

Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444-2673



231-773-5998 Phone
888-979-4469 Fax
www.trace-labs.com

September 17, 2021

Tom Molski
Gladwin, City of
501 Chatterton
Gladwin, MI 48624

Fax:

RE: Trace ID: 21H1183

Enclosed are your analytical results associated with your project for Biosolids PFAS - 8/27/21. The results of this report relate only to the samples listed in the body of this report.

The results were obtained from Fibertec Environmental Services

Thank you for working with Trace. If you have questions concerning this report, please contact me at 231.773.5998 or by email at tbrewer@trace-labs.com.

Sincerely,

A handwritten signature in black ink that reads "Timothy W. Brewer".

Tim Brewer
Project Manager

Enclosures



NJDEP Accreditation No. MI008

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Friday, September 17, 2021

Fibertec Project Number: A03707
Project Identification: 21H1183 /21H1183
Submittal Date: 08/30/2021

Mr. Tim Brewer
Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444

Dear Mr. Brewer,

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.

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,

A handwritten signature in black ink, appearing to read "Sue Ricketts".

By Sue Ricketts at 2:48 PM, Sep 17, 2021

For Daryl P. Strandbergh
Laboratory Director

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

Client Identification:	Trace Analytical Laboratories, Inc.	Sample Description:	Sludge	Chain of Custody:	N/A
Client Project Name:	21H1183	Sample No:	21H1183-01	Collect Date:	08/27/21
Client Project No:	21H1183	Sample Matrix:	Biosolids	Collect Time:	12:00

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

PFAS						Aliquot ID: A03707-001		Matrix: Biosolids			
Method: ASTM D7968-17a						Description: Sludge					
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis			
						P. Date	P. Batch	A. Date	A. Batch	Init.	
‡ 1. ADONA	U		µg/kg	2.0	1.0	09/03/21	PS21I03F	09/11/21	SM21I11A	SKG	
‡ 2. 9CI-PF3ONS	U		µg/kg	2.0	1.0	09/03/21	PS21I03F	09/11/21	SM21I11A	SKG	
‡ 3. 11CI-PF3OUdS	U		µg/kg	2.0	1.0	09/03/21	PS21I03F	09/11/21	SM21I11A	SKG	
‡ 4. N-EtFOSAA	8.6		µg/kg	2.0	1.0	09/03/21	PS21I03F	09/11/21	SM21I11A	SKG	
‡ 5. FtS 4:2	U		µg/kg	2.0	1.0	09/03/21	PS21I03F	09/11/21	SM21I11A	SKG	
‡ 6. FtS 6:2	U		µg/kg	2.0	1.0	09/03/21	PS21I03F	09/11/21	SM21I11A	SKG	
‡ 7. FtS 8:2	U		µg/kg	2.0	1.0	09/03/21	PS21I03F	09/11/21	SM21I11A	SKG	
‡ 8. HFPO-DA	U		µg/kg	2.0	1.0	09/03/21	PS21I03F	09/11/21	SM21I11A	SKG	
‡ 9. N-MeFOSAA	2.4		µg/kg	2.0	1.0	09/03/21	PS21I03F	09/11/21	SM21I11A	SKG	
‡ 10. PFBA	U		µg/kg	2.0	1.0	09/03/21	PS21I03F	09/11/21	SM21I11A	SKG	
‡ 11. PFBS	U		µg/kg	2.0	1.0	09/03/21	PS21I03F	09/11/21	SM21I11A	SKG	
‡ 12. PFDA	U		µg/kg	2.0	1.0	09/03/21	PS21I03F	09/11/21	SM21I11A	SKG	
‡ 13. PFDoA	U		µg/kg	2.0	1.0	09/03/21	PS21I03F	09/11/21	SM21I11A	SKG	
‡ 14. PFDS	U	F-	µg/kg	2.0	1.0	09/03/21	PS21I03F	09/11/21	SM21I11A	SKG	
‡ 15. PFHpA	U		µg/kg	2.0	1.0	09/03/21	PS21I03F	09/11/21	SM21I11A	SKG	
‡ 16. PFHpS	U		µg/kg	2.0	1.0	09/03/21	PS21I03F	09/11/21	SM21I11A	SKG	
‡ 17. PFHxA	U		µg/kg	2.0	1.0	09/03/21	PS21I03F	09/11/21	SM21I11A	SKG	
‡ 18. PFHxS-Total	U		µg/kg	2.0	1.0	09/03/21	PS21I03F	09/11/21	SM21I11A	SKG	
‡ 19. PFNA	U		µg/kg	2.0	1.0	09/03/21	PS21I03F	09/11/21	SM21I11A	SKG	
‡ 20. PFNS	U		µg/kg	2.0	1.0	09/03/21	PS21I03F	09/11/21	SM21I11A	SKG	
‡ 21. PFOA	U		µg/kg	2.0	1.0	09/03/21	PS21I03F	09/11/21	SM21I11A	SKG	
‡ 22. PFOSA	U		µg/kg	2.0	1.0	09/03/21	PS21I03F	09/11/21	SM21I11A	SKG	
‡ 23. PFOS-Total	2.8		µg/kg	2.0	1.0	09/03/21	PS21I03F	09/11/21	SM21I11A	SKG	
‡ 24. PFPeA	2.1		µg/kg	2.0	1.0	09/03/21	PS21I03F	09/11/21	SM21I11A	SKG	
‡ 25. PFPeS	U		µg/kg	2.0	1.0	09/03/21	PS21I03F	09/11/21	SM21I11A	SKG	
‡ 26. PFTeA	U		µg/kg	2.0	1.0	09/03/21	PS21I03F	09/11/21	SM21I11A	SKG	
‡ 27. PFTrIA	U	F-	µg/kg	2.0	1.0	09/03/21	PS21I03F	09/11/21	SM21I11A	SKG	
‡ 28. PFUnA	U		µg/kg	2.0	1.0	09/03/21	PS21I03F	09/11/21	SM21I11A	SKG	

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Definitions/ Qualifiers:

- A:** Spike recovery or precision unusable due to dilution.
B: The analyte was detected in the associated method blank.
E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
J: The concentration is an estimated value.
M: Modified Method
U: The analyte was not detected at or above the reporting limit.
X: Matrix Interference has resulted in a raised reporting limit or distorted result.
W: Results reported on a wet-weight basis.
***:** Value reported is outside QC limits

Exception Summary:

- F-** : Recovery from the spiked aliquot exceeds the lower control limit (matrix spike or matrix spike duplicate).

Analysis Locations:

All analyses performed in Holt.



Accreditation Number(s):

T104704518-19-8 (TX)

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CHAIN-OF-CUSTODY RECORD

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Page _____ of _____

Trace ID No.

21H1183

Report Results To:

Bill To:

Trace Use:

Company Name: Gladin WTP PO #:

Logged By: AW

Report To:

Checked By: AW

Mailing Address:

Soil Volatiles Preserved (circle if applicable):

City, State, Zip Code:

MeOH Low Level Lab

Office Phone:

Sampling Time:

Email Address:

Billing Email Address:

Turnaround Requirements:

Matrix Key:

☐ Standard, 5-10 Days

S = Soil / Solid

WI = Wipes

☐ 3 Day*

W = Water

LW = Liquid Waste

☐ 1 Day*

SL = Sludge

A = Air

*Results provided end of business day, requires prior approval.

OI = Oil

D = Drinking Water

Analysis Requested

Project Name:

Sampled By:

Trace No. 1 Date Collected 8-22-21 12 PM Time Collected 12 PM Client Sample ID Sludge

Metals Field Filtered (Y / N) YES Matrix Biosolids Number of Containers 1

Preservation
Cool ☐ HCl ☐ HNO₃ ☐ H₂SO₄ ☐ NaOH ☐ Other ☐

Remarks

Possible Health Hazards?

Please Sign

Released By: [Signature]

Received By: [Signature]

Date: 8-22-21 12:30 Time: 12:30

Released By: [Signature]

Received By: [Signature]

Date: 8-22-21 16:24 Time: 16:24

In executing this Chain of Custody, the client acknowledges the terms set forth at www.trace-labs.com/terms-of-agreement.

☐ Check this box if you would not like your samples analyzed if received outside of the conditions outlined in the Trace Sample Acceptance Policy at www.trace-labs.com/downloads.

Form 70-Z-1

CERTIFICATE OF ANALYSIS

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21H1183.

Gladwin, City of

Project Manager: Tim Brewer

Sample Log In Checklist

Date: 8-27-21	Original Observation	Corrected Temperature	IR-9 (CF: +0.1°C)	IR-10 (CF: +0.1°C)	20B12743 (CF: -0.3°C)	Temp Blank	Client Sample
Time: 16:24							
Logged by: du							
Package Description: Cooler							
Package Temp °C	0.1	0.2	✓				
Representative Sample Temp °C	1.0	0.7			✓	✓	

Sample Receipt

Yes No

☒ ☐ Received on ice or other coolant

☒ ☐ Ice still present upon receipt

☐ ☒ Custody seals present

☒ Trace Courier ☐ Client Drop-off

☐ Yes ☐ No Custody seals intact (if applicable)

☐ UPS

☐ Fed Ex

☐ US Mail

☐ Other

Sample Condition

Yes No N/A

☒ ☐ ☐ All sample containers arrived unbroken and labeled

☒ ☐ ☐ Sufficient sample to run requested analyses

☐ ☐ ☒ Correct chemical preservative added to samples

☐ ☐ ☒ Samples preserved at Trace

☐ ☐ ☒ Chemical preservation verified, check EMD pH test strip used (if applicable)

☐ pH 0-2.5 (Lot: HC029115)

☐ pH 11.0-13.0 (Lot: HC022540)

☐ Other

☐ ☐ ☒ Air bubbles absent from VOAs

Chain of Custody (COC)

Yes No

☒ ☐ All bottle labels agree with COC

☒ ☐ COC filled out properly

☒ ☐ COC signed by client

Notes:

Form 70-A.39
Effective 7/2/21

TRACE Analytical Laboratories, Inc.

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Report ID: 21H1183 TRACE_Farmed_Out FINAL 09 17 21 1600