CL-PF3OUdS		95.9	70.0	130.0
9CL-PF3ONS		92.3	70.0	130.0
ADONA		107.0	70.0	130.0
HFPO-DA	*	48.0	70.0	130.0

Duplicate (DUP)

Lab Sample ID: AK210521BIO.2383304D, Parent Sample ID: S23833.04

Run in Batch: AK210521BIO, Run Date: 05/22/2021 08:45, Prep Date: 05/21/2021, Matrix: SO, Dilution: 43.2

Analyte	Flags	RPD	RPD CL
PFBA		NC	30.0
PFPeA		12.0	30.0

QC Report - Batch QC Results

Organics - Volatiles, Prep Batch ID: PF210521S2 (continued)

Surrogates: Yes, QC Types: BLK/LCS/LCSD/MS/DUP

Duplicate (DUP) (continued)

Lab Sample ID: AK210521BIO.2383304D, Parent Sample ID: S23833.04

Run in Batch: AK210521BIO, Run Date: 05/22/2021 08:45, Prep Date: 05/21/2021, Matrix: SO, Dilution: 43.2

Analyte	Flags	RPD	RPD CL
4:2 FTSA		NC	30.0
PFHxA		5.7	30.0
PFBS		NC	30.0
PFHpA		NC	30.0
PFPeS		NC	30.0
6:2 FTSA		NC	30.0
PFOA		4.1	30.0
PFHxS	*	30.8	30.0
PFHxS-LN	*	30.8	30.0
PFHxS-BR		NC	30.0
PFNA		0.0	30.0
8:2 FTSA		NC	30.0
PFHpS		NC	30.0
PFDA		9.4	30.0
N-MeFOSAA		1.4	30.0
EtFOSAA		10.5	30.0
PFOS		18.2	30.0
PFOS-LN		20.7	30.0
PFOS-BR		11.1	30.0
PFUnDA		24.0	30.0
PFNS		NC	30.0
PFDoDA		16.2	30.0
PFDS		NC	30.0
PFTTrDA		NC	30.0
FOSA		6.1	30.0
PFTeDA		NC	30.0
11CL-PF3OUdS		NC	30.0
9CL-PF3ONS		NC	30.0
ADONA		NC	30.0
HFPO-DA		NC	30.0

C.O.C. PAGE # _____ OF _____ 137663

INVOICE TO

CONTACT NAME		Don Popma	
COMPANY		Biotech Agronomics, Inc	
ADDRESS		1651 Beulah Hwy	
CITY		STATE	ZIP CODE
Beulah		MI	49617
PHONE NO	FAX NO	PO. NO.	
616-835-0100			
E-MAIL ADDRESS		QUOTE NO.	
dpopma@biotechag.com			

CONTACT NAME		STATE	
COMPANY			
ADDRESS			
CITY		STATE	ZIP CODE
PHONE NO.	E-MAIL ADDRESS		

PROJECT NO./NAME <i>Lakeview Estates East Pond</i>	SAMPLER(S) - PLEASE PRINT SAMPLER NAME <i>Don Poloma</i>
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TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☒ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX	GW=GROUNDWATER	WW=WASTEWATER	S=SOIL	L=LIQUID	SD=SOLID
CODE:	SL=SLUDGE	DW=DRINKING WATER	O=OIL	WP=WIPE	A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)[illegible][illegible]

A blank sheet of graph paper with a grid pattern. A vertical line runs down the left side, creating a margin. The top-left corner has a small checkmark symbol.

RELINQUISHED BY	<i>Dr. P. J. ...</i>	<input checked="" type="checkbox"/> Sample	DATE	TIME
SIGNATURE/ORGANIZATION			5/18/21	1:48P
RECEIVED BY	<i>M. ...</i>		5/18/21	1:48P
SIGNATURE/ORGANIZATION			DATE	TIME
RECEIVED BY			DATE	TIME
SIGNATURE/ORGANIZATION			DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION			DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION			DATE	TIME
SEAL NO	SEAL INTACT YES <input type="checkbox"/> NO <input type="checkbox"/>	INITIALS	NOTES:	TEMP. ON ARRIVAL
SEAL NO.	SEAL INTACT YES <input type="checkbox"/> NO <input type="checkbox"/>	INITIALS		
				28

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE