

Friday, June 4, 2021

Robert Roznowski
Alpena WWTP (SUEZ)
210 Harbor Drive
Alpena, MI 49707

Workorder: 369007
Project Name: Suez / Alpena, MI

Robert Roznowski,
Paragon Laboratories, Inc. received the samples associated with the workorder listed above for the analyses presented in the following report. The analyses pertain only to the aliquot of sample received.

This material is confidential and is intended solely for the person to whom it is addressed. If this is received in error, please contact the number below.

Please note that any unused portion of the sample(s) will be discarded 40 days after sample receipt, unless requested otherwise.

We appreciate the opportunity to assist you. If you have any questions concerning this report, please contact me at 734-469-5625.

Sincerely,



Margaret Snyder
Senior Account Coordinator

GLOSSARY

Abbreviation	Meaning	Explanation
ID	Identification	Preceded by "Lab", it describes the unique 10-digit sample number assigned by the laboratory. Preceded by "Sample", it describes the client-specified sample identifier.
Qual	Qualifier	Column that populates with an asterisk (*) when a related narrative comment appears in the Workorder Summary.
RL	Reporting Limit	The value at or above which a result is routinely reported.
MDL	Method Detection Limit	The minimum measured concentration that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results.
DF	Dilution Factor	The dilution applied to the sample during analysis to arrive at the final reported analyte result.
Min	Minimum	The minimum value that a result can be to meet the applicable specification, regulatory, permit, or client-specified limit.
Max	Maximum	The maximum value that a result can be to meet the applicable specification, regulatory, permit, or client-specified limit.
(S)	Surrogate	A compound that is added to the sample to mimic one or more compounds of interest. Its recovery is used to evaluate the efficiency of recovering the compound(s) of interest.
<	Less Than	Symbol that indicates that a result is less than the value following it.
>	Greater Than	Symbol that indicates that a result is greater than the value following it.

SAMPLE SUMMARY

Lab ID	Sample ID	Sample Description	Matrix	Date Collected	Date Received	Collector
3690070001	Alpena Biosolids	Grab	SO	04/27/2021 08:45	04/28/2021 09:30	JS
3690070002	Trip Blank		SO		04/28/2021 09:30	JS
3690070003	Field Blank		SO	04/27/2021 08:49	04/28/2021 09:30	JS

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WORKORDER SUMMARY

Accreditations

Paragon Laboratories, Inc. is certified by the Michigan Department of Environment, Great Lakes, and Energy to analyze Drinking Water. (EGLE Lab No. 9901 Expires 2/25/2023)

Workorder Narrative

General Comment:

No suspected contamination during sampling process, therefore the trip blank was not analyzed.

Surrogate Results Narrative

3690070001 - Alpena Biosolids - M2-6:2 FTS

Surrogate recovery is above the upper control limit, possibly due to matrix interferences.

3690070001 - Alpena Biosolids - M2PFDoA

Surrogate recovery is below the lower control limit, possibly due to matrix interferences.

3690070001 - Alpena Biosolids - M2PFTeDA

Surrogate recovery is below the lower control limit, possibly due to matrix interferences.

3690070001 - Alpena Biosolids - M5PFHxA

Surrogate recovery is below the lower control limit, possibly due to matrix interferences.

3690070001 - Alpena Biosolids - M8PFOSA

Surrogate recovery is below the lower control limit, possibly due to matrix interferences.

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ANALYTICAL RESULTS

Lab ID: 3690070001
Sample ID: Alpena Biosolids
Description: Grab

Date Collected: 04/27/2021 08:45
Date Received: 04/28/2021 09:30

Matrix: Solid (SO)
Collector: JS

Parameter	Result	Qual	Unit	RL	MDL	DF	Min	Max	Analyzed	By
Individual Parameters by SM 2540 G										
Percent Total Solids	3.7		% m/m	0.10		1			04/29/2021 11:10	JKP

Per- & Polyfluoroalkyls (PFAS) by ASTM D7968 Mod.

11CI-PF3OUdS	180		ng/Kg-dry	100	65	1			05/20/2021 23:46	JKP
4:2 FTSA	120		ng/Kg-dry	100	58	1			05/20/2021 23:46	JKP
6:2 FTSA	1500		ng/Kg-dry	150	130	1			05/20/2021 23:46	JKP
8:2 FTSA	2400		ng/Kg-dry	100	50	1			05/20/2021 23:46	JKP
9CI-PF3ONS	<100		ng/Kg-dry	100	59	1			05/20/2021 23:46	JKP
ADONA	<100		ng/Kg-dry	100	68	1			05/20/2021 23:46	JKP
HFPO-DA	<150		ng/Kg-dry	150	130	1			05/20/2021 23:46	JKP
NEtFOSAA	17000		ng/Kg-dry	100	57	1			05/20/2021 23:46	JKP
NMeFOSAA	33000		ng/Kg-dry	200	190	1			05/20/2021 23:46	JKP
PFBA	2600		ng/Kg-dry	25	20	1			05/20/2021 23:46	JKP
PFBS	16000		ng/Kg-dry	10	9.2	1			05/20/2021 23:46	JKP
PFDA	4700		ng/Kg-dry	15	14	1			05/20/2021 23:46	JKP
PFDS	1400		ng/Kg-dry	15	15	1			05/20/2021 23:46	JKP
PFDoA	1500		ng/Kg-dry	20	17	1			05/20/2021 23:46	JKP
PFHpA	340		ng/Kg-dry	20	16	1			05/20/2021 23:46	JKP
PFHpS	220		ng/Kg-dry	15	12	1			05/20/2021 23:46	JKP
PFHxA	2700		ng/Kg-dry	10	7.5	1			05/20/2021 23:46	JKP
PFHxS	1700		ng/Kg-dry	10	5.8	1			05/20/2021 23:46	JKP
PFNA	950		ng/Kg-dry	10	5.2	1			05/20/2021 23:46	JKP
PFNS	440		ng/Kg-dry	30	29	1			05/20/2021 23:46	JKP
PFOA	1600		ng/Kg-dry	10	9.3	1			05/20/2021 23:46	JKP
PFOS	38000		ng/Kg-dry	400	20	1			05/20/2021 23:46	JKP
PFOSA	2300		ng/Kg-dry	15	10	1			05/20/2021 23:46	JKP
PFPeA	3100		ng/Kg-dry	15	12	1			05/20/2021 23:46	JKP
PFPeS	<15		ng/Kg-dry	15	15	1			05/20/2021 23:46	JKP
PFTeDA	<25		ng/Kg-dry	25	23	1			05/20/2021 23:46	JKP
PFTTrDA	340		ng/Kg-dry	20	10	1			05/20/2021 23:46	JKP
PFUnDA	1200		ng/Kg-dry	10	8.7	1			05/20/2021 23:46	JKP
PFecHS	<15		ng/Kg-dry	15	9.6	1			05/20/2021 23:46	JKP

Surrogate	Unit	Spiked Amount	Spike Result	Spike % Recovery	Control Limits	Qual
13C-HFPO-DA (S)	ng/Kg-dry	220000	160000	72	70 - 130	
d3-NMeFOSAA (S)	ng/Kg-dry	22000	21000	95	70 - 130	
d5-NEtFOSAA (S)	ng/Kg-dry	22000	24000	109	70 - 130	
M2-4:2 FTS (S)	ng/Kg-dry	22000	21000	95	70 - 130	
M2-6:2 FTS (S)	ng/Kg-dry	22000	30000	139	70 - 130	*
M2-8:2 FTS (S)	ng/Kg-dry	22000	28000	127	70 - 130	
M2PFDoA (S)	ng/Kg-dry	22000	11000	51	70 - 130	*

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ANALYTICAL RESULTS

M2PFTeDA (S)	ng/Kg-dry	22000	3200	14	70 - 130	*
M3PFBS (S)	ng/Kg-dry	22000	16000	72	70 - 130	
M3PFHxS (S)	ng/Kg-dry	22000	18000	81	70 - 130	
M4PFBA (S)	ng/Kg-dry	22000	18000	84	70 - 130	
M4PFHpA (S)	ng/Kg-dry	22000	16000	73	70 - 130	
M5PFHxA (S)	ng/Kg-dry	22000	14000	66	70 - 130	*
M5PFPeA (S)	ng/Kg-dry	22000	20000	92	70 - 130	
M6PFDA (S)	ng/Kg-dry	22000	22000	99	70 - 130	
M7PFUnDA (S)	ng/Kg-dry	22000	18000	84	70 - 130	
M8PFOA (S)	ng/Kg-dry	22000	17000	80	70 - 130	
M8PFOS (S)	ng/Kg-dry	22000	18000	82	70 - 130	
M8PFOSA (S)	ng/Kg-dry	22000	9400	43	70 - 130	*
M9PFNA (S)	ng/Kg-dry	22000	22000	99	70 - 130	

Sample Preparation by ASTM D7968 Mod.

Tumble Extraction for PFAS	2.0075	grams	1	05/10/2021 14:57	JKP
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ANALYTICAL RESULTS

Lab ID: 3690070002
Sample ID: Trip Blank
Description:

Date Collected:
Date Received: 04/28/2021 09:30

Matrix: Solid (SO)
Collector: JS

Parameter	Result	Qual	Unit	RL	MDL	DF	Min	Max	Analyzed	By
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No results available.

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ANALYTICAL RESULTS

Lab ID: 3690070003	Date Collected: 04/27/2021 08:49	Matrix: Solid (SO)
Sample ID: Field Blank	Date Received: 04/28/2021 09:30	Collector: JS
Description:		

Parameter	Result	Qual	Unit	RL	MDL	DF	Min	Max	Analyzed	By
Per- & Polyfluoroalkyls (PFAS) by ASTM D7968 Mod.										
11CI-PF3OUdS	<100		ng/Kg-dry	100	65	1			05/21/2021 02:52	JKP
4:2 FTSA	<100		ng/Kg-dry	100	58	1			05/21/2021 02:52	JKP
6:2 FTSA	<150		ng/Kg-dry	150	130	1			05/21/2021 02:52	JKP
8:2 FTSA	<100		ng/Kg-dry	100	50	1			05/21/2021 02:52	JKP
9CI-PF3ONS	<100		ng/Kg-dry	100	59	1			05/21/2021 02:52	JKP
ADONA	<100		ng/Kg-dry	100	68	1			05/21/2021 02:52	JKP
HFPO-DA	<150		ng/Kg-dry	150	130	1			05/21/2021 02:52	JKP
NEtFOSAA	<100		ng/Kg-dry	100	57	1			05/21/2021 02:52	JKP
NMeFOSAA	<200		ng/Kg-dry	200	190	1			05/21/2021 02:52	JKP
PFBA	<25		ng/Kg-dry	25	20	1			05/21/2021 02:52	JKP
PFBS	<10		ng/Kg-dry	10	9.2	1			05/21/2021 02:52	JKP
PFDA	<15		ng/Kg-dry	15	14	1			05/21/2021 02:52	JKP
PFDS	<15		ng/Kg-dry	15	15	1			05/21/2021 02:52	JKP
PFDaA	<20		ng/Kg-dry	20	17	1			05/21/2021 02:52	JKP
PFHpA	<20		ng/Kg-dry	20	16	1			05/21/2021 02:52	JKP
PFHpS	<15		ng/Kg-dry	15	12	1			05/21/2021 02:52	JKP
PFHxA	<10		ng/Kg-dry	10	7.5	1			05/21/2021 02:52	JKP
PFHxS	<10		ng/Kg-dry	10	5.8	1			05/21/2021 02:52	JKP
PFNA	<10		ng/Kg-dry	10	5.2	1			05/21/2021 02:52	JKP
PFNS	<30		ng/Kg-dry	30	29	1			05/21/2021 02:52	JKP
PFOA	<10		ng/Kg-dry	10	9.3	1			05/21/2021 02:52	JKP
PFOS	<20		ng/Kg-dry	20	20	1			05/21/2021 02:52	JKP
PFOSA	<15		ng/Kg-dry	15	10	1			05/21/2021 02:52	JKP
PFPeA	<15		ng/Kg-dry	15	12	1			05/21/2021 02:52	JKP
PFPeS	<15		ng/Kg-dry	15	15	1			05/21/2021 02:52	JKP
PFTeDA	<25		ng/Kg-dry	25	23	1			05/21/2021 02:52	JKP
PFTTrDA	<20		ng/Kg-dry	20	10	1			05/21/2021 02:52	JKP
PFUnDA	<10		ng/Kg-dry	10	8.7	1			05/21/2021 02:52	JKP
PFecHS	<15		ng/Kg-dry	15	9.6	1			05/21/2021 02:52	JKP

Surrogate	Unit	Spiked Amount	Spike Result	Spike % Recovery	Control Limits	Qual
13C-HFPO-DA (S)	ng/Kg-dry	8000	8000	100	70 - 130	
d3-NMeFOSAA (S)	ng/Kg-dry	800	830	100	70 - 130	
d5-NEtFOSAA (S)	ng/Kg-dry	800	910	113	70 - 130	
M2-4:2 FTS (S)	ng/Kg-dry	800	720	90	70 - 130	
M2-6:2 FTS (S)	ng/Kg-dry	800	740	93	70 - 130	
M2-8:2 FTS (S)	ng/Kg-dry	800	800	100	70 - 130	
M2PFDaA (S)	ng/Kg-dry	800	940	118	70 - 130	
M2PFTeDA (S)	ng/Kg-dry	800	800	100	70 - 130	
M3PFBS (S)	ng/Kg-dry	800	820	102	70 - 130	
M3PFHxS (S)	ng/Kg-dry	800	790	99	70 - 130	

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ANALYTICAL RESULTS

M4PFBA (S)	ng/Kg-dry	800	820	102	70 - 130
M4PFHpA (S)	ng/Kg-dry	800	800	100	70 - 130
M5PFHxA (S)	ng/Kg-dry	800	840	105	70 - 130
M5PFPeA (S)	ng/Kg-dry	800	830	104	70 - 130
M6PFDA (S)	ng/Kg-dry	800	920	115	70 - 130
M7PFUnDA (S)	ng/Kg-dry	800	960	121	70 - 130
M8PFOA (S)	ng/Kg-dry	800	840	105	70 - 130
M8PFOS (S)	ng/Kg-dry	800	770	96	70 - 130
M8PFOSA (S)	ng/Kg-dry	800	820	103	70 - 130
M9PFNA (S)	ng/Kg-dry	800	920	115	70 - 130

Sample Preparation by ASTM D7968 Mod.

Tumble Extraction for PFAS	2.0002	grams	1	05/10/2021 14:57	JKP
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