

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



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

October 21, 2021

Rob Witherell
Durand, City of
4910 S. Durand Rd.
Durand, MI 48429

Phone: (989) 288-2158
Fax: (989) 288-7214

RE: Trace ID: 21J0006

Enclosed are your analytical results associated with your project for Durand Biosolids PFAS - 9/30/21.
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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Thursday, October 21, 2021

Fibertec Project Number: A04401
Project Identification: 21J0006 /21J0006
Submittal Date: 10/04/2021

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 10:18 AM, Oct 21, 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

Analytical Laboratory Report
Laboratory Project Number: A04401
Laboratory Sample Number: A04401-001

Order: A04401
Page: 2 of 3
Date: 10/21/21

Client Identification:	Trace Analytical Laboratories, Inc.	Sample Description:	21J0006-01	Chain of Custody:	n/a
Client Project Name:	21J0006	Sample No:		Collect Date:	09/30/21
Client Project No:	21J0006	Sample Matrix:	Biosolids	Collect Time:	11:00

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: A04401-001		Matrix: Biosolids				
Method: ASTM D7968-17a				Description: 21J0006-01						
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	10/18/21	PS21J18I	10/20/21	SM21J19B	SKG
‡ 2. 9CI-PF3ONS	U		µg/kg	2.0	1.0	10/18/21	PS21J18I	10/20/21	SM21J19B	SKG
‡ 3. 11CI-PF3OUdS	U		µg/kg	2.0	1.0	10/18/21	PS21J18I	10/20/21	SM21J19B	SKG
‡ 4. N-EtFOSAA	U		µg/kg	2.0	1.0	10/18/21	PS21J18I	10/20/21	SM21J19B	SKG
‡ 5. FtS 4:2	U	EIS+	µg/kg	2.0	1.0	10/18/21	PS21J18I	10/20/21	SM21J19B	SKG
‡ 6. FtS 6:2	U	F+ *	µg/kg	2.0	1.0	10/18/21	PS21J18I	10/20/21	SM21J19B	SKG
EIS+										
‡ 7. FtS 8:2	U		µg/kg	2.0	1.0	10/18/21	PS21J18I	10/20/21	SM21J19B	SKG
‡ 8. HFPO-DA	U	F-	µg/kg	2.0	1.0	10/18/21	PS21J18I	10/20/21	SM21J19B	SKG
‡ 9. N-MeFOSAA	U		µg/kg	2.0	1.0	10/18/21	PS21J18I	10/20/21	SM21J19B	SKG
‡ 10. PFBA	U		µg/kg	2.0	1.0	10/18/21	PS21J18I	10/20/21	SM21J19B	SKG
‡ 11. PFBS	U		µg/kg	2.0	1.0	10/18/21	PS21J18I	10/20/21	SM21J19B	SKG
‡ 12. PFDA	U		µg/kg	2.0	1.0	10/18/21	PS21J18I	10/20/21	SM21J19B	SKG
‡ 13. PFDoA	U		µg/kg	2.0	1.0	10/18/21	PS21J18I	10/20/21	SM21J19B	SKG
‡ 14. PFDS	U		µg/kg	2.0	1.0	10/18/21	PS21J18I	10/20/21	SM21J19B	SKG
‡ 15. PFHpA	U		µg/kg	2.0	1.0	10/18/21	PS21J18I	10/20/21	SM21J19B	SKG
‡ 16. PFHpS	U		µg/kg	2.0	1.0	10/18/21	PS21J18I	10/20/21	SM21J19B	SKG
‡ 17. PFHxA	U		µg/kg	2.0	1.0	10/18/21	PS21J18I	10/20/21	SM21J19B	SKG
‡ 18. PFHxS-Total	U		µg/kg	2.0	1.0	10/18/21	PS21J18I	10/20/21	SM21J19B	SKG
‡ 19. PFNA	U		µg/kg	2.0	1.0	10/18/21	PS21J18I	10/20/21	SM21J19B	SKG
‡ 20. PFNS	U	ISC+	µg/kg	2.0	1.0	10/18/21	PS21J18I	10/20/21	SM21J19B	SKG
‡ 21. PFOA	U		µg/kg	2.0	1.0	10/18/21	PS21J18I	10/20/21	SM21J19B	SKG
‡ 22. PFOSA	U		µg/kg	2.0	1.0	10/18/21	PS21J18I	10/20/21	SM21J19B	SKG
‡ 23. PFOS-Total	10	ISC+	µg/kg	2.0	1.0	10/18/21	PS21J18I	10/20/21	SM21J19B	SKG
‡ 24. PFPeA	U		µg/kg	2.0	1.0	10/18/21	PS21J18I	10/20/21	SM21J19B	SKG
‡ 25. PFPeS	U		µg/kg	2.0	1.0	10/18/21	PS21J18I	10/20/21	SM21J19B	SKG
‡ 26. PFTeA	U		µg/kg	2.0	1.0	10/18/21	PS21J18I	10/20/21	SM21J19B	SKG
‡ 27. PFTriA	U		µg/kg	2.0	1.0	10/18/21	PS21J18I	10/20/21	SM21J19B	SKG
‡ 28. PFUnA	U		µg/kg	2.0	1.0	10/18/21	PS21J18I	10/20/21	SM21J19B	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:

- *** : Duplicate analysis not within control limits.
EIS+ : The Isotope Dilution/Extracted Internal Standard area exceeds the upper control limit.
F- : Recovery from the spiked aliquot exceeds the lower control limit (matrix spike or matrix spike duplicate).
F+ : Recovery from the spiked aliquot exceeds the upper control limit (matrix spike or matrix spike duplicate).
ISC+ : Recovery in the associated Instrument Sensitivity Check (ISC) exceeds the upper control limit. Results may be biased high.

Analysis Locations:

All analyses performed in Holt.



Accreditation Number(s):

T104704518-19-8 (TX)

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[illegible]

CERTIFICATE OF ANALYSIS

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21J0006

Durand, City of
Project Manager: Tim Brewer

Sample Log In Checklist

Date: 10/1/21	Original Observation	Corrected Temperature	IR-9 (CF: +0.1°C)	IR-10 (CF: +0.1°C)	20812743 (CF: -0.3°C)	Temp Blank	Client Sample
Time: 8:21							
Logged by: BW							
Package Description: Cooler							
Package Temp °C	-1.5	-1.4	✓	✓	✓	✓	✓
Representative Sample Temp °C	0.5	0.6	✓	✓	✓	✓	✓

Sample Receipt

Yes	No	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Received on ice or other coolant
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Ice still present upon receipt
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Custody seals present
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Trace Courier
<input type="checkbox"/>	<input type="checkbox"/>	Client Drop-off
<input type="checkbox"/>	<input type="checkbox"/>	UPS
<input type="checkbox"/>	<input type="checkbox"/>	Fed Ex
<input type="checkbox"/>	<input type="checkbox"/>	US Mail
<input type="checkbox"/>	<input type="checkbox"/>	Other

Sample Condition

Yes	No	N/A	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All sample containers arrived unbroken and labeled
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sufficient sample to run requested analyses
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Correct chemical preservative added to samples
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Samples preserved at Trace
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Chemical preservation verified, check EMD pH test strip used (if applicable)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH 0-2.5 (Lot: HC029115)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH 11.0-13.0 (Lot: HC022540)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Air bubbles absent from VOAs

Chain of Custody (COC)

Yes	No	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	All bottle labels agree with COC
<input checked="" type="checkbox"/>	<input type="checkbox"/>	COC filled out properly
<input checked="" type="checkbox"/>	<input type="checkbox"/>	COC signed by client

Notes:

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

TRACE Analytical Laboratories, Inc.

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Report ID: 21J0006 TRACE_Farmed_Out FINAL 10 21 21 1646